University of Ghana http://ugspace.ug.edu.gh

UNIVERSITY OF GHANA

COLLEGE OF HUMANITIES

SOCIOECONOMIC STATUS AND PSYCHOLOGICAL DISTRESS AMONG URBAN AND RURAL DWELLERS IN GHANA

BY

KPADAM OPUNI
(10186775)

THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF PHD POPULATION STUDIES DEGREE

REGIONAL INSTITUTE FOR POPULATION STUDIES

DECEMBER 2023

University of Ghana http://ugspace.ug.edu.gh

DECLARATION

I, KPADAM OPUNI, hereby declare that, except for references to other people's work, which have been duly acknowledged, this thesis is the result of my own research conducted under the joint supervision of Dr. Mumuni Abu, Prof. Isaac Osei-Akoto, and Dr. Lily Kpobi. I also declare that this thesis has neither in part nor in whole been published or presented to any other institution for another degree.



14th December 2023

Kpadam Opuni — Date

Student



December 14, 2023

Dr. Mumuni Abu — Date

Principal Supervisor



December 14, 2023

Professor Isaac Osei-Akoto — Date

Co-Supervisor



14 December, 2023

Dr. Lily Kpobi — Date

Co-Supervisor

University of Ghana http://ugspace.ug.edu.gh

DEDICATION

This work is dedicated to the memory of my late father Upuin Timor, my wife Janet Opuni, and children Betty, Caleb, Robert, and Wilfred.

University of Ghana http://ugspace.ug.edu.gh

ACKNOWLEDGEMENTS

Praise and adoration be to the Lord Almighty for His abundant grace and faithfulness throughout this journey.

I wish to express my sincere gratitude to my supervisors. To Dr Mumuni Abu, I want to thank you so much for your inspiration to me to start the PhD programme when things looked impossible at the time. When I took up the challenge you continued to encourage and guide me in shaping my thesis. To Professor Isaac Osei-Akoto, I am equally grateful to you for your support and mentorship which equipped me with the research skills to successfully complete this work. Dr. Lily Kpobi, apart from your regular reviews and shaping of the thesis, you also ensured I received the needed encouragement any time I met with you. Thank you so much.

I also want to use this opportunity to thank the former and current Directors of the Regional Institute for Population Studies (RIPS), Professor Joseph A. Yaro and Professor Ayaga Bawah respectively for their support over my four years of study at the institute. I am also grateful to all faculty and staff of RIPS in the diverse ways you have contributed to this success.

To the Ghana Education Trust Fund (GETFund) I wish to thank you endlessly for your scholarship which catered for my fees for the four years of study. I could not have gotten this far without your timely support.

I am equally grateful to the Enhancing Capacity and Postgraduate Education in the Humanities at The University of Ghana (ENCAPEH) project funded by The Andrew W. Mellon Foundation for the one-year scholarship award granted me to complete my doctoral studies. Your support was divine and has contributed to the success of this thesis.

University of Ghana http://ugspace.ug.edu.gh

I am grateful to the Institute of Statistical, Social and Economic Research (ISSER), University of Ghana, the Economic Growth Centre (EGC) at Yale University and the Global Poverty Research Lab (GPRL) at Northwestern University, USA for making available for use panel data of the Ghana Socioeconomic Panel Survey.

My profound gratitude goes to Madam Naana of GETFund, Mr. Benedict Fosu Adjei, College Secretary, College of Humanities, University of Ghana, Professor Mariama Awumbila, Professor Delali Badasu, Professor Joseph Teye, Director of the Office of Research, Innovation, and Development (ORID), University of Ghana, Dr Simon Bawakyillenuo, ISSER, University of Ghana for your support in diverse ways in making this dream a reality. May the good Lord reward each one of you exceedingly.

I also use this opportunity to thank my siblings and the entire family of Christian Missionary Fellowship International, Ghana for their support and unceasing prayers. Finally, I thank my colleagues David Adumbire, Christiana Adu, Esther Atujona, Michaeal Amponsah, Jones Frimpong, Clare Kyomuhendo, Gabriel Nyamekye, Naa Adjeley Mensah, Atindana Nsobilla, Charles Asabere, Andrew Coduah, Shamsudini Amidu, Daniel Djimah for your support in shaping this thesis.

University of Ghana http://ugspace.ug.edu.gh

ABSTRACT

Socioeconomic status (SES) plays a pivotal role in determining the opportunities, challenges, and life trajectories of people globally. Socioeconomic status factors, such as educational attainment, the type of occupation, and subjective social status of an individual, significantly impact their overall well-being. Studies examining the relationship between individuals' SES and overall psychological well-being have gained considerable attention in Ghana**.** However, previous studies investigating the association between SES and individuals' psychological well-being have predominantly utilised cross-sectional methodologies. Previous research utilising longitudinal methods to examine the relationship between socioeconomic status (SES) and psychological well-being has primarily concentrated on the influence of individual-level SES and other personal variables on psychological well-being. However, these studies have failed to account for the potential impact of household and community factors on psychological well-being. This study sought to present empirical evidence on the effects of an individual's SES, and other personal and external factors on their psychological well-being over time. This study employed quantitative and qualitative designs using the sequential explanatory mixed-method approach to provide answers to the research questions. The quantitative data for this study was derived from the first three waves of the Ghana socioeconomic Panel Survey (GSPS) conducted by the Institute of Statistical, Social and Economic Research (ISSER), University of Ghana and the Global Poverty Research Lab (GPRL) at Northwestern University, USA. The total sample size for the quantitative data for the study was 25,924 individual participants aged 18 years and older who had participated in the three waves. The qualitative stage encompassed the implementation of focus group discussions (FGDs) across specific urban and rural locations spanning the three ecological zones of Ghana. Twelve (12) FGDs were conducted in six communities- one male and one female per community. The

University of Ghana http://ugspace.ug.edu.gh

quantitative data was analysed using cross-sectional panel descriptive statistics and multivariate panel regression models with pooled ordinary least squares (OLS), fixed, and random effects specifications. The interviews were audio-taped from FGDs, transcribed, and analysed using content analysis. The study found that the prevalence of psychological distress was higher among respondents residing in rural areas (66.1%) than those living in urban areas (52.9%). In the multivariate analysis, the study observed a negative correlation between educational attainment and psychological distress. Specifically, individuals in urban areas without any educational qualifications or with lower educational qualifications exhibited higher levels of psychological distress compared to those who had obtained a bachelor's degree or higher. However, no significant association was found between educational attainment and psychological distress in rural locations. At the household level, the study found that respondents with higher wealth quintiles, those who did not have any household debt and did not receive any transfer of goods or money from people outside of their household experienced lower levels of psychological distress. The study also discovered that at the community level, in both urban and rural areas, respondents' perceptions of the helpfulness of community members lessened the likelihood of experiencing psychological distress. The study's findings revealed an overall prevalence of psychological distress among participants residing in urban and rural areas in Ghana. In addition, psychological distress over time was found to be significantly predicted by lower educational qualification attainment in Ghana. The study recommends the establishment of voluntary psychological distress screening centres.

University of Ghana http://ugspace.ug.edu.gh

LIST OF ABBREVIATIONS

AHLHS	Ageing, Health, Lifestyle, and Health Services
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
APA	American Psychological Association
BECE	Basic Education Certificate Examination
DHS	Demographic Health Survey
DSM	Diagnostic and Statistical Manual
DTA	Delivery by Trained Attendants
EA PGS	Educational Attainment Polygenic Score
EAs	Enumeration Areas
ECH	Ethics Committee for the Humanities
ED	Erectile Dysfunction
EGC	Economic Growth Centre
ENCAPEH	Enhancing Capacity and Postgraduate Education in the Humanities
FCT	Fundamental Cause Theory
FGDs	Focus Group Discussions
FCUBE	Free Compulsory Universal Basic Education
FSHS	Free Senior High School
FSW	Female Sex Worker
GBD	Global Burden of Disease
GCE A-Level	General Certificate Examination Advance Level
GCE O' Level	General Certificate Examination Ordinary Level
GDHSs	Ghana Demographic and Health Surveys
GETFund	Ghana Education Trust Fund
GOG	Government of Ghana
GPRL	Ghana and the Global Poverty Research Lab

University of Ghana http://ugspace.ug.edu.gh

GSFP	Ghana School Feeding Programme
GSPS	Ghana Socioeconomic Panel Survey
GSS	Ghana Statistical Service
HDSS	Health and Demographic System Site
HIV	Human Immunodeficiency Virus
HND	Higher National Diploma
ICT	Information and Communication
ISCO	International Standard Classification of Occupations
ISSER	Institute of Statistical, Social, and Economic Research
LEAP	Livelihood Empowerment Against Poverty
LTC	Long-Term Care
LM	Lagrangian Multiplier
MDD	Major Depressive Disorder
MOE	Ministry of Education
MoGCSP	Ministry of Gender, Children and Social Protection
MSLC	Middle School Leaving Certificate
MSM	Men engaged in Sex with other Men
NCDs	Non-communicable Diseases
NDPC	National Development Planning Commission
NEIP	National Entrepreneurship and Innovation Programme
NFED	Non-Formal Education Division
NLAAS	National Latino and Asian American Study
OLS	Ordinary Least Squares
ORID	Office of Research, Innovation and Development
PANAS	Positive and Negative Affect Schedule
PCA	Principal Component Analysis
PD	Psychological Distress

University of Ghana http://ugspace.ug.edu.gh

PHC	Population and Housing Census
RCT	Randomized Controlled Trial
RIPS	Regional Institute for Population Studies
SAVI	Strength and Vulnerability Integration
SCI	Spinal Cord Injury
SDH	Social Determinant of Health
SEM	Socioecological Model
SES	Socioeconomic Status
SHARE	Surveys of Health, Ageing, and Retirement in Europe
SHIM	Sexual Health Inventory for Men
SSA	Sub Saharan Africa
SSSCE	Senior Secondary School Certificate Examination
SSS	Subjective Social Status
SST	Socio-Emotional Selectivity Theory
SWB	Subjective Well-being
SWLS	Satisfaction with Life Scale
VIF	Variance Inflation Factor
WHO	World Health Organisation

University of Ghana http://ugspace.ug.edu.gh

Table of Contents

DEDICATION ii

ACKNOWLEDGEMENTS iii

ABSTRACT v

LIST OF ABBREVIATIONS vii

Table of Contents x

List of Figures xviii

List of Tables xx

CHAPTER ONE 1

INTRODUCTION 1

1.1 Background of the study 1

1.2 Statement of the problem 5

1.3 Research questions 7

1.4 Objectives 7

1.5 Rationale of the study 8

1.6 Organisation of the dissertation 9

CHAPTER TWO 10

University of Ghana http://ugspace.ug.edu.gh

EMPIRICAL, THEORETICAL AND CONCEPTUAL PERSPECTIVES ON SOCIOECONOMIC STATUS AND PSYCHOLOGICAL DISTRESS 10

2.1 Introduction 10

2.2 Definitions of socioeconomic status and its measurements 10

2.3 Limitations of using One-dimensional measures 18

2.4 Critiques of using a multidimensional approach 19

2.5 Definitions of psychological well-being and its measurements 20

2.6 Global prevalence and predictors of psychological distress 23

2.7 Prevalence and predictors of psychological distress in urban areas in SSA 30

2.8 Prevalence and predictors of psychological distress in rural areas in SSA 35

2.9 Factors that predict psychological distress in urban and rural areas in Ghana 39

2.10 Theory and Conceptualization 44

2.10.1 Social Determinants of Health (SDH) Theory 44

..... **Error! Bookmark not defined.**

2.10.2 Structuralist Perspective 45

2.11. 3 Neo-Marxist Perspective 46

2.11.4 Strengths of the SDH Theory 47

2.10.5 Critiques of the SDH Theory 47

2.11 Conceptual framework 49

CHAPTER THREE 52

University of Ghana http://ugspace.ug.edu.gh

METHODOLOGY 52

3.1 Introduction 52

3.2 Study area 52

3.3 Study design 54

3.4 The Ghana Socioeconomic Panel Survey (GSPS) 54

3.4.1 Study population 55

3.5 Categorization and measurement of variables 60

3.5.3 Sociodemographic characteristics 63

3.5.4 Household Variables 66

3.5.5 Community level factors 68

3.6 Data analysis 68

3.6.1 Data diagnostic test 70

3.6.2 Specification test for the model to assess the effect of sociodemographic and SES factors on psychological well-being in urban areas. 71

3.6.3 Specification test for the model to assess the effect of sociodemographic and SES factors on psychological well-being in rural areas over time. 72

3.6.4 Specification test for the model to investigate the effects of household and community factors on the psychological well-being of urban areas over time. 72

3.6.5 Specification test for the model to investigate the effects of household and community factors on the psychological well-being of rural areas over time. 73

3.7.1 Qualitative study design 74

University of Ghana http://ugspace.ug.edu.gh

3.7.2 Recruitment of participants 77

3.7.3 Ethical considerations 77

3.7.4 Data collection 78

3.7.5 Transcribing and translating 78

3.7.6 Method of qualitative analysis 79

CHAPTER FOUR 80

DISTRIBUTION OF STUDY POPULATION BY SOCIODEMOGRAPHIC, SES, HOUSEHOLD, AND COMMUNITY CHARACTERISTICS 80

4.1 Introduction 80

4.2 Univariate analysis 80

4.2.1 Sociodemographic characteristics of respondents 80

4.2.2 Sociodemographic characteristics of respondents in urban and rural areas 84

4.2.3 Socioeconomic status of respondents 87

4.2.4 Socioeconomic status of respondents in urban and rural areas 89

4.2.5 Household and community characteristics of respondents 92

4.2.6 Household and community characteristics of respondents in urban and rural areas 95

4.3 Discussion 100

4.4 Changes in respondents' sociodemographic, SES, households, and community attributes across waves. 105

University of Ghana http://ugspace.ug.edu.gh

4.5 Cross-sectional changes in respondents' mean psychological distress levels across waves 108

CHAPTER FIVE 111

PSYCHOLOGICAL DISTRESS PREVALENCE AMONG URBAN AND RURAL DWELLERS IN GHANA 111

5.1 Introduction 111

5.2 Psychological distress prevalence in Ghana 111

5.2.1 Psychological distress prevalence rate in urban and rural areas in Ghana 112

5.3 Psychological distress prevalence across respondents' sociodemographic characteristics in urban and rural areas in Ghana 113

5.3.1 Psychological distress prevalence rate by respondents' sex in urban and rural areas 114

5.3.2 Psychological distress prevalence rate by respondents' age group in urban and rural areas 115

5.3.3 Psychological distress prevalence rate by respondents' marital status in urban and rural areas 118

5.3.4 Psychological distress prevalence rate by respondents' household membership status in urban and rural areas 120

5.3.5 Psychological distress prevalence rate by respondents' household size in urban and rural areas 122

5.3.6 Psychological distress prevalence rate by respondents' community of birth in urban and rural areas 124

University of Ghana http://ugspace.ug.edu.gh

5.3.7 Psychological distress prevalence rate by respondents' religious affiliation in urban and rural areas 125

5.3.8 Psychological distress prevalence rate by respondents' region in urban and rural areas 128

5.4 Psychological distress prevalence across respondents' SES in urban and rural areas. 133

5.4.1 Psychological distress prevalence rate by respondents' highest educational qualification attained in urban and rural areas. 133

5.4.2 Psychological distress prevalence rate by respondents' SSS in urban and rural areas. 136

5.4.3 Psychological distress prevalence rate by occupational status in urban and rural areas 137

5.5 Psychological distress prevalence across respondents' household factors in urban and rural areas. 139

5.5.1 Psychological distress prevalence rate by respondents' household wealth quintile in urban and rural areas. 139

5.5.2 Psychological distress prevalence rate by respondents' household debt status in urban and rural areas 141

5.5.3 Psychological distress prevalence rate by respondents' household receipt of transfer in urban and rural areas 142

5.5.4 Psychological distress prevalence rate by respondents' household occupancy status in urban and rural areas 143

University of Ghana http://ugspace.ug.edu.gh

5.5.5 Psychological distress prevalence rate by respondents' household access to ICT in urban and rural areas 144

5.5.6 Psychological distress prevalence by respondents' perceived community trust and support in urban and rural areas. 150

5.7 Discussion 156

CHAPTER SIX 165

EXAMINING THE EFFECTS OF INDIVIDUAL, HOUSEHOLD AND COMMUNITY FACTORS ON PSYCHOLOGICAL WELL-BEING OVER TIME 165

6.1 Introduction 165

6.2 Assessing the effects of SES and sociodemographic factors on the psychological well-being of urban and rural dwellers in Ghana over time. 165

6.3 Discussion 172

6.4 Investigating the effects of household and community factors on the psychological well-being of urban and rural dwellers in Ghana over time. 187

6.5 Discussion 192

CHAPTER SEVEN 202

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 202

7.1 Summary of main findings 202

7.1.1 Psychological distress prevalence among urban and rural dwellers in Ghana 202

7.1.2 Assessing the effect of sociodemographic and SES factors on the psychological well-being of urban and rural dwellers in Ghana over time 203

University of Ghana http://ugspace.ug.edu.gh

7.2.3 Appraising the effects of household and community factors on the psychological well-being of urban and rural dwellers in Ghana over time 204

7.2 Limitations of the study 205

7.5 Recommendations 206

7.5.1 Policy recommendations 206

7.5.2 Recommendations for future studies 208

REFERENCES 209

LIST OF APPENDICES 252

APPENDIX B 258

APPENDIX C 273

APPENDIX D 276

APPENDIX E 280

APPENDIX F 282

University of Ghana http://ugspace.ug.edu.gh

List of Figures

Figure 2.1 WHO framework of social determinants of health……... 46

Figure 2.2 A conceptual framework of factors that predict psychological distress among urban and rural dwellers in Ghana…….52

Figure 3.1 Summary of sample size selection criteria…… 60

Figure 3.2 Map of Ghana showing the three ecological zones for qualitative study..... 76

Figure 5.1 Psychological distress prevalence rate in Ghana..... 112

Figure 5.3 Psychological distress prevalence rate by respondents' sex in urban and rural areas. 115

Figure 5.4 Psychological distress prevalence rate by respondents' marital status in urban and rural areas 119

Figure 5.5 Psychological distress prevalence rate by respondents' household membership status in urban and rural areas..... 121

Figure 5.6 Psychological distress prevalence rate by respondents' household size in urban and rural areas 123

Figure 5.7 Psychological distress prevalence rate by respondents' place of birth in urban and rural areas 125

Figure 5.8 Psychological distress prevalence rate by respondents' SSS in urban and rural areas 137

Figure 5.9 Psychological distress prevalence rate by respondents' household debt status in urban and rural areas..... 137

Figure 5.10 Psychological distress prevalence rate by respondents' household receipt of transfer in urban and rural areas..... 138

University of Ghana http://ugspace.ug.edu.gh

Figure 5.11 Psychological distress prevalence rate by respondents' household occupancy status in urban and rural areas 140

University of Ghana http://ugspace.ug.edu.gh

List of Tables

Table 3.1 Distribution of EAs across the regions in Ghana 57

Table 3.2 Questions for subjective social status 63

Table 3.3 Measurement of sociodemographic characteristics 64

Table 3.4 Questions and responses for other household variables 67

Table 3.5 Specification test for model for panel regression for objective two for urban 71

Table 3.6 Specification test for model for panel regression for objective two for rural 72

Table 3.7 Specification test for model for panel regression for objective three for urban 73

Table 3.8 Specification test for model for panel regression for objective three for rural 74

Table 4.1 Percentage distribution of sociodemographic characteristics of respondents 82

Table 4.2 Percentage distribution of sociodemographic characteristics of respondents in urban and rural areas 85

Table 4.3 Percentage distribution of socioeconomic variables of respondents 88

Table 4.4 Percentage distribution of SES of respondents in urban and rural areas 90

Table 4.5 Percentage distribution of household and community characteristics of respondents . 93

Table 4.6 Percentage distribution of household and community characteristics of respondents in urban and rural areas 98

Table 5.1 Psychological distress prevalence rate by respondents' age group in urban and rural areas 117

Table 5.2 Psychological distress prevalence rate by respondents' religious affiliation in urban and rural areas 127

Table 5.3 Psychological distress prevalence rate by respondents' region in urban and rural areas 131

University of Ghana http://ugspace.ug.edu.gh

Table 5.4 Psychological distress prevalence rate by respondents' highest educational qualification attained in urban and rural areas 135

Table 5.5 Psychological distress prevalence rate by occupational status in urban and rural areas 138

Table 5.6 Psychological distress prevalence rate by respondents' household wealth quintile in urban and rural areas 140

Table 5.7 Psychological distress prevalence rate by respondents' household access to ICT in urban and rural areas 147

Table 5.8 Psychological distress prevalence across respondents' community factors in urban and rural areas 153

Table 6.1 Panel regression analysis results of fixed effects models for urban and rural 168

Table 6.2 Panel regression analysis result of fixed effects model for urban and rural 190

University of Ghana http://ugspace.ug.edu.gh

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The socioeconomic attributes of individuals play a crucial role in shaping various aspects of human well-being throughout their lifespan, encompassing factors such as personal growth, subjective well-being, and physical and mental health (Saegert et al., 2006). Socioeconomic status (SES) describes a person's or a family's social and economic standing in a community. Several components are commonly used to measure SES, including income, education level, occupation, and one's subjective standing on the social ladder.

The educational level reflects the amount and quality of education qualification, often measured by the highest education completed. Higher levels of educational attainment are often correlated with higher income levels and more significant job opportunities (Nadler et al., 2016; Loesch, 2018; Alali, 2022). Individuals with advanced degrees tend to have higher earning potential and are more likely to access resources and opportunities promoting socioeconomic advancement. Additionally, education provides individuals with skills and knowledge to enhance their economic position and increase their socioeconomic mobility (Gloster et al., 2015; Cismaş & Banu, 2016; Liao, 2019).

Another essential SES variable is occupation. Occupation is the type of work an individual engages in and is often categorised based on skill level and income (Navarro-Carrillo et al., 2020). The type of job a person has can significantly impact their socioeconomic status. Certain occupations, such as those in professional fields or business ownership, often have higher salaries and benefits,

University of Ghana http://ugspace.ug.edu.gh

leading to a higher socioeconomic status (Anders, 2015; Friedman et al., 2015; Xie et al., 2016). On the other hand, low-wage and part-time jobs can contribute to lower socioeconomic status due to limited financial resources and lack of access to benefits like health insurance or retirement savings (Wößmann, 2003; Saegert et al., 2006; Aikens & Barbarin, 2008; Kieffer, 2012; Baker, 2014; Li et al., 2020; Lindberg et al., 2022).

Subjective social status (SSS), commonly referred to as an individual's "place on the social ladder," is a distinct and crucial concept in evaluating an individual's socioeconomic status. In contrast to conventional objective metrics of socioeconomic status, which are based on tangible markers such as income, education, or occupation, subjective social status pertains to an individual's sense of their position within the social hierarchy (Hoebel & Lampert, 2020; Nolan & Weisstanner, 2022; Moss et al., 2023). This complex and diverse concept enables individuals to assess their position compared to others, offering valuable insights into their subjective perception of their social and economic status (Antunes et al., 2021; Madigan & Daly, 2023). Subjective social status functions as a beneficial supplement to objective indicators, providing a more comprehensive understanding of an individual's experiences, self-perception, and overall welfare within a society that is not exclusively characterised by material affluence or educational achievements (Duman, 2020; Zou et al., 2020; Moss et al., 2023).

Studies have used different indicators to determine the SES of study participants (Lago et al., 2018; Dewan et al., 2020; Crnkovic et al., 2022). However, this study employs two objective measures (educational attainment and occupation status) and a subjective measure (subjective social status) to determine one's SES. These three classifications of SES are interrelated and jointly contribute to a person's social standing and access to resources and opportunities from an objective and subjective viewpoint. Thus, education and occupation are seen as stable and standardised SES

University of Ghana http://ugspace.ug.edu.gh

measures over the life course. Beyond these objective metrics, subjective social status offers a distinct viewpoint that expresses each person's subjective perception of their social standing. Given that people experience their social and economic location in different ways, this multidimensional approach aids in accounting for the overlap of various social categories in a longitudinal study.

An individual's psychological well-being is threaded into an elaborate composition not just by their own experiences but also by the larger context of their household and community factors.

When people encounter excessive stressors, they might develop psychological distress, which is commonly described as a state of emotional suffering marked by signs of anxiety and sadness (Hawton et al., 2013). The link between household indebtedness and psychological well-being has received some attention in recent years as individuals and families struggle with debt's financial and emotional pressures. For instance, a study by Boyce et al. (2018) used British data to examine how interest rate decisions of the central bank and household indebtedness affected psychiatric morbidity. A key finding from this study showed that people with significant debt burdens have a higher chance of developing psychiatric illness when interest rates are high. Similar results have been found in other studies establishing a direct relationship between high household indebtedness and high psychological well-being (Berger et al., 2016; Hiilamo, 2020).

Moreover, a person's mental health and general psychological well-being can be significantly impacted by the household in-transfer received. It has been revealed that contributory and non-contributory cash transfers considerably improve mental and subjective health in low-and middle-income nations (McGuire et al., 2020). In most cases, these transfers improve several outcomes, such as monetary poverty, education, health and nutrition, savings, investment, and production. (Amidu et al., 2019; Bastagli et al., 2019). Furthermore, the direct and indirect effects of a household's material and financial wealth also predict the psychological well-being of individual

University of Ghana http://ugspace.ug.edu.gh

members. Brown & Gray (2014) study used a nationally representative panel survey to determine how the household's financial situation affects the quality of life and found that overall life satisfaction was significantly influenced by a household's financial worth, assets, and debt levels.

However, another prominent component that dominates the determinants of psychological well-being discourse is the prevailing factors at the community level. Studies have established that the strength of a community's trustworthiness and helpfulness is closely linked to the overall psychological well-being of its residents, fostering a sense of security and support that is essential for mental health (Gordeev & Egan, 2015; Salone, 2019; Wang et al., 2022). Several activities, such as neighbourhood clean-ups, community volunteer programmes, and occupational labour support, to mention a few, exemplify trustworthiness and helpfulness, contributing significantly to the psychological well-being of its members (Lovell et al., 2015; Morelli et al., 2017; Curry et al., 2018).

The interrelationship between sociodemographic, SES, household and community factors and psychological well-being differs among urban and rural dwellers (Islam, 2019; Seruwagi et al., 2022). In urban areas, factors such as the fast-paced and competitive nature of city life, income inequality, high cost of living, and the constant pressure to succeed, coupled with limited access to resources and social support play a crucial role in shaping the psychological well-being of individuals (Lenzi & Perucca, 2021; Krabbendam et al., 2021). In contrast, in rural areas, factors such as limited employment opportunities and social isolation are equally crucial in predicting the psychological well-being of residents (Dosa & Dabu, 2023; Zhang et al., 2023; Deslauriers et al., 2024). Using data from the Ghana Socioeconomic Panel Survey (GSPS) this study examines the pathways through which SES, sociodemographic, household and community factors predict psychological distress of urban and rural dwellers in Ghana over time.

University of Ghana http://ugspace.ug.edu.gh

1.2 Statement of the problem

Globally, factors such as educational attainment, employment status, and subjective social status, have been found to be significant drivers of psychological distress (Duchaine et al., 2017; Chan et al., 2022; Zhang et al., 2023). However, a significant limitation of most of the existing research is the dearth of longitudinal studies that can track changes in people's socioeconomic conditions and their psychological well-being over time.

In Ghana, understanding the long-term effects of socioeconomic factors such as educational attainment, farm ownership, business ownership and community support on psychological distress is challenging because to the absence of longitudinal data. For instance, Novignon et al. (2019) study of socioeconomic inequalities in maternal healthcare utilization, discovered that pregnant women from wealthier households promoted the attendance of at least four antenatal care (ANC) visits as well as delivery by trained attendants (DTA). The study also found higher educational attainment to predict ANC and DTA services among pregnant women significantly. Other studies in Ghana have examined how SES is associated with mental well-being. At the peak of the recent COVID-19 outbreak, a study by Aberese-Ako et al. (2022) found that slum dwellers in urban areas particularly men in Accra and Tema where lockdown measures were imposed reported higher symptoms of depression due to their inability to provide for their families' fundamental necessities. Further, Alhassan (2022), examined the socioeconomic predictors of happiness among men in Ghana and found that higher educational attainment was a significant factor in predicting happiness.

The shortfall associated with findings from cross-sectional studies is the inability to account for changes that may occur among the study subjects and how these changes affect the outcome variable(s). Moreover, the results of the cross-sectional studies cannot measure the proper

University of Ghana http://ugspace.ug.edu.gh

relationship among variables. For instance, data indicates that low SES is linked with a high level of depression (Gadalla, 2009; Hoebel et al., 2017; Kim, 2021) but is unable to account for how changes in SES and other factors alter psychological health outcomes over time.

Longitudinal data, in contrast to cross-sectional studies, offer more robust evidence for causal relationship by enabling the tracking of individuals' psychological distress and socioeconomic status over time. This makes it possible to evaluate whether psychological distress varies in response to changes in socioeconomic status, such as occupational changes or educational attainment, or whether psychological distress already present affects socioeconomic outcomes. Furthermore, longitudinal data records dynamic fluctuations in psychological distress, providing information about how times of economic hardship impact people's psychological well-being. In addition, it makes it easier to identify the psychological distress trajectories of various groups, such as younger versus older people or urban versus rural, illustrating how continuous socioeconomic changes shape their psychological health outcomes (Jokela & Fuller-Rowell, 2022; Jiménez-Solomon et al., 2024; Zhang et al., 2024).

Most studies, however, that have used longitudinal methods to analyse the SES-well-being nexus have largely focused on an individual's SES and other personal variables and how these factors determine their psychological well-being (Lorant et al., 2007; Elwell-Sutton et al., 2019; Luo & Zhao, 2021; Zhou et al., 2021). A few others have incorporated an individual's household level characteristics to examine their effect of psychological well-being (Daly & Robinson, 2021; Duarte & Jiménez-Molina, 2022; Wright et al., 2022). However, longitudinal studies that examine the relationship between SES and psychological well-being of individuals by considering the effects of multiple external factors, such as an individual's household and community characteristics are scarce. Another gap identified in longitudinal studies examining SES and

University of Ghana http://ugspace.ug.edu.gh

psychological well-being is the focus on the overall prevalence of psychological distress over time. However, this study among other objectives examines overall prevalence of psychological distress in Ghana and among individual's sociodemographic, SES, household, and community characteristics over time.

By examining data from a longitudinal study, this study seeks to provide evidence on (a) the effects of changes in the individual sociodemographic and SES factors on psychological well-being over time and (b) the effects of individual's household and community factors on psychological well-being among urban and rural dwellers in Ghana over time.

1.3 Research questions

This research seeks to provide answers to the following questions:

i. What is the prevalence of psychological distress among various sociodemographic and SES groups in Ghana over time?
ii. Which sociodemographic and SES factors affect the psychological well-being of urban and rural dwellers in Ghana over time?
iii. Which household and community factors affect the psychological well-being of urban and rural dwellers in Ghana over time?

1.4 Objectives

The main objective of this research is to explore the effect of SES on the psychological well-being of urban and rural dwellers in Ghana using panel data to unearth evidence for this relationship over time. The specific objectives are:

University of Ghana http://ugspace.ug.edu.gh

i. To examine the prevalence of psychological distress among various demographic and SES groups in Ghana.

ii. To assess the effect of sociodemographic and SES factors on the psychological well-being of urban and rural dwellers in Ghana over time.

iii. To appraise the effects of household and community factors on the psychological well-being of urban and rural dwellers in Ghana over time.

1.5 Rationale of the study

With a 98 percent treatment gap, mental health care in Ghana is still a concern for the country's roughly 2.3 million sufferers of various mental illnesses (WHO, 2023). As a result, biomedical and indigenous approaches are being employed in treating mental illnesses (Kpobi & Swartz, 2018).

In addition to filling a knowledge gap in the literature, this study will help to uncover new information about how sociodemographic and SES factors affect psychological well-being over time. Specifically, this research employs nationally representative data from three waves of longitudinal panel studies in urban and rural areas across Ghana to explore the association between changes in the socioeconomic status of urban and rural dwellers and how this plays out in their psychological well-being over a period. Furthermore, this study seeks to provide in-depth and novelty on how urban and rural dwellers' individual, household and community factors mediate on their psychological well-being over time. The findings of this research will present a comprehensive understanding of SES changes in urban and rural dwellers in Ghana, and how they are associated with psychological well-being outcomes over time. Consequently, findings from

University of Ghana http://ugspace.ug.edu.gh

this study will provide a benchmark for implementing and monitoring of programmes addressing psychological distress in Ghana.

1.6 Organisation of the dissertation

This dissertation has a total of seven chapters and is structured as follows: the first chapter consists of the background of the study, a statement of the problem, research questions, objectives, and rationale. In chapter two, the relevant literature on SES, its definition, measurements, psychological well-being, psychological distress, predicting factors, and the theory underpinning this study are reviewed extensively. Chapter Three on the other hand focuses on the research methods used to gather data for this study. The fourth chapter presents results of the univariate analysis as well as cross-sectional changes in the independent and dependent variables. The prevalence of psychological distress among individuals in urban and rural areas was discussed in chapter five. The sixth chapter examines the remaining two objectives of this study by employing panel fixed effects regressions to examine the demographic and SES factors that affect the psychological well-being of urban and rural dwellers over time and to investigate the household and community factors that affect psychological well-being of urban and rural dwellers over time. Chapter seven focuses on a summary of key findings, conclusions, limitations, and the recommendations.

University of Ghana http://ugspace.ug.edu.gh

CHAPTER TWO

EMPIRICAL, THEORETICAL AND CONCEPTUAL PERSPECTIVES ON SOCIOECONOMIC STATUS AND PSYCHOLOGICAL DISTRESS

2.1 Introduction

This chapter presents a review of literature which focuses on examining and understanding the relationship between SES and psychological well-being. Specifically, this chapter begins by looking at global definitions and measurements of SES and psychological well-being in developed and less developed countries. The chapter further delves into the global and regional prevalence of psychological distress and its predictors. This is followed by a review of the literature on the impact of SES and sociodemographic factors on psychological well-being among urban and rural dwellers in developed and developing countries. The literature on factors that moderate the impact of SES on psychological well-being is reviewed with the gaps identified, after which the chapter concludes with the theoretical and conceptual framework underpinning the study.

2.2 Definitions of socioeconomic status and its measurements

To comprehend the concept of socioeconomic status (SES), examining its definitions and measurements is essential. This section aims to provide a deeper analysis of socioeconomic status by exploring these definitions and measurements. Sociologists have long acknowledged the importance of SES as a fundamental dimension of stratification within society. According to Erik Olin Wright (1997), SES refers to the position individuals or groups hold within a social hierarchy based on their access to and control over economic and social resources. This definition highlights the multidimensionality of SES, which includes not only income and wealth but also occupational

University of Ghana http://ugspace.ug.edu.gh

prestige and education level. Duncan and Duncan (1968) had earlier emphasised the importance of objective and subjective measurements in determining socioeconomic status. Objective measurements rely on indicators such as income, occupation, and education, whereas subjective measurements rely on individuals' perceptions of their own social standing.

Socioeconomic status, however, is a multidimensional construct that encompasses material resources, access to opportunities, and social standing. The American Psychological Association Task Force on Socioeconomic Status study introduced three separate approaches for defining and studying socioeconomic disparities in education and several domains (APA, 2007). The initial approach, sometimes called the "materialist" interpretation of SES, entails a comprehensive analysis of the association between socioeconomic position and outcomes by investigating their correlation with quantifiable factors such as wealth and income. The second approach called the "gradient approach," emphasises relative position and conceptualises SES as a unidimensional hierarchy of individuals within a given community. Nevertheless, the determination of this ranking may be subject to several factors, including subjective elements like individuals' subjective beliefs of their standing. These perceptions can be assessed using the MacArthur scale (Goodman et al., 2001). The third aspect of analysis is the perpetuation of power and privilege hierarchies, sometimes called "class models." This aspect is intricately linked to theories of social stratification, as expounded by Weber in 1922. This approach emphasises categorical measures that can be ordered or unordered (for instance, "the intellectual elite" vs "the business elite" (Piketty, 2018, p.5).

The measurement of SES is essential for studying social disparities and understanding the mechanisms through which social inequalities are reproduced and perpetuated. These interrelated and mutually reinforcing; dimensions contribute to an individual's socioeconomic position within

University of Ghana http://ugspace.ug.edu.gh

society. For example, higher levels of education often lead to better job opportunities and increased income, which in turn can result in more significant wealth accumulation. These measures enable researchers and policymakers to examine how SES influences various aspects of well-being, including health, education, and employment opportunities. Defining SES allows for identifying social inequalities and developing targeted interventions to promote a more equitable and just society (Listl & Jürges, 2015; Harwell, 2018).

Incorporating both objective and subjective approaches to measuring SES in research cannot be over emphasised. Objective indicators, such as income, education, and occupation, serve as quantitative metrics that consistently classify individuals or households into SES groups (Campbell & Parker, 1983; Vos, 2005). Nevertheless, these measures may only partially encompass the intricate nature regarding a person's social and economic encounters. In contrast, subjective measures pertain to an individual's perceptions of their socioeconomic status (SES), encompassing their subjective evaluation of their overall satisfaction, financial stability, and social standing (Zhao et al., 2021; Madigan & Daly, 2023). By employing both metrics, scholars might acquire a more holistic comprehension of an individual's socioeconomic status (Pan et al., 2022; Najdzionek et al., 2023; Zhao et al., 2023).

According to Adler and Stewart (2007), this comprehensive framework allows a more precise assessment of a person's social standing by considering multiple dimensions. Income is a fundamental component of SES, representing an individual's earnings and economic resources. Education plays a crucial role, reflecting an individual's knowledge, skills, and opportunities for social mobility. Occupation provides insight into an individual's work status and professional achievements. Lastly, wealth encompasses an individual's accumulated assets, including properties

University of Ghana http://ugspace.ug.edu.gh

and investments, and these are all taken into consideration by an individual or household to determine one's subjective social status (SSS).

On the other hand, education is widely acknowledged as a significant element that influences an individual's professional standing, providing access to a wide range of job prospects and impacting their place within the social and economic structure (Weiss, 2013). In their article, Blair and Black (2018) assert that education is crucial in determining occupational status. They argue that people with more education are more likely to have higher-paying jobs and hold positions of authority and prestige. The information, skills, and qualifications that education provides people will enable them to excel in the field of their choice. Furthermore, Blair and Black (2018) highlight that education also provides individuals networking opportunities and access to resources, which can further enhance their occupational status. Bolyard & Savelyev (2022) utilized data derived from the National Longitudinal Study of Adolescent to Adult Health to examine the association between the Educational Attainment Polygenic Score (EA PGS) and health consequences in the initial phases of adulthood. The study found a continuous correlation between education and improved health outcomes. Overall, education is instrumental in determining an individual's occupational status, with higher levels of education typically leading to greater career opportunities and upward mobility in the workforce.

Another widely used measure is income, which captures an individual's earning potential and the available material resources (Park, 2008). Additionally, occupational prestige is often used to measure of socioeconomic status, as it reflects the status and social standing associated with an individual's occupation (Adler et al., 2008). These measures, along with others like wealth and neighbourhood characteristics, provide researchers with diverse tools to evaluate socioeconomic status accurately.

University of Ghana http://ugspace.ug.edu.gh

Income-based measurements are commonly used to assess socioeconomic status. These measurements focus on individuals' income levels and potential to access resources and opportunities. One widely used method is the income quintile, which divides the population into five equal groups based on income, providing a relative measure of social standing (Park et al., 2018). Another approach is examining the poverty rate, which identifies the percentage of individuals living below a certain income threshold, often set by the government (Majer et al., 2020). These income-based measurements allow researchers to understand and compare differences in economic well-being across populations, providing insights into disparities in health outcomes and access to education, healthcare, and other social determinants of health.

Research by Galobardes et al. (2006) focusing on measuring socioeconomic status, median income and income quintiles emerged as significant indicators. The median income refers to the midpoint in the income distribution, dividing the population into two halves. This measure enables researchers to assess the financial well-being of individuals and households within a society. Furthermore, income quintiles offer an additional dimension by categorizing the population into five equal groups based on income levels (Best, 2018; Srikanth et al., 2022). This allows for a more nuanced understanding of income disparities among socioeconomic groups. Both median and income quintiles play a crucial role in evaluating a population's socioeconomic status and inequality, providing valuable insights for policymakers and researchers alike.

The limitations of income as the sole indicator of socioeconomic status (SES) have a wealth of documentation in the literature. Galobardes et al. (2006) assert that relying solely on income as a measure of SES fails to capture social stratification's full complexity and multidimensionality. They argue that income alone cannot account for variations in other vital dimensions of SES, such as education level, occupation, and social networks. Furthermore, income may fluctuate over time,

University of Ghana http://ugspace.ug.edu.gh

making it unreliable for assessing long-term socioeconomic standing. Therefore, considering income as a singular measure of SES oversimplifies the complex nature of social class and falls short of offering a thorough comprehensive understanding of a person's social position and associated outcomes.

Furthermore, education-based measurements are essential in capturing an individual's socioeconomic status. Education provides individuals with knowledge, skills, and abilities crucial for socioeconomic development. In the United States, education is widely recognized as a primary means for upward mobility and economic success (Baum et al., 2013). Therefore, it is common for researchers to assess an individual's socioeconomic status based on their educational attainment. Educational attainment measures individual's the highest degree or level of education, ranging from less than high school education to advanced degrees (Davis-Kean, 2005). This measurement is instrumental as it captures the long-term effects of education on one's socioeconomic status and allows for meaningful comparisons between individuals with different educational achievements.

Educational attainment is crucial in determining an individual's socioeconomic status as it affects their earning potential, job opportunities, and social mobility. Individuals with higher levels of education tend to have higher incomes and a more comprehensive range of job opportunities compared to those with less education (Winters, 2018; Roller et al., 2020). Furthermore, education is often considered a form of social capital, as it provides individuals with skills and knowledge that can contribute to their overall well-being and socioeconomic advancement.

Research has shown that the quality of education is a crucial factor in determining an individual's socioeconomic status (SES). According to Sewell, Hauser, and Springer (2004), individuals with access to high-quality education tend to have better economic opportunities and higher social

University of Ghana http://ugspace.ug.edu.gh

mobility. A high-quality education provides people with the information and abilities needed to succeed in their careers, enabling them to secure higher-paying jobs and upward mobility. Conversely, those with restricted opportunities to higher learning are more likely to be trapped in lower-paying jobs and experience socioeconomic disadvantages. Therefore, it is evident that the quality of education significantly impacts an individual's SES, emphasising the importance of addressing educational disparities to promote social equity and economic prosperity.

Occupation-based measurements are another commonly used method of assessing socioeconomic status. This measurement focuses on the individual's job and the level of skill and responsibility it entails. For example, occupational prestige is a widely used measure that ranks occupations based on social standing and level of respect in society (Nwaru et al., 2021; Hughes et al., 2022). This measurement allows researchers to evaluate an individual's socioeconomic status by considering factors such as education, income, and power associated with a particular occupation. Furthermore, occupational classifications such as the International Standard Classification of Occupations (ISCO) provide a standardized framework for categorizing and comparing occupations across different countries and periods (Krzyanowska, 2015). Hence, utilising occupation-based measurements allows for examining socioeconomic status from a unique lens, providing valuable insights into the disparities and opportunities present in society.

Occupational prestige refers to the perceived social standing or esteem associated with a particular job or profession (Blair & Black, 2018). According to Blair and Black (2018), occupational prestige is often linked to actual economic benefits, as individuals in high-prestige occupations tend to have higher earnings than to those in low-prestige occupations. This connection between occupational prestige and economic benefits due to several factors including, the level of education, skills, and expertise required for high-prestige occupations, and the societal demand for

University of Ghana http://ugspace.ug.edu.gh

certain professions. Additionally, high-prestige occupations often provide better job security, benefits, and advancement opportunities, further contributing to their economic advantages. Thus, occupational prestige plays a crucial role in shaping socioeconomic status and its associated advantages, highlighting the diverse measuring dimensions, and defining one's societal standing (Janus & Filar-Mierzwa, 2019; Huang et al., 2022).

Wealth-based measurements are another approach to assessing socioeconomic status. Wealth refers to the abundance of material possessions and financial resources an individual or household possesses. This measurement considers income and includes assets such as property, investments, and savings. In a study by Sullivan and others (2018), wealth was a significant predictor of socioeconomic status, independent of income. This is because wealth reflects long-term financial stability and accumulative resources, while income indicates short-term economic well-being. Therefore, wealth-based measurements provide a comprehensive understanding of an individual's financial standing and can complement income-based measurements in assessing socioeconomic status.

Net worth and assets are crucial in measuring an individual's socioeconomic status. According to Galobardes et al. (2006), these factors provide insights into the financial resources of individuals and households, enabling a more comprehensive understanding of their economic position. Net worth encompasses the complete assets valuation, including financial investments, real estate, and personal property, minus any debts or liabilities. Assets, however, represent the specific economic resources individuals or households own, such as savings accounts, stocks, or properties. These measures provide a quantitative assessment of wealth accumulation and financial stability, highlighting the economic advantages or disadvantages experienced by different socioeconomic

University of Ghana http://ugspace.ug.edu.gh

groups. Consequently, net worth and assets are essential indicators when studying socioeconomic disparities and their impact on health outcomes.

2.3 Limitations of using One-dimensional measures

One of the main limitations of using one-dimensional socioeconomic status (SES) measures is that they need to capture the multidimensional nature of this construct. Socioeconomic status encompasses various aspects including wealth, education, occupation, and income (Adler et al., 2016). Researchers may overlook important aspects of an individual's socioeconomic status by focusing solely on one dimension, such as income. For example, someone with a high income but low educational attainment may face different opportunities and challenges than someone with a lower income but higher educational attainment. Furthermore, one-dimensional measures can perpetuate social inequalities by simplifying complex societal dynamics. Researchers must adopt multidimensional approaches to measure socioeconomic status to obtain a more accurate representation of individuals' social and economic standing in society.

Mirowsky and Ross (2003) highlight the overemphasis on income measures. While income is undeniably crucial in determining an individual's economic standing, its sole reliance as an indicator of SES neglects other crucial dimensions. For instance, assets and wealth, encompassing financial holdings and property, can provide a deeper understanding of an individual's economic well-being. Occupational status, educational attainment, and access to resources and opportunities also contribute to one's SES. If the definition of SES is limited to income metrics alone, it ignores these other significant factors and falls short of offering a thorough assessment of a person's socioeconomic status. Consequently, a broader approach that considers a range of indicators is necessary for a more accurate assessment of SES.

University of Ghana http://ugspace.ug.edu.gh

Another argument against using one-dimension measures is the lack of consideration for non-economic factors. In their study, Galobardes et al. (2006) discuss the lack of consideration for non-economic factors in measuring socioeconomic status. They argue that traditional measures of socioeconomic status often focus solely on economic indicators, such as income or education level, and ignore other important factors that influence individuals' social position. Non-economic factors, such as occupation, social networks, or access to healthcare, can significantly shape an individual's socioeconomic status but are frequently overlooked in measurements. Galobardes et al. (2006) emphasise the need to incorporate non-economic factors into defining and measuring of socioeconomic status to obtain a more comprehensive understanding of social inequalities. By considering a broader range of factors, researchers and policymakers can develop strategies addressing the underlying causes of social disparities and promoting societal equity.

2.4 Critiques of using a multidimensional approach

Critiques of using a multidimensional approach to define and measure socioeconomic status (SES) have emerged in recent literature. Scholars argue that incorporating multiple dimensions, such as income, education, and occupation is complex and difficult to operationalize effectively (Stewart et al., 2016). Furthermore, the multidimensional approach may overlook other important factors that contribute to disparities in SES, such as having access to social support networks, housing, and medical care (Lantz et al., 2010). This implies that more than a multidimensional approach is needed to adequately capture the nuanced and multifaceted nature of SES, potentially leading to an oversimplification of socioeconomic inequalities. Additionally, critics contend that a multidimensional approach can be time-consuming, resource-intensive, and thus impractical for large-scale studies (Adler & Ostrove, 1999). Therefore, it is critical that researchers carefully take

University of Ghana http://ugspace.ug.edu.gh

in account both the advantages and limitations of utilizing a multidimensional approach in defining and measuring SES.

Difficulties in operationalizing and weighting different dimensions of socioeconomic status (SES) have been highlighted by Mirowsky and Ross (2003). The authors argue that the multidimensional nature of SES presents challenges in accurately measuring and quantifying its various dimensions. Traditional measures of SES often rely on indicators such as income, education, and occupation. However, these dimensions may differ in relevance and importance depending on the context and population under study. Additionally, assigning appropriate weights to these dimensions poses further complexity. Mirowsky and Ross emphasise the need for careful consideration when operationalizing and weighing different dimensions of SES to ensure accurate and comprehensive measurement. This recognition of the challenges inherent in SES measurement underscores the importance of adopting a nuanced and context-specific approach to studying socioeconomic disparities.

2.5 Definitions of psychological well-being and its measurements

Psychological well-being is multifaceted and includes many facets of mental health and life satisfaction. In addition to the absence of disease, it is also defined by other factors such as healthy mental functioning, life satisfaction, functional interaction, positive relationships with oneself, other people, and the environment (Jangi et al., 2020). When people can accept their circumstances, establish healthy relationships, manage their environment, be autonomous, set life objectives, and hone their talents and abilities, this is considered excellent psychological health (Faruqi & Pratisti, 2018).

A renowned psychologist, Carol Ryff, defined psychological well-being as "a positive state of functioning characterized by the presence of high levels of positive emotions, the absence of

University of Ghana http://ugspace.ug.edu.gh

negative emotions, and the realization of one's full potential." (Ryff, 1989a, p.10). Keyes (2002), on the other hand, views psychological well-being as a positive and holistic state of functioning that incorporates emotional, psychological, and social domains. It is characterized by individuals' ability to experience positive emotions, engage in fulfilling activities, build and maintain positive relationships, and find meaning and purpose in life. The concept of psychological well-being emphasises positive psychological aspects rather than only the absence of mental illness (Ryff, 1989; Keyes, 2002). Another definition of psychological well-being is provided by Waterman (1993), who emphasises personal growth and fulfilling one's potential. In this perspective, psychological well-being is achieved through developing and expressing one's unique attributes and capabilities. Waterman argues a person's capacity to partake in relationships and activities that are congruent with their innate values, interests, and objectives is what determines their well-being. Thus, pursuing personal growth and realizing one's potential become key factors in attaining psychological well-being. Waterman's definition highlights the importance of self-actualization and the satisfaction of living a meaningful and purposeful life.

Subjective Well-being (SWB) is considered an important component in determining one's psychological well-being. It encompasses an individual's overall emotional and cognitive evaluation of their own well-being, including positive and negative affect and life satisfaction (Diener, 2009). Scholars have proposed various theories and measures to assess subjective well-being, including the hedonic approach, which focuses on the presence of positive emotions and the absence of negative emotions, and the eudaimonic approach, which emphasises personal growth and purpose in life (Ryan & Deci, 2001; Maddux, 2017). Subjective well-being has been conceptualised for more than three decades as encompassing both emotive and cognitive evaluations of one's life (Diener, 1984; Diener et al., 2018). According to Watson et al. (1988), the

University of Ghana http://ugspace.ug.edu.gh

affective aspect comprising positive and negative aspects, is considered an assessment of the feelings people experience regularly, such as grief, fear, fury, and joy, among others. The term "positive affect" describes the sensation of joyful, exhilarating, or happy feelings. It is characterized by feelings of enthusiasm, optimism, and contentment. On the other hand, negative affects encompass unpleasant emotions such as sadness, anger, and anxiety. It involves feelings of distress, hostility, and fear. Positive and negative affects are crucial in determining an individual's overall psychological well-being. Conversely, the cognitive component is conceived of as how individuals compare their total quality of life to a set objective (Diener et al., 1985; Watson et al., 1988). Subjective well-being conceptualization distinguishes between affective evaluations like life satisfaction and cognitive, judgment-focused evaluations, focusing on a person's typical emotional experience. However, scholars have, recently proposed harmony in life as a complement or supplement to life satisfaction (Kjell et al., 2016; Kjell, 2018). Harmony is the feeling of balance and flexibility that a person experiences about her surroundings, as opposed to the emphasis on a psychologically self-imposed ideal involved in assessing life satisfaction (Li, 2008a, b). For example, individuals' most common phrases to express how they pursue harmony include peace, balance, unity, agreement, quiet, mediation, cooperation, tolerance, nature, forgiveness, among others (Kjell et al., 2016). However, when asked to explain their methods for pursuing life happiness, the most often used phrases are employment, wealth, house, gratification, achievement, education, and success (Kjell et al., 2016). Since harmony encompasses behaviours and ideas of a person being in balance, in agreement, or striving for equilibrium or unity with the world around her, it is conceptually distinct from life satisfaction (Garcia et al., 2020b).

Two main approaches are used in measuring psychological well-being: the self-report and the diagnostic measures. Self-report measures are commonly used in the assessment of psychological

University of Ghana http://ugspace.ug.edu.gh

well-being. These measures involve individuals providing subjective information about their thoughts, feelings, and behaviours, which are then used to evaluate their level of psychological well-being. Among the most popular methods for self-reporting is the Satisfaction with Life Scale (SWLS), developed by Diener et al. (1985). This measure assesses an individual's overall satisfaction with their life, encompassing various domains such as relationships, work, and leisure. Another important self-report measure is the Positive and Negative Affect Schedule (PANAS), developed by Watson, Clark, and Tellegen (1988). The PANAS measures positive and negative affect, providing information about an individual's experience of positive and negative emotions. These self-report measures offer valuable insights into an individual's subjective well-being and can be used to inform interventions to enhance psychological well-being.

2.6 Global prevalence and predictors of psychological distress

Psychological distress is a prevalent issue affecting individuals worldwide. According to a study conducted by Steel et al. (2014), approximately one in four people experience psychological distress at some point in their lives. The global prevalence of psychological distress is a significant concern, as it not only impacts individuals but also has far-reaching consequences for societies and healthcare systems. Understanding the prevalence of psychological distress is crucial for policymakers and healthcare professionals, as it aids in the identification of at-risk populations and the development of effective intervention strategies. Psychological distress has been defined as an unpleasant emotional state characterized by symptoms of anxiety, depression, and general mental suffering (Hawton et al., 2013). It encompasses various experiences and affects individuals across different age groups, genders, and cultural backgrounds (Whiteford et al., 2013). The scope of psychological distress extends beyond clinically diagnosed mental disorders to include subclinical levels of distress that may still have a substantial effect on the well-being and functioning of an

University of Ghana http://ugspace.ug.edu.gh

individual (Kessler et al., 2015). Additionally, psychological distress can manifest as a transient condition or persist as a chronic state, varying in severity and duration among individuals (Baxter et al., 2014). Psychological distress and mental disorders are often used interchangeably, yet they hold distinct differences.

Psychological distress is a normal reaction to various life challenges and does not necessarily indicate the presence of a mental disorder. Mental disorders, on the other hand, encompass clinically significant patterns of thought, emotion, and behaviour that significantly impair a person's daily functioning. Diagnosis manuals such as the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association, 2013) provide detailed criteria for identifying and treating them.

Various studies have shed light on the global prevalence of psychological distress. In a study by Steel and colleagues (2014), the authors intended to assess the global prevalence of psychological distress. The researchers engaged in a comprehensive literature review, analysing various studies published from 1990 to 2014. The findings revealed that psychological distress is a widespread phenomenon affecting individuals worldwide, with varying prevalence rates across different populations. Age, gender, socioeconomic status, and cultural differences influenced the prevalence and manifestation of psychological distress. Furthermore, the study emphasised the importance of understanding the global burden of psychological distress to develop appropriate mental health interventions and policies that can effectively address this significant public health concern. Additionally, a systematic review by Demyttenaere et al. (2004) found that the 12-month prevalence rate ranged from 8.6 percent to 32.2 percent across different countries. Furthermore, a cross-national study conducted by Kessler et al. (2007) revealed that the prevalence of any mental disorder ranged from 4.3 percent to 26.4 percent in fourteen countries. Another European study

University of Ghana http://ugspace.ug.edu.gh

reported higher psychological distress rates in Eastern European countries than in Western European countries (Elgar et al., 2017). Similarly, a study in the United States found regional disparities with higher rates of psychological distress in the Southern states compared to the Northeastern states (Wu et al., 2021). These differences suggest that factors such as socioeconomic conditions, cultural norms, and access to mental health services may contribute to the differences in psychological distress prevalence across regions.

Other studies have also investigated the prevalence of psychological distress in less developed regions such as Asia. For example, a systematic review by Naveed and colleagues (2020) on the South Asian region found that nearly 15.0 percent of the population in this area suffers from one or more mental disorders. Furthermore, a study found that 47.5 percent of rural older adults in Shandong, China reported psychological distress, which was indirectly associated with chronic conditions and persistent pain through decreased sleep quality and self-rated health (Ma et al., 2021).

In sub-Saharan Africa, existing literature on the prevalence of psychological distress varies equally across countries. Tlhajoane et al. (2018) study sought to ascertain the prevalence of psychological distress within a community affected by widespread HIV in East Zimbabwe using cross-sectional data. The study showed that distress prevalence was 4.5 percent among males and 12.9 percent among women. A similar study by Tchankoni et al. (2020) assessed the incidence of psychological distress and identified potential factors among populations at risk for HIV in Togo. Results from this study revealed that the overall prevalence of mild psychological distress among males engaged in sex with other males (MSM), female sex workers (FSW), and drug users (DU) was 19.9 percent. The study further identified risk factors associated with this prevalence rate as advancing age, HIV infection, and the intake of alcohol in a hazardous manner. Duko et al. (2020)

University of Ghana http://ugspace.ug.edu.gh

reviewed the literature to determine the prevalence of psychological distress among patients diagnosed with tuberculosis in the SSA region. The prevalence of psychological distress was found to be 61.1 percent in Cameroon, 49.4 percent in Angola, 47.7 percent in Ethiopia, 34.0 percent in Nigeria, and 29.3 percent in South Africa when the data from multiple studies were combined.

Sociodemographic attributes like age, marital status, gender, religious affiliation, and household size among others are key predictors of psychological distress. Among various cultures, gender disparities-related psychological distress has been observed. Most studies have found that women are consistently more distressed compared to men (Osayomi & Adegboye, 2017; Viertiö et al., 2019; Kolakowsky-Hayner et al., 2021). Factors that have been attributed to this trend include women's battle over work and family, lack of decision-making power, being a single parent, and poor self-esteem (Bilodeau et al., 2020). In addition to these factors, research by Gust et al. (2017) investigated the factors that contribute to psychological distress among young Kisumu women in Kenya. The findings showed that women with recent food insecurity, a history of forced intercourse, and self-reported sexually transmitted infections had higher psychological distress. Other studies identified infertility, involuntarily childlessness among women and gendered racism as other predictors of higher psychological distress (McQuillan et al., 2003; Thomas et al., 2008). This notwithstanding, a few studies observed a high prevalence of psychological distress in men. Utilizing the Sexual Health Inventory for Men (SHIM) questionnaire, Barbonetti et al. (2012) assessed the level of psychological distress in males with spinal cord injury (SCI) and erectile dysfunction (ED). The study discovered that men with ED had psychological distress levels that were considerably greater than those without ED. Furthermore, studies have also revealed that minority sexual groups such as gay and bisexual men indicated greater degrees of psychological distress compared to those who identify as heterosexual.

University of Ghana http://ugspace.ug.edu.gh

Age groups around the world experience psychological distress differently. While some studies indicate a drop in distress with increasing age, there are variations in how age impacts psychological distress (Drapeau et al., 2014; Rega et al., 2022; Hale et al., 2023). To forecast psychological distress across a range of age groups, two theoretical frameworks, the Socio-Emotional Selectivity Theory (SST) and the Strength and Vulnerability Integration Model (SAVI), are employed to explain lower psychological distress with age. The Socio-Emotional Selectivity Theory posits that people's motivational orientation starts to alter as they become older and start to regard their time as limited (Carstensen, 1991). Due to these changes in motivation throughout a person's lifetime, SST predicts that getting older is related to lesser psychological distress (Best et al., 2023). SAVI, on the other hand, posits that increased frequency and successful use of attentional strategies, assessments, and behaviours to control common emotional situations are associated with ageing (Charles, 2010). Corroborating the claims of these theories Best et al. (2023) used a 29-wave longitudinal survey done with a national life-span sample of Americans during the first 16 months of the COVID-19 epidemic to evaluate age variations in psychological distress. The study found that even though age gaps shrank over time, younger persons still reported higher levels of psychological distress than older ones. Another study (Jackman et al., 2018) employed secondary analysis of data gathered as part of a bigger research of the transgender community in the United States to investigate internalized trans negativity and emotional distress in two age groups of transgender people who identify as feminine. The results also found that the younger trans-feminine people recorded more psychological distress than the older trans-feminine individuals despite the enhanced awareness of transgender people and rising acceptance of gender variation in the United States.

University of Ghana http://ugspace.ug.edu.gh

Furthermore, psychological distress is related to marital status. Nevertheless, the link between marital status and distress is nuanced and incorporates both selection and causation factors. A selection effect, for instance, may be shown by the fact that people's distress levels may have existed before marital transitions whereas changes like divorce might cause more distress for people, particularly women (Hope et al., 1999; Tavares & Aassve, 2013). In numerous studies, widows consistently demonstrated higher levels of psychological distress than the married (Carr et al., 2014; Garvey et al., 2018; Narendra, 2023). However, preloss marital quality has been cited as key in determining psychological distress among the widowed. Those with supportive marital relationships may face greater psychological distress after losing a spouse, whereas those in unhappy marriages may only see a worsening of their physical health but not distress (Lee et al., 2023).

Darghouth et al. (2015), used data from the National Latino and Asian American Study (NLAAS) to investigate the connection between marital status and psychological distress among Latinos in the United States. Findings from this study established that being separated or divorced was associated with higher levels of psychological distress in women, whereas marital status had no bearing on psychological distress in men. Even for the married, it has been found that psychological distress and the functioning of a marriage predict each other. Villeneuve et al. (2014) studied older couples living in French-speaking communities in Quebec for roughly 18 months. Two key findings from this study were that: marital functioning and psychological distress are both predictive of one another for women, indicating a two-way relationship between the two variables, and that the link between marital functioning and psychological distress in men was shown to be unidirectional, with marital issues being associated with greater psychological distress in men.

University of Ghana http://ugspace.ug.edu.gh

In addition to the high prevalence of psychological distress across different sociodemographic groups, there are significant disparities in its occurrence due to other factors such as limited access to mental healthcare services, poverty, social inequality, and exposure to violence and conflicts (Gopikumar, 2014; Cuartas Ricaurte et al., 2019; Achdut et al., 2021). According to Adler et al. (2016), social factors such as income, education, employment, and socioeconomic status have a significant impact on mental health outcomes. Lower socioeconomic status and lack of access to resources and opportunities can contribute to increased levels of psychological distress. Carhuatanta et al. (2014) conducted a study to locate chromosomal areas that predicted the acquisition of fear learning and emotional behaviour after exposure to a controlled or chronic stress environment using the BXD behavioural genetics mouse model. The study found that specific genetic loci are linked to emotional behaviour in both control and chronic stress situations, indicating that the interaction of a person's genetic background and past experiences with stress affects behavioural outcomes.

Globalization, on the other hand, has had a profound impact on various aspects of society, including economics, culture, and communication. This undoubtedly has had a significant impact on the spread and recognition of psychological distress worldwide. For instance, multinational corporations, such as Apple and Toyota, have expanded their operations worldwide, resulting in increased trade and investment across borders (Callanan, 2015). Additionally, the internet and advancements in technology have facilitated global connections, allowing individuals from different parts of the world to communicate easily and access information instantaneously (Ritzer & Dean, 2015). Furthermore, globalization has led to the spread of popular culture, as seen in the global popularity of Hollywood movies and fast-food chains like McDonald's (Matusitz & Payano, 2012). Economic uncertainty, job insecurity, and increased competition are some of the

University of Ghana http://ugspace.ug.edu.gh

consequences of globalization that have been associated with psychological distress (Colantone et al., 2015; Ljajić et al., 2016). Additionally, the pressure to conform to global standards of beauty, success, and happiness, as perpetuated by media and consumerism, further exacerbates distress among individuals (Benbow-Buitenhuis, 2014).

2.7 Prevalence and predictors of psychological distress in urban areas in SSA

The prevalence and predictors of psychological distress in urban areas in sub-Saharan Africa have been the subject of growing interest and concern. With rapid urbanization and the increasing urban population in the region, it is vital to comprehend the elements that lead to psychological distress in these settings. One study conducted by Mbanuzuru et al. (2022) in Anambra state, Nigeria, confirms the importance of studying psychological distress in urban areas in SSA. Assessing the occurrence of stress disorders among teenagers in school, the authors found a higher prevalence of stress disorders among teenagers in urban areas compared to those in rural areas. A prior study by Harriman et al. (2021) aimed to investigate the racial disparities in psychological distress within post-apartheid South Africa utilised cross-sectional data obtained from a nationally representative survey. One important conclusion drawn from this research was that persons of African descent residing in formal urban set-ups exhibited increased degrees of psychological distress compared to those residing in both formal and informal rural locales. Furthermore, a cross-sectional study conducted by Ali et al. (2020) in a Nigerian urban setting revealed that approximately 38.0 percent of participants experienced symptoms of psychological distress. Similarly, another study conducted by Wafula et al. (2019) in Kenya found that 45.0 percent of participants residing in urban areas reported experiencing psychological distress symptoms. Another study conducted in Nigeria revealed a high prevalence of psychological distress among residents of urban areas. The research examined the relationship between geographical location and psychological distress,

University of Ghana http://ugspace.ug.edu.gh

finding that urban inhabitants reported significantly higher levels of distress compared to their rural counterparts (Adeosun et al., 2018). This study corroborates previous findings and further emphasises the elevated prevalence of psychological distress in urban settings in SSA.

The high prevalence of psychological distress in urban areas can be attributed to several factors. One significant factor is the rapid urbanisation happening in sub-Saharan Africa just like other developing countries. As more people move to cities from rural areas in pursuit of better employment prospect, they face numerous challenges such as overcrowding, high competition for limited resources, and infrastructural deficiencies (Hugo, 2019; Keopasith & Neng, 2020; Lagakos,2020). These factors contribute to increased stress levels and a higher likelihood of experiencing psychological distress (Rostampoor-Vajari, 2012; Keopasith & Neng, 2020; Lagakos, 2020).

The rapid population growth, coupled with inadequate housing and infrastructure, has resulted in cramped living conditions for many individuals and families living in urban areas in SSA (Osumanu et al., 2016; Inmpey, 2019). Overcrowding can lead to various negative consequences, such as reduced privacy and a higher risk of infectious diseases, noise, and pollution, among others (Ochodo et al., 2015; Lima et al., 2020). Studies have shown that exposure to high levels of noise can result in various negative mental health consequences, including stress, anxiety, and depression (Smith et al., 2018). Additionally, the presence of air pollution in urban environments has been linked to increased psychological distress, as it can cause respiratory problems and cardiovascular complications (Brooks et al., 2011).

Again, there are other socioeconomic and sociocultural factors that are significant predictors of psychological distress in urban areas. Mthembu et al. (2017) used data from a nationally representative household survey conducted in 2012 to examine the factors that are linked to

University of Ghana http://ugspace.ug.edu.gh

psychological distress in South Africa. In essence, the study's findings indicated that females, the elderly, individuals with alcohol abuse, those who are jobless, and individuals with HIV/AIDS demonstrated higher levels of distress in urban areas. In a recent study, Tippens et al. (2021) study employed a cross-sectional research design and utilized snowball sampling methodology to explore the prevalence of psychological distress, as well as the stressors and support systems experienced by urban-displaced Congolese adults residing in Kenya. From the findings, it emerged that there was a significant correlation between individuals with advanced age, having dependents, experiencing feelings of isolation or loneliness, confusion or uncertainty, and fear of seeking healthcare while ill and higher levels of distress. These findings exhibit a remarkable degree of consistency with other studies (Allen et al., 2011; Kidwai, 2014; Matiullah et al., 2021), regardless of variations in time, location, and research methodologies employed.

Inequality is another prominent issue in urban areas in sub-Saharan Africa that has been linked to increased levels of psychological distress. Duthé et al. (2016) employed data obtained from the Ouagadougou Health and Demographic System Site (Ouaga HDSS) to assess the prevalence of major depressive episodes among the adult population residing in Ouagadougou, Burkina Faso. Additionally, the study aimed to investigate the potential correlation between major depressive episodes and various demographic, socioeconomic, and health-related factors. The primary theme of inequality derived from the results of this study pertained to the correlation between household food scarcity, instances of physically violent victimization, and the manifestation of psychological distress. Moreover, the lack of access to necessities such as clean water, adequate healthcare, and quality education further exacerbates the disparities and deepens the sense of inequality. Consequently, individuals experiencing inequality are more likely to experience psychological distress, including symptoms of depression, anxiety, and stress (Achore & Bisung, 2022).

University of Ghana http://ugspace.ug.edu.gh

Poverty is also one fundamental issue impacting the well-being of individuals and communities in urban areas in sub-Saharan Africa as it perpetuates and deepens inequalities. The prevalence of poverty in these regions serves as a predictor for the occurrence of psychological distress. The lack of access to necessities such as food, water, and healthcare exacerbates feelings of hopelessness and despair (Gyasi et al., 2020; Mũrage et al., 2023). Unemployment, on the other hand, is a critical issue faced by many individuals and societies around the world. In sub-Saharan Africa, particularly in urban areas, the prevalence rates of unemployment are alarmingly high (Viljoen, 2015; Adedoyin, 2021). This is attributed to various factors, including rapid population growth, limited job opportunities, and insufficient educational resources (Kibret, 2014; Jibril Mohammed et al., 2018; Debele, 2020). High levels of unemployment have detrimental effects on the psychological well-being of individuals, leading to increased levels of psychological distress and mental health problems (Jenkins et al., 2010; Canavan et al., 2013).

Research has shown that sociocultural factors such as migration, acculturation, and social support play significant roles in the prevalence and predictors of psychological distress in urban areas in sub-Saharan Africa (Hill et al., 2019). These factors encompass a range of social and cultural influences that contribute to the experience of psychological distress within the urban context. The prevailing migratory trend observed in sub-Saharan Africa demonstrates a significant movement from rural to urban areas as individuals actively pursue economic and social prospects in urban areas (Adepoju, 2011; Geyer & Geyer, 2015; Lucas, 2016). These migrants face numerous challenges, such as social isolation, discrimination, and limited access to basic services, such as healthcare and education, that can contribute to psychological distress (Olowu, 2014; Labinjo et al., 2020).

University of Ghana http://ugspace.ug.edu.gh

Moreover, the process of adaptation to an unfamiliar environment can be overwhelming, further exacerbating their psychological well-being (Davey, 2017; Hasanović et al., 2020; Idemudia et al., 2020). In the context of urban areas in sub-Saharan Africa, acculturation significantly influences the prevalence of psychological distress. Migrants who experience greater difficulty in adapting to the urban context and assimilating into the new cultural norms are more likely to experience psychological distress (Jowell et al., 2018; Labinjo et al., 2020). This suggests that the process of acculturation can have negative effects on individuals' mental well-being, with the level of distress being influenced by various factors such as language proficiency, social support, and discrimination experiences (Meyer et al., 2017; Idemudia et al., 2020; Choy et al., 2021). Social support received by migrants at the destination, for example, has been found to play a crucial role in mitigating psychological distress (Wen et al., 2017; Brailovskaia et al., 2019; Khatiwada et al., 2021). Studies have highlighted that individuals who have access to supportive social networks, such as family, friends, and community, are more likely to experience lower levels of psychological distress (Kabiru et al., 2010; du Plooy et al., 2019; Tulin & Smith, 2020). These networks provide emotional, informational, and instrumental support, which are key elements in buffering against the negative impacts of urban stressors (Garip & Asad, 2016; Guveli et al., 2016).

The implications and consequences of psychological distress on individuals and communities in urban areas are vast and multifaceted. For instance, a study by Oladipo et al. (2018) found that individuals experiencing psychological distress were more prone to participate in risky behaviours such as drug abuse and unprotected sex. This not only negatively impacts their own health but also increases the risk of spreading infectious diseases like HIV/AIDS. Furthermore, psychological distress has been linked to poorer academic performance and reduced productivity in the workplace (Maringe et al., 2016). Research has shown that individuals experiencing psychological

University of Ghana http://ugspace.ug.edu.gh

distress are likely to have impaired social functioning, resulting in difficulties in forming and maintaining relationships (Muga et al., 2012). This can lead to a breakdown in social support networks within communities, consequently impacting overall social cohesion. Furthermore, psychological distress is also associated with economic burden, as individuals affected may be unable to engage in productive activities or work effectively (Patel et al., 2007).

2.8 Prevalence and predictors of psychological distress in rural areas in SSA

Rural areas in SSA are characterized by a unique set of challenges and realities. In these regions, most of the population predominantly engages in agricultural activities and faces significant economic and social disparities. Limited access to essential services such as healthcare, education, and infrastructure exacerbates existing inequalities. Various studies have been conducted to assess the prevalence of psychological distress in rural areas of SSA. For instance, a study by Okulate et al. (2010) found a high prevalence of psychological distress among rural dwellers in Nigeria, with 22.5 percent of participants meeting the criteria for mood disorders. Similarly, another study by Shidhaye et al. (2013) in Ethiopia reported a high prevalence of psychological distress among communities living in rural areas, with an estimated 40.0 percent of participants experiencing symptoms of depression. Furthermore, research by Gureje et al. (2006) in a rural population of Uganda revealed that 13.8 percent of individuals had symptoms consistent with a diagnosis of major depressive disorder.

Quite like predictors of psychological distress in urban areas in SSA, factors such as social isolation, poverty, unemployment, limited access to healthcare services, lack of infrastructure and other sociocultural factors account for psychological distress in rural areas. A study conducted in rural communities in sub-Saharan Africa found that individuals who reported having fewer social connections and limited access to support systems were more likely to experience high levels of

University of Ghana http://ugspace.ug.edu.gh

psychological distress (Berger et al., 2018). This finding suggests that the absence of close relationships and the inability to seek help from others may contribute to feelings of loneliness, isolation, and emotional burden among individuals living in rural areas. Furthermore, a lack of social support can lead to increased stress levels and difficulty in coping with challenging life circumstances, further exacerbating psychological distress (Patel, 2018).

Socioeconomic factors such as poverty and unemployment have been identified as key determinants of psychological distress in rural areas of sub-Saharan Africa (Smith et al., 2015). Poverty, characterized by a lack of access to necessities and resources, has been consistently associated with higher levels of psychological distress (Patel et al., 2010). The scarcity of financial means limits individuals' ability to meet their basic needs, causing significant stress and psychological strain (Lund et al., 2010). Unemployment, on the other hand, exacerbates the impact of poverty by further limiting individuals' access to socio-economic resources and opportunities (Patel et al., 2010). This lack of employment opportunities not only hampers economic well-being but also contributes to a sense of hopelessness, leading to increased psychological distress (Lund et al., 2010). Limited access to healthcare services is another significant factor that contributes to the prevalence of psychological distress in rural areas in SSA. A study by Ezeamama and colleagues (2015) highlighted the significant barriers to accessing healthcare services in rural communities. These obstacles included insufficient infrastructure for the healthcare industry, few transportation options, and extensive travel times to healthcare institutions. As a result, residents in rural areas are trapped in terms of seeking timely and appropriate healthcare when faced with psychological distress. The lack of mental health professionals in these regions further exacerbates the problem as it restricts access to specialized care. Moreover, the shortage of qualified healthcare providers and the high cost of services in private healthcare facilities pose additional obstacles to

University of Ghana http://ugspace.ug.edu.gh

obtaining necessary treatment. Such limited access to healthcare services intensifies the burden of psychological distress in rural areas in SSA. The prevalence and impact of psychological distress may also be influenced by stressors unique to these regions. One such stressor is agricultural challenges. Rural communities often rely heavily on agriculture as their primary source of income and livelihood. However, factors such as unpredictable weather patterns, limited access to resources and technologies, and poor soil quality can significantly impact agricultural productivity, leading to financial insecurity and increased stress levels among individuals in these areas (Gureje et al., 2020). Additionally, the lack of adequate infrastructure in rural areas, including limited access to healthcare facilities and transportation, can further exacerbate the stress experienced by individuals.

Sociocultural factors such as stigma around mental health and gender inequality play a significant role in the prevalence and predictors of psychological distress in rural areas in sub-Saharan Africa. Studies have indicated that mental health issues are often stigmatized in these regions, leading to underreporting and a lack of access to appropriate care (Keynejad et al., 2016). In many rural communities in SSA, mental health issues are seen as a personal weakness or taboo subject (Ng et al., 2010). Moreover, the prevailing belief that mental health problems are caused by witchcraft or supernatural forces further discourages individuals from seeking help (Mbwayo et al., 2013). This cultural context, in addition to inadequate comprehension and awareness among rural populations, creates an environment where psychological distress remains hidden and untreated. In addition, the scarcity of mental health resources in rural areas exacerbates the problem, as individuals often lack access to trained professionals and appropriate treatment options (Muga et al., 2009).

Apart from the scarcity of trained mental health professionals in rural areas and the stigma associated with the condition, language and communication barriers are also significant observable

University of Ghana http://ugspace.ug.edu.gh

challenges confronted in relation to psychological distress in rural areas (Hege et al., 2018; Trembath et al., 2021). As highlighted by Alem et al. (2007), the lack of mental health services in local languages constrains rural populations' access to adequate care and treatment. Additionally, cultural factors may further complicate communication, as certain psychological concepts and experiences may not have direct translations or equivalents in local languages. The existing gender inequalities further exacerbate this situation, as women face additional barriers to seeking help due to social, cultural, and economic factors (Keynejad et al., 2016). Societal expectations and norms surrounding mental health contribute to the perpetuation of stigma, ultimately hindering individuals from seeking the necessary support and treatment (Samari et al., 2022; Koutra et al., 2023).

Studies have shown that, partly because of the above factors, high levels of psychological distress in rural areas can have significant implications on productivity, economic growth, and development in these communities (Canavan et al., 2013; Dzator et al., 2016). The mental well-being of individuals is closely linked to their ability to function effectively in various aspects of life, including work and economic activities (Kawakami et al., 2008; Corbière et al., 2013; Serdiuk, 2022). Psychological distress can lead to impaired concentration, decreased motivation, and heightened stress levels, all of which can negatively impact productivity levels (Murphy et al., 2007; Dobson & Schnall, 2018). This, in turn, can undermine economic growth and development in rural communities, as reduced productivity hinders the generation of income and limits opportunities for progress. Additionally, the presence of psychological distress in rural areas can hinder the development of essential services and infrastructure, such as healthcare and education systems, which are crucial for sustainable development in these communities (Kawakami et al., 2008; Perkins et al., 2019).

University of Ghana http://ugspace.ug.edu.gh

2.9 Factors that predict psychological distress in urban and rural areas in Ghana

In both urban and rural communities in Ghana, the prevalence of psychological distress continues to be of great concern. Therefore, understanding the personal and external predictors of psychological distress is significant for several reasons, including providing evidence of recurrent predictors, affected population, prevalence, awareness creation and implementation of tailored interventions by authorities responsible.

Numerous studies have demonstrated that high levels of psychological distress are largely related to poor income, restricted access to healthcare and education, and high unemployment rates (Boateng, 2019; Chirwa et al., 2020; Sulemana et al., 2021). These SES characteristics are crucial in Ghana, where there are clear differences between urban and rural areas in terms of poverty rates and resource access (Molini, 2015; Diao et al., 2019). Studies in Ghana have established a significant association between psychological distress and urban characteristics. For instance, Greif and Dodoo (2015) used a population-based study approach to determine the frequency of mental health issues and the factors that predict them in underprivileged urban areas of Accra, Ghana. The results discovered that local stressors such as poverty, unemployment, and poor sanitation lead to mental health issues in poor urban communities of Accra. This may be explained by the fact that urban surroundings expose people to more violence, crime, and other social stressors (Owusu et al., 2016). Moreover, rapid urbanization and migrant inflow in metropolitan areas result in housing shortages and crowded living conditions. Consequently, this leads to decreased privacy, higher noise levels, and heightened social competition, which increases the risk of psychological distress (Owusu & Yeboah, 2018).

In both urban and rural communities in Ghana, economic inequality and poverty are two key causes of psychological distress. Economic inequality is the unequal distribution of wealth and resources

University of Ghana http://ugspace.ug.edu.gh

among individuals or groups within a community whereas poverty is the lack of access to fundamental needs and resources. Morgan et al. (2021), used cross-sectional data from a Ghanaian study on ageing, health, lifestyle, and health services (AHLHS) that was carried out in the Ashanti and Greater Accra to examine the impact of the COVID-19 pandemic on psychological distress. Findings from this study indicated that psychological distress was substantially correlated with gender, employment position, chronic non-communicable diseases (NCDs), perceived health status, and receipt of COVID-19 information. Sulemana et al., (2021) utilized data from Ghana's Rounds 2 and 3 of the Afrobarometer Surveys, which were carried out in 2002–2003 and 2005–2006, respectively to analyse how unemployment affected psychological distress in Ghana. A key finding from this study showed that part-time job seekers and full-time employees who are looking for work were more likely to report having significant levels of psychological distress.

Additionally, there is evidence of the effect of limited educational opportunities and low literacy on psychological distress in both urban and rural areas in Ghana. Kushitor et al. (2018) employed data from the Urban Health and Poverty Survey (EDULINK Wave III), carried out in 2013 in three urban poor neighbourhoods in Accra: Agbogbloshie, James Town, and Ussher Town and found perceived economic status, educational attainment, and place of residence as additional elements linked to psychological distress.

Sociodemographic variables also strongly influence a person's experiences and general well-being, including the degree of psychological distress. Studies have delved into the intricate interplay between sociodemographic features and psychological distress in Ghana, highlighting the multifaceted nature of this phenomenon. Boima et al. (2020) examined the prevalence and risk factors for depression in young and older adult hypertension patients using data from the World Health Organization Study of Global Ageing and Adult Health Wave 2 (2014/2015) for Ghana.

University of Ghana http://ugspace.ug.edu.gh

The study revealed that the prevalence of depression was nearly twice as high in older hypertension patients as it was in younger ones. Furthermore, it was found that participants with no religion had a greater likelihood of experiencing depression than Christians over seven times, while participants in the Volta region had a greater likelihood of experiencing depression than those in the Greater Accra region over eight times. Other studies carried out among older people in Ghana have also confirmed the high prevalence of distress (Lloyd-Sherlock et al., 2019; Gyasi et al., 2020; Morgan et al., 2021).

However, in comparing the variations in psychological distress between urban and rural areas, Nanewortor (2011) used data from senior high school students in Ghana to assess religiosity, psychological distress, Afrocentrism, and suicidal ideation. One key finding of this study was that compared to teenagers living in cities, those who lived in rural areas had higher levels of psychological distress and suicidal thoughts. In Ghana, it has been discovered that marital status is related to psychological distress. Older adults in Ghana, particularly women, have been linked to psychological distress after experiencing spousal loss, such as widowhood and divorce/separation (Gyasi & Phillips, 2020). Additionally, single mothers in Ghana have been discovered to experience more psychological distress than women with partners, driven by elements such as employment status, family size, and educational level (Opoku Mensah et al., 2017). Another study by Anim (2012) to assess marital distress in Ghanaian married couples also found that wives in Ghanaian marriages frequently experience greater distress than their husbands.

Yet another important determinant of an individual's psychological well-being is their household characteristics. Households, as the fundamental unit of society, function as a microcosm in which individuals encounter and navigate the intricacies of existence. The psychological well-being of individuals residing in a household is greatly influenced by many household features, such as size,

University of Ghana http://ugspace.ug.edu.gh

composition, and socio-economic considerations (Ruiz-Tagle & Urria, 2022; Anakpo & Kollamparambil, 2023). These elements not only shape daily interactions inside the household but also play a crucial role in determining the overall well-being of its members. To provide empirical evidence for this relationship, Annim et al. (2015) used data obtained from four rounds of the Ghana Demographic and Health Surveys (GDHSs) spanning the years 1993 to 2008. One key objective of this study was to evaluate the impact of household size and wealth level on the association between reliance and child health outcomes. An important finding that emerged from this study indicated that households characterized by an equal number of dependent children, the presence of children under the age of five in nucleated households, and high-wealth status households exhibited superior health outcomes in comparison to children in non-nucleated households. Similarly, a study by Zereyesus et al. (2016) utilized data from the 2012 population-based survey from Northern Ghana to investigate the correlation between household-level socioeconomic and demographic characteristics and the metric of collective physical health of the household as an aspect of overall well-being. The study's primary findings indicated a significant correlation between a father's educational level and the number of dependents with the most substantial knowledge on the overall physical well-being of the family. Domfe and Aryeetey (2016) on the other hand, aimed to investigate the changes in household composition in Ghana from 1991-1992 to 2012-2013 and the general well-being of older individuals, utilizing data from the Ghana Living Standard Survey. The results indicated that there was a positive correlation between a greater number of economically active household members and household possession of specific material and social resources and the well-being of older individuals.

Furthermore, in an era characterized by the extensive presence of ICT, the function of these digital instruments goes beyond simply convenience and connectedness. The importance of household

University of Ghana http://ugspace.ug.edu.gh

access to ICT in influencing the psychological well-being of persons residing in that household cannot be underestimated. Annan and Archibong (2023) conducted a randomized controlled trial (RCT) to assess the effects of a brief intervention, including "mobile phone calling credit" on a sample of low-income households in Ghana. The study aimed to provide a nationally representative analysis of the repercussions of the COVID-19 epidemic. The results indicated a notable reduction of mental distress by 9.8% and a decrease of 2.3 percentage points in the probability of severe mental distress among participants in the treatment group. Specifically, individuals who were initially unable to make unexpected calls required SOS airtime assistance and digital loans experienced a significant decline in these behaviours compared to the control group.

The communities where people live, on the other hand, have a significant role in shaping the psychological well-being of individuals, as they provide the context in which individuals are exposed to various social, economic, and cultural factors (Kuehl et al., 2016; Gan et al., 2022). The psychological well-being of individuals is influenced by various factors, including the strength of their social relationships, the presence of support systems, the quality of their local surroundings, and the availability of community resources (Taylor et al., 2012; Ahn et al., 2017).

In their study, Gyasi et al. (2019) utilized data from the Aging, Health, Psychological Wellbeing, and Health-seeking Behavior Study conducted in 2016/2017. The objective of the study was to analyze the individual and combined effects of loneliness and living alone on the risk of experiencing psychological distress (PD) among older individuals in Ghana. Additionally, the researchers aimed to explore whether these associations were influenced by neighbourhood characteristics. The findings of the study indicated that there was a substantial association between loneliness, living alone, and an increased risk of psychological distress. Nevertheless, the research

University of Ghana http://ugspace.ug.edu.gh

also revealed that social activity had a negative impact on psychological distress outcomes for those who were socially isolated, among other contributing factors. In a previous study, Asante (2012) utilized a cross-sectional data obtained from a sample of 107 individuals, both male and female, to examine the interrelationship between gender, age, social support, and the psychological well-being of individuals living with HIV and AIDS (PLHA) in Ghana. The findings of the study indicated that there was a negative correlation between social support and the presence of sadness, stress, and anxiety.

In conclusion, despite the limited studies on the interrelationship between SES, sociodemographic and psychological distress, evidence has been established that being an older person, being females, single-mothered, separated, or widowed are associated with higher distress. It has also been established that an individual's household characteristics and the community where they live play a significant role in shaping their psychological well-being.

2.10 Theory and Conceptualization

2.10.1 Social Determinants of Health (SDH) Theory

The SDH theory postulates that various social factors contribute significantly to an individual's health and well-being. It examines the impacts of societal conditions such as socioeconomic status, education, employment, social support, and access to healthcare services on health outcomes. This theory acknowledges that health is not solely influenced by individual choices or genetics but also by the broader social environment in which individuals live. The SDH theory can be defined as a framework that recognizes the role of social, economic, and environmental factors on a person's health status and outcomes. These determinants include but are not limited to, income and wealth, education, employment, social support networks, and the physical environment in which

University of Ghana http://ugspace.ug.edu.gh

individuals live. According to Marmot and Wilkinson (2001), the social determinant of health theory emphasises the importance of addressing the underlying social structures and conditions that contribute to health disparities. Figure 2.1 presents the SDH framework by the World Health Organization.

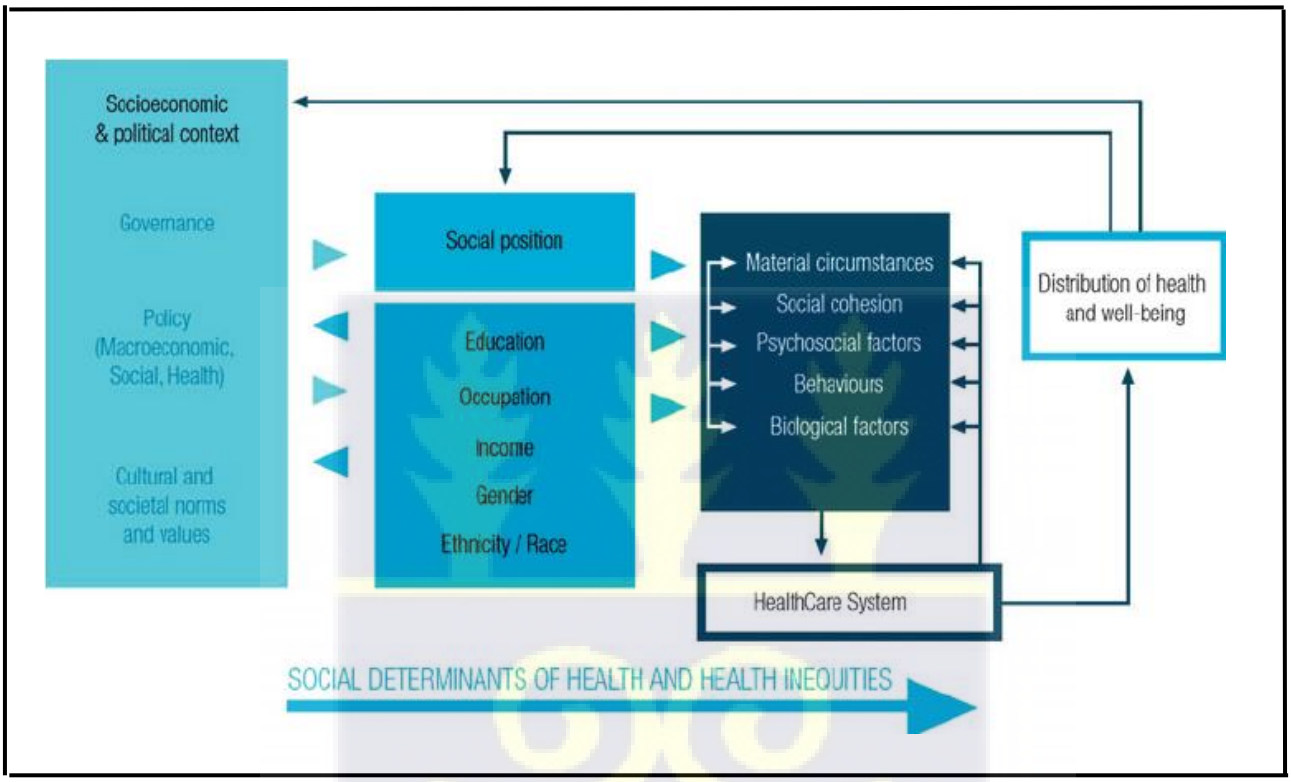


Figure 2.1 WHO framework of social determinants of health

Source: WHO, 2010

2.10.2 Structuralist Perspective

Structuralism, as an approach, focuses on understanding social phenomena through their underlying structures and systems rather than individual actions or behaviours (Robinson, 2017). From this perspective, the social determinants of health theory seek to identify and address the root causes of health disparities by examining the societal structures that contribute to them.

University of Ghana http://ugspace.ug.edu.gh

However, critics argue that this focus on structures overlooks the agency and autonomy of individuals in shaping their own health outcomes (Carter, 2018). They contend that while structural factors may play a role, individual choices and behaviours also contribute significantly to health disparities. This criticism points to the need for a more nuanced understanding of how structural factors intersect with individual actions and behaviours to influence health outcomes. By incorporating both perspectives, researchers and practitioners can develop more comprehensive approaches to addressing health inequities.

2.10. 3 Neo-Marxist Perspective

The Neo-Marxist perspective offers an alternative lens through which to understand social determinants of health. According to this perspective, health disparities result from the unequal distribution of power and resources in society, which is rooted in the capitalist system (Hofrichter, 2003). Neo-Marxists argue that health outcomes are determined by socioeconomic factors, with marginalized groups facing greater health risks due to their lower social status and limited access to resources (Navarro, 2009). This perspective emphasises the importance of social and economic policies in addressing health inequalities, advocating for redistributive measures that aim to reduce social and economic disparities (Krieger et al., 2002). Critics of the Neo-Marxist perspective argue that focusing solely on socioeconomic factors overlooks the influence of other determinants such as individual behaviours and biological factors (Solar and Irwin, 2010). Despite this criticism, the Neo-Marxist perspective contributes to our understanding of the broader structural factors that shape health outcomes, highlighting the need for comprehensive and multi-level interventions to address health inequities.

University of Ghana http://ugspace.ug.edu.gh

2.10.4 Strengths of the SDH Theory

One of the strengths of the Social Determinants of Health (SDH) theory is its multidimensional approach to understanding health disparities and inequalities. According to Marmot and Bell (2012), SDH theory acknowledges that health outcomes are influenced by a range of interconnected social, economic, and environmental factors. Rather than focusing solely on individual behaviours or genetics, the theory recognizes the importance of broader social structures and systems in shaping health outcomes. This allows for a more comprehensive understanding of the complex and multifaceted nature of health disparities. Additionally, the SDH theory highlights the importance of addressing social determinants to achieve health equity, as it recognizes that improving individual health behaviours alone is insufficient in reducing health inequalities. By emphasising the social roots of health disparities, the SDH theory provides a critical framework for identifying and addressing the underlying causes of health inequalities, thereby guiding actions to create healthier and more equitable societies.

2.10.5 Critiques of the SDH Theory

While the theory rightly emphasises the importance of social and economic factors in determining health outcomes, it often fails to acknowledge the significant role of biological and genetic factors in health disparities. Research has shown that certain genetic variations can increase susceptibility to specific diseases or conditions, which can lead to a higher prevalence among certain populations (Murray, 2006). For example, certain ethnic groups have been found to possess an increased susceptibility to illnesses such as diabetes or heart disease due to genetic predispositions (Khoury et al., 2009). In addition, the interplay between genetic factors and environmental exposures can further contribute to health disparities (Ioannidis et al., 2004). Thus, while social determinants are

University of Ghana http://ugspace.ug.edu.gh

crucial in understanding health inequalities, it is important to acknowledge the simultaneous influence of biological and genetic factors. Ignoring these factors may limit the effectiveness of interventions aimed at reducing health disparities.

Another criticism of the social determinants of health theory is that it overlooks individual agency and personal choice. Critics argue that while social and economic factors may indeed play a significant role in determining health outcomes, individuals also can make choices and take actions that can impact their own well-being. For example, someone may choose to eat a balanced diet, engage in regular exercise, and avoid smoking or excessive alcohol consumption, despite their socioeconomic circumstances. By focusing solely on the structural determinants, the theory undermines the role of individual responsibility in shaping health outcomes. Proponents of this criticism argue that emphasising individual agency can empower individuals to take control of their own health and make positive changes. They contend that by neglecting this aspect, the social determinants theory paints a narrow picture of health inequities and potential solutions.

However, the components of this thesis largely take into consideration the strengths and weaknesses of the SDH theory in numerous ways. First, by examining the effects of sociodemographic, SES, household, and community factors on psychological distress, this thesis aligns with the strength of the SDH theory through these multiple determinants. Secondly, apart from the individual factors, this thesis also uses other structural determinants, such as SES, household, and community dynamics. This is situated with the SDH theory's emphasis on addressing root causes of health disparities. Moreover, the inclusion of both urban and rural areas recognises the importance of contextualising how these determinants operate in different settings. As a result, this thesis contributes to a nuanced understanding of psychological distress disparities by considering the contextual variations being propagated by the SDH theory.

University of Ghana http://ugspace.ug.edu.gh

In addition, this thesis also addresses some weaknesses of the SDH theory. For instance, the combination of quantitative and qualitative approaches addresses the limitation of the SDH theory which may primarily rely on quantitative data. Secondly, by examining how these determinants (sociodemographic, SES, household, and community) operate over time, this thesis acknowledges the dynamic nature of these factors and how they influence psychological distress.

2.11 Conceptual framework

The conceptual framework in Figure 2.2 emanates from the researcher's own construct employing the tenets underpinning the social determinant of health (SDH) theory. This conceptual framework is used in this thesis to explain the effects of social factors such as one's personal and external attributes on their psychological distress outcomes.

The framework (Figure 2.2) argues that an individual's personal factors which comprise (1) SES factors such as one's educational attainment, occupational status, and subjective social status (2) sociodemographic characteristics such as sex, age, marital status, religion, place of birth, locality type, region of residence among others can influence negatively or positively their psychological well-being overtime. The framework (Figure 2.2) also establishes an interaction between one's SES characteristics and their sociodemographic attributes and how they determine the psychological well-being outcomes of an individual. For instance, in some settings some occupations are prescribed to a particular sex, and this could lead to income disparity and potentially affecting psychological well-being outcomes (Polavieja, 2008; Didham, 2015; Baron, & Bielby, 2018).

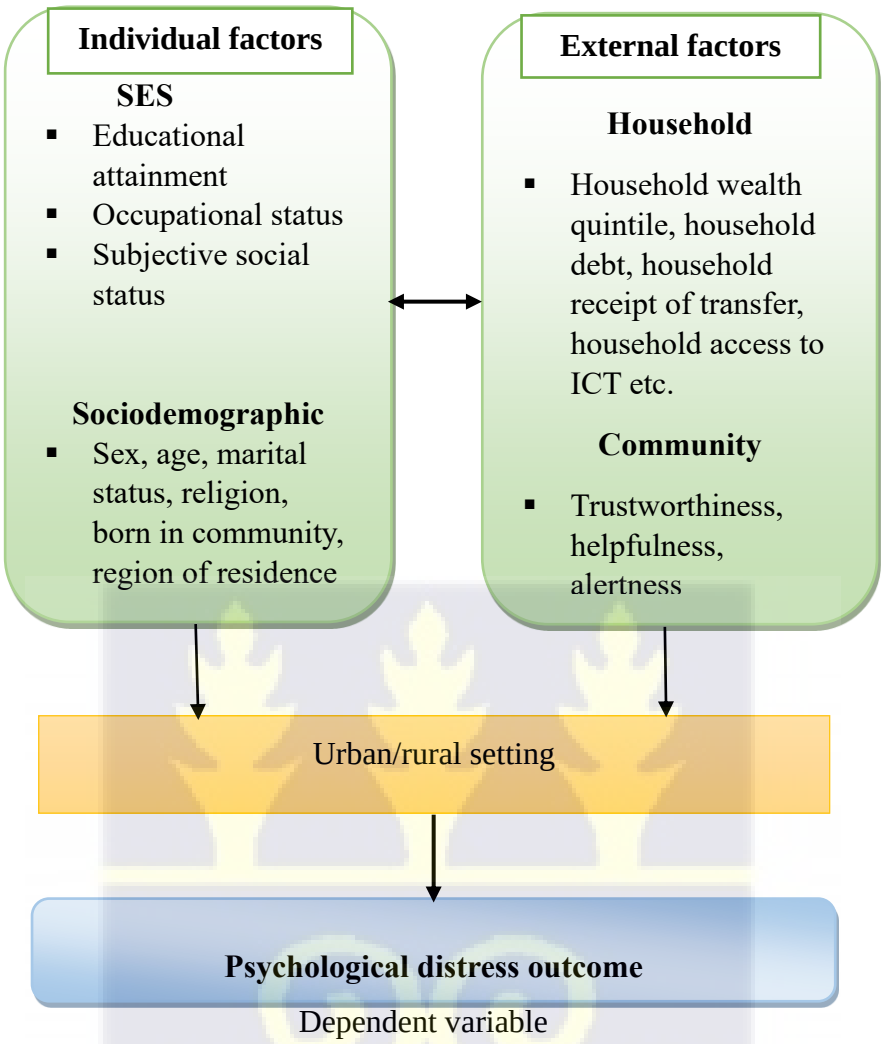
In addition to an individual's personal factors, other external factors such as one's household and prevailing community characteristics could also be consequential in determining a person's psychological well-being status. A person's household characteristics such as household wealth

University of Ghana http://ugspace.ug.edu.gh

quintile, household debt status, household receipt of in-transfer, household dwelling occupancy status and their access to ICT services can contribute significantly to their psychological well-being outcomes. Apart from the household factors, the extent to which an individual perceives that members of their community are trustworthy and helpful can also influence their psychological well-being outcomes. The framework (Figure 2.2) also acknowledges an interaction between the household and community factors which in turn affect the psychological well-being of members within the household and the community. For instance, wealthier households may have the means to contribute to community initiatives or render support to members of their community and this can foster a sense of trust and helpfulness. In contrast, poor households may rely more on community support which affects their perception of community trustworthiness or helpfulness, depending on whether they receive the needed support or not.

It is important to mention that, even though there exists a possible interaction between personal and external factors, this thesis examines them separately for two reasons. First, analysing the results separately provides a deeper understanding of the distinct contributions of each set of variables on psychological well-being without the potential confusion that might arise from interrelationships. Secondly, understanding the distinct contribution of personal and external factors to psychological well-being over time would provide a stronger basis for policy and intervention strategies.

University of Ghana http://ugspace.ug.edu.gh



Source: Author's construct

Figure 2.2 A conceptual framework of factors that predict psychological distress in Ghana

University of Ghana http://ugspace.ug.edu.gh

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the processes and procedures used to gather data for this research as well as the philosophical underpinnings of the research. Specifically, the chapter describes the study area, study design, sources of data, sampling design, unit of analysis, sample size, measurement of variables, methods of analysis, and the study's limitations.

3.2 Study area

Ghana is in West Africa at latitude 7.9465° N and longitude 1.0232° W, bordered geographically to the east by Togo, to the west by Cote d'Ivoire, to the north by Burkina Faso and to the south is the coast of the Gulf of Guinea. There are currently 16 administrative regions which are subdivided into 261 Metropolitan, Municipal and District Assemblies (MMDAs).

According to the Ghana Statistical Service (GSS), the population from the recent 2021 Population and Housing Census (PHC) is 30,832,019, a five-fold increase from the population in 1960 of 6,726,815. The census data further indicate that Ghana's current population constitutes 15.6 million females (50.7 percent) and 15.2 million males (49.3 percent), with more than half (54 percent) of the population residing in four out of the sixteen regions namely, Greater Accra (17.7 percent), Ashanti (17.6 percent), Eastern (9.5 percent) and Central (9.3 percent). The recent census also shows an intercensal population growth rate of 2.1 percent between 2010 and 2021. Furthermore, the population in both the urban and rural areas increased in all regions except in the Eastern and Ahafo regions which recorded a decrease in rural population. This notwithstanding,

University of Ghana http://ugspace.ug.edu.gh

the population growth rate across regions between 2010 and 2021 varied from 3.7 percent in the Northern region to 1.0 percent in the Eastern region. The population of people living in urban areas in Ghana has also seen an increase from 12,545,229 (50.9 percent) in 2010 to 17,472,530 (56.7 percent) in 2021 and almost half (47.8 percent) of the increase was observed in Greater Accra and Ashanti regions. The 2021 census further revealed that the average household size in Ghana decreased in all the sixteen regions but a significant reduction by two or more persons was seen in the Northern, Savannah, Northeast, and Upper West regions. With regards to education, the census data also revealed that 39.8 percent of the population of Ghana 3 years and older have ever attended school in the past, 39.4 percent are currently attending school while 20.8 percent have never attended school. Further segregation of the above figures by locality type showed that 45.6 percent of the urban population in Ghana 3 years and older have attended school in the past, 41.1 percent still attending school and 13.2 percent have never attended school. On the other hand, the rural population in the same age category indicated that 31.9 percent have ever attended school, 37.2 percent are currently attending school with 30.8 percent never attended school. The census data on the economically active population in Ghana 15 years and older also revealed that 50.3 percent are employed while 7.8 percent are unemployed, and this translates into 50.2 percent of the urban labour force employed and 8.3 percent unemployed and 50.4 percent of the rural labour force employed with 7.0 percent unemployed respectively. The urban-rural dichotomy of the population 15 years and older also showed that 36.6 percent of the urban employed population are employees compared to 13.8% of those employed in rural areas. The proportion of the self-employed population in urban centres without employees was 50.2 percent as against 74.1 percent of rural self-employed persons without employees. Highlighting occupation, the recent census data further indicated that 32.0 percent of Ghana's labour force 15 years and older work in skilled agriculture,

University of Ghana http://ugspace.ug.edu.gh

forestry, and fishery, 26.5 percent in services and sales while 16.1 percent are engaged in craft and other related trades.

3.3 Study design

This study's strategy mixes quantitative and qualitative designs using the explanatory sequential approach. With this, the interview design of the qualitative component was guided by the results of the quantitative data. To commence, data from the first three waves of the Ghana Socioeconomic Panel Survey (GSPS) was analysed to determine which sociodemographic and SES variables were associated with psychological distress over time. The second stage, which was the qualitative involved conducting focus group discussions (FGDs) in selected urban and rural areas across the three ecological zones of Ghana. Subsequently, the qualitative study's results were used to explain the quantitative data (Creswell, 2003).

3.4 The Ghana Socioeconomic Panel Survey (GSPS)

The main source of data for quantitative arm of research is obtained from the Ghana Socioeconomic Panel Survey (GSPS). There have been three waves of this study conducted in 2009/10, 2013/14 and 2018. The first two waves of this panel survey were a collaborative effort between the Economic Growth Centre (EGC) at Yale University and the Institute for Statistical, Social and Economic Research (ISSER), at the University of Ghana. The third wave was jointly conducted by the Global Poverty Research Lab (GPRL) at Northwestern University, USA, and ISSER. This panel survey was started in 2009 to gather data among the same households and individuals over 5 rounds of surveys over the next 15-21 years within approximately 3 years intervals each.

Two types of questionnaires were developed for the GSPS survey: the household questionnaire and the community questionnaire (which included a Price Questionnaire). For the purposes of this

University of Ghana http://ugspace.ug.edu.gh

dissertation, however, only the household questionnaire was used. The household questionnaire has 12 modules, six of which were used for this dissertation: household background information, household assets, agricultural production, non-farm household enterprises, psychology and social networking, and housing characteristics. These selected modules were important for determining the interrelationship between SES and psychological well-being outcomes among urban and rural dwellers in Ghana. The other six which were not used included modules on non-resident relatives and spouses, household health, women's health, men's health, children's module, and consumption. Though very useful, these modules were excluded in this dissertation because they were not directly linked to the key research question of this dissertation. Secondly, these other six modules were excluded to maintain the precision of the analysis of this study.

3.4.1 Study population

The GSPS has collected data from the same selected rural and urban households across Ghana since 2009. However, the survey population for this research focused on the original urban and rural household members who had participated in the first three rounds of surveys. The unit of analysis was individuals aged 18 years and older in urban and rural households who had personally responded to the module on psychology and social networking in addition to data from the other modules already mentioned in section 3.4 above. Household members 3 to 17 years who responded to some of the modules used were, however, excluded in this study. This decision stems from the fact that when it comes to making decisions and engaging in the economy, adults (18 years of age and older) tend to be more independent. Moreover, SES variables including household debt, occupation, and SSS are more likely to have a direct impact on adults than children and teenagers since they are more dependent on their parents or caregivers and because their SES is frequently linked to that of their parents. The total sample population for this study was 25,924 individual

University of Ghana http://ugspace.ug.edu.gh

household members in all. Specifically, the sample population for individual waves constituted 8,667, 8,303, and 8,954 respectively.

3.4.2 Sampling procedure

A total of 5,010 households from 334 Enumeration Areas (EAs) were sampled across the ten regions of Ghana for the baseline wave of the GSPS with 15 households selected from each EA. Allocation of EAs for each region was done based on the proportionately estimated 2009 population share for each region. However, EAs in Upper East and Upper West regions with comparably smaller population sizes were oversampled so that a logical number of households could be interviewed from all the regions.

For the first stage, clusters were selected from the revised master sampling frame derived from the 2000 Ghana Population and Housing Census (PHC). Three hundred and thirty-four clusters (census enumeration areas) from the master sampling frame were selected. Subsequently, there was a random selection of clusters from the pool of enumeration areas (EAs) in each of the ten regions using a simple random sampling approach. This was followed by a complete listing exercise in 2009 in all the chosen clusters to aid the second stage, which involved selecting households.

During the second stage selection, a simple random sampling technique was used to select 15 households from each cluster listed. The goal of the second stage of selection was to ensure that quite a substantial number of individual interviews were completed to provide estimates for key indicators that yielded a high level of precision at the regional levels. Another objective was to ensure that the workload for interviewers was manageable within each sample area and minimize the effects of intra-class correlation with a sample area on the variance of the survey estimates.

University of Ghana http://ugspace.ug.edu.gh

The second round was conducted in 2013/14 and whole households and individual household members from the first wave who had moved to form new households or join households not part of the original sample were interviewed. This constituted 475 splits of households that were created and added to the wave 1 sample of 5010. Table 3.1 outlines the distribution of EAs across the previous ten regions of Ghana at the time of the baseline survey.

Table 3.1 Distribution of EAs across the regions in Ghana

Region	Number of EAs	Percent
Western	31	9.3
Central	28	8.4
Greater Accra	39	11.7
Volta	33	9.9
Eastern	43	12.9
Ashanti	60	18.0
Brong Ahafo	34	10.2
Northern	38	11.4
Upper East	16	4.8
Upper West	12	3.6
Total	**334**	**100**

3.4.3 Inclusion criteria

The total number of household members interviewed over the three waves was 54,228 in Ghana's urban and rural areas. However, this study focused on household members 18 years and older primarily because they were the economically active group who could respond to the module on psychology and social networking. Household members who meet the criteria above should also have participated in all three waves. As a result, household members 0-17 years were dropped from the data. Out of the total household members size of 18,884 interviewed in wave 1, a total of

University of Ghana http://ugspace.ug.edu.gh

10,217 were dropped. For the second wave, 8,035 household members were dropped from a total sample size of 16,338. The third wave on the other hand had a total sample size of 19,006 out of which 10,052 were dropped. Figure 3.1 below summarizes the stages of sample size exclusion and inclusion criteria.

University of Ghana http://ugspace.ug.edu.gh

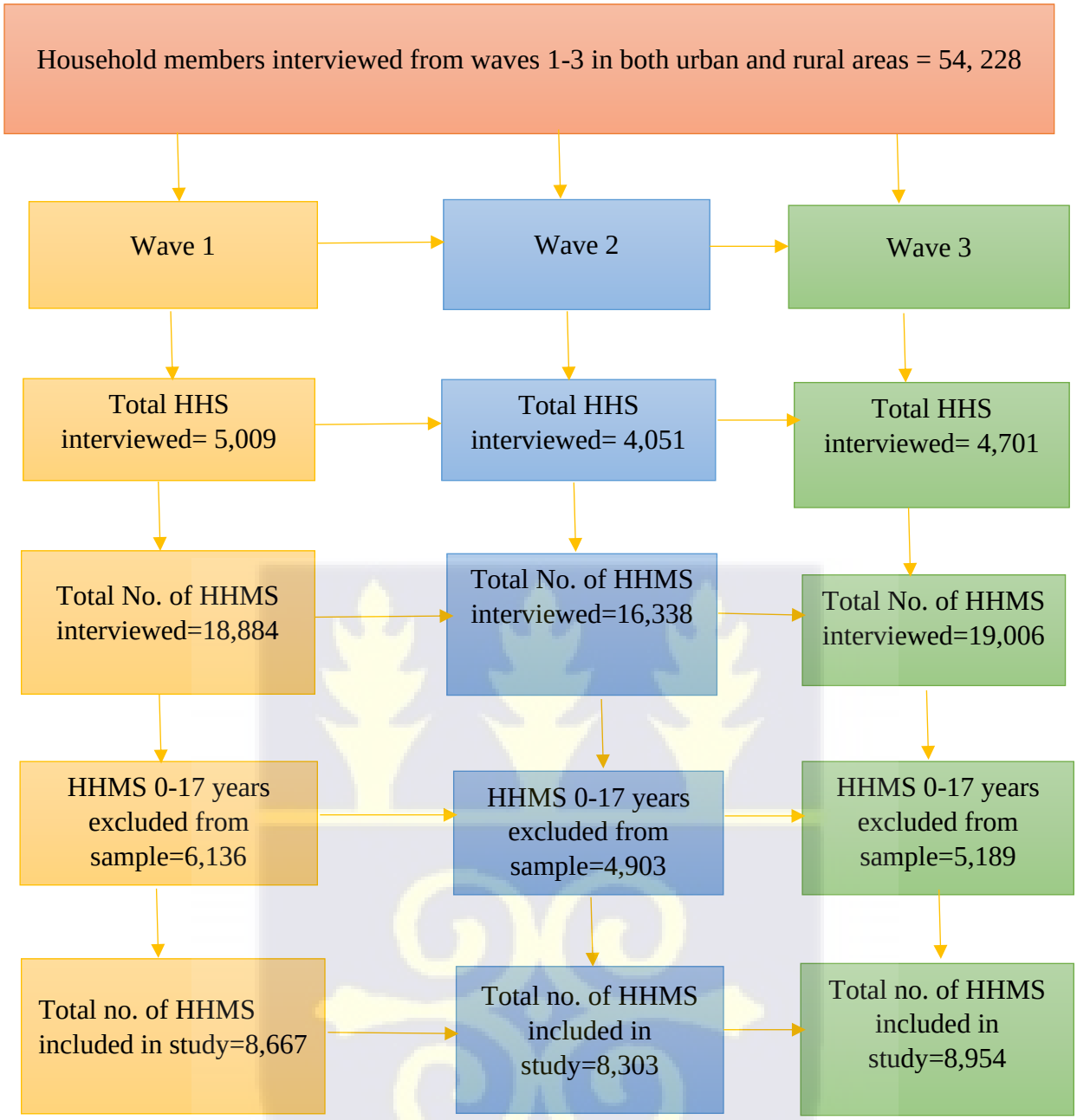


Figure 3.1 Summary of sample size selection criteria

University of Ghana http://ugspace.ug.edu.gh

3.5 Categorization and measurement of variables

3.5.1 Dependent variable

This research targeted household members 18 years of age and older who responded to questions on psychological distress in the household questionnaire. The dependent variable for this research is psychological distress outcome and this was estimated through scores on the Kessler Psychological Distress scale. The Kessler-10 Psychological Distress scale is a self-report questionnaire. It was developed by Ronald Kessler and colleagues in the early 2000s as part of the World Health Organization's World Mental Health Survey initiative. It asks participants to score how often they had depressive and anxious symptoms throughout the previous four weeks using ten questions as follows:

1. About how often did you feel tired out for no good reason?
2. About how often did you feel nervous?
3. About how often did you feel so nervous that nothing could calm you down?
4. About how often did you feel hopeless?
5. About how often did you feel restless or fidgety?
6. About how often did you feel so restless you could not sit still?
7. About how often did you feel depressed?
8. About how often did you feel that everything was an effort?
9. About how often did you feel so sad that nothing could cheer you up?
10. About how often did you feel worthless?

These ten questions were answered using a 5-point scale (where 5= all the time, 4= Most of the time, 3= Some of the time, 2= A little of the time, and 1= None of the time).

The maximum total score for this set of questions is fifty which represents severe distress while the minimum score of fewer than 10 points shows no distress. The level of distress for an individual respondent is computed by summing up the total response score for the ten questions. Distress levels for this study are categorized as follows.

University of Ghana http://ugspace.ug.edu.gh

10-15 points- Little or no psychological distress

16-21 points- Moderate psychological distress

22-29 points- High psychological distress

30-50 points-Vey high psychological distress

Although the K-10 offers insightful information about overall psychological distress levels, it is important to recognize that it has its strengths and limitations that may impact how it should be used and how the results should be interpreted. Some strengths of the K-10 Psychological Distress Scale include its simplicity and quick administration, reliability and validity, sensitivity to changes, and cost-effectiveness (Hoffman et al., 2022; Thakre et al., 2022). On the other hand, non-diagnostic nature, limited scope, subjectivity, timeframe limitation, and cultural sensitivity are some limitations associated with the use of the K-10 Psychological Distress Scale in population health studies (O'Connor & Parslow, 2009; Bougie et al., 2016).

3.5.2 Independent variable

The main independent variable for this study is SES. Baker (2014) states that SES measures an individual's economic and social status. In this study, SES variables included educational attainment, subjective social status, and occupational status.

3.5.2.1 Highest educational attainment

The highest educational attainment variable in this study was interested in the highest level of formal education a respondent had completed. For this category, a respondent who left school at a certain level that was not completed was not recorded as the highest. The set of questions asked over the three waves leading to this variable included: “Has [Name] ever attended school?”

University of Ghana http://ugspace.ug.edu.gh

Responses: 1=Yes; 5. No >>SKIP NEXT QUESTION; "What is the highest grade [Name] successfully completed?"; "What is the highest educational qualification [Name] has attained?"; *Qualification Codes included:* 0=None; 2=Middle School Leaving Certificate (MSLC); 3=Basic Education Certificate Examination (BECE) ; 4=Vocational/Commercial; 5=Teacher Training; 6=Teacher Post-Secondary; 7=General Certificate Examination (GCE) Ordinary Level (GCE O' Level); 8=Senior Secondary Certificate Examination (SSCE)*;* 9= General Certificate Examination (GCE); Advance Level (GCE A-Level)*;* 10=Technical/ Professional Certificate; 11=Technical/Professional Diploma*;* 12=Higher National Diploma (HND)*;* 13=Bachelor's*;*14=Master's. The qualification codes were recorded as follows; 1= None 2= MSCL/BECE/O' Level 3= SSCE/A' Level/Prof. Cert. 4= Teacher Training/HND/ Prof. Diploma 5= Bachelor's degree and above and 6= Other In examining the psychological distress prevalence rate among various sociodemographic and SES groups, the education variables "ever attended school" and "highest educational qualification attained" were used. However, in the multivariate analysis only "highest educational qualification attained" was used due to multicollinearity.

3.5.2.2 Subjective social status

The purpose of this question was to determine where respondents saw themselves in their village's social order. Respondents were asked to imagine a ladder with 10 steps with 1 being the bottom step and 10 being the top step on the social order in the community. To measure the subjective social welfare status of respondents, the following question in Table 3.2 below was used. However, the responses were recorded into three categories: low (1-4), high (5-7) and very high (8-10).

University of Ghana http://ugspace.ug.edu.gh

Table 3.2 Question for subjective social status

Preamble	
Imagine that this ladder represents your community and that each step on the ladder represents the various places that members of your community hold in the community. People define community in different ways; please define it in the manner which is most meaningful to you. Imagine that each person in this community is represented on one of the steps of this ladder. On the highest part of the ladder are the people who hold the highest position in the community. On the lowest part of the ladder are the people who hold the lowest position in the community. The lower you are on the ladder, the closer you are to the people of the lowest rank in society.	
Question	**Response**
Where would you be on this ladder in relation to other people in your community? If the steps were numbered 1 through 10	1 2 3 4 5 6 7 8 9 10

3.5.2.3 Occupation status

The occupation of a respondent in this study was measured as the work done for which most time was devoted to which the respondent made income or living. To be able to determine the type of main occupation each respondent was engaged in the last year, the following questions are asked; "Is [Name] currently a paid employed worker?", "Is [Name] currently the owner or operator of a household non-farm enterprise?", "Is [Name] currently a contributing worker in a household non-farm enterprise?" Responses for each of these questions were "1=Yes", "2=No".

3.5.3 Sociodemographic characteristics

The sociodemographic characteristics of individual household members measured in this study included age, sex, marital status, the relationship of the household members to the household head,

University of Ghana http://ugspace.ug.edu.gh

religion, locality type, region of residence and place. It is important to add that the categorization of age variable in this study did not follow the usual interval of five years. This current categorization was used considering the distinct life course transitions for respondents in each of the categories and how this is linked to their SES and their psychological well-being. These variables and how they were coded are summarized in Table 3.3 below.

Table 3.3 Measurement of sociodemographic characteristics

Variable	**Variable type**	**Definition/code**
Age	Categorical	1=18-30 2=31-40 3=41-50 4=51-60 5=61+
Sex	Categorical	1=Male 2=Female

University of Ghana http://ugspace.ug.edu.gh

Table 3.3 continued

Variable	Variable type	Definition/code
Marital Status	Categorical	1= Married 2=Consensual Union 3=Separated 4=Divorced 5=Widowed 6=Never Married 7=Betrothed
Relationship to HHH	Categorical	1=Household Head 2=Spouse 3=Child 4=Grandchild 5=Parent/Parent in-law 6=Son/Daughter-in-law 7=Other relative 8=Adopted/Fostered/Stepchild 9=House Help 10=Non-relative
Religion	Categorical	1=None 2=Christian 3=Muslim 4=Traditional 5=Other 888=Refuse to Answer 999=Don't Know
Household Size	Categorical	1 2-3 4-6 7+
Born Here	Categorical	1=Yes 2= No
Locality type	Categorical	1=Urban 2=Rural
Region of Residence	Categorical	1=Western 2=Central 3=Greater Accra 4=Volta 5=Eastern 6=Ashanti 7=Brong Ahafo 8=Northern 9=Upper East 10=Upper West

University of Ghana http://ugspace.ug.edu.gh

3.5.4 Household Variables

Another set of key independent variables used in this study to examine their effect on psychological well-being was respondents' household level characteristics. They included household wealth quintile, household debt status, household in-transfer status, household dwelling occupancy status as well as household access to basic information communication technology (ICT) accessories.

3.5.4.1 Wealth quintile

The Demographic Health Survey (DHS) Program defines a wealth index as "a composite measure of a household's cumulative living standards" and this is calculated using a household's or individual ownership of selected assets. In this study household durable goods except those directly linked with information communication technology (ICT) such as fixed line telephone, mobile phone, and personal computer were excluded and used as separate variables. This was done to examine two critical aspects of well-being: economic well-being index based on assets and access to technology and information, which is increasingly vital for participation in the modern society. To do this response options for about forty-two durable assets were put into binary variables (1=Yes; 2=No). Weights for each of the assets was completed separately for urban and rural dwellers. The Principal Component Analysis (PCA) was then used to compute the wealth index across households or individuals.

3.5.4.2 Household debt

The focus of this question was to gather information on any loans the household or a member had taken including financial and material borrowing which had not been paid entirely. This was

University of Ghana http://ugspace.ug.edu.gh

included because whether a household owe a debt or not can be linked to the psychological well-being of members.

The question was asked: "Does anyone in this household currently owe money or goods to other people or have outstanding loans from banking institutions". Responses were 1=Yes; 2=No

3.5.4.3 Household in-transfer

This constituted gifts of cash or products that the household had received in the last 12 months from individuals outside the household. Like household debt, the receipt of goods or money to support members of a household or not has the potential effect on their psychological well-being. The question was asked "Is there any person who does not currently live in this household from whom this household has received money or goods in the last year that you will not pay back?". Responses were 1=Yes; 2=No

3.5.4.4 Other household variables

Other variables such as household housing occupancy status, household access to a fixed-line telephone, mobile phone, personal computer, electronic commerce, and internet were also accessed. Table 3.4 provides details of the questions and response for these variables.

Table 3.4 Questions and responses for other household variables

Question	Response
Do you pay rent for this dwelling?	1=Yes 2= No
Does the household have access to Fixed line telephone?	1=Yes 2= No
Does the household have access to Mobile phone?	1=Yes 2= No
Does the household have access to a Personal computer (desktops, laptop, etc.)?	1=Yes 2= No

University of Ghana http://ugspace.ug.edu.gh

Table 3.4 continued

Question	Response
Does the household have access to Internet?	1=Yes 2= No
Does the household have access to E-commerce?	1=Yes 2= No

3.5.5 Community level factors

Finally, a few community level characteristics of respondents were also used as independent variables to determine their effect on psychological well-being over time. They included respondents' perception of trustworthiness, helpfulness, and need for alertness among community members and whether the respondent was willing to contribute time to a project which was beneficial to the community and not their household.

To measure these characteristics respondents for this study were asked the following questions: "Most people in this community can be trusted (it is safe to deal with most people in this community" Responses 1=Strongly disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly agree; "Most people in this community are willing to help if you need help or assistance of any kind" Responses 1=Strongly disagree;2=Disagree;3=Neutral;4=Agree;5=Strongly agree; "In this community, you have to be alert or else someone is likely to take advantage of you" Responses 1=Strongly disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly agree.

3.6 Data analysis

Data for this study was analysed mainly at two stages-univariate and multivariate using the Stata version 14 statistical software package. The univariate analysis involved the use of tables and graphs to show frequencies and percentages of variables. Another level of the univariate analysis

University of Ghana http://ugspace.ug.edu.gh

was used to determine the extent of psychological distress prevalence in urban and rural areas across the various demographic, SES, household, and community variables and results were presented in tables and graphs. For each of the variables, the overall prevalence rate of psychological distress was computed as follows:

$$\text{Prevalence Rate} = \frac{\text{Number of Cases with the Characteristic}}{\text{Total Population}} \times 100$$

Where:

- Number of Cases with the Characteristic: This refers to the frequency or total count of the variable in question.
- Total Population: The total number of respondents in the study sample,
- 100: This was included to be able to express psychological distress prevalence in a percentage.

At the multivariate analysis stage, panel analysis regression was used to examine the effects of the independent variables on the dependent variable in Ghana over time. Prior to running the multivariate analysis, the data was first set into a panel mode in Stata to allow for time series measurements. The panel analysis regression equation is shown as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1,it} + \beta_2 X_{2,it} \ldots\ldots + \beta_k X_{k,it} + u_{it}$$

Where:

Y_{it} represents the dependent variable for individual i and time t

$X_{1,it}$, $X_{2,it}$, ……., $X_{k,it}$ are the independent variables for individual i and time t.

University of Ghana http://ugspace.ug.edu.gh

$\beta_0, \beta_1, \beta_2, \ldots\ldots, \beta_k$ are the coefficients to be estimated.

uit is the error term (residual) for individual i and time t, representing unobserved factors and random variability.

3.6.1 Data diagnostic test

Prior to analysis, the urban and rural data were separated to make a good comparison. Next, several diagnostic tests, such as univariate and multivariate normality tests, had to be run to provide trustworthy results from data of this kind (Hair et al., 2014). Firstly, a test for the normality of the data was carried out using the Shapiro-Wilk W test which showed that some of the variables deviated from the normal distribution. The variance inflation factor (VIF) and tolerance were thus evaluated to check for multicollinearity. This showed that there was no multicollinearity among the independent variables because the VIF values were less than 10 and the tolerance was more than 0.1. The next important stage involved the diagnostic testing of the panel data to ensure that the advantage attached to using panel data was achieved. Specifically, a panel model's incorrect specification could result in inaccurate estimates that deviate from the actual population parameter values for several reasons. Panel models must satisfy the assumptions of exogeneity, homoscedasticity, no serial correlation, and no measurement error to yield unbiased results. They include selectivity owing to sample attrition, omitted variables, and measurement mistakes, among others. Since these aspects are unknown or the data do not measure them, the assumption of exogeneity states that the independent variables cannot be influenced by past or future variables that are not considered in the model. The error term must always have a constant variance according to the homoscedasticity assumption. The idea that there is no serial correlation

University of Ghana http://ugspace.ug.edu.gh

presupposes that the time-varying errors are independent of one another. To address endogeneity, fixed effects model estimates, and random effects model estimates were compared, as stated by Rabe-Hesketh (2013). The random model's applicability was the null hypothesis under examination. The null hypothesis was rejected, and the fixed effects models were used because the compared coefficients did differ significantly ($p>0.001$).

3.6.2 Specification test for the model to assess the effect of sociodemographic and SES factors on psychological well-being in urban areas.

Table 3.5 presents the specification test for the selection of the most statistically preferred model for interpreting the panel regression analysis. These tests were used to verify the preferred model between the pooled OLS, fixed, and random effects regression models. From Table 3.5, the F-test has a p-value less than 0.05 suggesting that the fixed effect model is appropriate. The Lagrangian Multiplier (LM) Test also had a p-value greater than 0.05 suggesting that the pooled OLS is appropriate. According to Table 3.5, prob>chi2 of the Hausman test is greater than 0.05 for psychological distress. Since Prob>chi2 is greater than 0.05 we fail to reject the null hypothesis (H_0) which states that the preferred model is random effects. However, since the LM test preferred pooled OLS to the random effect model, the fixed effect model is the appropriate model to use for interpretation. The results of analysis for all three models are in Table A1 of appendix A.

Table 3.5 Specification test for model for panel regression for objective two for urban

	Chi2 Values	P-value	Tested	Selection
F-test	20.03	0.000	Pooled OLS/Fixed	Fixed
LM Test	0.00	1.000	Pooled OLS/Random	Pooled OLS
Hausman test	24.63	0.657	Fixed/Random	Random

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

3.6.3 Specification test for the model to assess the effect of sociodemographic and SES factors on psychological well-being in rural areas over time.

As shown in Table 3.6, the F-test has a p-value greater than 0.05. As a result, the null hypothesis that the pooled OLS is adequate is accepted. Thus, we conclude that the Pooled OLS is adequate. The Breusch and Pagan Lagrangian Multiplier (LM) test also has a p-value less than 0.05. This implies a rejection of the null hypothesis and concludes that the random effects model is appropriate. The Hausman test has a p-value less than 0.05 suggesting a rejection of the null hypothesis and the conclusion that the fixed effects model is appropriate. Therefore, since the F-test preferred the fixed effects and the Hausman test preferred the fixed effects, it can be concluded that the fixed effect model is appropriate for interpretation. The results of analysis for all three models are in Table A2 of appendix A.

Table 3.6 Specification test for model for panel regression for objective two for rural

	Chi2 Values	P-value	Tested	Selection
F-test	5.36	0.000	Pooled OLS/Fixed	Fixed
LM Test	17.17	0.000	Pooled OLS/Random	Random
Hausman test	250.95	0.000	Fixed/Random	Fixed

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

3.6.4 Specification test for the model to investigate the effects of household and community factors on the psychological well-being of urban areas over time.

Table 3.7 presents the specification test. The F-test, the LM test and the Hausman Test were the three distinct tests that were carried out to determine which model was superior. effect regression model. According to Table 3.7, the F-test has a p-value that is lower than 0.05, which indicates that the fixed effect model is the one that should be used. In addition, the LM Test had a p-value

University of Ghana http://ugspace.ug.edu.gh

that was higher than 0.05, which provides evidence that the pooled OLS should be used. Again, based on the information in Table 3.7, the Hausman test produced a p-value that was greater than 0.05, which indicates that the random effect model is the one that should be used.

Since the LM test favoured pooled OLS over the random effect model, the fixed effect model should be used for analysis. Full results of the three models are showed in Table A3 of appendix A.

3.7 Specification test for model for panel regression for objective three for urban

	Chi2 Values	P-value	Tested	Selection
F-test	14.22	0.000	Pooled OLS/Fixed	Fixed
LM Test	0.00	1.000	Pooled OLS/Random	Pooled OLS
Hausman test	13.55	0.406	Fixed/Random	Random

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

3.6.5 Specification test for the model to investigate the effects of household and community factors on the psychological well-being of rural areas over time.

As shown in Table 3.8, the F-test has a p-value is less than 0.05, implying that the fixed effect model is best compared to pooled OLS. The Breusch and Pagan Lagrangian Multiplier (LM) test also has a p-value less than 0.05. This implies that we reject the null hypothesis and conclude that random effect is appropriate compared to the pooled OLS. The Hausman test has a p-value less than 0.05 suggesting we reject the null hypothesis and conclude that the fixed effect is appropriate. From the above, it can be concluded that the fixed effect model is suitable for interpretation, as both the F-test and the Hausman test supported the suitable of the fixed effects model. Actual results from panel analysis regression for the three models are shown in Table A4 of appendix A.

University of Ghana http://ugspace.ug.edu.gh

Table 3.8 Specification test for model for panel regression for objective three for rural

	Chi2 Values	P-value	Tested	Selection
F-test	53.42	0.000	Pooled OLS/Fixed	Fixed
LM Test	96.47	0.000	Pooled OLS/Random	Random
Hausman test	131.55	0.000	Fixed/Random	Fixed

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

Qualitative study design

The goal of the qualitative study was to obtain in-depth knowledge and explanation of which sociodemographic and SES variables were associated with psychological distress over time and how these played out among urban and rural communities in Ghana.

Based on the results of the quantitative analysis, one urban and one rural community were purposively selected for focus group discussions (FGDs) for community members as well as key informant interviews. These communities spanned across the three ecological zones of Ghana in which the GSPS data have been collected over the three waves. Across the three ecological zones, the Greater Accra region was selected in the coastal belt considering the fact that it is the national capital, the most populated and the most cosmopolitan (GSS, 2021) which provides a good ground to examine the association between the independent and dependent variables. The quantitative results also found high rates of psychological distress in the region. The Brong Ahafo and Upper West regions were selected for the middle and northern belts respectively because the quantitative data revealed a high rate of psychological distress. The specific communities included Ashongman Estate (urban, Greater Accra), Apollonia (rural, Greater Accra), Wenchi (urban, Brong Ahafo), Fiaso (rural, Brong Ahafo), Wa (urban, Upper West), and Jango (rural, Upper West) were randomly selected from a list of the GSPS communities in the respective regions. Subsequently,

University of Ghana http://ugspace.ug.edu.gh

two focus group discussions (FGDs), one for males and one for females were organized in each of these communities. The choice of FGDs over individual in-depth interviews (IDIs) was taken because FGDs provide a diversity of participation and contribute to the generation of a broad spectrum of ideas, attitudes, and viewpoints (Woodyatt et al., 2016; Boateng, 2012).

A semi-structured discussion guide was developed which focused on respondents' knowledge of SES status variables, and how they affect one's psychological distress differently in urban and rural areas. In addition to this, key informants such as Assemblymembers and Unit committee members were also interviewed to understand possible predictors of psychological distress in the communities and what had been done by both local and government actors over time.

University of Ghana http://ugspace.ug.edu.gh

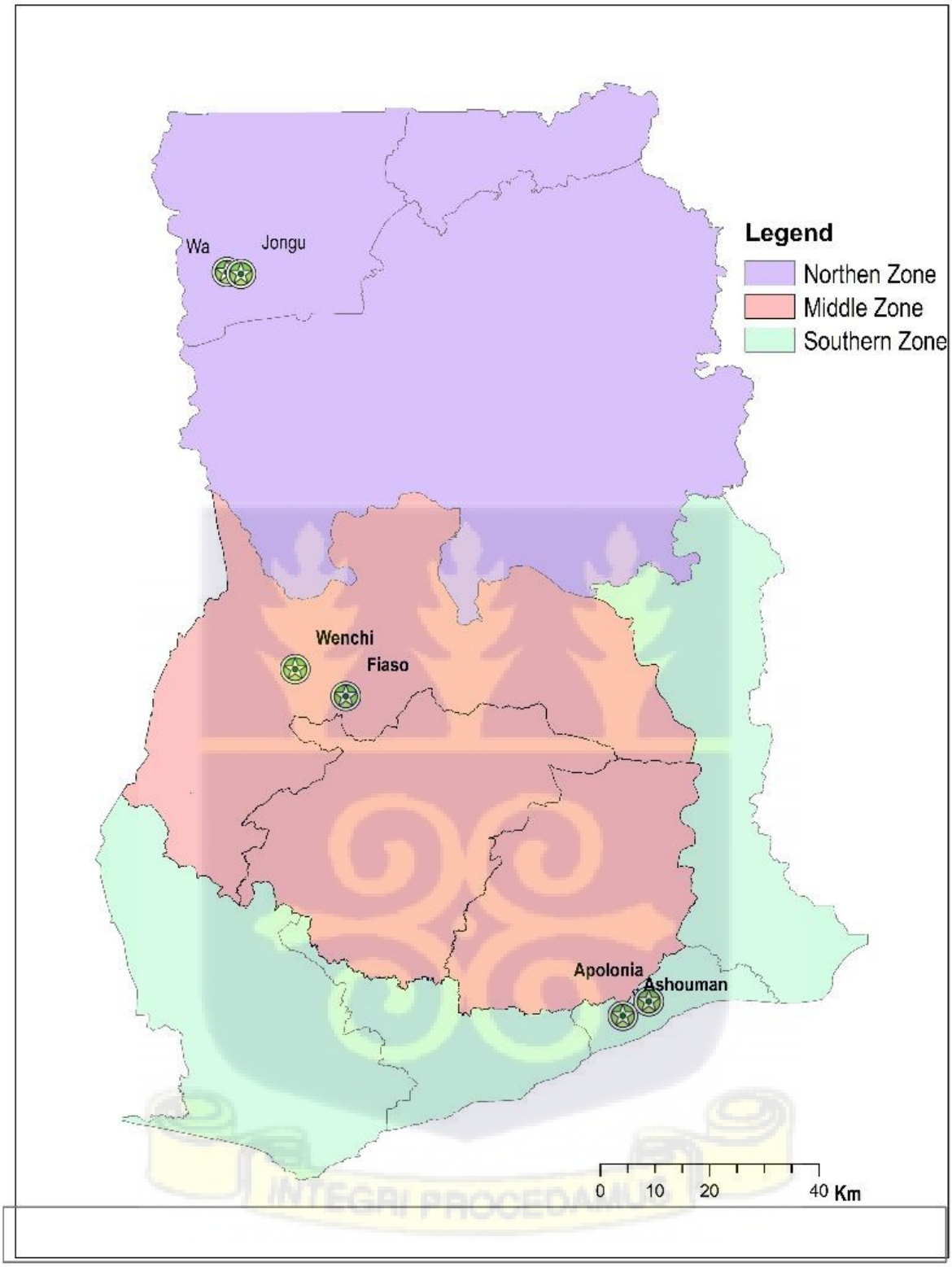


Figure 3.2 Map of Ghana showing the communities selected in the three ecological zones for qualitative study
Source: Author's construct

University of Ghana http://ugspace.ug.edu.gh

3.7.2 Recruitment of participants

In each community, participants for both the male and female FGD were purposively and conveniently selected on the condition that they had resided in the community for at least a year. As much as was possible, the FGD comprised participants of the various sociodemographic and SES characteristics in the quantitative data. Each FGD depending on the availability of eligible community members had at least six participants and a maximum of ten.

3.7.3 Ethical considerations

Ethical issues play a key role throughout all phases of the research process. It is imperative for researchers to prioritize the safety and well-being of participants throughout various stages of the research process, including the identification of the research problem, selection of research participants, data collection, data analysis and interpretation, as well as the writing and dissemination of the research report (Creswell & Zhang, 2009). Therefore, before initiating data collecting in the field, ethical clearance was obtained from the Ethics Committee for the Humanities (ECH) at the University of Ghana as attached in the appendix. The study primarily emphasised ethical concerns related to involvement, consent, and confidentiality (Dowling, 2005). Participants before the start of the discussion or interview were informed about the fact that their accepting to partake in the discussion was voluntary and that they were free to exit at any time in during the discussion. The discussants were also assured of the confidentiality of their responses which were accessible only to the researcher and the supervisory committee. Upon satisfaction of all participants, they were then asked to accent either by pen or thumb a consent form before the commencement of the discussion. The thesis employed pseudonyms to ensure the anonymous presentation of the respondents' identities.

University of Ghana http://ugspace.ug.edu.gh

3.7.4 Data collection

The fieldwork was carried out in May and June 2023. The needed community entry protocols were followed in all communities before the commencement of work. Upon reaching the community the first point of contact was the Assembly Member or Unit Committee Chairperson who was briefed on the study's overall goals and procedures and permission sought to commerce recruitment. After permission was granted with the help of an assigned community member, 6-10 community members of the same sex were recruited for the FGD. To ensure the effectiveness of FGDs, a quiet location in the community which would afford privacy for the interviews was identified for this gathering. Prior to starting each FGD, participants were taken through the various ethical protocols including adequately explaining to participants the research's goal, obtaining both oral and written consent and taking into consideration their level of education, before proceeding with the administration of the interview. The background and purpose of the interview were predominantly communicated to the respondents in the language spoken in the community (Waala-Upper West region, Twi-Brong Ahafo region and Ga-Greater Accra region). Participants were guaranteed anonymity and confidentiality about their personal identity and the information they provided. Two Research Assistants who understood Waala and Ga respectively were recruited to assist the researcher in this exercise due to language barrier. With the permission of participants, interviews were audio-taped and lasted between 2-3 hours. After completing FGDs in each community, respondents were given incentives in the form of soap or airtime worth GHS10.00 in appreciation for their time spent.

3.7.5 Transcribing and translating

The interviews were transcribed verbatim into English by a team of transcribers who possessed proficiency in the Ga, Twi, and Waala languages. The transcription process was conducted

University of Ghana http://ugspace.ug.edu.gh

throughout the period spanning from July to August of 2023. To ensure data quality, there was a meticulous examination of the transcripts by simultaneously reviewing them with the corresponding audio recordings to confirm the accuracy of the transcriptions. For the Waala and Ga languages in which the researcher lacked proficiency, experienced assistants who were native speakers were hired to do the double-checking.

3.7.6 Method of qualitative analysis

Content analysis using a deductive approach was employed in the coding of the transcripts. The approach was adopted because it is in accordance with the research objectives and research questions that were defined at the beginning of the study. This approach facilitates a methodical examination of themes and concepts that are closely aligned with the objectives of the research (Williams & Moser, 2019; Khokhar et al., 2020). Moreover, the utilization of deductive coding proved to be quite advantageous in this research because of the goal of testing the SDH theory. The transcripts were analysed to identify meaningful units of phrases and sentences. These units were then assigned codes or labels that accurately conveyed their intended meaning. The themes were further developed and analysed through an examination of the connections and significance that arose within and among the categories. Direct quotations were then incorporated in the discussions to strengthen the argument and enhance comprehension of the quantitative findings.

University of Ghana http://ugspace.ug.edu.gh

CHAPTER FOUR

DISTRIBUTION OF STUDY POPULATION BY SOCIODEMOGRAPHIC, SOCIOECONOMIC STATUS, HOUSEHOLD, AND COMMUNITY CHARACTERISTICS

4.1 Introduction

This chapter presents the results of the distribution of the study population. The first part provides an overall description of the sociodemographic characteristics of respondents (sex, age, marital status, relationship to household head, whether born in the community of study or not, place of residence, religion, and region of residence). The second part focuses on the SES distribution of the population specifically looking at the distribution of the population in terms of highest education attainment, subjective social status in the community, occupational status. In addition, respondents, household (household wealth quintile, household debt and household receipt of remittances, household dwelling occupancy status, and household access to ICT tools and services) and community attributes (trustworthiness, helpfulness, and alertness) are also described. The third phase of this chapter looks at the changes that occurred in respondents' sociodemographic, SES, household, and community factors across the three waves. Finally, the chapter describes variations in psychological distress mean scores across the three waves.

4.2 Univariate analysis

4.2.1 Sociodemographic characteristics of respondents

Table 4.1 shows that more than half (56.0%) of the respondents were females, while the remaining (44.0 %) were males. With regards to the age distribution of respondents, the table further indicates that close to a third (27.6%) of respondents were in the age group 18-35 years, and 21.3 percent

University of Ghana http://ugspace.ug.edu.gh

were 36-45 years. Those 46-55 and those more than 60 years represented 18.9 percent and 18.0 percent of the respondents respectively with those 56-60 years constituting the least (14.2%). In terms of marital status, the number of respondents in a union (living together or married) was the majority (62.9%) with 19.3 percent never in a union while 17.8 percent were formerly in a union (divorced, separated, widowed). The table further reveals that a significant proportion (57.1%) of respondents were heads of households, more than one-fifth (26.3%) were spouses, 12.3 percent were children of household heads with the least proportion (4.3%) being other relatives or non-relatives of household head. Concerning the size of households of respondents, the table further revealed that a large proportion (40.3%) were in 4-6 member households, with close to half (29.5%) in 2-3 member households. Respondents in a one-member household and those in households with more than seven members were 15.0 percent and 15.2 percent respectively. More than half (55.7%) of the respondents were born in the community of interview with the remaining (44.3%) not born in the community of interview. Most respondents (63.2%) resided in rural communities while the remaining 36.8 percent were in urban areas. Christianity was the most dominant (67.4%) religion among the study population with the proportion of Muslims constituting almost one-fifth (19.1%). The remaining respondents were either affiliated to the traditional religion (6.8%), other religions (1.2%) or no religion at all (5.5%). In terms of regional distribution of the respondents Ashanti (16.9%) and Northern (16.5%) regions had the highest number of participants constituting more than a third (33.4%) of the total study population. Apart from Eastern and Greater Accra regions, there was no other region from the remaining which had up to one-tenth of the study population. However, the Upper West region was shown to have the least proportion (4.4%) of the study population.

University of Ghana http://ugspace.ug.edu.gh

Table 4.1 Percentage distribution of sociodemographic characteristics of respondents

Variable	Frequency (N=25,986)	Percentage
Sex		
Male	11,435	44
Female	14,551	56
Age group (years)		
Less than 36 years	7,167	27.6
36-45	5,547	21.3
46-55	4,901	18.9
56-60	3,699	14.2
61+	4,672	18.0
Marital status		
In union	16,343	62.9
Formerly in union	4,637	17.8
Never in union	5,006	19.3
HH membership status		
Head	14,816	57.1
Spouse	6,844	26.3
Child	3,200	12.3
Other relatives/non-relative	1,126	4.3
Household size		
1	3,899	15.0
2-3	7,665	29.5
4-6	10,469	40.3
7+	3,953	15.2

University of Ghana http://ugspace.ug.edu.gh

Table 4.1 continued

Variable	Frequency (N=25,986)	Percentage
Born in community		
Yes	14,443	55.7
No	11,481	44.3
Place of residence		
Urban	9,565	36.8
Rural	16,421	63.2
Religion		
None	1,426	5.5
Christian	17,503	67.4
Muslim	4,964	19.1
Traditional	1,769	6.8
Other	324	1.2
Region of residence		
Western	2,239	8.6
Central	1,882	7.2
Greater Accra	2,661	10.2
Volta	2,383	9.2
Eastern	2,967	11.4
Ashanti	4,385	16.9
Brong Ahafo	2,532	9.7
Northern	4,283	16.5
Upper East	1,524	5.9
Upper West	1,130	4.4

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

4.2.2 Sociodemographic characteristics of respondents in urban and rural areas

From Table 4.2, males in urban areas accounted for 42.0 percent of the population, while in rural areas, males represented 45.2 percent. The urban population had a higher percentage of females (58.0%) compared to rural areas (54.8%). Regarding age distribution, the urban population had a higher percentage of individuals in almost all age groups; 18-35 (28.4%), 36-46 (22.1%), 46-55 (19.6%), 56-60 (14.3%) except for those 61+ (15.6%) compared to the age groups in rural areas. However, in rural areas the population of those 61+ (19.4%) was higher compared to urban areas. In terms of marital status, urban areas had a lower percentage of respondents who were either married or living together (55.4%) compared to rural areas (67.2%). Conversely, urban areas have a higher percentage of respondents who were either divorced, separated, or widowed (19.7%) or had never been in a union (24.9%) compared to rural areas. In urban areas, a higher percentage of respondents are the head of the household (60.2%) compared to rural areas (55.2%). Rural areas had a higher percentage of individuals who were spouses (29.0%) compared to urban areas (21.8%). On household size, urban areas had a higher percentage of smaller households, with 19.2 percent having only one member and 33.5 percent having 2-3 members. In contrast, rural areas had a higher percentage of larger households, with 41.2 percent having 4-6 members and 19.1 percent having seven or more members. A higher percentage of individuals in rural areas (58.2%) were born in the community they reside in compared to urban areas (51.5%). Urban areas had a higher percentage of individuals identifying as Christians (76.6%) compared to rural areas (62.0 %). However, rural areas had a higher percentage of Muslims (20.2 percent) and individuals practicing traditional religions (10.2%) compared to urban areas. The distribution of regions varied between urban and rural areas, with different regions having varying percentages in each category. For example, Greater Accra had a higher representation in urban areas (22.4%) compared to rural

University of Ghana http://ugspace.ug.edu.gh

areas (3.2%), while the Northern region had a higher representation in rural areas (20.2%) compared to urban areas (10.2%).

Table 4.2 Percentage distribution of sociodemographic characteristics of respondents in urban and rural areas

	Urban		Rural	
Variable	**Frequency (n=9,544)**	**Percentage**	**Frequency (n=16,380)**	**Percentage**
Sex				
Male	4, 005	42.0	7, 397	45.2
Female	5, 539	58.0	8, 983	54.8
Age group (years)				
Less than 36 years	2,709	28.4	4, 399	26.9
36-45	2, 108	22.1	3, 436	21.0
46-55	1, 874	19.6	3, 027	18.5
56-60	1, 365	14.3	2, 334	14.2
61+	1, 488	15.6	3, 184	19.4
Marital status				
In union	5, 290	55.4	11, 019	67.2
Formerly in union	1, 877	19.7	2, 748	16.8
Never in union	2, 377	24.9	2, 613	16.0

University of Ghana http://ugspace.ug.edu.gh

Table 4.2 continued

	Urban		Rural	
Variable	**Frequency (n=9,544)**	**Percentage**	**Frequency (n=16,380)**	**Percentage**
Relationship to HH head				
Head	5, 743	60.2	9, 040	55.2
Spouse	2, 082	21.8	4, 754	29.0
Child	1, 315	13.8	1, 870	11.4
Other relatives/non-relatives	404	4.2	716	4.4
Household size				
1	1, 835	19.2	2, 061	12.6
2-3	3, 200	33.5	4, 450	27.2
4-6	3, 685	38.6	6, 749	41.2
7+	824	8.6	3, 120	19.1
Born in community				
Yes	4, 912	51.5	9, 531	58.2
No	4, 632	48.5	6, 849	41.8
Religion				
None	370	3.9	1, 031	6.3
Christian	7, 313	76.6	10, 170	62.0
Muslim	1, 648	17.3	3, 302	20.2
Traditional	97	1.0	1, 671	10.2
Other	116	1.2	206	1.3

University of Ghana http://ugspace.ug.edu.gh

Table 4.2 continued

	Urban		Rural	
Variable	**Frequency (n=9,544)**	**Percentage**	**Frequency (n=16,380)**	**Percentage**
Region of residence				
Western	684	7.2	1, 553	9.5
Central	763	8.0	1, 116	6.8
Greater Accra	2, 142	22.4	516	3.2
Volta	672	7.0	1, 702	10.4
Eastern	1, 121	11.8	1, 831	11.2
Ashanti	2, 036	21.3	2,338	14.3
Brong Ahafo	863	9.0	1, 666	10.2
Northern	971	10.2	3, 300	20.2
Upper East	181	1.9	1, 343	8.2
Upper West	111	1.2	1, 015	6.2

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

4.2.3 Socioeconomic status of respondents

The SES of respondents is shown in Table 4.3. From the table, it is observed that a large proportion (66.4%) of respondents had ever attended school with slightly above a third (33.6%) never attended school. However, for those who had ever attended school, more than half (57.2%) had no educational qualification while almost a third (29.1%) had attained either MSLC/BECE/O'Level certificates. Almost one-tenth (8.8%) had either SSCE/A' Level/Professional certificates whereas those with tertiary and other certificates (Teacher Training/HND/ Prof. Diploma/ bachelor's degree and above) put together constituted the least (4.9%) proportion of educational qualifications. With regards to respondents' subjective social welfare status in the community, a majority (43.7%) were in the low SSS with a sizeable proportion (38.5%) in the high SSS. The

University of Ghana http://ugspace.ug.edu.gh

proportion of respondents ranked in the very high SSS was 17.8 percent. In terms of the occupational status of respondents, the table indicated that the majority (32.6%) were farm owners while 22.4 percent and 13.4 percent were business owners and paid employees respectively.

Table 4.3 Percentage distribution of socioeconomic variables of respondents

Variable	Frequency (n=25, 986)	Percentage (%)
Ever attended sch.		
Yes	17,261	66.4
No	8,725	33.6
Highest edu. qual.		
None	14,853	57.2
MSLC/BECE/O' Level	7,563	29.1
SSCE/A' Level/Prof. Cert.	2,295	8.8
Teacher Training/HND/ Prof. Diploma	737	2.8
Bachelor's degree+	437	1.7
Other, specify	101	0.4
Subjective social status (SSS)		
Low	11,356	43.7
High	10,011	38.5
Very high	4,619	17.8

University of Ghana http://ugspace.ug.edu.gh

Table 4.3 continued

Variable	Frequency (n=25, 986)	Percentage (%)
Occupational status		
Paid employee		
No	22,512	86.6
Yes	3,474	13.4
Business owner		
No	20,167	77.6
Yes	5,819	22.4
Farm owner		
No	17512	67.4
Yes	8,474	32.6

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

4.2.4 Socioeconomic status of respondents in urban and rural areas

Table 4.4 compares the SES distribution of respondents in urban and rural areas. Regarding ever attended school, the table showed 82.9 percent of respondents in urban areas had ever attended school while in rural areas, the percentage was lower at 56.8 percent. Most respondents in both urban and rural areas have no educational qualifications with 37.5 percent in urban areas and 68.6 percent in rural areas. In terms of middle school or equivalent qualification, a higher number (38.2%) of respondents in urban areas had obtained it compared to 23.8 percent in rural areas. The proportion of respondents who had senior secondary school or professional training certificates was higher (15.0%) in urban areas compared to rural areas (5.2%). Similarly, a higher percentage (5.3%) of respondents in urban had attained teacher training or higher diplomas compared to rural areas (1.4%). The percentage of respondents with a bachelor's or higher degree was also more

University of Ghana http://ugspace.ug.edu.gh

(3.4%) in urban compared to rural areas (1.0%). Most respondents in both areas fell in the "Low" SSS bracket with 40.6 percent in urban and 45.4 percent in rural areas. Similarly, respondents in the "High" SSS category were slightly higher (42.0%) in urban areas compared to rural areas (36.7%). The "Very High" SSS category on the other hand was rather higher (17.9%) in rural areas compared to urban areas (17.6%). In terms of being a paid employee, a higher percentage (77.8% and 91.8%) respectively of respondents in both urban and rural areas are not paid employees with a majority (22.2%) of paid employee respondents in urban compared to rural (8.2%). Comparing respondents who were business owners, the table showed that 31.9 percent of respondents in urban areas were business owners while in rural areas the proportion was slightly lower at 16.9 percent. The percentage of respondents who were farm owners was significantly higher (43.8%) in rural areas compared to urban areas (13.5%).

Table 4.4 Percentage distribution of SES of respondents in urban and rural areas

	Urban		Rural	
Variable	**Frequency (n= 9,544)**	**Percentage**	**Frequency (n= 16, 380)**	**Percentage**
Ever attended sch.				
Yes	7, 908	82.9	9, 308	56.8
No	1, 636	17.1	7, 072	43.2

University of Ghana http://ugspace.ug.edu.gh

Table 4.4 continued

	Urban		Rural	
Variable	**Frequency (n= 9,544)**	**Percentage**	**Frequency (n= 16, 380)**	**Percentage**
Highest edu. qual.				
None	3, 580	37.5	11, 241	68.6
MSLC/BECE/O' Level	3, 643	38.2	3, 902	23.8
SSCE/A' Level/Prof. Cert.	1, 431	15.0	858	5.2
Teacher Training/HND/ Prof. Diploma	502	5.3	231	1.4
Bachelor's degree+	323	3.4	112	0.7
Others	65	0.7	36	0.2
Subjective social status (SSS)				
Low	3, 878	40.6	7, 431	45.4
High	3, 988	41.8	6, 017	36.7
Very High	1, 678	17.6	2, 932	17.9
Occupational status				
Paid employee				
No	7,421	77.8	15, 037	91.8
Yes	2, 123	22.2	1, 343	8.2
Business owner				
No	6, 504	68.2	13, 605	83.1
Yes	3, 040	31.9	2, 775	16.9
Farm owner				
No	8, 260	86.6	9, 203	56.2
Yes	1, 284	13.5	7, 177	43.8

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

4.2.5 Household and community characteristics of respondents

Table 4.5 describes the household and community characteristics of respondents of this study. According to the table, respondents in households within the poorest quintile were the majority (21.7%) with close to one-fifth (18.9%) in the poor quintile households. Those in the middle (19.4%), rich (19.6%) and richest (20.5%) quintile households constituted over half (59.5%) of the entire study population. With regards to household debt, a larger majority (71.5%) of respondents were in households that did not owe goods or income to other people outside of the household while close to one-third (28.5%) were in households indebted. Slightly over two-thirds (60.1%) of respondents were part of households that had also not received either goods or income from members outside the household within the reference period (last 30 days) with almost two-fifths (39.9%) part of households who had received some goods or income.

Concerning the occupancy status, the results indicated that less than one-fifth (16.2%) of respondents' households pay rent while majority of households (83.8%) occupied dwellings that were rent free. The results further showed that only a small fraction (2.1%) of respondents' households had access to fixed line telephone services, whereas the vast majority (97.9%) did not. Still on ICT access among respondents' households, the results revealed that mobile phones access was prevalent (82.5%) while 17.5 percent of respondents' households did not have access to mobile phones. In addition, a relatively small proportion (8.1%) of respondents were part of households with access to a personal computer while most households did not. The proportion of respondents in households with access to e-commerce was 3.2 percent while slightly over three-quarters of households of respondents did not engage in e-commerce activities. Finally, on households ICT access, Table 4.5 showed that 13.8 percent of respondents' households had access to the internet while 86.2 percent of households did not.

University of Ghana http://ugspace.ug.edu.gh

At the community level, the results indicated that approximately half (51.3%) of respondents agree that members of their community were trustworthy, but 37.1 percent of them disagree while 11.6 percent were in a neutral position. Similarly, regarding respondents' perception of helpfulness of community members, almost half (49.9%) of respondents agree that community members were helpful, 37.4 percent disagree while 12.7 percent remained neutral. Moreover, 64.1 percent of respondents agree that one had to be alert when dealing with community members, 25.4 percent disagree while 10.5 percent had a neutral opinion. Finally, Table 4.5 confirmed that slightly above two-thirds (62.7%) of respondents were willing to contribute time to community projects even if they were not directly beneficial to their households whereas over one-third (37.3%) were unwilling to participate.

Table 4.5 Percentage distribution of household and community characteristics of respondents

Variable	Frequency	Percentage
Household characteristics		
Wealth quintile		
Poorest	5,628	21.7
Poor	4,906	18.9
Middle	5,032	19.4
Rich	5,083	19.6
Richest	5,337	20.5
Household debt		
No	18, 573	71.5
Yes	7,413	28.5

University of Ghana http://ugspace.ug.edu.gh

Table 4.5 continued

Variable	Frequency	Percentage
Household in-transfer		
No	15,628	60.1
Yes	10,358	39.9
Rent		
Yes	4,201	16.2
No	21,723	83.8
Fixed line telephone		
Yes	535	2.1
No	25,389	97.9
Mobile phone		
Yes	21,398	82.5
No	4,526	17.5
Personal computer		
Yes	2,093	8.1
No	23,831	91.9
E-commerce		
Yes	830	3.2
No	25,094	96.8
Internet		
Yes	3,572	13.8
No	22,352	86.2

University of Ghana http://ugspace.ug.edu.gh

Table 4.5 continued

Variable	Frequency	Percentage
Community factors		
Trustworthiness		
Agree	13, 306	51.3
Neutral	3,008	11.6
Disagree	9,610	37.1
Helpfulness		
Agree	12,931	49.9
Neutral	3,284	12.7
Disagree	9,709	37.4
Alertness		
Agree	16,621	64.1
Neutral	2,727	10.5
Disagree	6,576	25.4
Community project participation		
Will contribute	16,257	62.7
Will not contribute	9,667	37.3

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

4.2.6 Household and community characteristics of respondents in urban and rural areas

Table 4.6 provides information on respondents' household and community characteristics in urban and rural areas. Concerning the respondents' household wealth quintile, the table revealed that

University of Ghana http://ugspace.ug.edu.gh

those in the "Poorest" household wealth quintile had a higher percentage (26.8%) of respondents in rural areas compared to urban areas (12.9%). However, respondents in the "Poor" household wealth quintile bracket in both urban and rural areas were just about the same (18.8% and 19.0%) respectively. The respondents in the "Middle", "Rich" and "Richest" household wealth quintiles were higher (22.5%, 22.1%, and 23.8 %) in urban compared to rural areas (17.6 %, 18.1%, and 18.6%).

Regarding goods or income owed by households, in urban areas 27.4 percent of the respondents' households were indebted while in rural areas, the percentage was slightly higher at 29.2 percent. It is observed, however, that most households in both urban and rural did not have debts with 72.6 percent in urban and 70.8 percent in rural areas. In terms of household receipt of goods or income from people outside the household, the table indicated that in urban areas, 41.1 percent of respondents' households received in-transfers while in rural areas, the percentage was slightly lower at 39.1 percent. However, most respondents' households did not receive in-transfer with 58.9 percent and 60.9 percent in urban and rural areas respectively. Regarding households' dwelling rental status, Table 4.6 showed that in urban areas 30.3 percent of households lived in rented dwellings compared to only 8.0 percent of households in rural areas. Results from the table revealed a generally low household access to fixed line telephone services in both urban and rural areas. Among urban households, a mere 4.7 percent had access to fixed line telephone services while 0.5 percent of rural households did have. Mobile phone access, on the other hand, was prevalent in both urban and rural areas with 92.7 percent of urban households and 76.7 percent of rural households who had access. The proportion of households with access to a personal computer was higher (16.2%) among urban households compared to only 3.4 percent of rural households with access to a personal computer. E-commerce access by households in both urban and rural

University of Ghana http://ugspace.ug.edu.gh

areas was low with 5.6 percent and 1.8 percent of households with access to e-commerce in urban and rural areas, respectively. In addition, Table 4.6 showed that the proportion of urban households with access to internet was higher (22.2%) compared to rural households (8.9%).

Concerning respondents' trust for members of their communities, the results indicated a higher proportion of respondents (58.6%) in rural areas who expressed trust for their community members compared to 38.8 percent respondents in urban areas. Similarly, more rural households (56.8%) perceived that their community members were helpful compared to 38.0 percent of urban households. Respondents' perception of the need to be alert with one's transactions with community members was relatively high in both urban and rural areas. However, a higher proportion of respondents (70.4%) in urban areas perceived that one needed to be alert when dealing with community members compared to 60.4 percent of respondents in rural areas. Finally, in both urban and rural areas, quite a substantial proportion (61.8%-urban, 62.9%-rural) were willing to contribute to projects in their communities which did not benefit their households directly.

University of Ghana http://ugspace.ug.edu.gh

Table 4.6 Percentage distribution of household and community characteristics of respondents in urban and rural areas

	Urban		Rural	
Variable	**Frequency (n= 9,544)**	**Percentage**	**Frequency (n= 16, 380)**	**Percentage**
Household characteristics				
Wealth quintile				
Poorest	1, 227	12.9	4, 387	26.8
Poor	1, 796	18.8	3, 107	19.0
Middle	2, 144	22.5	2, 876	17.6
Rich	2, 106	22.1	2, 964	18.1
Richest	2, 271	23.8	3, 046	18.6
Household debt				
No	6, 928	72.6	11, 599	70.8
Yes	2, 616	27.4	4, 781	29.2
Household in-transfer				
No	5, 622	58.9	9, 972	60.9
Yes	3, 922	41.1	6, 408	39.1
Rent				
Yes	2,889	30.3	1,312	8.0
No	6,655	69.7	15,068	92.0
Fixed line telephone				
Yes	450	4.7	85	0.5
No	9,094	95.3	16,295	99.5
Mobile phone				
Yes	8,843	92.7	12,555	76.7
No	701	7.3	3,825	23.3

University of Ghana http://ugspace.ug.edu.gh

Table 4.6 continued

	Urban		Rural	
Variable	**Frequency (n= 9,544)**	**Percentage**	**Frequency (n= 16, 380)**	**Percentage**
Personal computer				
Yes	1,543	16.2	550	3.4
No	8,001	83.8	15,830	96.6
E-commerce				
Yes	533	5.6	297	1.8
No	9,011	94.4	16,083	98.2
Internet				
Yes	2,116	22.2	1,456	8.9
No	7,428	77.8	14,924	91.1
Community factors				
Trustworthiness				
Agree	3,705	38.8	9,601	58.3
Neutral	1,336	14.0	1,672	10.2
Disagree	4,503	47.2	5,107	31.2
Helpfulness				
Agree	3,626	38.0	9,305	56.8
Neutral	1,440	15.1	1,844	11.3
Disagree	4,478	46.9	5,231	31.9

University of Ghana http://ugspace.ug.edu.gh

Table 4.6 continued

	Urban		Rural	
Variable	**Frequency (n= 9,544)**	**Percentage**	**Frequency (n= 16, 380)**	**Percentage**
Alertness				
Agree	6,725	70.4	9,896	60.4
Neutral	1,020	10.7	1,707	10.4
Disagree	1,799	18.9	4,777	29.2
Community project participation				
Will contribute	5,843	61.8	10,273	62.9
Will not contribute	3,615	38.2	6,052	37.1

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

4.3 Discussion

This chapter described the overall sociodemographic, SES, household, and community characteristics of respondents for this study. In both urban and rural areas, most of the respondents were within the youthful age bracket, and this is consistent with the results of Ghana's 2021 Population and Housing Census (PHC) which indicated a shift from children-dominated (0-14 years) to most of the Ghanaian population now dominated by the youths (18-35 years). The proportion of youths in urban areas was slightly higher compared to rural areas like the results of the 2021 census *(*Ghana Statistical Service, 2021 Census Report). This can be attributed to the high rural-urban migration of young people to urban areas in Ghana and other developing countries mainly due to poverty and unemployment predominant in rural areas (Alarima, 2018; Asamoah, 2020; Tanle et al., 2020, Li, 2021). However, the population of the aged (60 years+) was higher in rural areas than in urban areas. One plausible explanation for this trend is the lack of motivation

University of Ghana http://ugspace.ug.edu.gh

among the aged to migrate to urban areas largely because they do not have the physical strength to take up new challenges coupled with other household and community responsibilities they may be occupied with in rural areas (Mba, 2004; Ahmad et al., 2011). Another explanation could be the fact that older people prefer to return to rural areas during retirement because of the high cost of living and the decline in material family support for the aged in urban areas (Aboderin, 2004; Kpessa-Whyte, 2018).

The univariate result also showed that most of the study participants in both urban and rural areas were married or living with a partner even though this was higher in rural areas than in urban areas. The high cost of marriage and the risk of living with a partner in urban areas in Ghana outweighs that of rural areas. In rural areas, particularly in Ghana families of both a male and a female who intend to get married usually agree on simple terms for consensual unions and moderate bride prices for marriages in addition to the causes and stigma that come along with divorce or separation (Oppong Asante et al., 2014; Osafo et al., 2021). The proportion of the population who had never been in a union was higher among urban dwellers compared to those in rural areas. This further supports the notion of the high cost of getting married in urban areas. Another possible explanation could be the higher number of years spent in schooling in urban areas compared to rural areas (Hicks & Hicks., 2019; Rehim et al., 2023).

Regarding household size, urban areas were characterized largely by fewer household members (1-3) compared to rural areas where household members of four and more were dominant and that is slightly higher than the national average of 3.6 *(*Ghana Statistical Service, 2021 Census Report). This corroborated findings of a study by Gyan and Kpoor, (2022) which revealed factors such as the cost of raising children, access to modern contraceptives, infertility, and women's involvement in the labour force as reasons for a decline in family size especially in urban areas. However, most

University of Ghana http://ugspace.ug.edu.gh

rural areas in sub-Saharan Africa continue to experience early age at first marriage, low educational levels, and regard large family sizes as a source of both economic power and security (Dana et al., 2020). On the contrary, other studies (Ennin et al., 2011; Awel,2013; Endalew & Tassie, 2018) have attributed household poverty to large household sizes due to the increases in food and non-food expenditures for each household member.

Results of the SES of participants also showed a higher proportion of school attendance and educational qualification attainment in urban areas than in rural areas of Ghana consistent with results of Ghana's 2021 PHC. The census report further established that the percentage of adults (18 and older) in urban areas who had attended school in the past and had a tertiary degree as the highest level obtained (16.6 percent) was about three times higher than the percentage in rural areas (5.9 percent). Better household resources of urban dwellers, parents' education, access to improved educational resources and the rapid developments in urban areas in Ghana over the last few decades could account for this result (Rolleston, 2009; Iddrisu et al., 2017).

Respondents' subjective assessment of their social status was generally low. Factors such as low income, low educational attainment, job insecurity, and poor living conditions, among others could undermine one's subjective measure of their social status (Hoebel & Lampert, 2020; Othman, 2022). A plethora of studies have identified the prevalence of low income, unemployment, and poor living conditions in Ghana (Osei-Assibey, 2014; Baah-Boateng, 2015; GSS, 2019) and these could explain the largely low SSS ranking. Compared to urban areas in Ghana, this study found a higher proportion of respondents from rural areas who assessed themselves to be in the low SSS. Possible explanation could be the fact that many rural communities in Ghana and other SSA countries are characterized by limited access to essentials such healthcare, education,

University of Ghana http://ugspace.ug.edu.gh

transportation as well as high poverty levels (Neely & Ponshunmugam, 2019; Adu et al., 2021; Sebbeh, 2022).

In urban areas, more respondents worked as paid employees and business owners whereas those who were farm owners dominated the rural population. Globally, urban areas are noted to be the heart of business and commerce and in the case of Ghana like other developing countries most urban dwellers work in the informal sector as employees or owners (Macheras & Stanley, 2017; De Falco & Corbino, 2021; GSS, 2021; Mensah, 2023). The prevalence of businesses and commerce in urban areas can be attributed to access to large customer base, well developed infrastructure which facilitates the movement of goods and services and the highly skilled labour force access (Rubalcaba et al., 2013; Camacho-Ballesta et al., 2014; Lee & Xu, 2020).

Focusing on household level factors, the results of SES further showed that most urban respondents were part of households in the middle to richest quintiles with those in the poorest and poor quintiles constituting much of the rural population. Household members in urban areas have access to a wide range of employment opportunities across various sectors compared to those in rural areas (Khare et al., 2020; Cattaneo et al., 2021; Shaikh et al., 2023). Moreover, individual members who get employed in urban areas are likely to receive better and stable wages which increases their wealth over time compared to those in rural areas (Diao et al., 2017; Kamei & Nakamura, 2022). On the contrary, the existence of higher wealth quintiles in urban areas have the tendency to exacerbate socioeconomic disparities as affluent households enjoy access to superior educational resources, healthcare services, and economic prospects (Novignon, 2017; Couture et al., 2019; Kist et al., 2021).

Furthermore, the univariate results also indicated that in both urban and rural areas, most respondents were neither indebted nor had received financial or material remittances. The Ghana

University of Ghana http://ugspace.ug.edu.gh

Living Standard Survey Round Seven (GLSS7) reported confirmed a low desire among Ghanaians to acquire loans with a major reason being that it was not necessary. Conversely, in the same report indebtedness was found to be one of the causes of conflicts in communities in Ghana (GSS, 2019). This suggests that peoples' negative perceptions or experiences about borrowing could be the reason accounting for this trend. The proportion of respondents who received remittances in cash or goods in both urban and rural areas (41.1% and 39.1% respectively) was like the finding from the GLSS7 (43.2%). This substantiates the claim that remittances act as a safety net, considerably reducing the volatility of household consumption in Ghana and other developing nations (Abadi et al., 2018; Quartey et al., 2019; Fromell et al., 2020).

Regarding trustworthiness and helpfulness, the results found that respondents in rural areas who agreed that members of their communities were trustworthy and helpful were more compared to those in urban. This could be so because rural areas in Ghana and other SSA countries usually have smaller and tight-knit communities where members know each other well. As such, this familiarity could potentially result in increased levels of trust and helpfulness as individuals have a heightened sense of belonging (Walsh et al., 2014; Bhowmick & Sorathia, 2019; Ferris-Day et al., 2021). On the other hand, rural communities experiencing ethnic or cultural differences, historical conflicts over land and other resources, lack of communication, among other factors may harbour mistrust and unwillingness to help each other (Agyeman & Neal, 2009; Lai, 2014). The results indicated that majority of the respondents in urban areas in Ghana did not perceive trustworthiness and helpfulness of their community members.

There are several discernible factors contributing to this phenomenon, including the substantial concentration of individuals in urban areas and the demanding nature of their work responsibilities (Thomas, 2013; Torgerson & Edwards, 2013). These circumstances create an environment that

University of Ghana http://ugspace.ug.edu.gh

facilitates anonymity and reduces the level of accountability within residential communities, ultimately leading to a sense of mistrust and individualistic tendencies among the populace (Monson et al., 2016; Vargas et al., 2020). Furthermore, the existence of socioeconomic inequalities and high crime rates in urban areas give rise to feelings of animosity and suspicion across different socioeconomic factions, resulting in a hesitancy to interact with fellow residents (Vauclair & Bratanova, 2017; Atkinson & Millington, 2018). It is therefore not surprising that the results found that more than two-thirds of respondents in urban areas perceived that one needed to be alert when dealing with community members.

One striking finding from the study was the fact that more than half of the respondents in rural areas perceived that there was the need to be alert when dealing with community members after it was observed of their perception of trustworthiness and helpfulness of their community members. This phenomenon may potentially occur due to the risk-averse behaviour and heightened concern for reputation among persons residing in rural areas, which can be attributed to the tightly knit structure of these communities. Consequently, individuals would refrain from engaging in any behaviour that has the capacity to disrupt their happy coexistence.

4.4 Changes in respondents' sociodemographic, SES, households, and community attributes across waves.

This section describes the cross-sectional changes that occurred in key sociodemographic, SES, household, and community characteristics of respondents across the three waves in urban and rural areas in Ghana. As shown in Table D1 in appendix D, it is observed that there was a general decline in the percentage of respondents who were either married or living from wave 1 through to wave 3 in both urban and rural areas, with a larger decrease in urban areas. Consequently, this led to an increased proportion of the urban respondents who were either separated, divorced, or widowed.

University of Ghana http://ugspace.ug.edu.gh

This could be due to the pressures in urban areas emanating from economic demands and competitive job markets in Ghana between 2009 and 2017 because of the International Monetary Fund (IMF) programme which froze public sector employment and brought about other economic hardships. These and other factors such as changes in social norms and access to legal resources could account for the decrease in the rate of marital unions. This was also felt among the never married as the Table D1in appendix D shows an increase in the proportion of people who could enter marital unions between waves 1 to 3 in both urban and rural areas.

Moreover, the cross-sectional analysis also revealed that there was a decrease in household sizes especially for those with membership between one and three in urban areas in Ghana from 2009 to 2018. This also could be due to the rising cost of living in urban areas, increased educational attainment which potentially delays childbearing, as well as the increase in access to family planning services. The household size pattern among rural respondents, however, was mixed between waves 1 to 3. This could be attributed to frequent temporal out-migration of people from rural to urban areas in Ghana to engage in seasonal or short time jobs which could lead to a fluctuation of household membership.

Regarding changes that occurred in the socioeconomic status of respondents from the first to the third wave, Table D1 in appendix D showed that the percentage of respondents with no educational qualification decreased over the period in both urban and rural areas. On the other hand, the proportion of respondents with higher educational qualifications such as bachelor's degree and above witnessed an increase over the waves especially in urban areas. This could be attributed to Ghana's continuous and increasing investment in the education sector (NDPC, 2018).

Table D1 in appendix D further revealed an improvement of respondents' subjective social status from wave one through to wave three particularly for those in the high subjective social status in

University of Ghana http://ugspace.ug.edu.gh

both urban and rural areas. It is also observed that the percentage of respondents in the very high subjective social status decreased in waves two and three in urban and rural areas compared to wave one. Possibly this subjective view could confirm the impact of the economic challenges experienced in Ghana for all irrespective of social class.

With respect to occupational status, the data for wave one captured it differently and so was not included in this section. Nonetheless, Table D1 in appendix D showed a decrease in the percentage of respondents in urban areas engaged as paid employees, business, and farm ownership in wave three compared to the situation as of wave two. In contrast, however, the proportion of respondents engaged as paid employees, business, and farm owners in rural areas increase in wave three when compared to wave three. The economic challenges during this period could have led to a decrease in job opportunities, difficulty in the ability to sustain businesses due to high competition and cost of operation in urban areas (GSS, 2016). However, the increase in the establishment of small, medium, and large industries in rural areas usually closer to urban areas due to easy access to land, raw materials and cheap labour could explain for the increase in the proportion of rural respondents engaged as paid employees, business, and farm owners.

At the household level of respondents, Table D1 in appendix D revealed a sharp increase in the proportion of respondents' households in-debt in wave two in both urban and rural areas compared to wave one. However, wave three showed some decrease in the percentage of respondents' households in-debt compared to wave two but not as lower as was experienced in wave one in both urban and rural areas.

Regarding occupancy status of respondents' households, it is observed from Table D1in appendix D that the proportion of urban respondents' households living in rented dwellings decreased in waves two and three compared to wave one. However, in rural areas there was a slight increase in

University of Ghana http://ugspace.ug.edu.gh

the percentage of respondents living in rented dwellings though comparatively far below those who did not pay rent in rural areas. For urban respondents, it could be that individuals were either building their own houses and moving out of rented housing arrangements, moving to live with friends and families in urban areas due to high cost of rent or that they were relocating to rural areas.

Moreover, respondents' households' access to mobile phone witnessed a continuous increase in both urban and rural areas from wave one to three. This confirms the fast improvement in the ICT sector in Ghana especially within the past two decades (Clemente Miranda et al., 2019; Boakye et al., 2022). Finally, the results of Table D1 in appendix D also revealed that respondents' perception of trustworthiness and helpfulness of their community members saw some increases across waves more pronouncedly in urban areas and in wave three compared to wave 1. Details of changes that occurred for other variables not discussed in this section are also shown in Table D1 in appendix D.

4.5 Cross-sectional changes in respondents' mean psychological distress levels across waves

The goal of this section is to provide information on cross-sectional changes in mean psychological distress levels of respondents from wave one through to wave three. This allows for comparison and investigating for possible contributory factors accounting for these changes. With reference to Table D2 in appendix D, this section interprets results for selected sociodemographic, SES, household, and community factors while detailed information on psychological distress changes among respondents in urban and rural areas is provided in appendix.

From Table D2 in appendix D, it is observed that psychological distress mean scores for males and females in urban and rural areas were generally moderate (16-21) across the three waves. It is further observed that females exhibited higher psychological distress mean scores compared to

University of Ghana http://ugspace.ug.edu.gh

males in both urban and rural areas and across all three waves. Furthermore, psychological distress mean scores were higher for both males and females in rural areas across the three waves compared to males.

Regarding respondents' ages, a similar trend to the one for sex was found. However, among rural respondents aged 61+, high psychological mean scores were recorded in wave one even though there was a decline in waves two and three. Except for respondents aged 46-55 years in urban areas in wave three, the results in urban and rural areas found a generally increasing psychological distress mean scores with increasing age for respondents across all waves. Apart from the fact that higher psychological distress mean scores were found among respondents divorced, separated, or widowed (formerly in union) compared to those in union and the never married, it was also found that respondents formerly in union recorded high psychological distress mean score (22.2) in wave one.

Across regions, Table D2 in appendix D found generally moderate psychological distress mean scores in all the regions across the three waves. It is worth noting, however, that no psychological distress was recorded in wave two among urban respondents in the Western (14.9), Central (15.1), Eastern (14.8), Ashanti (15.7), and Brong Ahafo (15.2). A similar trend was found in wave three among urban respondents in Ashanti (15.9) and Northern (15.6). This could be due to the moderate cost of living coupled with a sizeable number of job opportunities in urban areas in these regions compared to Greater Accra and the remaining regions. On the other hand, the results found that respondents in rural areas in the Eastern region experienced high psychological distress mean score (22.4) in wave one. This could possibly be because of insufficient or too much rain which affected their agricultural output leading to distress. Moreover, it is found that respondents in both urban and rural areas in the northern region experienced high psychological distress mean scores (22.1

University of Ghana http://ugspace.ug.edu.gh

and 23.8) respectively. This could be due to the negative shocks from floods leading to loss of livelihood in 2010 (relief web, 2010). Furthermore, respondents in urban areas of the Upper West region in wave three also experienced high psychological distress mean score (22.8). This may be attributed to the effect of displacement suffered most areas in northern Ghana in 2018 because of the overflowing of the White Volta River and the Bagre dam spillage (Flood list, 2018).

With respect to SES factors and psychological distress mean scores, Table D2 observed that respondents with no educational qualification had higher mean scores in both urban and rural areas across the three waves. It is also noticed that across the three waves, respondents with Teacher training/HND/Professional diploma in urban areas did not experience psychological distress as well as respondents with a bachelor's degree and above in waves two and three. This implies that higher educational qualification attainment could lead to better psychological well-being outcomes. Largely, the results also found that respondents' subjective social status levels across the three waves were directly linked to psychological distress mean scores.

Regarding household characteristics, the results revealed that among respondents' households in rural areas in wave one, a high psychological distress mean score was recorded for those in households with no access to mobile phone. At the community level respondents who perceived strong community trustworthiness and helpfulness (strong social support) across the waves in both urban and rural areas recorded higher psychological distress mean scores compared to those with weak or moderate perception of community trustworthiness and helpfulness.

In summary, it is evident that psychological distress mean scores were higher among rural respondents across the various characteristics and across the three waves. The results also identified a decrease in psychological distress in wave two compared to wave one and a slight increase again in wave three compared to wave two.

University of Ghana http://ugspace.ug.edu.gh

CHAPTER FIVE

PSYCHOLOGICAL DISTRESS PREVALENCE AMONG URBAN AND RURAL DWELLERS IN GHANA

5.1 Introduction

The focus of this chapter is to examine the prevalence of psychological distress across the various demographic, SES, household, and community characteristics of respondents in urban and rural areas in Ghana. For each variable, psychological distress prevalence is compared between urban and rural respondents, considering differences in overall prevalence and differences in specific-level prevalence.

5.2 Psychological distress prevalence in Ghana

This subsection first examines the overall prevalence rate of psychological distress in Ghana and specific level rates. The section examines prevalence among urban and rural respondents and, finally among the respondents' various sociodemographic characteristics and SES.

Overall psychological distress prevalence among respondents

Figure 5.1 establishes that approximately 33.0 percent of respondents had no psychological distress. The overall prevalence rate of psychological distress was 66.2 percent, with moderate psychological distress prevalence being 33.3 percent. The rate of high psychological distress among the respondents was 22.5 percent, whereas the prevalence of very high psychological distress was 5.4 percent.

University of Ghana http://ugspace.ug.edu.gh

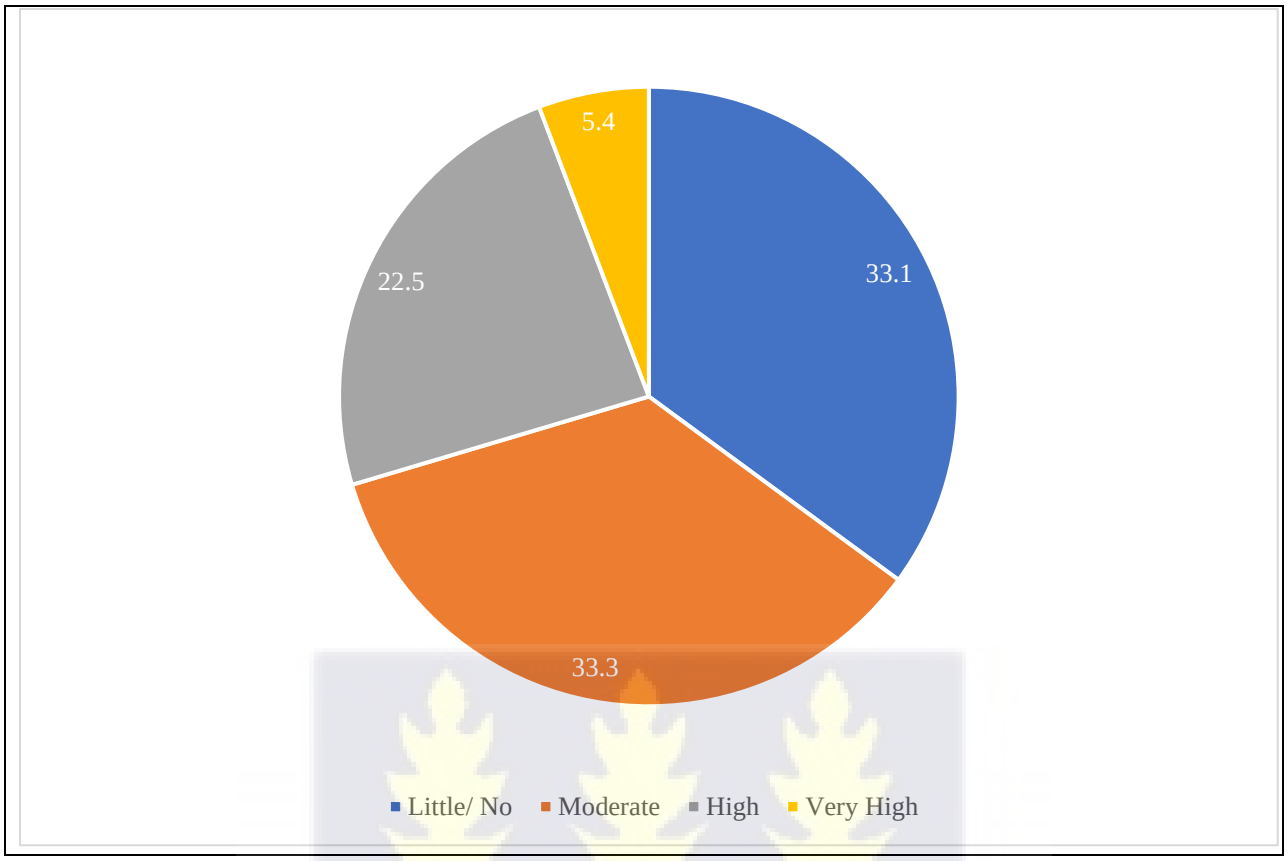


Figure 5.1 Psychological distress prevalence rate in Ghana

5.2.1 Psychological distress prevalence rate in urban and rural areas in Ghana

Figure 5.2 shows that the overall prevalence of psychological distress among respondents was lower in urban areas at 52.9 percent, while rural areas had a higher overall prevalence of 66.1 percent. It is also indicated that in urban areas, 47.1 percent of respondents reported little/no psychological distress, while in rural areas, the prevalence of little/no psychological distress was 33.9 percent. However, the rate of moderate psychological distress was higher (34.3%) among rural respondents compared to the rate (31.7%) among respondents in urban areas. Again, in urban areas, 17.3 percent of respondents reported high levels of psychological distress, with the rate of high psychological distress being 25.5 percent in rural areas. Lastly, from Figure 4.2, it is reported that the prevalence rate of very high psychological distress was significantly low among

University of Ghana http://ugspace.ug.edu.gh

respondents in both urban and rural areas, even though rural respondents reported slightly higher rates (6.3%) compared to the urban rate of 4.0 percent.

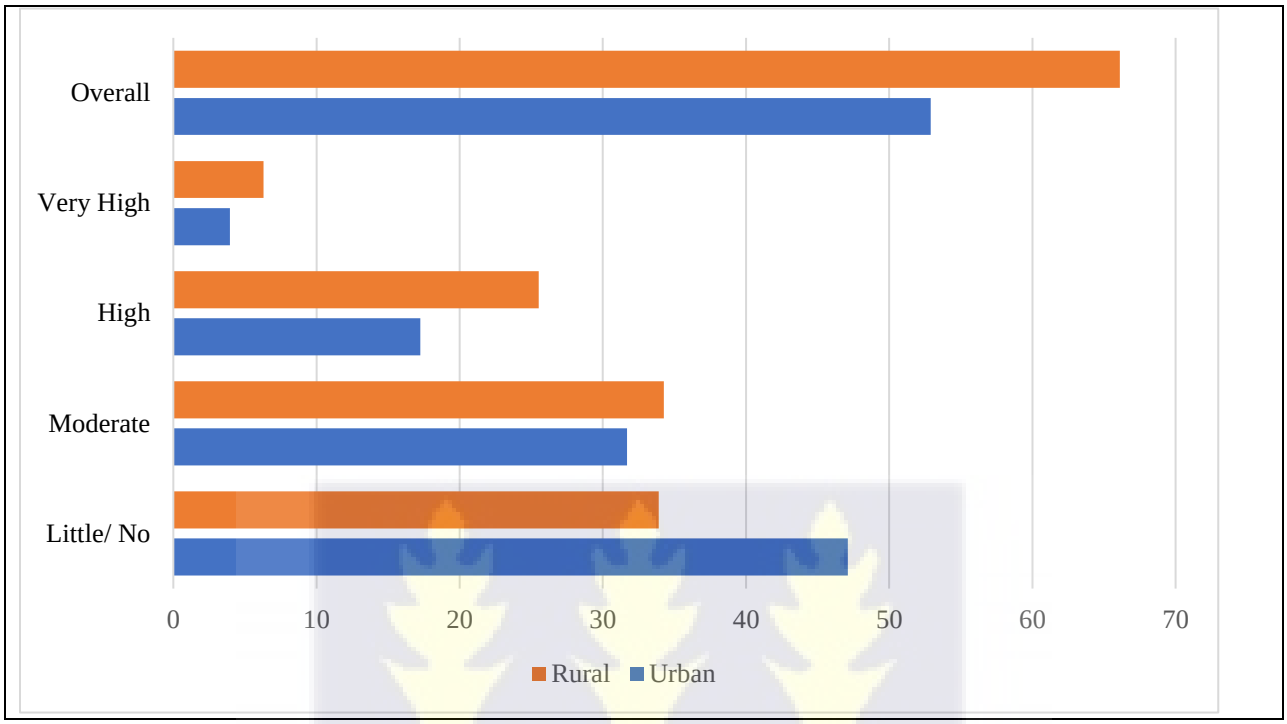


Figure 5.2 Psychological distress prevalence rate in urban and rural areas in Ghana

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

5.3 Psychological distress prevalence across respondents' sociodemographic characteristics in urban and rural areas in Ghana

This section of the chapter examined the prevalence of psychological distress across the various sociodemographic groups in urban and rural areas in Ghana. The overall prevalence of distress between urban and rural areas is compared to each sociodemographic variable. In addition, a comparison between urban and rural prevalence of moderate, high, and very high psychological distress was also examined.

University of Ghana http://ugspace.ug.edu.gh

5.3.1 Psychological distress prevalence rate by respondents' sex in urban and rural areas

From Figure 5.3, it is reported that the overall prevalence of psychological distress for urban males was 47.9 percent. Of this group, 30.6 percent experienced moderate distress, 14.1 percent reported high distress and 3.2 percent prevalence of very high distress. However, among men in rural areas, the overall prevalence of psychological distress was 62.8 percent. Among them, 35.3 percent experienced moderate distress, 22.0 percent reported high distress, and 5.5 percent reported very high distress.

Regarding females in urban areas, the overall prevalence of psychological distress was 56.4 percent. The moderate distress prevalence rate was 32.4 percent, with a 4.4 percent prevalence of very high distress. Comparing that with rural females, it is indicated that overall prevalence was even higher at 68.7 percent. Moreover, within the rural female population, 33.4 percent experienced moderate distress, 28.4 percent reported high distress, and 6.9 percent reported very high distress. In summary, Figure 4.3 shows a higher prevalence of distress among females than males in both urban and rural areas.

University of Ghana http://ugspace.ug.edu.gh

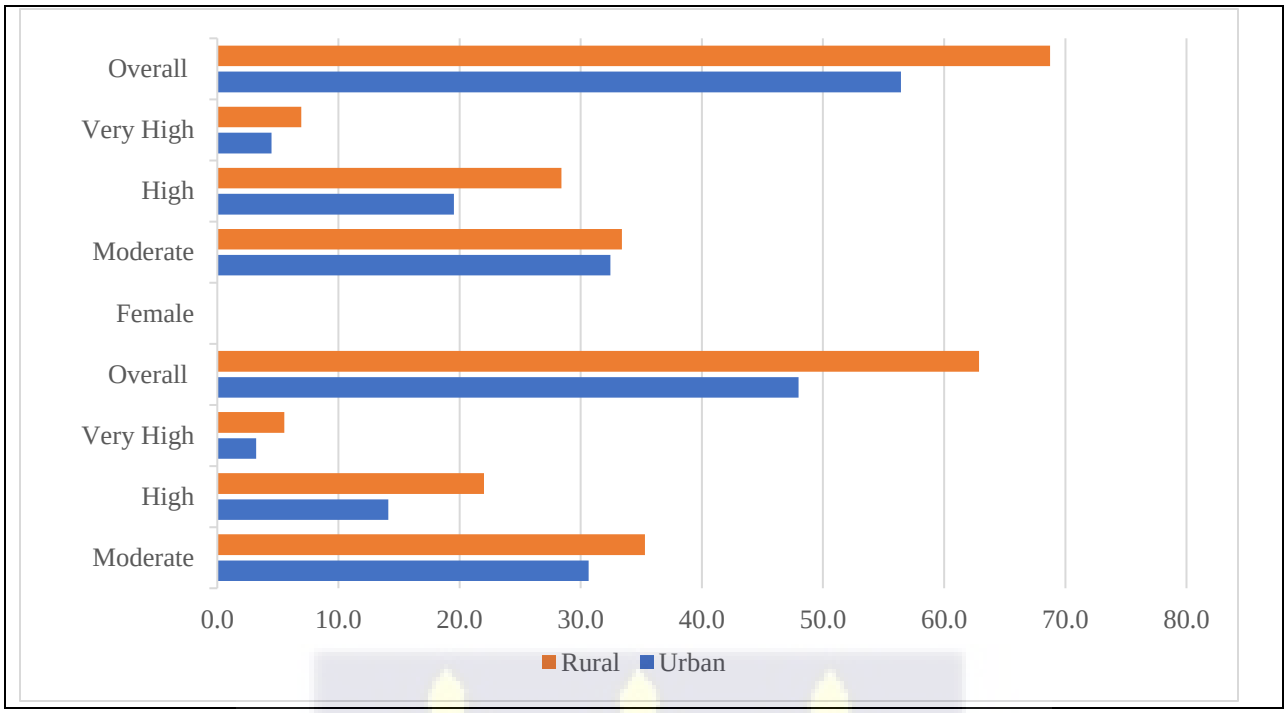


Figure 5.3 Psychological distress prevalence rate by respondents' sex in urban and rural areas

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

5.3.2 Psychological distress prevalence rate by respondents' age group in urban and rural areas

Table 5.1 presents the result of psychological distress prevalence among respondents of different age groups in urban and rural areas. For the age group less than 36 years in urban areas, the prevalence of psychological distress was 45.3 percent. Among them, moderate, high, and very high distress prevalence were 28.1 percent, 14.3 percent, and 3.0 percent respectively. For the same age group in rural areas, the prevalence of psychological distress was higher at 57.4 percent. Subsequently, 32.5 percent experienced moderate distress, 20.9 percent experienced high distress, and 4.0 percent reported very high distress. Comparatively, it is observed that the prevalence of psychological distress was higher in rural areas than in urban areas among respondents in this age group.

University of Ghana http://ugspace.ug.edu.gh

For respondents aged 36-45 years in urban areas, the prevalence of psychological distress was 51.2 percent. Within this same age group, 31.4 percent experienced moderate distress, 16.7 percent experienced high distress, and 3.2 percent reported very high distress. On the other hand, among the same age group in rural areas, the prevalence of psychological distress was 65.8 percent. The prevalence of moderate distress was 35.9 percent, high distress prevalence was 24.2 percent, and 5.7 percent reported very high distress. Again, the result found a higher prevalence of psychological among this age group in rural areas compared to urban areas.

Regarding respondents in the age group 46-55, the result indicated that the prevalence of psychological distress in urban areas was 53.9 percent. For specific psychological distress prevalence, 32.4 percent experienced moderate distress, 18.0 percent experienced high distress, and 3.4 percent reported very high distress. In rural areas, however, distress was higher at 66.8 percent. Among this age group, 35.2 percent experienced moderate distress, 26.0 percent experienced high distress, and the rate of very high distress was 5.6 percent.

Furthermore, in urban areas, the prevalence of psychological distress was 55.4 percent for respondents aged 56-60. The prevalence of moderate, high, and very high distress was 34.5 percent, 15.8 percent, and 5.1 percent respectively. In rural areas, the prevalence was higher at 69.0 percent. Moderate distress was at a prevalence of 34.1 percent, high distress was 28.9 percent, and 6.0 percent reported very high distress.

Finally, for the age group 61 years and over, the urban prevalence of psychological distress was 65.5 percent. Among this same age group, 35.1 percent experienced moderate distress, 24.0 percent experienced high distress, and the prevalence of very high distress was 6.5 percent. For this same age group in rural areas, the overall prevalence of distress was 75.7 percent. The specific

University of Ghana http://ugspace.ug.edu.gh

prevalence of moderate, high, and very high distress was 34.2 percent, 30.4 percent, and 11.1 percent respectively.

In summary, the result showed that psychological distress prevalence generally increased with age across all age groups in both urban and rural areas. Additionally, rural areas consistently had higher prevalence rates of psychological distress compared to urban areas within each age group.

Table 5.1 Psychological distress prevalence rate by respondents' age group in urban and rural areas

Age group	Urban (%)	Rural (%)
Less than 36 years		
Moderate	28.1	32.5
High	14.3	20.9
Very High	3.0	4.0
Overall	45.3	57.4
36-45		
Moderate	31.4	35.9
High	16.7	24.2
Very High	3.2	5.7
Overall	51.2	65.8
46-55		
Moderate	32.4	35.2
High	18.0	26.0
Very High	3.4	5.6
Overall	53.9	66.8

University of Ghana http://ugspace.ug.edu.gh

Table 5.1 continued

Age group	Urban (%)	Rural (%)
56-60		
Moderate	34.5	34.1
High	15.8	28.9
Very High	5.1	6.0
Overall	55.4	69.0
61+		
Moderate	35.1	34.2
High	24.0	30.4
Very High	6.5	11.1
Overall	65.5	75.7

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

5.3.3 Psychological distress prevalence rate by respondents' marital status in urban and rural areas

Figure 5.4 presents the results of psychological distress prevalence by marital status of respondents in urban and rural areas. For respondents in a union (married or living together) in urban areas, the prevalence rate of psychological distress was 52.3 percent. Of this group, 32.0 percent experienced moderate distress, 16.9 percent reported high distress, and 3.4 percent reported very high distress. However, compared to respondents in a union in rural areas, the prevalence of psychological distress was higher at 66.7 percent. Those in a union who experienced moderate distress were 35.4 percent, high distress prevalence was 25.6 percent, and 5.7 percent experienced very high distress.

Concerning urban respondents formerly in a union (separated/divorced/widowed), the result showed that the prevalence of psychological distress was 65.9 percent. The prevalence of moderate distress, however, was 35.4 percent, with a high and very high prevalence of psychological distress

University of Ghana http://ugspace.ug.edu.gh

being 23.6 percent and 6.8 percent, respectively. In rural areas, however, among this same group formerly in union, the prevalence of psychological distress was 77.8 percent. Among them, 33.9 percent experienced distress, 33.0 percent experienced high distress, and 10.9 percent reported very high distress.

For urban respondents who have never been in a union, the prevalence of psychological distress was 44.1 percent. Among them, 29.1 percent experienced moderate distress, 13.1 percent experienced high distress, and 2.9 percent reported very high distress. The overall prevalence of psychological distress among the same group in rural areas was 50.9 percent. The prevalence of moderate distress, however, was 30.0 percent, high distress was 17.1 percent, and 3.9 percent reported very high distress. The result showed that the overall prevalence of psychological distress was higher in urban and rural areas for respondents formerly in a union than those in a union and never in a union. Additionally, respondents in rural areas generally had higher prevalence rates of psychological distress across the various marital statuses compared to those in urban areas.

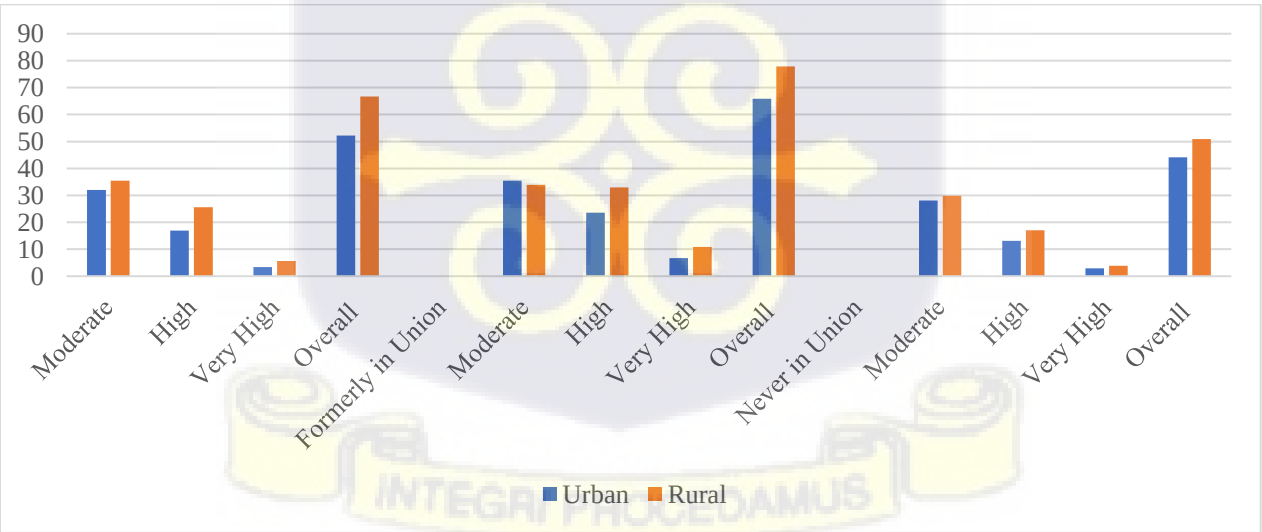


Figure 5.4 Psychological distress prevalence rate by respondents' marital status in urban and rural areas

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

5.3.4 Psychological distress prevalence rate by respondents' household membership status in urban and rural areas

Figure 5.5 presents the result of the prevalence of psychological distress among household members in urban and rural areas, focusing on their membership status. Regarding respondents who were heads of households in urban areas, the prevalence of psychological distress was 54.8 percent. Of this group, 32.4 percent experienced moderate distress, 18.1 percent reported high distress, and 4.2 percent experienced very high distress. In rural areas, however, the prevalence of psychological distress was higher at 68.0 percent for respondents who were the heads of households. Among them, 35.4 percent experienced moderate distress, 25.7 percent experienced high distress, and 7.0 percent reported very high distress. This implied that the prevalence of psychological distress was higher among heads of households in rural areas than those in urban areas.

Concerning respondents who were spouses in urban areas, the prevalence of psychological distress was 54.1 percent. Within this group of spouses, 32.8 percent experienced moderate distress, 18.0 percent experienced high distress, and 3.3 percent reported very high distress. Among spouses in rural areas, however, the prevalence of psychological distress was higher at 67.8 percent. Rural spouses who reported moderate psychological distress were 34.2 percent, and those who experienced high distress were 27.9 percent and 5.7 percent reported very high distress.

Moreover, in urban areas, the prevalence of psychological distress was 43.2 percent for respondents who were children in the household. Among them, 28.1 percent experienced moderate distress, 12.1 percent experienced high distress, and 3.0 percent reported very high distress. For children in households in rural areas, the prevalence of psychological distress was much higher at

University of Ghana http://ugspace.ug.edu.gh

82.1 percent. Among this population of children, 47.3 percent experienced moderate distress, 30.9 percent experienced high distress, and 4.0 percent reported very high distress.

Regarding other relatives or non-relatives in households in urban areas, the prevalence of psychological distress was 50.7 percent. Among them, 26.7 percent experienced moderate distress, 18.6 percent experienced high distress, and 5.5 percent reported very high distress. In rural areas, the prevalence of psychological distress was higher at 65.6 percent for respondents who were other relatives or non-relatives within the household. Of this, 29.8 percent experienced moderate distress, 27.7 percent experienced high distress, and 8.2 percent reported very high distress.

In summary, the results revealed that psychological distress prevalence varied significantly among household members across urban and rural areas with, a higher prevalence rate in rural areas than in urban areas.

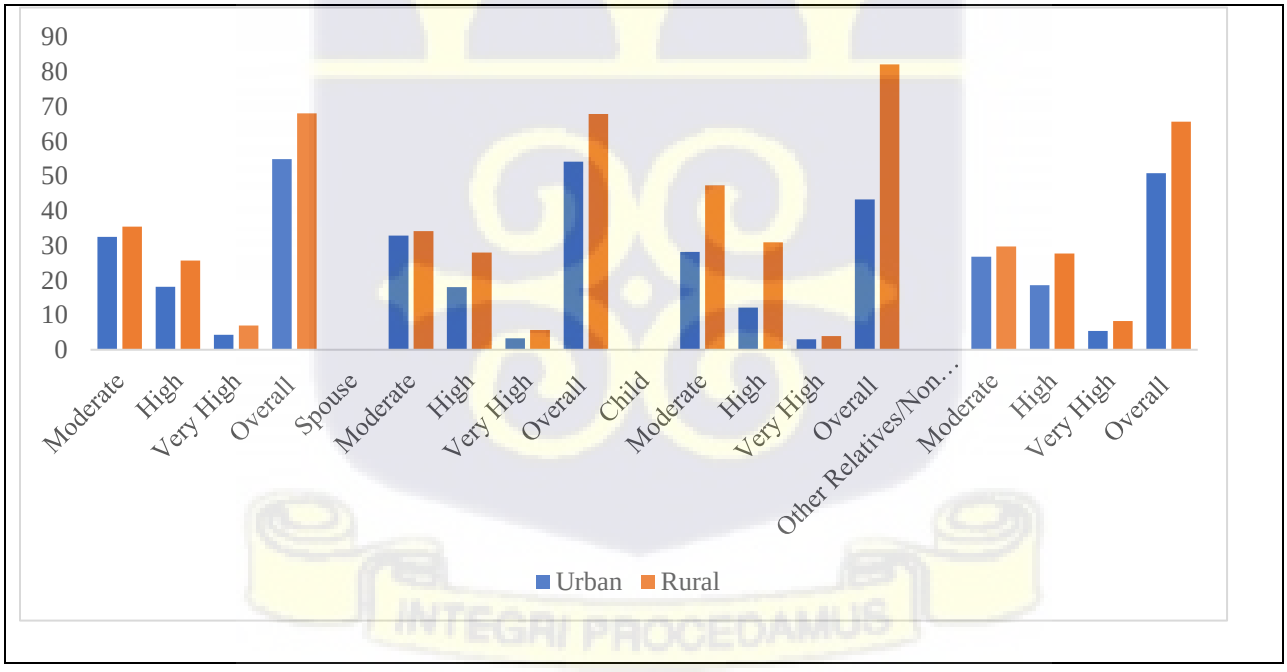


Figure 5.5 Psychological distress prevalence rate by respondents' household membership status in urban and rural areas

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

5.3.5 Psychological distress prevalence rate by respondents' household size in urban and rural areas

The prevalence of psychological distress among respondents of different household sizes in urban and rural areas is examined in Figure 5.6. Concerning respondents being single-member households in urban areas, the prevalence of psychological distress was 55.2 percent. Among this group, 33.1 percent experienced moderate distress, 18.1 percent reported high distress, and 4.0 percent reported very high distress. However, in rural areas, respondents with one-member households had a psychological distress prevalence of 68.0 percent. Within this group, 34.4 percent experienced moderate distress, 26.0 percent experienced high distress, and 7.7 percent reported very high distress.

Taking respondents from households with 2-3 members in urban areas into consideration, it is observed that the prevalence of psychological distress was 54.6 percent. Prevalence rates for moderate, high, and very high psychological distress among this group were 32.9 percent, 17.6 percent, and 4.1 percent respectively. In rural areas for this same group, the prevalence of psychological distress was higher at 66.4 percent. Among them, 34.2 percent experienced moderate distress, 26.0 percent experienced high distress, and 6.2 percent reported very high distress. For respondents in households with sizes 4-6 in urban areas, the prevalence of psychological distress was 49.7 percent. Of this group, 30.6 percent experienced moderate distress, 15.4 percent experienced high distress, and 3.8 percent reported very high distress. Among the same group in rural areas, the results indicated that the prevalence of psychological distress was higher at 65.5 percent. Within this group, 34.8 percent experienced moderate distress, 25.0 percent experienced high distress, and the prevalence of very high distress was 5.8 percent.

University of Ghana http://ugspace.ug.edu.gh

Finally, in urban areas, the prevalence of psychological distress was 55.3 percent for respondents in households with seven or more members. Among this population, 28.9 percent experienced moderate distress, 22.6 percent experienced high distress, and 3.9 percent reported very high distress. Concerning the same group in rural areas, the prevalence of psychological distress was higher at 67.2 percent. However, the prevalence of moderate distress was 34.7 percent, whereas 25.8 percent reported high distress, and 6.7 percent experienced very high distress. Among respondents of different household sizes, the results again found that the prevalence of psychological distress was higher in rural areas compared to those in urban areas.

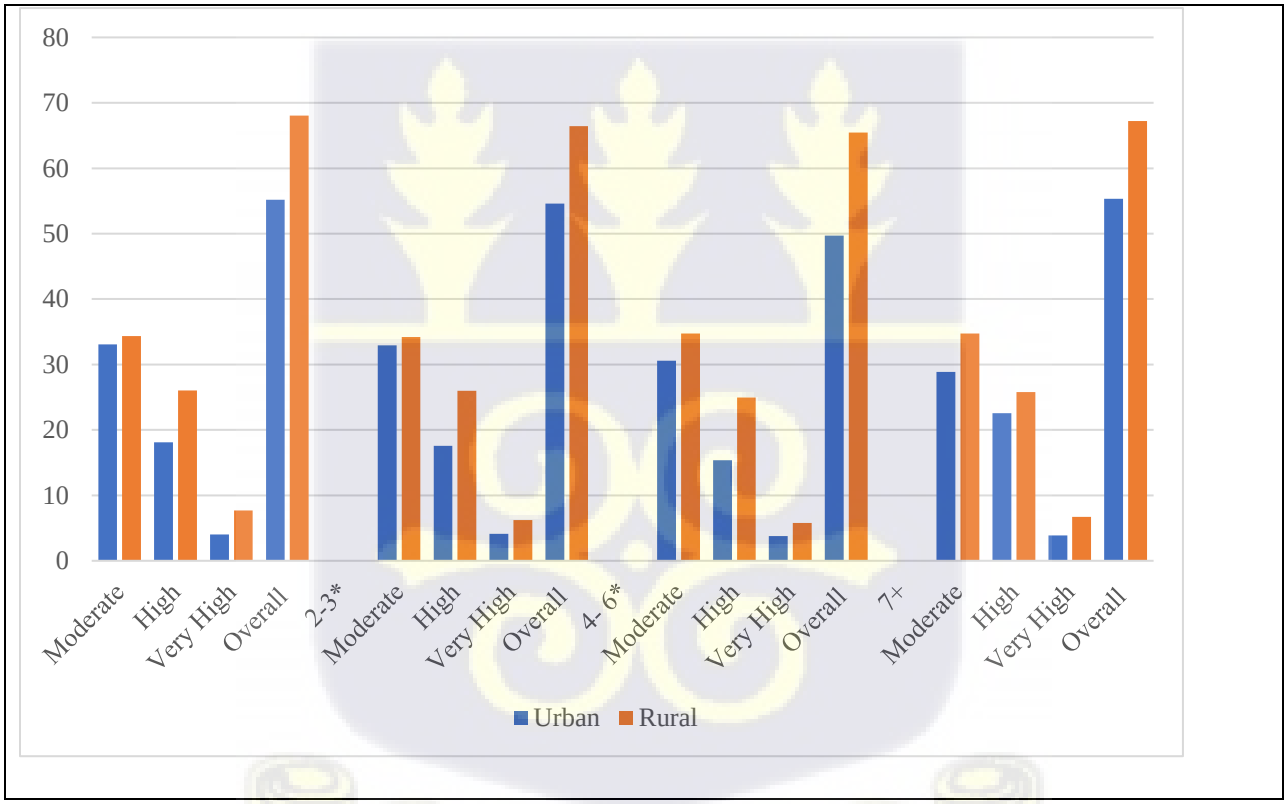


Figure 5.6 Psychological distress prevalence rate by respondents' household size in urban and rural areas

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

5.3.6 Psychological distress prevalence rate by respondents' community of birth in urban and rural areas

Figure 5.7 examines the prevalence of psychological distress in urban and rural areas based on whether a respondent was born in the community of residence. The results showed that in urban areas, the prevalence of psychological distress was 55.9 percent among respondents who were born in the same community of interview. Of this group, 32.0 percent experienced moderate distress, 18.8 percent reported high distress, and 5.2 percent reported very high distress. In rural areas, however, the prevalence of psychological distress was higher at 67.6 percent for respondents born in the same community.

It was further observed that among this group, 34.6 percent experienced moderate distress, 26.6 percent experienced high distress, and 6.5 percent reported very high distress. For respondents in urban areas not born in the community of interview, the prevalence of psychological distress was 49.7 percent. Within this group, 31.4 percent experienced moderate distress, 15.7 percent experienced high distress, and 2.6 percent reported very high distress. Concerning respondents in rural areas not born in the community, the results indicated that the prevalence of psychological distress was higher at 64.0 percent. Those in that population who experienced moderate distress were 33.9 percent. The prevalence of high and very high distress, on the other hand, was 24.0 percent and 6.1 percent, respectively. The results established that psychological distress prevalence varied based on whether respondents were born in the same community or not across urban and rural areas, with an overall prevalence of distress higher among rural respondents for both born-in and not-born-in groups compared to urban areas.

University of Ghana http://ugspace.ug.edu.gh

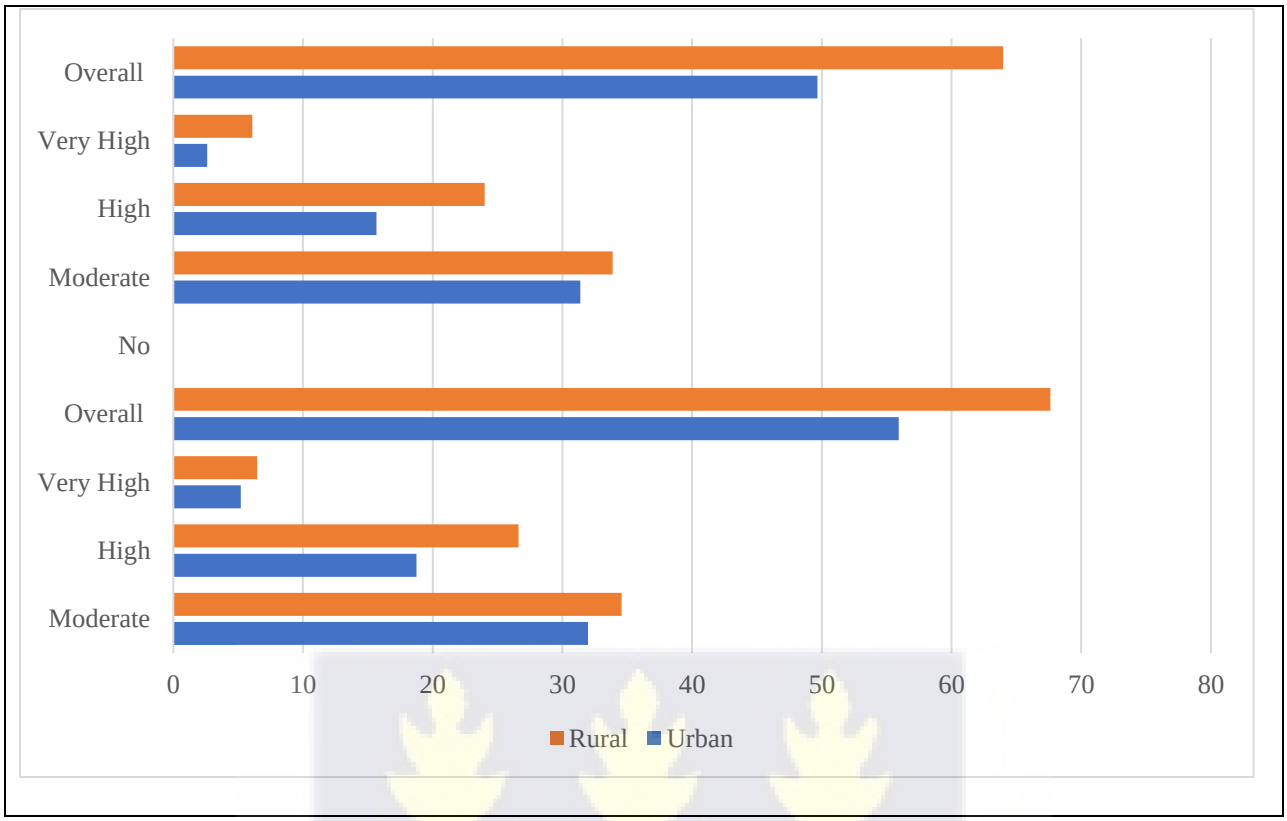


Figure 5.7 Psychological distress prevalence rate by respondents' place of birth in urban and rural areas

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

5.3.7 Psychological distress prevalence rate by respondents' religious affiliation in urban and rural areas

Table 5.2 presents the results of psychological distress prevalence among respondents across different religious affiliations in urban and rural areas. According to the results, in urban areas, psychological distress prevalence among respondents identified as having no religion was 59.2 percent. The prevalence of moderate distress among this group was 33.0 percent, high distress prevalence was also 19.2 percent, and 7.0 percent reported very high distress. In rural areas, however, the prevalence of psychological distress was higher at 66.6 percent for respondents with no religion. Among that group, 33.4 percent experienced moderate distress, 25.2 percent experienced high distress, and 8.1 percent reported very high distress. For respondents identified

University of Ghana http://ugspace.ug.edu.gh

as Christians in urban areas, the results indicated that psychological distress prevalence was 50.6 percent. Moderate, high, and very high distress prevalence for this same group was 31.1 percent, 16.4 percent, and 3.1 percent, respectively.

Regarding those identified as Christians in rural areas, the results indicated that the psychological prevalence rate was 63.4 percent. Among them, the prevalence of moderate distress was 34.2 percent, high distress was 23.7 percent, and 5.5 reported very high distress. For respondents identified as Muslims in urban areas, psychological distress prevalence was 60.0 percent. Among them, 34.4 percent experienced moderate distress, 19.7 percent experienced high distress, and 6.0 percent reported very high distress. Among respondents of this same religion in rural areas, psychological distress prevalence was 68.3 percent. Those who experienced moderate, high, and very high distress in rural areas were 34.8 percent, 26.9 percent, and 6.6 percent respectively. Regarding respondents affiliated with traditional religion, the prevalence of moderate and high psychological distress in urban areas was 28.9 percent and 33.0 percent, respectively. In rural areas, however, moderate, and high distress was higher, 34.4 percent and 34.1 percent, respectively, compared to urban areas. The table nonetheless reported that the prevalence of very high distress was higher (14.4%) in urban areas than in rural areas (9.4%). The table further showed that the overall prevalence of psychological distress was slightly higher (77.9%) in rural areas than in urban areas (76.3%). For respondents affiliated with other religions, the overall prevalence of distress was 62.1 percent and 64.6 percent, in urban and rural areas respectively. Among respondents in urban areas, the prevalence of moderate distress was 31.0 percent, while 20.7 percent experienced high distress. The prevalence of moderate and high psychological distress in rural areas was comparatively higher: 32.0 percent and 25.2 percent, respectively. However, the very high distress prevalence was higher (10.3%) in urban areas compared to rural

University of Ghana http://ugspace.ug.edu.gh

areas (7.3%). In summary, the result indicated that the overall prevalence of psychological distress was highest in both urban and rural areas among respondents affiliated with the traditional religion and lowest among those with no religion.

Table 5.2 Psychological distress prevalence rate by respondents' religious affiliation in urban and rural areas

Religion	Urban (%)	Rural (%)
None		
Moderate	34.0	33.4
High	19.2	25.2
Very High	7.0	8.1
Overall	59.2	66.6
Christian		
Moderate	31.1	34.2
High	16.4	23.7
Very High	3.1	5.5
Overall	50.6	63.4
Muslim		
Moderate	34.4	34.8
High	19.7	26.9
Very High	6.0	6.57
Overall	60.0	68.3

University of Ghana http://ugspace.ug.edu.gh

Table 5.2 continued

Religion	Urban (%)	Rural (%)
Traditional		
Moderate	28.9	34.4
High	33.0	34.1
Very High	14.4	9.4
Overall	76.3	77.9
Other		
Moderate	31.0	32.0
High	20.7	25.2
Very High	10.3	7.3
Overall	62.1	64.6

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

5.3.8 Psychological distress prevalence rate by respondents' region in urban and rural areas

Table 5.3 reports that in the Western region of Ghana, the overall prevalence of psychological distress was higher (59.4%) in rural areas compared to the rate (43.6%) in urban areas within the same region. Moreover, the prevalence rate of moderate (32.7%), high (21.6%) and very high (5.2%) psychological distress in rural areas was higher compared to urban areas, the prevalence of moderate (26.3%), high (14.8%) and very high (2.5%) psychological distress. Similarly, in the Central region, the overall prevalence of psychological distress was higher (63.5%) in rural areas compared to the prevailing rate of 55.1 percent in urban areas. At the specific levels, however, very high psychological distress prevalence was higher (7.2%) in urban areas compared to rural areas (4.1%). Moderate and high distress in rural areas were nonetheless higher (38.6% and 20.8%), respectively, compared to rates (29.8% and 18.1%) in urban areas within the region. The overall prevalence of psychological distress in the Greater Accra region urban areas was 52.7

University of Ghana http://ugspace.ug.edu.gh

percent, while in rural areas, the overall prevalence rate was 56.4 percent. Apart from the prevalence of moderate distress, which was higher (37.5%) in urban areas, the rate of high and very high distress was higher (17.6% and 3.1%) in rural areas compared to urban areas (13.5% and 1.7%) in the Greater Accra region. Like results from other regions, the table showed that, the prevalence rate for psychological distress in the Volta region was 64.4 percent in urban areas, lower than 67.0 percent in rural areas. There were no significant differences, however, in high and very high psychological distress prevalence. Regarding very high distress, in urban areas in the Volta region, a slightly higher (5.7%) prevalence was observed compared to the rate of 5.6 percent in rural areas. Moderate and high distress prevalence was slightly higher (32.7% and 28.7%) than those in rural areas (30.2% and 28.6%). The prevalence rates in the Eastern region at all levels (moderate, high, and very high) were higher (35.2%, 26.2%, and 8.8%) in rural areas compared to what was found in urban areas (31.8%, 20.4%, and 4.9%). Notably, the overall prevalence of distress in rural areas was much higher (70.1%) compared to urban (57.1%) areas in the same region and even other rural areas in southern Ghana. In the Ashanti region, just like the trend observed in the Eastern region, psychological distress prevalence was higher (28.8%, 22.3%, and 5.5%) at all levels (moderate, high, and very high) in rural areas compared to urban areas (24.4%, 12.6%, and 2.7%). In addition, overall distress prevalence was also higher (56.5%) in rural areas than in urban areas (39.7%). In the Brong Ahafo region, overall distress prevalence was higher (60.6%) in rural areas compared to a rate of 57.1 percent in urban areas. However, the prevalence of high and very high distress was slightly higher (20.9% and 4.5%) in urban areas compared to rural areas (20.1% and 4.1%), respectively. The rate of moderate distress in urban areas was nonetheless lower (31.8%) than in rural areas (36.4%). The table reported that the overall prevalence of psychological distress in urban areas of the northern region was 63.7 percent lower

University of Ghana http://ugspace.ug.edu.gh

than the overall prevalence rate (69.6%) in rural areas in the same region. Moderate distress was, however, higher (37.8%) in urban areas compared to rural areas (34.3%). Inversely, the prevalence of high and very high distress was higher in rural areas (27.0% and 8.3%) compared to urban areas (19.0% and 6.9%). In the Upper East region of Ghana, overall prevalence of distress was significantly higher (65.7% and 73.0%), in urban and rural areas compared to other regions in Ghana's southern and middle belts. Within the region, however, moderate distress was higher (37.6%) in urban areas than in rural areas (30.5 percent). On the other hand, there was a higher prevalence (35.4% and 7.1%) of high and very high distress in rural areas compared to urban areas (24.9% and 3.3%).

Finally, it was observed from the table that the Upper West region recorded the highest psychological distress prevalence (80.2% and 85.7%) in Ghana in both urban and rural areas, respectively. However, the prevalence of very high distress within the region was higher (7.2%) in urban areas than in rural areas (6.8%). The prevalence of moderate and high distress in rural areas of this region was, however, higher (46.3% and 32.6%) compared to the rates in urban areas (44.1% and 28.8%).

In summary, it was evident that the overall prevalence of distress was very high in all regions, particularly in urban and rural areas of the Volta, Upper East and Upper West regions, and rural areas in the Eastern region. Ashanti region recorded the least urban prevalence of psychological distress while rural areas in Greater Accra experienced the least prevalence rate of psychological distress.

University of Ghana http://ugspace.ug.edu.gh

Table 5.3 Psychological distress prevalence rate by respondents' region in urban and rural areas

Region	Urban (%)	Rural (%)
Western		
Moderate	26.3	32.7
High	14.8	21.6
Very High	2.5	5.2
Overall	43.6	59.4
Central		
Moderate	29.8	38.6
High	18.1	20.8
Very High	7.2	4.1
Overall	55.1	63.5
Greater Accra		
Moderate	37.5	35.7
High	13.5	17.6
Very High	1.7	3.1
Overall	52.7	56.4
Volta		
Moderate	30.2	32.7
High	28.6	28.7
Very High	5.7	5.6
Overall	64.4	67.0

University of Ghana http://ugspace.ug.edu.gh

Table 5.3 continued

Region	Urban (%)	Rural (%)
Eastern		
Moderate	31.8	35.2
High	20.4	26.2
Very High	4.9	8.8
Overall	57.1	70.1
Ashanti		
Moderate	24.4	28.8
High	12.6	22.3
Very High	2.7	5.5
Overall	39.7	56.5
Brong Ahafo		
Moderate	31.8	36.4
High	20.9	20.1
Very High	4.5	4.1
Overall	57.1	60.6
Northern		
Moderate	37.8	34.3
High	19.0	27.0
Very High	6.9	8.3
Overall	63.7	69.6

University of Ghana http://ugspace.ug.edu.gh

Table 5.3 continued

Region	Urban (%)	Rural (%)
Upper East		
Moderate	37.6	30.5
High	24.9	35.4
Very High	3.3	7.1
Overall	65.7	73.0
Upper West		
Moderate	44.1	46.3
High	28.8	32.6
Very High	7.2	6.8
Overall	80.2	85.7

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

5.4 Psychological distress prevalence across respondents' SES in urban and rural areas.

This section explored the prevalence of psychological distress among the various SES variables. Like the sociodemographic variables, the prevalence of psychological distress was also looked at between urban and rural areas, focusing first on overall prevalence and then distress-specific prevalence.

5.4.1 Psychological distress prevalence rate by respondents' highest educational qualification attained in urban and rural areas.

Table 5.4 reports the prevalence rate of psychological distress prevalence by respondents' highest educational qualification compared to the prevalence rate between urban and rural areas. Regarding respondents in urban areas who had no educational qualification, the overall prevalence of psychological distress was 64.3 percent lower than the overall prevalence in rural areas (70.8%). Similarly, the prevalence of moderate (33.6%), high (24.1%), and very high (6.7%) distress in

University of Ghana http://ugspace.ug.edu.gh

urban areas was also lower than what was recorded in rural areas (34.7%, 28.4%, and 7.7%), respectively. Similarly, the overall prevalence of distress among respondents with MSLC and its equivalent qualification in urban areas was 50.0 percent. Moderate, high, and very high distress was 32.5 percent, 14.9 percent, and 2.6 percent, among the same group in urban areas. Compared to respondents with the same qualification, it was observed that overall distress prevalence (57.1 percent), together with moderate (33.6%), high (20.0%), and very high distress (3.5%), were all higher in rural areas than in urban areas. It was further observed that psychological distress overall (52.7%), moderate (31.7%), and high (18.5%) prevalence was higher in rural areas compared to urban areas (Overall=40.2%, moderate=26.1%, and high=11.6% for respondents who had attained SSCE qualification and its equivalence. However, the table reported an equal prevalence of very high distress in urban and rural areas. Again, respondents with Teacher Training/HND/ Prof. Diploma qualifications in rural areas also experienced a higher prevalence of overall (50.7%), moderate (32.0%), high (14.3%), and very high (4.3%) distress compared to those with similar qualifications in urban areas (overall=39.4%, moderate=30.9%, high=8.4%, and very high=0.2%). Concerning respondents with bachelor's degrees and above qualifications, overall psychological distress prevalence was still higher in rural areas (49.1%) compared to urban areas (37.2%).

Additionally, moderate (36.6%) and high distress (11.6%) prevalence rates were higher in rural areas than in urban areas (27.6% and 8.4%), respectively. However, the table indicated that very high distress was higher (1.2%) in urban areas than in rural areas (0.9%). Respondents with other forms of qualifications in urban areas experienced a higher prevalence of overall (50.8%), high (15.4%), and very high (1.5%) distress compared to those in rural areas (overall=29.9%, high=13.9%, and very high=0.0%). Moderate prevalence, nonetheless, was higher (44.4%) in rural areas than in urban areas (33.9%). In summary, it is evident from the table that the overall

University of Ghana http://ugspace.ug.edu.gh

prevalence of psychological distress in both urban and rural areas was highest among respondents with no educational qualification and lowest in urban areas among respondents with a bachelor's degree and above.

Table 5.4 Psychological distress prevalence rate by respondents' highest educational qualification attained in urban and rural areas

Highest edu. qualification	Urban (%)	Rural (%)
None		
Moderate	33.6	34.7
High	24.1	28.4
Very High	6.7	7.7
Overall	64.3	70.8
MSLC/BECE/O' Level		
Moderate	32.5	33.6
High	14.9	20.0
Very High	2.6	3.5
Overall	50.0	57.1
SSCE/A' Level/Prof. Cert.		
Moderate	26.1	31.7
High	11.6	18.5
Very High	2.5	2.5
Overall	40.2	52.7

University of Ghana http://ugspace.ug.edu.gh

Table 5.4 continued

Highest edu. qual.	Urban (%)	Rural (%)
Teacher Training/HND/ Prof. Diploma		
Moderate	30.9	32.0
High	8.4	14.3
Very High	0.2	4.3
Overall	39.4	50.7
Bachelor's Degree+		
Moderate	27.6	36.6
High	8.4	11.6
Very High	1.2	0.9
Overall	37.2	49.1
Other qualifications		
Moderate	33.9	44.4
High	15.4	13.9
Very High	1.5	0.0
Overall	50.8	29.9

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

5.4.2 Psychological distress prevalence rate by respondents' SSS in urban and rural areas.

Figure 5.8 presents the prevalence of psychological distress among respondents in the different SSSs in urban and rural areas. It is observed that the overall prevalence of psychological distress among respondents in the lowest, middle, and highest SSS in rural areas was higher (65.4%, 64.8%, 70.7%) compared to the overall prevalence in urban areas (lowest=54.2%, middle=50.1%, and highest=56.2%) respectively. In the same way, moderate, high, and very high distress prevalence in rural areas was also higher compared to urban areas. However, in urban and rural

University of Ghana http://ugspace.ug.edu.gh

areas, respondents in the highest SSS experienced the highest psychological distress prevalence compared to those in the lowest and middle SSS.

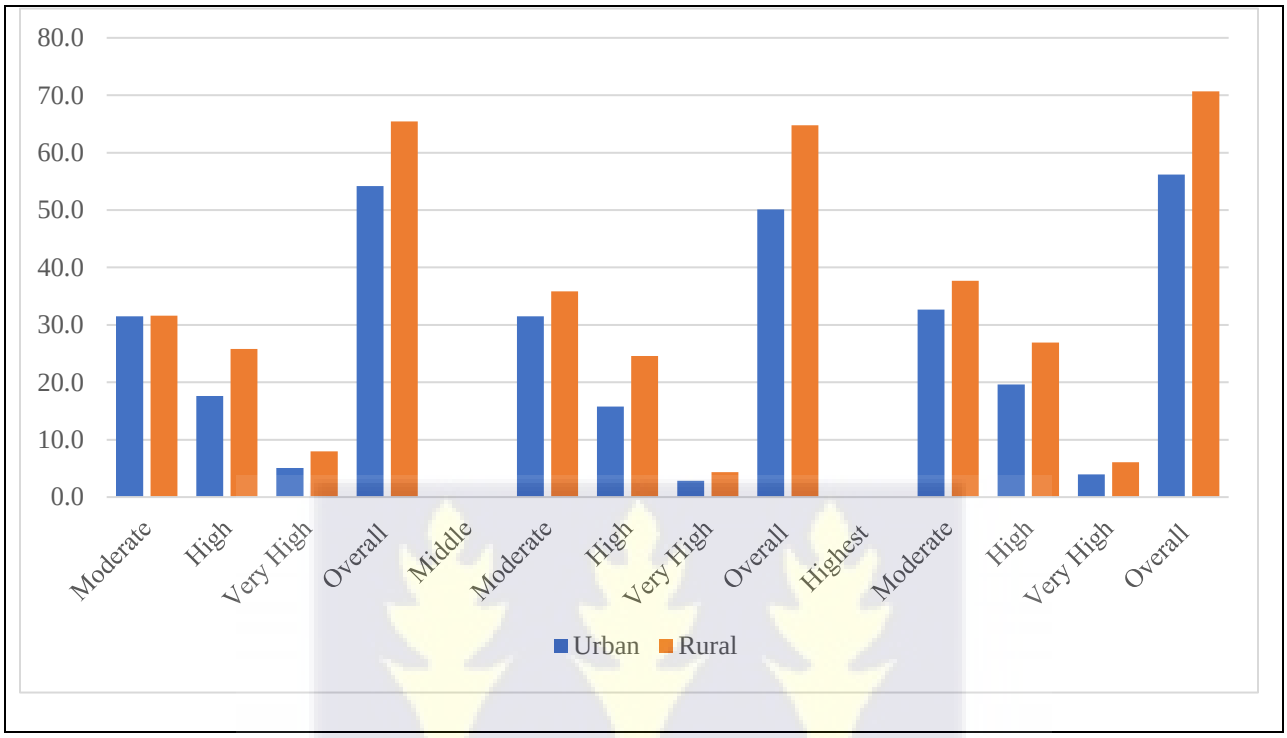


Figure 5.8 Psychological distress prevalence rate by respondents' SSS in urban and rural areas

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

5.4.3 Psychological distress prevalence rate by occupational status in urban and rural areas

Table 5.5 shows the prevalence rate of psychological distress among respondents of different occupations in urban and rural areas. Regarding respondents who were paid employees, the table indicates that the overall prevalence of psychological distress was higher (54.5%) among rural areas compared to urban areas (47.8%). Again, specific moderate, high, and very high prevalence levels were also higher in rural areas than in urban areas. Similarly, among respondents who were business and farm owners, the prevalence rate of psychological distress was higher across all categories in rural areas than in urban areas. While farm owners in rural areas experienced the

University of Ghana http://ugspace.ug.edu.gh

highest (68.6%) psychological distress prevalence, it was observed, however, paid employees in urban areas reported the lowest distress prevalence among the occupational groups.

Table 5.5 Psychological distress prevalence rate by occupational status in urban and rural areas

Occupational Status	Urban (%)	Rural (%)
Paid Employee		
Yes		
Moderate	31.6	33.0
High	13.6	17.9
Very High	2.6	3.7
Overall	47.8	54.5
Business Owner		
Yes		
Moderate	31.9	35.0
High	16.7	24.4
Very High	3.3	4.5
Overall	51.9	63.9
Farm Owner		
Yes		
Moderate	33.1	36.2
High	20.8	25.6
Very High	4.2	6.8
Overall	58.1	68.6

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

5.5 Psychological distress prevalence across respondents' household factors in urban and rural areas.

This section, in line with the chapter's objective, continues to focus on the prevalence of psychological distress in urban and rural areas in Ghana. In this section, the distress prevalence of respondents was examined considering their household characteristics such as wealth quintile, debt status, receipt of in-transfer, dwelling occupancy status, and access to ICT.

5.5.1 Psychological distress prevalence rate by respondents' household wealth quintile in urban and rural areas.

Table 5.6 presents the psychological distress prevalence across respondents' household wealth quintiles by comparing overall and level-specific prevalence in urban and rural areas. Regarding respondents in households in the poorest quintile, the table reported that the overall prevalence of psychological distress was higher (78.1%) among those in rural areas compared to those in urban areas (65.5%). Moreover, within the same poorest quintile, the prevalence of high and very high distress was also higher (32.3% and 8.9%) in rural than in urban (20.5% and 6.6%) areas, respectively. Moderate distress prevalence, however, was higher (38.4%) among respondents in households in the poorest quintile in urban areas than those in rural areas (36.9%). Furthermore, the table revealed that the poor quintile households' respondents in rural areas experienced a higher prevalence of overall (62.1%), moderate (34.8%), high (22.3%), and very high (5.0%) psychological distress compared with the prevalence rate (overall=55.1%, moderate=33.9%, high=17.9% and very high=3.3%) for those in the same quintile in urban areas. A similar trend is observed for respondents in the middle, rich and richest quintiles, where the prevalence of psychological distress at all levels was higher in rural areas compared to urban areas. In summary, the table shows that the prevalence of overall psychological distress was highest among urban and rural respondents in the poorest wealth quintile.

University of Ghana http://ugspace.ug.edu.gh

Table 5.6 Psychological distress prevalence rate by respondents' household wealth quintile in urban and rural areas

Wealth Quintile	Urban (%)	Rural (%)
Poorest		
Moderate	38.4	36.9
High	20.5	32.3
Very High	6.6	8.9
Overall	65.5	78.1
Poor		
Moderate	33.9	34.8
High	17.9	22.3
Very High	3.3	5.0
Overall	55.1	62.1
Middle		
Moderate	31.0	32.7
High	13.4	22.6
Very High	2.5	3.8
Overall	46.9	59.1
Rich		
Moderate	30.4	32.7
High	18.8	25.2
Very High	4.3	6.7
Overall	53.5	64.6
Richest		
Moderate	28.1	33.0
High	17.2	22.1
Very High	4.1	6.0
Overall	49.4	61.1

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

5.5.2 Psychological distress prevalence rate by respondents' household debt status in urban and rural areas

Figure 5.9 presents the prevalence of psychological distress among respondents in urban and rural areas based on their household debt status. In both urban and rural areas, there were no significant differences in the prevalence of distress among respondents in households with debts and those without debts. While the overall prevalence of distress among respondents in households with debts was 54.0 percent and 66.9 percent in urban and rural areas, respectively, those without debts recorded 52.5 percent and 65.8 percent in urban and rural areas. However, it remains clear that the prevalence of distress in both situations at all levels was higher in rural areas than in urban areas.

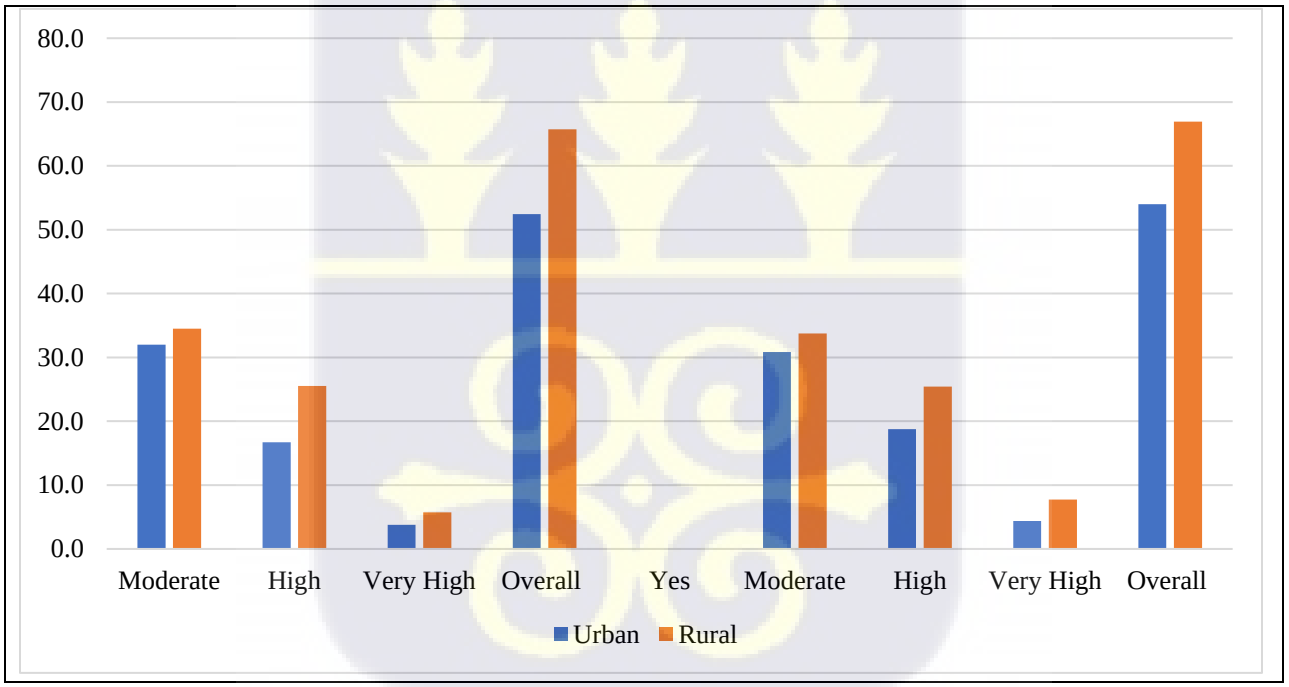


Figure 5.9 Psychological distress prevalence rate by respondents' household debt status in urban and rural areas

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

5.5.3 Psychological distress prevalence rate by respondents' household receipt of transfer in urban and rural areas

Figure 5.10 shows the prevalence of distress among respondents in urban and rural areas based on household receipts of goods or money. Surprisingly, it is revealed that respondents in households who received transfers in urban (55.2%) and rural (68.7%) areas alike experienced overall higher distress compared to those who did not receive (urban=51.3% and rural=64.4%). High and very high distress prevalence was also higher among respondents in households who received transfers in urban and rural areas than those who did not. In all categories, however, distress prevalence in rural areas as shown, was higher than in rural areas.

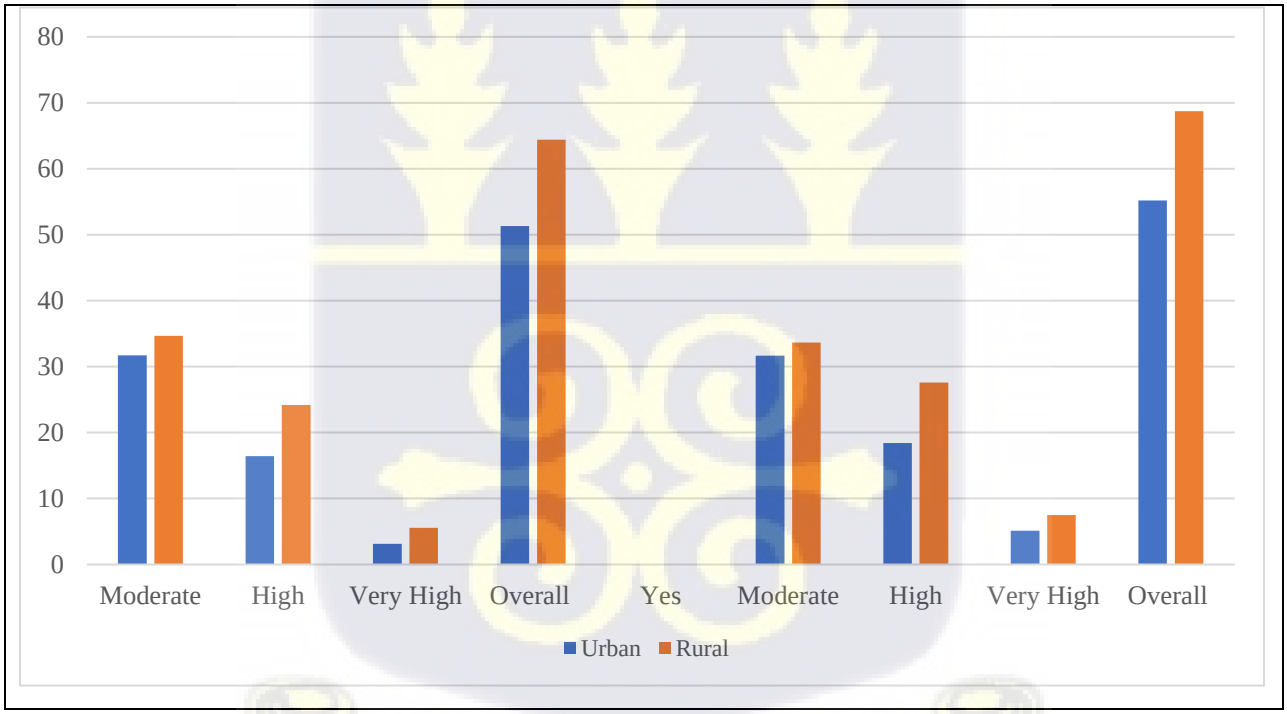


Figure 5.10 Psychological distress prevalence rate by respondents' household receipt of transfer in urban and rural areas

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

5.5.4 Psychological distress prevalence rate by respondents' household occupancy status in urban and rural areas

The prevalence of psychological distress of respondents based on their households' occupancy status is shown in Figure 5.11. It is revealed that the overall psychological distress was higher (30.3%) among respondents in urban areas whose households lived in rented accommodation compared to those in rural areas (8.0%). The results further revealed that there was no significant difference (urban=30.0%, rural=29.5%) in the prevalence of moderate distress for respondents in both urban and rural areas living with households in rented accommodation. However, respondents in rural areas who lived in rented accommodation experienced relatively higher prevalence in high (20.7%) and very high (6.6%) compared to urban respondents (high=15.6%, very high=2.7%) who lived in rented accommodation.

On the contrary, the results also showed that the overall prevalence of psychological distress in urban and rural areas for respondents not living in rented accommodation was higher (urban=69.7%, rural=92.0%) compared to those who rented in both urban and rural areas (urban=30.3%, rural=8.0%). However, comparing the overall prevalence between urban and rural areas for respondents who did not pay rent, it is observed that those in rural areas had higher distress (92.0%) than those in urban areas (69.7%). In addition, the results for respondents who occupied rent-free accommodation indicated a higher prevalence of moderate (34.7%), high (25.9%) and very high (6.5%) distress in rural areas compared to respondents who lived in rent-free accommodation in urban areas (moderate=32.4 %, high=18.0%, very high=4.5%).

University of Ghana http://ugspace.ug.edu.gh

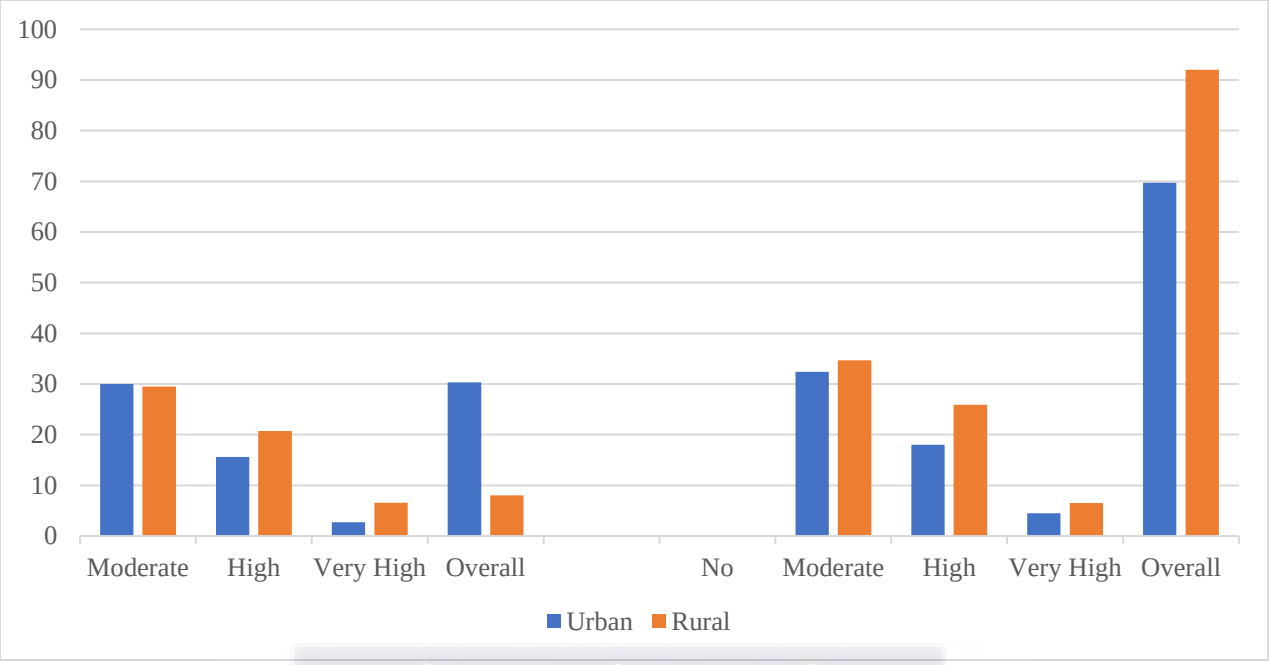


Figure 5.11 Psychological distress prevalence rate by respondents' household occupancy status in urban and rural areas

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

5.5.5 Psychological distress prevalence rate by respondents' household access to ICT in urban and rural areas

Table 5.7 provides information on the prevalence of psychological distress among respondents in urban and rural areas, considering their household access to ICT tools and services. Regarding respondents in a household with access to fixed line telephone, the results revealed that overall prevalence of distress among respondents in both urban (4.7%) and rural (0.5%) areas were relatively low. The moderate distress prevalence among respondents with access to fixed line telephone was marginally high in urban (30.4%) and rural (21.2%) areas. The results also revealed that the proportion of respondents with access to a fixed-line telephone in rural areas, with high distress prevalence was more (23.5%) compared to those in urban areas (12.4%). However, among respondents in households with access to a fixed-line telephone, the prevalence of very high

University of Ghana http://ugspace.ug.edu.gh

psychological distress, though broadly lower, was higher in urban areas (4.4%) than in rural areas (2.4%).

For respondents in households without access to a fixed-line telephone, the results showed a significantly higher overall psychological distress prevalence in both urban (95.3%) and rural (99.5%) areas. Like overall distress prevalence in rural areas, the results further indicated that moderate (34.2%), high (25.4%), and very high (6.3%) distress were more prevalent among respondents in households without access to a fixed-line telephone in rural areas compared to urban areas (moderate=31.7%, high=17.5%, and very high=3.9%).

Concerning the psychological distress prevalence of respondents in households with access to a mobile phone, the results showed quite a significant prevalence of overall distress in urban (92.7%) and rural areas (76.6%). Apart from overall distress prevalence, which was higher among urban respondents, the prevalence of moderate (34.6%), high (23.4%), and very high (4.9%) distress was found to be more dominant among rural respondents than those in urban areas. However, for respondents in households without access to a mobile phone, it was found that overall (23.4%), very high (11.0%), and high (32.7%) psychological distress were more prevalent in rural areas compared to urban areas. Moderate (36.4%) psychological distress, on the other hand, was higher among respondents in urban areas compared to those in rural areas (33.3%).

Table 5.7 further shows that the overall prevalence of psychological distress among respondents in households with access to a personal computer, though relatively low, was higher (16.2%) in urban areas compared to rural areas (3.4%). Moderate distress prevalence was also slightly higher (28.8%) in urban areas compared to rural areas (28.2%). The prevalence of high (15.5%) and very high (2.9%) distress was, however, dominated in rural areas more than in urban areas (high=11.3%, very high=1.6%), respectively. It is also observed that the overall prevalence of distress in urban

University of Ghana http://ugspace.ug.edu.gh

(83.8%) and rural (96.6%) areas among respondents whose households have no access to a personal computer was tremendously high. The results further identified that the prevalence of psychological distress for respondents without access to a personal computer at all levels was higher (overall=96.6%, very high=6.4%, high=25.9%, and moderate=34.5%) in rural areas than in urban areas (overall=83.8%, very high=4.4%, high=18.4%, and moderate=32.2%).

Moreover, Table 5.7 provides information on the prevalence of psychological distress among respondents in households with and without access to e-commerce in urban and rural areas. Regarding respondents with access to e-commerce, the results indicated that overall distress prevalence, though generally lower, was higher in urban (5.6%) areas than rural areas (1.8%). Conversely, moderate (28.0%), high (17.5%), and very high (4.0%) distress prevalence among respondents with access to e-commerce was more dominant in rural areas than in urban areas. Among respondents without access to e-commerce, however, the results found a very high prevalence of overall distress in urban (94.4%) and rural (98.2%) areas. In addition, the prevalence of moderate (34.4%), high (25.7%), and very high (6.3%) distress was also predominant in rural areas compared to urban areas.

Finally, the results from Table 5.7 on respondents' access to the internet and psychological distress prevalence revealed that apart from overall (22.2%) and moderate (29.5%) distress, where prevalence was higher in urban areas, high (26.4%) and very high (6.6%) distress on the other hand, were more prevalent in rural areas than in urban areas. Concerning respondents in households without access to the internet, the results found a higher prevalence of moderate (34.8%), high (26.4%), very high (6.6%), and overall (91.1%) distress in rural areas compared to urban areas (moderate= 32.3%, high=18.0%, very high=6.6%, and overall=77.8%).

University of Ghana http://ugspace.ug.edu.gh

In summary, the evidence suggests that information and communication technologies (ICT) moderate the prevalence of psychological distress. Specifically, rural respondents tend to exhibit elevated levels of distress, particularly in cases when access to these technologies is lacking. In general, urban respondents exhibit lower levels of distress, although the extent of this variation is dependent upon the precise type of ICT being considered.

Table 5.7 Psychological distress prevalence rate by respondents' household access to ICT in urban and rural areas

Household access to ICT	Urban (%)	Rural (%)
Fixed line telephone		
Yes		
Moderate	30.4	21.2
High	12.4	23.5
Very High	4.4	2.4
Overall	4.7	0.5
No		
Moderate	31.7	34.2
High	17.5	25.4
Very High	3.9	6.3
Overall	95.3	99.5

University of Ghana http://ugspace.ug.edu.gh

Table 5.7 continued

Household access to ICT	Urban (%)	Rural (%)
Mobile Phone		
Yes		
Moderate	31.3	34.6
High	16.5	23.4
Very High	3.5	4.9
Overall	92.7	76.6
No		
Moderate	36.4	33.3
High	26.4	32.7
Very High	9.4	11.0
Overall	7.3	23.4
Personal computer		
Yes		
Moderate	28.8	28.2
High	11.3	15.5
Very High	1.6	2.9
Overall	16.2	3.4
No		
Moderate	32.2	34.5
High	18.4	25.9
Very High	4.4	6.4
Overall	83.8	96.6

University of Ghana http://ugspace.ug.edu.gh

Table 5.7 continued

Household access to ICT	Urban (%)	Rural (%)
E-commerce		
Yes		
Moderate	25.1	28.0
High	10.1	17.5
Very High	3.2	4.0
Overall	5.6	1.8
No		
Moderate	32.1	34.4
High	17.7	25.7
Very High	4.0	6.3
Overall	94.4	98.2
Internet		
Yes		
Moderate	29.5	29.2
High	14.7	17.0
Very High	2.6	3.7
Overall	22.2	8.9
No		
Moderate	32.3	34.8
High	18.0	26.4
Very High	4.3	6.6
Overall	77.8	91.1

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

5.5.6 Psychological distress prevalence by respondents' perceived community trust and support in urban and rural areas.

This final section examines the prevalence of psychological distress, considering the community characteristics of the respondents. Specifically, the section focused on the prevalence of psychological distress among respondents based on the extent to which they perceived their community members to be trustworthy and helpful, and their willingness to contribute time to community projects that did not benefit their households directly.

According to Table 5.8, the overall prevalence of psychological distress among respondents who agreed that members of their community could be trusted was higher (58.3%) in rural areas than in urban areas (37.9%). Similarly, the prevalence of moderate (34.8%), high (25.1%), and very high (6.0%) distress was also intense among respondents in rural areas who perceived their community members could be trusted compared to those in urban areas.

Among respondents who were undecided as to whether members of their community were trustworthy or not, the results found that the prevalence of moderate (34.7%), high (27.6%), and very high (10.2%) distress was higher in rural areas than observed in urban areas. However, the prevalence of overall distress was higher (14.0%) among urban respondents compared to those in rural areas (10.2%).

Following the same trend, the results further showed that moderate (33.1%), high (25.6%), and very high (6.9%) psychological distress prevalence was also higher in rural areas for respondents who disagreed that members of their community were trustworthy. However, the overall prevalence of distress among this category of respondents was higher in urban (47.2%) areas than in rural areas (31.2%).

University of Ghana http://ugspace.ug.edu.gh

Regarding community helpfulness and prevalence of psychological distress, Table 5.7 reports that psychological distress prevalence at all levels (moderate=34.8%, high=24.5%, very high=5.9%, overall=56.4%) was higher among rural respondents who perceived that members of their community were helpful compared to those in urban areas (moderate=29.8%, high=17.7%, very high=3.9%, overall=36.9%). Similarly, the prevalence of moderate (34.1%), high (26.7%), and very high (6.4%) distress among respondents who were neutral as to whether their community members were helpful or not was higher in rural areas compared to urban areas. However, the overall prevalence of psychological distress was slightly higher (15.1%) among urban respondents compared to those in rural areas (11.3%).

Even among respondents who perceived that their community members were not helpful, the results again found that moderate (33.5%), high (26.9%), and very high (7.0%) distress was more intense in rural areas than in urban areas. The overall prevalence of psychological among respondents in this category was nonetheless higher (46.9%) in urban areas compared to rural areas (31.9%).

Concerning respondents' perception of the need for alertness when dealing with members of their community and psychological distress prevalence, the results were not different. For respondents who agreed to the need to be alert, the results found that apart from overall distress, which was slightly higher (69.5%) in urban areas, moderate (33.7%), high (24.5%), and very high (5.5%) prevalence of distress was dominant in rural areas than in urban areas. A similar trend was observed for respondents who were neutral about whether they needed to be alert when dealing with community members or not. The prevalence of moderate (34.0%), high (26.9%), and very high (6.4%) distress was higher in rural areas. Overall distress prevalence was slightly higher (10.7%) in urban areas than in rural areas. However, in the case of respondents who disagreed that

University of Ghana http://ugspace.ug.edu.gh

one needed to be alert when dealing with community members, the results showed the psychological distress prevalence at all levels (moderate=35.5%, high=27.1%, very high=7.9%, overall=29.2%) was higher in rural areas compared to urban areas.

The final segment of Table 5.8 examines respondents' willingness or unwillingness to contribute to a community project even if it did not directly benefit their household and the prevalence of psychological distress. For respondents who expressed willingness to contribute time to a community project, the results found that prevalence of moderate (33.4%), high (22.1%), very high (4.6%), and overall (62.9%) psychological distress was higher among respondents in rural areas than those in urban areas (moderate=30.2%. High=15.8%, very high=2.7%, overall=61.8%). Quite similarly, for respondents who were unwilling to contribute time to a community project, the results also showed that moderate (35.7%), high (31.3%), and very high (9.2%) psychological distress prevalence was intense in rural areas compared to urban areas (moderate=34.1%, high=19.4%, very high=5.6%). However, there was a slight increase in overall distress prevalence (38.2%) among urban respondents than in those in rural areas (37.1%).

University of Ghana http://ugspace.ug.edu.gh

Table 5.8 Psychological distress prevalence across respondents' community factors in urban and rural areas

Community factors	Urban (%)	Rural (%)
Trustworthiness		
Agree		
Moderate	30.2	34.8
High	17.6	25.1
Very High	3.9	6.0
Overall	37.9	58.3
Neutral		
Moderate	32.9	34.7
High	17.7	27.6
Very High	4.2	6.5
Overall	14.0	10.2
Disagree		
Moderate	32.6	33.1
High	16.8	25.6
Very High	3.7	6.9
Overall	47.2	31.2

University of Ghana http://ugspace.ug.edu.gh

Table 5.8 continued

Community factors	Urban (%)	Rural (%)
Helpfulness		
Agree		
Moderate	29.8	34.8
High	17.7	24.5
Very High	3.9	5.9
Overall	36.9	56.4
Neutral		
Moderate	31.7	34.1
High	16.0	26.7
Very High	3.3	6.4
Overall	15.1	11.3
Disagree		
Moderate	33.1	33.5
High	17.2	26.9
Very High	4.0	7.0
Overall	46.9	31.9

University of Ghana http://ugspace.ug.edu.gh

Table 5.8 continued

Community factors	Urban (%)	Rural (%)
Alertness		
Agree		
Moderate	31.3	33.7
High	17.2	24.5
Very High	3.8	5.5
Overall	69.5	60.0
Neutral		
Moderate	32.5	34.0
High	18.2	26.9
Very High	4.2	6.4
Overall	10.7	10.4
Disagree		
Moderate	32.6	35.5
High	16.7	27.1
Very High	3.6	7.9
Overall	18.8	29.2
Community project participation		
Will contribute		
Moderate	30.2	33.4
High	15.8	22.1
Very High	2.7	4.6
Overall	61.8	62.9
Will not contribute		
Moderate	34.1	35.7
High	19.4	31.3
Very High	5.6	9.2
Overall	38.2	37.1

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

University of Ghana http://ugspace.ug.edu.gh

5.7 Discussion

Results from this study showed that the overall prevalence rate of psychological distress was 52.9 percent and 66.1 percent in urban and rural areas of Ghana, respectively. Specifically, the findings showed that most urban respondents had little or no psychological distress compared to rural areas. However, moderate to very high psychological distress was higher among rural participants. Focus group discussions among females in a rural community in the middle zone provided some explanation for factors accounting for the higher psychological distress prevalence in rural communities:

> *"There is a difference because there are quite a number of job opportunities in the urban areas compared to the rural areas. For instance, one can even engage in head porterage, cleaning, among others and earn some income at the end of the day, but in the rural areas, all we have is farm work. The farm work has also become difficult for us because the lands are not readily available, and we do need more money to rent the lands to farm in rural areas". (FGD, rural, females, 2023).*

This is consistent with the study by Nanewortor (2011) that found that compared to urban dwellers, adolescents in rural areas had higher levels of suicide ideation and psychological distress. In other developing countries, the findings of other studies corroborated this result (Kidwai, 2014; Chen et al., 2021). Lack of employment opportunities, food insecurity and poor living conditions in rural areas are possible causes of higher psychological distress in Ghana and other rural communities in developing countries (Vousoura, 2014; Islam, 2019; Sweetland et al., 2019).

In contrast, studies from other regions have shown different outcomes. Dhingra et al. (2009) found that psychological distress (MPD or SPD) was more prevalent among urban county inhabitants

University of Ghana http://ugspace.ug.edu.gh

than rural county residents. Similarly, a more recent study by Gunther et al. (2017) in Suriname indicated that 3.8 percent of people experienced severe mental distress, 4.9 percent of people experienced moderate mental distress, and 10.8 percent of people experienced mild mental distress, lower than what this study found. The study further showed that primary risk factors for mental distress are being a woman, being of the maroon ethnicity, having poor income and education levels, residing in urban areas, being unemployed, and being single. In addition, Islam (2019) study revealed that individuals residing in Pourashava (semi-urban areas) and urban Pourashava reported a higher prevalence of psychological distress when compared to rural areas (specifically, Narail upazilla). Other studies have found no difference in psychological distress between dwellers in urban and rural areas (Judd, 2006).

This contrary view was also confirmed in an FGD among males in the rural community from the northern zone. It was explained that:

> *"I think those in the urban areas will be more distressed. This is because they have seen what their colleagues do, especially those in Kumasi and Accra. Young men like us think about travelling abroad to seek greener pastures, but as we sit here, we will not think that way. If there is, there will be few of us, but when you go to the urban centres, they are always thinking about to the extent that some engage in robbery to get money to travel…". (FGD, rural, males, 2023).*

Compared to males, females had slightly higher psychological distress prevalence in both urban and rural areas. Possible reasons to substantiate this finding were illuminated in the FGDs in urban and rural areas. This was explained in a female FGD in an urban area in the southern zone as follows:

University of Ghana http://ugspace.ug.edu.gh

> *"I would say the women get distressed more than the men. The men have the work they do and provide for the family, but the woman must cater for the home aside from the job she must do outside the home. If the man cannot earn some money, he doesn't go the extra mile to make provisions for the home, but the woman will find any means possible to provide for the family. Every morning when the men leave for work, the children tend to come to us for their needs which makes us more distressed than the men". (FGD, urban, females, 2023).*

Contrary to the results of the survey and views of females in urban areas, males in an urban area in the southern zone during an FGD also provided a justification that psychological distress was higher among males in urban areas than females. This was expressed as:

> *"...It is the men. I say this because it is our responsibility to provide everything the house needs even though we may have our own accommodation. In terms of education for our children, we are the ones obligated to provide for the educational needs of our children. I also have a duty to provide for my wife, and support from my wife tends to be a plus since it is not mandated for her to carry this burden. So, I think the men are more distressed than the women". (FGD, urban, males, 2023).*

Findings from other studies corroborated with this result that females are more distressed psychologically compared to males. For example, Di Blasi et al. (2021) used a two-wave longitudinal design that sought to assess changes in women's psychological distress during the COVID-19 pandemic. The study found that high psychological distress was predicted by lower social stability and higher maladaptive emotional coping in women. In another recent study, Matud et al. (2020) examined the significance of stress, coping mechanisms, self-esteem, and perceived social support in distress of emerging adult women and men. This study showed that psychological

University of Ghana http://ugspace.ug.edu.gh

distress, chronic stress, minor daily hassles, emotional coping, and social support were higher in women compared to men.

Even though biological evidence also confirms higher psychological distress among females than males it has been argued that the higher prevalence of suicide among men which does not reflect in depression could be attributed to a gender bias in diagnosis, lower male help-seeking behaviour, and dysfunctional male coping mechanisms for stress (Hausmann et al., 2008; World Health Organization, 2019). For example, in the Ghanaian cultural setting, there are established norms such as "men do not cry" and "a man takes the bitter pill", which could make it difficult for males to express their psychological needs (Gyan et al., 2020; Dery & Apusigah, 2021).

Although this study found higher psychological distress prevalence among rural and females compared to urban and males respectively, further cross-tabulations showed the significance of place of residence in predicting the extent of psychological distress. For instance, there was a significant difference in psychological distress between men in rural areas and females in urban areas. Males in rural areas, when compared to women in urban areas, recorded higher psychological distress prevalence as well as males in urban compared to males in rural areas and females in urban and females in rural areas. These findings further underscore how prevailing conditions in rural areas in Ghana and other developing countries impact the psychological well-being of dwellers. This could account for the ever-increasing rural-urban migration in Ghana (GSS, 2021) and other developing countries. The findings further showed other socio-demographic characteristics such as age, marital status, religion, respondents' relationship with household head, household size and region of residence were associated with psychological distress. In both urban and rural areas, the study found an increase in psychological distress prevalence with increasing age. A possible explanation could be the increase in responsibilities, such as caring for the nuclear

University of Ghana http://ugspace.ug.edu.gh

and extended acquisition of basic life assets and other unfavourable social events, including ageism, disengagement, and lack of belonging (WHO, 2018; Gyasi et al., 2019) which have the potential to increase stress, loneliness and anxiety leading to psychological distress. In contrast, other studies (Blanchflower & Oswald, 2008; Stone et al., 2010; Keyes et al., 2014) have found that psychological distress increases continuously from adolescence until middle life, then levels off in old age. Extending the debate, Lang et al. (2011) using pooled data from the annual Health Survey for England, found that experience and greater prevalence of psychological distress, common mental illness and treatment in midlife was not a universal occurrence but rather associated with those in low-income households. The psychological distress prevalence of respondents who were separated, divorced, or widowed were higher in both urban and rural areas compared to those in union and never in union. In consonance with the social support theory (Cohen, 2000; Reis & Gable, 2003), living with a partner (married or living together) comes with some support, security, social status and agency marriage in Ghana and other sub-Saharan African countries (Duncan, 2010; Kyalo, 2012; Addai et al., 2015; Dery & Bawa, 2019). Considering the above, it is not surprising that spousal loss (widowhood and divorce/separation) is associated with higher psychological distress levels in Ghana. Reinforcing this evidence, a recent study by Gyasi & Phillips (2020) using data from 2016/2017 Ageing, Health, Psychological Well-being, and Health-seeking Behaviour Study revealed that spousal loss was associated with psychological distress even after adjusting for potential confounders. However, other scholars have argued that the level of psychological distress for the widowed/separated/divorced depends on the quality of the marital relationship. For instance, Lee et al. (2022) used a 2-year follow-up from a Health and Retirement Study. They found that widows who had undesirable outcomes in their marriages experienced a deterioration in physical health with no increase in psychological distress. However,

University of Ghana http://ugspace.ug.edu.gh

another recent study by Monk et al. (2022) revealed that women who experienced relationship instability before divorce or separation had fewer psychological distress symptoms than men.

There was also evidence of an association between respondents' SES and psychological distress. The study showed a positive association between school attendance and psychological distress. In both urban and rural areas, the psychological distress prevalence of those who had never attended school was higher compared to those who had attended school. This is likely due to opportunities such as skills, jobs, and social networks, among other easily available resources to the educated. This was confirmed by Amu et al. (2021) who observed that education and income predicted depression, with adults who had attained tertiary education less likely to experience depression, anxiety, and stress compared with those with no formal education. Studies (van der Sanden et al., 2016; Muñoz & Santos-Lozada, 2021; Tabor et al., 2021) in other developing and developed countries also validated the positive impact of education on psychological distress. Yet respondents in rural areas who had attended school had higher psychological distress prevalence compared to the educated in urban areas (Basta et al., 2009). Possible factors accounting for this trend include unfavourable social and economic conditions such as poor or unavailability of mental health services, scarce employment opportunities and other support services, which are predictors of higher psychological distress for the educated in rural areas (Handley et al., 2017; Howard et al., 2022; Champion, 2023).

The influence of household characteristics is of considerable importance in the prediction of elevated prevalence rates of psychological distress in both urban and rural areas. The results compared psychological distress considering the household characteristics of respondents in urban and rural areas in Ghana. In their study, Dığrak et al. (2014) employed a cross-sectional simple random sampling methodology to assess the mental state of individuals aged 18 to 65 residing in

University of Ghana http://ugspace.ug.edu.gh

a rural area. Their study aimed to identify factors associated with mental disorders and draw conclusions based on the findings. The study revealed a higher prevalence of mental disorders in rural areas, with income and family structure emerging as significant determinants contributing to the occurrence of these disorders.

Moreover, the study found a higher overall prevalence of psychological among respondents in urban areas whose households lived in rented housing arrangements. Within contemporary urban environments, housing arrangements manifest in a multitude of distinct arrangements. Among the various groups, people who pay rent for their housing represent a substantial demographic, characterized by a living arrangement that is characterized by flexibility and transience. Although the act of renting offers individuals a feeling of liberation and flexibility, it also introduces a range of uncertainties, such as high cost, insecurity, poor housing conditions among others, that have the potential to dramatically influence psychological distress prevalence (Singh et al., 2020; Denary et al., 2021). Confirming this, Park, and Seo (2020) employed longitudinal data obtained from the Korean Welfare Panel Study to investigate the correlations between home instability and individuals' subjective health state. Key findings from their study were that the health status of individuals was strongly affected by residential instability, resulting in a decline in overall health and experience of depression among those who rent their homes. Again, the study found that depression among study participants was also because of factors such as non-compliance with housing regulations, reliance on government support, and discontentment with residential settings and social interactions.

On the other hand, the prevalence of psychological distress among participants who did not pay rent in rural areas was found to be higher compared to those in urban areas. Residing in rent-free housing in rural regions may appear as a safe escape from the pressures of urban living. In contrast

University of Ghana http://ugspace.ug.edu.gh

to the prevailing belief that rural living is necessarily characterized by tranquillity and reduced demands, it is conversely argued that the lack of rent obligations in such settings may lead to heightened psychological stress. In certain rural areas, the expenses associated with constructing and upkeeping a dwelling may exhibit a disproportionate relationship with the income levels prevalent among the local community (Woroniecka, 2016). The financial implications of these costs can impose a significant burden on inhabitants, resulting in financial pressures that have an impact on their psychological well-being (Zumbro, 2014; Muianga et al., 2021; Garnham et al., 2022).

In this current era characterized by widespread digital connectivity, household access to ICT tools and services has become a fundamental aspect of our everyday existence (Wang & Lim, 2020; Díaz et al., 2022). The exponential growth of mobile phones, personal computers, and high-speed internet has significantly impacted the way individuals engage in work, communication, and global interaction (Rathore et al., 2019; Tulaev et al., 2020). Interestingly, ICT in recent times extended beyond mere convenience and productivity to influencing people's psychological well-being (Castellacci & Tveito, 2016; Turel et al., 2020). This study found higher psychological distress prevalence rates, particularly among respondents in rural areas who did not have access to ICT tools and services. The absence of ICT tools can lead to limited availability of information and reduced connectivity with one's social circle, including family, friends, and support networks (Baker et al., 2017; Seifert & Cotten, 2023). This can possibly intensify the feelings of loneliness and worsen distress.

The psychological well-being of individuals residing in a community, regardless of whether it is in an urban or rural setting, is significantly influenced by the perceptions of trust and helpfulness within that community (Stewart & Townley, 2020; Seo, 2023). These perceptions have wide-

University of Ghana http://ugspace.ug.edu.gh

ranging implications. The degree to which individuals see their neighbours and fellow community members as dependable can significantly influence their perception of security, sense of belonging, and emotional well-being. One key finding from this study was that overall psychological distress prevalence was higher among rural participants who perceived that members of their community were trustworthy and helpful. A possible explanation could be that rural communities where there is a perception of trustworthiness and helpfulness among members have a high tendency for reciprocation of such acts of kindness (Bigoni et al., 2012; Ścigała et al., 2020; Roberts et al., 2021). The persistent expectation to help others could result in a sense of duty, fatigue, and, subsequently, the prevalence of psychological distress (Tippens et al., 2021).

In urban areas, however, the study revealed that overall psychological distress prevalence was higher among respondents who perceived that their community members were untrustworthy and unhelpful. This could be so because the existence of a perception of untrustworthiness within a community has the potential to engender a feeling of danger or vulnerability (Bako et al., 2018; Villasis & Castillo, 2018). The perception of residents regarding their vulnerability to potential injury, criminal activities, or exploitation may result in increased levels of anxiety and worry (Putrik et al., 2019; Abdullah et al., 2020; Robinette et al., 2021).

In summary, findings from this chapter reveal relatively higher psychological distress in urban and rural areas in Ghana over time. That notwithstanding, it was also observed that the prevalence of psychological distress was higher among females than males and among rural dwellers than those in urban areas.

University of Ghana http://ugspace.ug.edu.gh

CHAPTER SIX

EXAMINING THE EFFECTS OF INDIVIDUAL, HOUSEHOLD AND COMMUNITY FACTORS ON PSYCHOLOGICAL WELL-BEING OVER TIME

6.1 Introduction

This chapter presents the results of the panel regression analysis, which seeks to address the remaining two objectives of this study assessing the effects of sociodemographic and SES factors on the psychological well-being of urban and rural dwellers in Ghana over time and investigating the effects of household and community factors on the psychological well-being of urban and rural dwellers in Ghana over time. The first part focuses on the results, specification test for the model and discussion of the effects of sociodemographic and SES factors on psychological well-being over time. In the same light, the second part focuses on the effects of household and community factors on psychological well-being over time.

6.2 Assessing the effects of SES and sociodemographic factors on the psychological well-being of urban and rural dwellers in Ghana over time.

Table 6.1 provides the results of the panel regression analysis based on urban and rural data. Of the three panel models, pooled OLS, fixed, and random effects diagnosed (details in appendix A), the fixed effect model emerged as the most ideal for interpreting this result after diagnostic test (as shown in Tables 3.5-3.8). Using the fixed effects model, three separate models were run to examine the effects of SES and sociodemographic factors on psychological well-being in urban and rural areas. Model one focuses on SES variables that affect psychological well-being, Model two looks at sociodemographic characteristics of respondents and their effect on psychological well-being.

University of Ghana http://ugspace.ug.edu.gh

Model three combines SES and sociodemographic and examines their effects on psychological well-being.

According to Model one, in urban areas participants with no educational qualification (β=3.613, P = 0.000) and MSCL/BECE/O'Level qualifications (β=1.450, P= 0.004) are more psychologically distressed when compared to those with bachelor's degree qualification. However, in rural areas there was no statistical significance between educational qualification and psychological well-being. Model one further shows that individuals in urban areas who do not own a business (β=0.645, P=0.001) are more psychologically distressed when compared to those with a business. In rural areas, however, business ownership was not statistically significant with psychological well-being. Model one also shows that in rural areas, individuals who do not own a farm (β=0.497, P=0.007) are more psychologically distressed compared to those with a farm. Nonetheless, farm ownership was not statistically significant with psychological distress.

Model two, on the other hand, describes the effects of respondents' sociodemographic characteristics on psychological well-being. From Model two, it is evident that females in urban areas (β=1.130, P=0.000) are more psychologically distressed compared to males in urban areas. However, in rural areas gender was not statistically significant with psychological distress. Furthermore, Model two reveals that age is linked to respondents' psychological distress in urban and rural areas. In urban areas, psychological distress is found to increase with an increase in age (β=0.045, P=0.000) of respondents. On the contrary, in rural areas an increase in age (β=-0.119, P=0.000) lead to a decrease in psychological distress.

Regarding the marital status of respondents, Model two shows that respondents in urban areas formerly in a union (β=1.041, P=0.000) are more psychologically distressed compared to those currently in a union. Marital status, however, was not statistically significant with psychological

University of Ghana http://ugspace.ug.edu.gh

distress in rural areas. Furthermore, Model two indicates that being a spouse (β=-0.863, P=0.039) to the household head in rural areas is linked to lesser psychological distress compared to being a head of a household. Again, it is evident that an increase in the household size (β=0.109, P=0.016) of respondents in rural areas leads to an increase in psychological distress. In urban areas, Model two shows that respondents not born (β=-0.876, P=0.000) in the community of current residence are less psychologically distressed compared to those born in the current community of residence. Concerning region of residence, Model two shows that in urban areas, respondents living in the western (β=-0.719, P=0.044) and Ashanti (β=-1.064, P=0.000) regions are less psychologically distressed compared to respondents living in Greater Accra region. On the other hand, individuals living in the Volta (β=2.277, P=0.000), Eastern (β=0.672, P=0.027), Brong Ahafo (β=1.021, P=0.002), Northern (β=1.886, P=0.000), Upper East (β=1.924, P=0.003) and Upper West (β=3.953, P=0.000) regions are more psychologically distressed compared to those living in Greater Accra region.

In Model three, for urban areas, the results continued to show that respondents with no educational qualification (β = 2.745, *P*= 0.000), those with MSCL/BECE/O' Level (β= 1.490, *P*= 0.003), and not being a business owner (β=0.724, *P*= 0.000) are more psychological distressed compared to those with bachelor's degree qualification and those who own a business respectively. Moreover, Model three indicates that female respondents (β= 0.867, *P*= 0.000), age (β =0.032, *P*=0.000), those formerly in union (β=0.780, *P*=0.005), those residing in regions such as Volta (β=2.277, P=0.000), Eastern (β=0.672, P=0.027), Brong Ahafo (β=1.021, P=0.002), Northern (β=1.886, P=0.000), Upper East (β=1.924, P=0.003) and Upper West (β=3.953, P=0.000) are more l psychologically distressed compared to males, those in a union, and those living in Greater Accra respectively. On the contrary, being a child (β= -0.747, *P*= 0.036), not born in the community of

University of Ghana http://ugspace.ug.edu.gh

current residence (β = -0.708, P=0.000) and residing in regions like Western (β=-0.719, P=0.044) and Ashanti (β=-1.064, P=0.000) is associated with less psychological distress in urban areas compared to the head of household and those living in Greater Accra respectively.

In Model three for rural areas, however, the results show that respondents who do not own a farm (β=0.497, P=0.007) are more psychologically distressed compared to those who own a farm. Sociodemographic variables such as age (β=-0.119, P=0.000) and being a spouse of a household head (β=-0.863, P=0.039) continue to be less associated with psychological distress. An increase in household size (β=0.109, P=0.016) of respondents, on the other hand, is also linked to a higher likelihood of psychological distress.

Table 6.1 Panel regression analysis results of fixed effects models for urban and rural

Variable	Model 1: SES		Model 2: Sociodemographic		Model 3: Full model	
	Urban	Rural	Urban	Rural	Urban	Rural
Highest educational qual.						
Bachelors (RC)						
None	3.613*** (0.514)	-0.244 (1.250)			2.745*** (0.510)	-1.007 (1.252)
MSCL/BECE/O' Level	1.450*** (0.506)	-0.370 (1.228)			1.490*** (0.496)	-1.125 (1.230)
SSCE/A' Level/Prof. Cert.	0.271 (0.530)	0.611 (1.196)			0.802 (0.520)	-0.010 (1.196)
Teacher Training/HND/ Prof. Diploma	0.313 (0.600)	0.013 (1.075)			0.419 (0.584)	-0.415 (1.074)
Other, specify	1.368 (1.144)	-0.979 (1.838)			0.775 (1.118)	-1.391 (1.834)

University of Ghana http://ugspace.ug.edu.gh

Table 6.1 continued

Variable	Model 1: SES		Model 2: Sociodemographic		Model 3: Full model	
	Urban	Rural	Urban	Rural	Urban	Rural
Occupational status						
Paid employee						
Yes (RC)						
No	0.278 (0.230)	0.286 (0.308)			0.088 (0.235)	0.329 (0.308)
Business owner						
Yes (RC)						
No	0.645 *** (0.188)	0.142 (0.206)			0.724*** (0.196)	0.077 (0.205)
Farm owner						
Yes (RC)						
No	-0.122 (0.253)	0.497*** (0.183)			0.327 (0.270)	0.451* (0.186)
SSS	-0.009 (0.035)	-0.000 (0.025)			-0.060 (0.350)	-0.003 (0.025)

University of Ghana http://ugspace.ug.edu.gh

Table 6.1 continued

Variable	Model 1: SES		Model 2: Sociodemographic		Model 3: Full model	
	Urban	Rural	Urban	Rural	Urban	Rural
Gender						
Male (RC)						
Female			1.130*** (0.212)	1.518 (1.151)	0.867*** (0.216)	1.523 (1.154)
Age			0.045*** (0.007)	-0.119*** (0.012)	0.032*** (0.007)	-0.120*** (0.012)
Marital status						
In Union (RC)						
Formerly in Union			1.041*** (0.277)	0.342 (0.329)	0.780*** (0.276)	0.338 (0.330)
Never in union			0.008 (0.318)	-0.727 (0.498)	-0.119 (0.320)	-0.752 (0.501)
Relationship to household head						
Head (RC)						
Spouse			-0.291 (0.282)	-0.863* (0.418)	-0.487 (0.285)	-1.003* (0.427)
Child			-0.629 (0.349)	-1.448 (0.836)	-0.747* (0.356)	-1.574 (0.839)
Other relatives/non-relatives			0.592 (0.460)	-0.474 (0.812)	0.276 (0.464)	-0.583 (0.815)

University of Ghana http://ugspace.ug.edu.gh

Table 6.1 continued

Variable	Model 1: SES		Model 2: Sociodemographic		Model 3: Full model	
	Urban	Rural	Urban	Rural	Urban	Rural
Household size			-0.005 (0.046)	0.109* (0.045)	-0.020 (0.454)	0.103* (0.045)
Born in comm.						
Yes (RC)						
No			-0.876*** (0.173)	-0.348 (0.186)	-0.708*** (0.173)	-0.321 (0.187)
Region						
Greater Accra (RC)						
Western			-0.719* (0.358)	-0.321 (1.666)	-0.723* (0.358)	-0.032 (1.714)
Central			0.676 (0.346)	-0.955 (1.706)	0.282 (0.347)	-0.898 (1.715)
Volta			2.277*** (0.359)	-0.306 (1.279)	1.970*** (0.361)	-0.371 (1.282)
Eastern			0.672* (0.303)	1.047 (1.177)	0.575 (0.305)	1.036 (1.180)
Ashanti			-1.064*** (0.253)	-1.002 (1.127)	-1.273*** (0.255)	-1.106 (1.133)
Brong Ahafo			1.021** (0.329)	1.014 (1.305)	0.809 ** (0.337)	1.101 (1.507)
Northern			1.886***(0.324)	-0.291 (1.503)	1.377 *** (0.331)	-0.293 (1.507)
Upper East			1.924** (0.646)	-0.292 (1.612)	2.016 ** (0.643)	-0.202 (1.619)
Upper West			3.953*** (0.805)	0.668 (2.269)	3.060*** (0.806)	0.772 (2.273)
Cons	14.790 *** (0.603)	18.526*** (1.265)	14.659*** (0.423)	23.646*** (1.287)	13.423*** (0.718)	24.112*** (1.814)
Number of observations	9,544	16,326	9,544	16,377	9,544	16,323
Number of groups	4,898	8,219	4,898	8,235	4,898	8,219

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

University of Ghana http://ugspace.ug.edu.gh

6.3 Discussion

The results from the fixed effects model of this study uncovered a strong negative relationship between education attainment and psychological distress in urban Ghana, with a unit increase in education attainment leading to a decrease in psychological distress. However, education attainment was not associated with psychological distress in rural areas. This result is perhaps a reflection of the benefits and opportunities present in higher educational attainment in urban areas when compared with rural areas in Ghana and other rural communities in SSA, where most rural dwellers are involved in smallholder agricultural and non-agricultural production ventures (Diao et al., 2019; GSS, 2021; Lambon-Quayefio et al., 2023). Compared to rural areas, urban areas in Ghana are characterised by limited and competitive employment opportunities, a high cost of living, and other stressors (Navamuel et al., 2019; Ghazali et al., 2020) as such, individuals with higher educational attainment are more likely to obtain stable and lucrative employment opportunities (Sowmya & Vidya, 2017; Kumar, 2021; Andres, 2022). Consequently, this can contribute to increased levels of general well-being and, decreased levels of psychological distress, and a negative outcome for those with lower educational attainment (Nikolaev, 2018; Araki, 2022). It is, therefore, consistent to find a strong positive association between educational attainment and psychological well-being. Several studies in developed and less developed countries have also confirmed a positive correlation between higher education, better health, and longevity.

For instance, Zhang et al. (2015) unveiled that, particularly for men, urban dwellers, and the young, educational attainment was associated with decreased psychological distress over time. Consistent with findings from the former, a recent study by Aye et al. (2020) established that mental distress was significantly negatively correlated with years spent in school.

University of Ghana http://ugspace.ug.edu.gh

Moreover, Belo et al. (2020) study found that older individuals who had attained more significant levels of education tended to exhibit improved psychological well-being and a more favourable attitude towards leisure activities. These findings can be linked to the existing evidence that educational attainment comprises a comprehensive range of learning experiences spanning an individual's life. These include the development of skills and talents that contribute to overall well-being, the cultivation of lifelong learning habits, the cultivation of adaptability in the face of changing circumstances, and the provision of psychosocial resources such as social support and coping techniques to promote mental health (Tsai et al., 2014; Zhang et al., 2015; Blair & Black, 2018). A study by Otchia (2021) in urban Ghana further confirmed that educational attainment above lower secondary led to higher returns in terms of wages and the flexibility of switching between occupations.

To further examine this relationship between the SES variables and psychological distress, FGDs were held in both urban and rural areas. The discussions provide compelling accounts which highlight the significant impact of educational attainment on the experience of psychological distress. In an FGD among females in an urban community in the northern zone, some participants recognised the anxiety that can come with being unemployed with and without education. One of them expressed it this way:

> *"The one who is not educated will be thinking or worried more than the one educated. This is because, the educated, knows what is going on, but the one with little or no education will be thinking of how to get work even though there are other menial works to do. The one educated is with the hope that he will surely get a job one day because the educated one has more opportunity than the one not educated." (FGD, urban, females, 2023).*

University of Ghana http://ugspace.ug.edu.gh

The key contribution of education attainment to the psychological well-being of urban dwellers in the northern zone was further re-echoed in the FGD session among males and captured as follows:

> *"One's educational status, to a large extent, will determine one's mental or physical well-being. This is because when one is well educated, he feels satisfied and can make ends meet wherever he may find himself. This will, in turn relieve him of any mental or physical challenges. So, in our area, the level of one's education helps him go a long way to save himself from economic or social problems." (FGD, urban, males, 2023).*

Even in rural areas where the fixed effects model did not show an association between educational attainment and psychological well-being, FGDs from these areas also emphasised the positive impact of the former on the latter. This was the view of one participant in an FGD session for females in a rural community in the middle zone:

> *"A person who has attained a higher level of education will be able to engage in some form of economic activity to make a living as compared to someone who attained a lower level of education since with the low level of knowledge, he or she will not be able to apply and establish something for themselves. So, this tends to leave them more distressed than those with a higher education level" (FGD, rural, females, 2023).*

Another SES factor that showed statistical significance with psychological distress is business ownership. The study found that in urban areas, respondents who were not businesses owners were more likely to be psychologically distressed than those who owned a business. A possible explanation for why being a business owner or not could affect psychological well-being is that in many SSA rural communities, individuals are involved in various income-generating activities,

University of Ghana http://ugspace.ug.edu.gh

including subsistence farming and informal trading. Diversifying revenue sources can serve as a protective measure, mitigating the financial strain and consequent distress that may arise from relying on a single commercial activity or source of income. Moreover, rural enterprises may require a smaller amount of initial capital and incur reduced operational expenses compared to businesses in urban areas. The reduced financial risk associated with this may result in decreased distress in the face of adverse business setbacks.

Entrepreneurship, particularly in urban areas in SSA, has emerged as a significant driver of economic activity due to the limited public sector job opportunities (Farayibi, 2015; Ramírez Pasillas et al., 2018). Entrepreneurs who choose to start businesses in these dynamic towns and cities may have access to many options for expansion and financial success. Ownership and management of a business can give individuals a sense of control over their financial prospects, and a degree of independence and flexibility. This enables them to achieve a more optimal equilibrium between their professional and personal life, fostering a heightened sense of achievement and contentment that might positively affect their physical and psychological well-being. In support of this finding, a recent study by Setyasalma and Muflikhati (2019) found that income and financial management was notably beneficial to the subjective well-being of families. Further validating the findings of this study, Fors Connolly et al. (2021) highlighted the importance of financial and time satisfaction on the emotional well-being of business owners. Moreover, the ownership and management of a business necessitate the exercise of decision-making, undertaking calculated risks, and deriving lessons from failures. Collectively, these elements foster a resilient problem-solving attitude that facilitates their ability to recover from setbacks that may affect their psychological well-being compared to those who do not own businesses (Ravikumar et al., 2023).

University of Ghana http://ugspace.ug.edu.gh

Findings from FGDs also corroborated the quantitative results on the fact that business ownership could offset psychological distress. Even though owning a business was not associated with psychological distress in rural areas, this was how a rural FGD participant from the middle zone linked the two:

> *"For instance, a self-employed businessman or someone will not have the same level of distress as a farmer. This is because the businessman, with the nature of his work, earns some income from his day-to-day activities compared to a farmer whose work depends on the seasons. When a season ends, the farmer tends to be distressed throughout the year, which is very different from someone who owns a shop or businessperson." (FGD, rural, males, 2023).*

This argument reinforces the financial advantage of business owners when compared with even paid employees in urban areas and was supported by views from an urban FGD from the southern zone:

> *"An individual in the city with his own business and properties may even contract a private teacher for his child, which makes them stay ahead of their peers". (FGD, urban, females, 2023).*

However, farm ownership was statistically associated with psychological distress. The results showed that individuals in rural areas who were not owners of farms were more likely to be psychologically distressed in rural areas compared to urban areas. This may be because rural residents who do not own farms face more significant economic uncertainty and insecurity due to their dependence on alternative employment types that exhibit lower stability levels than agricultural activities. The unpredictability of non-farm jobs could lead to financial stress and

University of Ghana http://ugspace.ug.edu.gh

psychological distress. Moreover, in rural areas, farming serves as a means of livelihood and a significant aspect of one's personal and communal identity, reflecting a profound connection to the rural cultural heritage. Therefore, within rural communities, a notable societal expectation exists for individuals to partake in agricultural pursuits. Residents in rural communities who do not own farms may experience social stigma or marginalisation, thereby exacerbating psychological distress. This finding is novel, particularly in SSA, as it contrasts with many studies that have revealed higher psychological distress among farm owners in rural areas compared to non-farm owners in other developing and developed countries (Feng et al., 2015; Daghagh et al., 2019; Hagen et al., 2022; Henning-Smith et al., 2022).

Regarding demographic factors and psychological distress, the study found that being a female in an urban area of Ghana was associated with higher distress compared to males in urban areas. In rural areas, however, there was no association between the sex of respondents and psychological distress. There are several possible factors in rural areas, particularly in SSA countries such as Ghana, that could mitigate stress on rural females compared to those in urban areas. For example, in SSA, conventional gender roles such as childcare and domestic chores, among others capable of causing stress among females, may be lessened by the communal support systems which may still be available for females in rural communities compared to those in urban areas faced with the burden of domestic and professional obligations (Hjálmsdóttir & Bjarnadóttir, 2021; Leo et al., 2022).

The gender imbalance in psychological distress between females and males in urban areas has gained significant attention from researchers who have identified various probable reasons that may contribute to this disparity. From a closer examination of studies, it is evident that a noteworthy trend exists. Women residing in urban areas frequently encounter distinct stress-

University of Ghana http://ugspace.ug.edu.gh

inducing factors such as conflicts between professional and familial responsibilities, concerns regarding personal safety, and social expectations. These factors, in turn, have the potential to contribute to heightened levels of psychological distress experienced by urban-dwelling females (Osayomi & Adegboye, 2017; Viertiö et al., 2019; Kolakowsky-Hayner et al., 2021).

Other explanations for why females in urban areas are more likely to be distressed compared to men were captured during field FGDs. For example, among female FGDs in urban areas in the southern zone, one participant elaborated on the issue as follows:

> *"I would say the women get distressed more than the men. The men have the work they do and provide for the family, but the woman must cater for the home aside the job she must do outside the home. If the man cannot earn some money, he does not go the extra mile to make provisions for the home, but the woman will find any means possible to provide for the family. Every morning, when the men leave for work, the children tend to come to us for their needs, which makes us distressed more than the men. This is with regards to the squatters" (FGD, urban,*

For males, other predictors of higher distress among females in urban areas, the other hand, had had to do with suspicion of their husbands' relationship with other females. This was illustrated as follows from an urban FGD among males in the northern zone:

> *"I will support the argument that women worry much more than men. Every woman fears rivalry, so when you even sit at the camp chatting and laughing, she will be in the house having sleepless nights and thinking until you return home. So, if we want to weigh it, we will realise that it is the women who worry much, and this is why I said women fear rivalry because of the rivalry; they cannot sleep even if the man does not have anything. However, your wife will not want you to marry another woman, and when you have money, that is even worse." (FGD, urban, males, 2023).*

University of Ghana http://ugspace.ug.edu.gh

Irrespective of their geographical location, individuals experience a dynamic psychological trajectory during ageing, which may lead to increased distress or enhanced resilience. This study found that each additional year of age increased psychological distress in urban areas. On the contrary, in rural areas, however, each additional year in age decreased psychological distress. While confirming previous findings (Allen et al., 2012; Alcañiz et al., 2020) on the interrelationship between age and psychological distress in rural areas, the finding in the case of urban areas was contradictory. Several prevailing factors in urban areas potentially hasten residents' distress with increasing age. For example, in urban areas, the stressors related to work, financial, and family obligations increase with age and eventually contribute to psychological distress over time. Furthermore, social isolation, lack of social support, financial insecurity, transition in mobility, and the insurgence of chronic diseases, among other challenges, particularly for the aged in urban areas, may account for this result. The study of Mthembu et al. (2017) corroborates the vulnerability of the aged in urban areas to distress as well as the study by Srivastava et al. (2021).

The findings of the FGDs in urban areas about the association between age and psychological distress were inclusive. The views of some participants in support of the quantitative findings that distress increases with increasing age in an urban area in the northern zone were expressed as follows:

> *"In my opinion, the older people worry more because even you, the younger ones, are part of his worries in many ways… Besides, as we are sitting here, in our culture, if anything happens, the older people will lead us to deal with it. However, some of us, the younger ones, are busy somewhere and do not even know what is happening, so we should not even be comparing the worries of an old man to that of a young man because the older people have more worries" (FGD, urban, males, 2023).*

University of Ghana http://ugspace.ug.edu.gh

Other urban dwellers during the FGD sessions believed both the young and the old in urban areas experience psychological distress but emphasised differences in the causal factors. In an FGD among females in an urban community in the northern zone, below is how a participant supported her claims:

> *".. the worries of the older and the younger ones are not the same; the older ones' worries are about the family and what to eat, but for someone younger like me, my worries are about my education, how to get a job after school and get married after, are the things which make me worry more". (FGD, urban, females, 2023).*

Even more contradictory to the quantitative data findings were other views from urban FGDs, which sought to establish that younger people were more likely to be distressed than the old. One of such key insights was shared in an urban FGD from the northern zone:

> *"In my view, we, today's youth, have more worries than the old ones because now every young man wants to be rich… and this one alone keeps us thinking about how to become this rich. He can sit down and admire good cars passing; I can use my brother as an example… When you go through his phone, the only things you see are beautiful, not even a single bad or ugly thing, which means that all the time his mind is seeing beautiful things, and anyone who always wants to see beautiful things has a lot of worries. This is the reason why I am saying we, the youth of today, worry more than the older ones because of our expectations". (FGD, urban, males, 2023).*

On the other hand, the study found an inverse relationship between age and psychological distress in rural areas in Ghana. In many rural communities in SSA and other less developed countries, traditional knowledge and cultural customs are highly recognised. As individuals progress with age, they acquire and retain cultural information and assume the role of custodians of this

University of Ghana http://ugspace.ug.edu.gh

knowledge. Consequently, older people are held in high regard for their wisdom, a characteristic that has the potential to promote psychological well-being positively (Carver et al., 2018; Šerý & Daňková, 2021). Furthermore, the hustle and bustle and other financial and family obligations associated with urban living and other conducive factors such as familial and communal support available to older people in rural areas may be possible reasons accounting for lower psychological distress with age (Forsman, 2012; Hyams et al., 2015; Aierken et al., 2022).

Intriguingly, the study found a positive and significant effect of marital status on psychological distress. In both urban and rural areas, participants who were either divorced, separated, or widowed were more likely to be psychologically distressed compared to those who were currently in union. Not currently in a union due to divorce, separation, or widowhood could pose possible emotional and material challenges to individuals experiencing the situation. The experience of divorce or the bereavement resulting from the loss of a spouse can cause significant distress because of the experience of grief, anger, and a sense of loss (Kaneez, 2015; Kamp et al., 2019; Sbarra & Whisman, 2022). Secondly, marriage usually offers an inherent support structure. As such, when individuals experience divorce, separation, or widowhood, they may also encounter a loss of practical assistance provided by a partner. The absence of adequate assistance could potentially exacerbate feelings of social isolation and psychological distress (Borst, 2015; Gyasi & Phillips, 2020). Particularly in SSA, divorce or separation may be perceived as a failure to meet conventional expectations associated with marital responsibilities. When this happens, the individuals are often subjected to community gossip, judgement, and exclusion (Baum, 2007; Darghouth et al., 2015; Araújo & de Oliveira Lima, 2016).

However, the FGDs carried out in both urban and rural areas, found mixed feelings about the quantitative evidence. Citing some emotional and physical reasons why widows were more likely

University of Ghana http://ugspace.ug.edu.gh

to be psychologically distressed compared to those currently in a union, a male respondent in a rural area in the southern zone explained:

> *"I think those who are widowed will have many issues to brood over as compared to those who are not. For instance, I have a wife, and so I do not think of issues that much. However, a widowed man or woman, first, will be in grief in addition to catering for the children, which tends to be a burden to them" (FGD, rural, males, 2023).*

This position was again emphasised in the FGD involving females in a rural community in the middle zone as follows:

> *"The situation is not the same. This is because those of us who have husbands get support from our husbands whenever they tend to have money. However, when the men do not have anything to support us, we tend to have a huge burden on us. So, those who are widowed tend to be distressed more than those of us who still have our husbands with us. Initially, people used to support taking care of the kids of those who are widowed, but that is not the case now" (FGD, rural, females, 2023).*

The views of some participants of the FGDs corroborated previous studies by (Gardner & Oswald, 2006 and Bourassa et al., 2015), who found that being divorced or separated could positively affect psychological well-being. This was how the claim was justified in an FGD in the southern zone:

> *"For those who are divorced, it may be okay for the man, or the woman involved due to the issues that cropped up in the marriage or the factors that led to the divorce. So, to progress in life, the best solution to the problem may be a divorce as compared to remaining in the marriage and always brooding over the issues and getting distressed" (FGD, rural, females, 2023).*

University of Ghana http://ugspace.ug.edu.gh

Furthermore, the study also found striking evidence within the intricate network of familial connections with being a spouse and child of household head having a negative effect on psychological distress. In urban areas, it was revealed that a child or children of household heads were less likely to be psychologically distressed than the household heads. In rural areas, however, the study found that compared to household heads, their spouses were less likely to be psychologically distressed. Obviously, the responsibility of supporting their families, along with the financial strain of housing, utility bills, and other living expenses, can result in considerable distress for household heads, unlike their children, who carry these responsibilities. Moreover, household heads in urban areas may also encounter challenges of balancing work and family life, job insecurity, persistent drive to progress in their careers, or the pressures associated with entrepreneurial pursuits. The presence of these uncertainties faced by household heads has the potential to contribute to psychological distress.

The study further revealed an intriguing association in rural areas, wherein being a spouse to the household head is correlated with a reduced occurrence of psychological distress. This may result from heightened vulnerability to economic instability, which includes fluctuations in crop yields and market prices. The responsibility of managing economic risks often may fall upon household heads and eventually lead to distress (Leekoi et al., 2014; Viganòn & Castellani, 2020). Moreover, in rural areas, individuals who serve as household heads mostly bear the primary responsibility of fulfilling the needs of their families and making crucial decisions pertaining to finances, health, and education, which leads to distress (Mokrova et al., 2017; Murry et al., 2020).

The study also unearthed that, within the dynamic urban landscape, a noteworthy phenomenon arose, unveiling that individuals who had relocated from other places to reside in the urban communities were less likely to be psychologically distressed compared to those born in those

University of Ghana http://ugspace.ug.edu.gh

urban communities. Some possible explanations for the outcome could be the fact that individuals not born in the urban community of residence may feel less pressure to conform to local norms and expectations. This enables them to preserve their sense of identity, leading to the experience of a decrease in psychological distress compared to the higher expectations from family and social circles of those born in their urban communities of residence. Moreover, not being born in an urban community of residence can result in exposure to a wider range of cultures, lifestyles, and perspectives which, have the potential to foster stronger levels of tolerance and reduce psychological distress.

Greater Accra, Ashanti, and the Western regions have continued to develop as major centres for business and commerce in Ghana (Ackah et al., 2014; GSS, 2018). In addition, the recent PHC of Ghana found these three regions to be the major destinations for internal migrants (GSS, 2021). Even though empirical evidence shows that Greater Accra provides the most opportunities for socioeconomic well-being (GSS, 2018; GSS, 2021), this study found that residents in urban areas of the Western and Ashanti regions exhibited comparatively lower levels of psychological distress compared to those in urban areas of Greater Accra. This trend could be attributed to several prevailing factors in urban areas of Greater Accra. Firstly, being the major destination for most international and internal migrants, most urban areas in Accra have become places of heightened competition for various resources, including housing and employment opportunities (Agyeman, 2018; Anarfi et al., 2020). Moreover, urban residents in Greater Accra have a greater cost of living in comparison to urban areas in the Western and Ashanti regions, which imposes financial burdens and potentially leads to psychological distress. Furthermore, urban areas in Greater Accra are characterised by a notable presence of pronounced economic disparities, with a heightened concentration of both affluent and underprivileged individuals among the population (Boadi &

University of Ghana http://ugspace.ug.edu.gh

Kuitunen, 2005; Agyeman et al., 2017). Additionally, the experiences of significant traffic congestion and work-life imbalance prevalent in most urban areas in Greater compared to urban areas in Western and Ashanti regions could also be the cause of variance in psychological distress.

During FGDs in an urban area in Greater Accra, a participant highlighted the social class competition that exists among residents, which could lead to psychological distress, and this was captured as follows in an FGD in an urban area of the southern zone:

> *"Here in the city, seeing that a neighbour takes his child to a good school and is earning a good salary, throws a challenge to the other person to also prove that they can also take their children to good schools, and this can put a lot of stress on the one doing the comparison" (FGD, urban, males, 2023).*

The FGD in the urban area in Greater Accra further confirmed the presence of both the affluent and the poor and indicated that it was the poor in urban areas who were likely to be distressed. This was explained by a participant during an FGD session for females in an urban area in the southern zone:

> *"In this area, we have some people who are not well-to-do and are living in squatters and some who are well-to-do like bankers, businessmen and women. The well-to-do in this area can afford quality education for their children as compared to those who are squatters. Those living in the estate do not really have any problems. I say this because both partners have the work they do, and they employ house- helps to assist them in the house so there is no pressure. The poor here live in uncompleted structures of people, and they pay some amount to the owners monthly. Due to this, the squatters are at a high risk of being psychologically distressed" (FGD, urban, females, 2023).*

University of Ghana http://ugspace.ug.edu.gh

On the contrary, however, the study found that urban dwellers in the Volta, Brong Ahafo, Northern, Upper East, and Upper West regions were more likely to be psychologically distressed compared to those in urban areas of the Greater Accra region. This was expected because evidence shows that urban areas in these regions have limited jobs and other socioeconomic opportunities, and this has triggered mass internal migration to Accra and other commercial areas like Kumasi and Takoradi (Awumbila & Ardayfio-Schandorf, 2008; Bosiakoh et al., 2014; Lattof, 2017).

In FGDs in an urban area, however, there were mixed views on whether residents in other urban

> *"… the worries can never be the same; how can someone be in Accra enjoying and I am in Wa here suffering, and we will have the same worries or sleepless nights? … those in other regions like Accra have fewer worries than we do here in Wa. Even in terms of farming, those in other regions like Accra have fertile land as compared to Wa here; some even have two farming seasons in a year, but there is only one here"* (*FGD, urban, females, 2023).*

Contrary views were held by another participant in a different FGD in an urban area. A comparison was made based on the higher cost of living in urban areas such as Accra and Kumasi and its connectedness to psychological distress. This was expressed in an FGD in an urban area of the northern zone as follows:

> "*To me, the person in Kumasi and Accra has more pressure than those in other regions such as Sunyani and Techiman. For instance, there is an abundance of food, but in Kumasi, if you earn GHS200.00, you will spend GHS180.00 out of that GHS200.00, leaving GHS20.00, but in Wa here, if you earn GHS200.00, you will spend GHS100.00 leaving GHS100.00. Accra and Kumasi leaving is not easy"* (*FGD, urban, males, 2023).*

University of Ghana http://ugspace.ug.edu.gh

6.4 Investigating the effects of household and community factors on the psychological well-being of urban and rural dwellers in Ghana over time.

This section presents the results of panel regression fixed effects models on the effects of household and community factors on psychological well-being over time. Three models were fitted to determine this interrelationship. The first model investigates which household factors affect the psychological well-being of an individual. The second model focuses on the community factors that affect psychological well-being of individuals over time. The third model determines which household and community factors when combined affect the psychological well-being of an individual over time. The models reveal the effect of household and community factors on psychological distress.

According to the results of Model one, in both urban and rural areas respondents in households with higher wealth quintiles (urban=β=-0.229, P=,0.000 rural=-0.658, P=0.000), those in households without debts (urban=β=-0.389, P=0.044, rural= β =-0.703, P=0.000), those in households that did not receive goods or money from people outside the household (urban= β=-0.665, P=0.000, rural=β=-0.561, P=0.000) are less likely to be psychologically distressed compared to those in households with lower wealth quintile, those in households with debts, and those in households who have received goods or money respectively.

On the contrary, Model one also shows respondents in households who do not pay rent (β=0.629, P=0.001) for their dwelling in urban areas, those in households with no access to mobile phone in urban and rural areas (urban= β= 2.774, P=0.000, rural= β=1.616, P=0.000), those in households with no access to personal computer (β =1.017, P=0.000) in urban areas are more likely to be psychologically distressed compared to those in households who pay rent, those in households with access to mobile phone and personal computers respectively.

University of Ghana http://ugspace.ug.edu.gh

Model two focuses on community factors and indicates that in urban areas, respondents with higher perception of trust (β=0.193, P=0.022) for members of the community are more likely to be psychologically distressed. In contrast, in rural areas, respondents' perception of trust (β=-0.166, P=0.010) for community members is likely to lessen psychological distress. Moreover, Model two also reveals that in urban and rural areas, respondents' perception of community helpfulness (urban= β=-0.245, P=0.004, rural= β=-0.149, P=0.022) is likely to lessen psychological distress. Respondents in rural areas who perceive the need to be alert (β=-0.243, P=0.000) in dealing with community members are likely to experience less psychological distress. Finally, Model two indicates that in urban and rural areas respondents who are not willing to contribute time (urban= β=1.581, P=0.000, rural=β=2.458, P=0.000) to community projects that do not benefit their household are more likely to be psychologically distressed compared to those willing to contribute time.

Results from Model three indicates that in both urban and rural areas better wealth quintile (urban= β=-0.240, P=0.000, rural=β=-0.444, P=0.000) of an individual's household lessen the likelihood of psychological distress. Similarly, in both urban and rural areas respondents in households with no debt (urban= β=-0.475, P=0.013, rural= β=-0.875, P=0.000) and those who did not receive transfer of goods or money (urban= β=-0.783, P=0.000, rural= β=-0.937, P=0.000) are less likely to be psychologically distressed compared to those in households with debts and did not receive transfer of goods or money respectively.

On the other hand, Model three shows that respondents in households in urban areas who do not pay rent (β=0.664, P=0.000), who do not have access to fixed line telephone (β=1.006, P=0.019), mobile phone (β=2.493, P=0.000), personal computer (β=0.906, P=0.000), and e-commerce (β=1.176, P=0.003) are more likely to be psychologically distressed compared to those with

University of Ghana http://ugspace.ug.edu.gh

access. In rural areas, however, respondents in households with no access to mobile phone (β=0.837, P=0.000) are more likely to be psychologically distressed compared to those with access.

Moreover, Model three reveals that at the community level in urban areas, a higher perception of helpfulness (β=-0.223, P=0.009) of community members lessened psychological distress. However, respondents who are unwilling to contribute time (β=1.673, P= 0.000) to community project that do not benefit their household are more likely to be psychologically distressed compared to those willing to contribute time.

In rural areas, Model three finds that respondents' perception of community trustworthiness (β=-0.130, P=0.042) and helpfulness (β=-0.175, P=0.007) lessened psychological distress. At the same time, in rural areas, respondents with high alertness (β=-0.186, P=0.000) of community members also have a lessened likelihood of psychological distress. Finally, in rural areas it is also found that respondents who are unwilling to contribute to time (β=2.345, P=0.000) to community projects are more likely to be psychologically distressed compared to those willing to contribute time.

University of Ghana http://ugspace.ug.edu.gh

Table 6.2 Panel regression analysis result of fixed effects model for urban and rural

Variable	Model 1: Household		Model 2: Community		Model 3: Full model	
	Urban	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
HH Wealth quintile	-0.229*** (0.643)	-0.658*** (0.060)			-0.240*** (0.064)	-0.444*** (0.060)
Household Debt						
Yes (RC)						
No	-0.389* (0.193)	-0.703*** (0.153)			-0.475* (0.191)	-0.875*** (0.150)
Household in-transfer						
Yes (RC)						
No	-0.665*** (0.175)	-0.561*** (0.150)			-0.783*** (0.174)	-0.937*** (0.148)
Rent						
Yes (RC)						
No	0.629*** (0.188)	0.065 (0.324)			0.664*** (0.187)	-0.048 (0.318)
Fixed line telephone						
Yes (RC)						
No	0.404 (0.426)	0.389 (0.922)			1.006* (0.427)	1.001 (0.901)
Mobile phone						
Yes (RC)						
No	2.774*** (0.333)	1.616*** (0.177)			2.493*** (0.331)	0.837*** (0.178)

University of Ghana http://ugspace.ug.edu.gh

Table 6.2 continued

Variable	Model 1: Household		Model 2: Community		Model 3: Full model	
	Urban	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
Personal computer						
Yes (RC)						
No	1.017*** (0.260)	0.618 (0.447)			0.906*** (0.258)	0.407 (0.439)
E-commerce						
Yes (RC)						
No	0.872 (0.400)	-0.416 (0.525)			1.176** (0.398)	0.601 (0.520)
Internet						
Yes (RC)						
No	-0.027 (0.227)	0.102 (0.252)			-0.181 (0.226)	-0.461 (0.250)
Comm. Trustworthiness			0.193* (0.084)	-0.166* (0.065)	0.158 (0.083)	-0.130* (0.064)
Comm. Helpfulness			-0.245*** (0.086)	-0.149* (0.065)	-0.223** (0.085)	-0.175** (0.065)
Comm. Alertness			-0.027 (0.075)	-0.243*** (0.052)	-0.018 (0.074)	-0.186*** (0.053)
Comm. Project						
Will contribute (RC)						
Will not contribute			1.581*** (0.178)	2.458*** (0.118)	1.673*** (0.179)	2.345*** (0.125)
Cons	16.006*** (0.568)	20.552*** (1.159)	16.916*** (0.407)	19.919*** (0.321)	15.137*** (0.699)	20.464*** (1.180)
Number of observations	9,544	16,338	9,544	16,266	9,544	16,224
Number of groups	4,898	8,225	4,898	8,197	4,898	8,187

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

University of Ghana http://ugspace.ug.edu.gh

6.5 Discussion

The analysis conducted highlights the individual household and community factors in urban and rural areas that the study found to be associated with psychological distress. These findings indicate that our homes and communities are more than just a place to live; they serve as a haven where we can grow or falter in terms of psychological health. Concerning household factors, the results of the fixed effects model in both urban and rural areas found that an increase in the wealth quintile of households resulted in a decrease in an individual household member's psychological distress. An increase in a household's wealth often means having a greater financial safety net to meet recurrent and unforeseen expenses on consumption, education, healthcare, utilities, and debts, among others (de Bondt et al., 2020; Zabai, 2020). This level of financial stability can lessen stress and worry about providing for basic needs, which helps to minimise psychological distress. A study by Halbmeier and Grabka (2019), corroborated that an increase in net wealth had a positive effect on SWB. This finding is also in consonance with the study of Brown & Gray (2014), which also unveiled that households' financial situation positively impacts the overall life satisfaction of their members.

Consistent with the earlier evidence, the study further showed that in both urban and rural areas, individuals in households who were not indebted were less likely to be psychologically distressed compared to individuals whose households had outstanding debts of goods or income. In both urban and rural areas particularly in SSA owing goods or money comes with a lot of stigmatisations. Consequently, household debt may lead to financial pressure because some of their income will be set aside to pay off debt. This could eventually hinder savings, financial freedom and flexibility and even spill over to cause tension and conflicts among household members or with their creditors (Turunen & Hiilamo, 2014; Fatoki, 2015; Montgomerie & Tepe-

University of Ghana http://ugspace.ug.edu.gh

Belfrage, 2017). The accumulation of these factors has the likelihood of increasing the psychological distress of household members. Similarly, the study by Berger et al. (2016) discovered a direct link between higher household debt and depression symptoms. In addition, a more recent study by Hiilamo & Grundy (2020) in conformity with this study confirmed that having low or high levels of debt was linked to more depressive symptoms.

Another household factor found to have a statistically significant effect on psychological distress was the receipt of financial or non-financial gifts. Among both urban and rural dwellers in Ghana, it was revealed that individuals in households who did not receive transfers from other people in the same community of residence or outside were less likely to be psychologically distressed compared to those who received transfers. Even though this finding contradicts the findings from other studies (Oh, 2014; Joarder et al., 2017; Tokhirov, 2018) there are possible factors that could account for this trend. First, households without external financial and non-financial support may take pride in their financial independence, and this feeling of freedom could result in improved psychological well-being (Gehring, 2012; Tach & Greene, 2014). From another angle, it is possible that households who do receive any form of assistance might live with a realistic budget and financial expectations. As a result, they may be able to handle available financial and non-financial resources better, which could reduce stress (Lim & Tsiaplias, 2019). Moreover, receiving gifts or remittances makes one feel obligated to give something back or offer some assistance in return, and this pressure could be a source of distress for individuals in a particular household (Thai, 2014; Pan & Xiao, 2016; Bulte et al., 2018).

Furthermore, whether a household pays rent or not goes beyond simple financial transactions; it has the power to seriously affect the psychological well-being of individuals and families, both in urban and rural settings. The results of the fixed effects model showed that in urban areas

University of Ghana http://ugspace.ug.edu.gh

individuals in households who did not pay rent were more likely to be distressed compared to those who paid rent. Apart from a small proportion of the urban population who reside in their own housing properties and do not pay rent in Ghana, a significant number of households who also do not pay rent may be living in rent-free or unstable housing units such as wooden structures (kiosks) or uncompleted buildings (Luginaah et al., 2010; Obeng-Odoom & Amedzro, 2011; Peprah et al., 2015). The main causes of this are typically lower incomes or unstable financial situations of these households when it comes to paying for other necessities like food, utilities, and healthcare (Asante et al., 2018; Danso-Wiredu, 2018). As a result, individuals in the households may worry about housing stability, frequent moves, or the possibility of losing their housing, which can cause psychological distress (Oishi & Talhelm, 2012; Dwyer& Phillips Lassus, 2015; Wang, 2022). Other plausible challenges confront urban households who are unable to pay rent which may lead to higher psychological distress. For example, the dependency on other family members and friends, lack of control over the household's living circumstances, a restricted degree of independence, and the social stigma and shame associated with not being able to rent could also exacerbate distress (Peen & Dekker, 2004; Routhier, 2019).

Contrary to the situation in urban areas, the study found no interrelationship between an individual's household occupancy status and psychological distress. This could be explained by the fact that most households in rural communities in Ghana occupy their own housing units. Conducive factors accounting for this situation include the availability of free land or at a reduced cost, affordable building materials that may be acquired locally, traditional building and housing methods, and communal support for housing construction, among others (Cook et al., 2009; Lapping, 2016; Gkartzios & Ziebarth, 2016). This ownership may help individuals in the household feel more secure and lessen distress. Moreover, compared to urban households who

University of Ghana http://ugspace.ug.edu.gh

cannot afford the cost of rent, those in similar situations in rural areas might receive help due to the stronger social support networks in rural communities, easing their loneliness and distress (Ziebarth, 2015; Warto, 2016; Carson & Mattingly, 2017).

Urban life revolves around communication, and having access to a variety of communication tools is crucial for managing its many challenges. One such device is the fixed-line telephone which the study found that in urban areas individuals in households who did not have access to this communication tool were more likely to be psychologically distressed compared to those who had. Until recently, the easily accessed telecommunication tool in Ghana was the fixed-line telephone which dominated telecommunication in both homes and organisations, particularly in urban areas.

A few years ago, the absence of fixed-line telephone services in a Ghanaian household was a sign of socioeconomic deprivation. For that matter, individuals in households without access may have felt excluded from urban opportunities and marginalised, which can be distressing. Moreover, it was possible in the past for households without fixed-line phones to suffer social isolation, especially if individuals in those households were unable to communicate with family and friends. This solitude may result in depressive and lonely sentiments among individual household members in urban areas (Graves et al., 2021). In rural areas, however, the study found no significant relationship between household access to a fixed-line telephone and psychological distress. Apart from the enormous fixed-line telephone coverage gap in rural communities in Ghana, other potential explanations for the non-association could include the strong social links in rural areas, which typically take the form of in-person meetings and community gatherings (Kim & Sim, 2015; Holloway & Kneafsey, 2017).

With respect to households' access to a mobile phone, the results of the fixed effects revealed that in both urban and rural areas in Ghana, individuals in households without access to a mobile phone

University of Ghana http://ugspace.ug.edu.gh

were more likely to be distressed compared to those in households with mobile phone access. The possession of mobile phones by individuals within households has emerged as a significant characteristic of contemporary society, exerting a substantial influence in both urban and rural areas, irrespective of geographical limitations. As such, households without access to a mobile phone may encounter difficulties in maintaining connections with their family members, acquaintances, or support networks (Bond, 2010; Macdonald et al., 2017; Pearson et al., 2017), hence resulting in experiences of loneliness and distress. There are several additional obstacles that arise from the lack of access to a mobile phone within households. These challenges encompass the inability to engage in mobile financial transactions, reliance on others for communication and information, manifestation of poverty, as well as social stigmatisation and feelings of shame, among other difficulties (Velghe, 2012; Huang, 2013; Amoah et al., 2020). These circumstances may give rise to emotions of powerlessness, inequity, and marginalisation which may exacerbate psychological distress (Maurer, 2012; Pearson et al., 2017; Danquah & Iddrisu, 2018). On the contrary, other studies have shown that the presence of mobile phones among household members might result in heightened spending and financial losses, addiction, distraction, information overload, social comparison, feelings of jealousy, and overall psychological distress (Nasiar & Rani, 2018; Kushlev & Leitao, 2020; Shahjehan et al., 2021).

The presence of personal computers within most households has greatly reformed the way individuals work, learn, communicate, and access information, particularly in urban areas. It is therefore not surprising that the study discovered households without access to a personal computer in urban areas were more likely to be psychologically distressed compared to those with access. One plausible explanation is that in many urban areas in developing countries such as Ghana, there is a growing trend of remote working options that necessitates the availability of

University of Ghana http://ugspace.ug.edu.gh

computer access. Households who lack access may experience a potential disadvantage in accessing flexible employment opportunities, which can lead to heightened concerns about job security and income stability and lead to psychological distress (Larrison et al., 2002; Ortiz et al., 2012; Araque et al., 2013). Secondly, a multitude of job-related responsibilities, as well as contemporary tertiary education, necessitate students to have access to computers (Williams et al., 2006; Araque et al., 2013). Households without computer access may encounter both professional and educational obstacles which can contribute to distress.

Furthermore, household access to e-commerce showed statistical significance in only urban areas. The study found that households without access to e-commerce in urban areas were more likely to be psychologically distressed compared to those with access. In cities and towns where individuals have limited time availability, e-commerce facilitates the buying procedure by making it more efficient and streamlined. In addition, e-commerce affords households the opportunity to efficiently engage in pricing comparisons, read reviews, and engage in purchasing activities without the necessity of physically visiting brick-and-mortar retail establishments (Goswami & Narwal, 2014; Vadwala & Vadwala, 2017; Jimenez et al., 2019). The absence of e-commerce in an urban household means that individuals may have to traverse through congested streets and long queues to purchase limited product offerings in physical shops, which can heighten stress levels (Hiselius et al., 2012; Rotem-Mindali, 2013; Somasundram, 2020).

The establishment of trust and solidarity within a community serves as the fundamental basis for the development and prosperity of local communities. In a period marked by rapid urbanisation and technological progress, the enduring principles of trust and solidarity remain critical in forming the social structure of communities. These values not only cultivate a sense of inclusion but also enhance the general welfare and unity of communities. Regarding individual household

University of Ghana http://ugspace.ug.edu.gh

members' level of trust in community members, the study found a statistically significant link with psychological distress in rural areas. The study revealed that as perceived trust for community members increased there was a decrease in psychological distress among individual members of households in rural areas. It is possible that communities characterised by a high level of trust are more inclined to participate in the practice of sharing resources (Mark, 2016; Marth et al., 2020). This encompasses the act of helping in the form of food, shelter, and other necessary resources during periods of hardship, thereby alleviating economic pressures that contribute to emotional strain (Kushitor et al., 2018; Martínez et al., 2019; Zhang, 2020). In addition, high levels of trust foster a sense of security within the community. Experiencing a sense of safety has been found to be associated with a decrease in feelings of worry and fear, hence playing a role in mitigating psychological distress (Kidd & Anderson, 2015; Robinette et al., 2016; Hedayati Marzbali et al., 2021).

There was, however, no statistically significant relationship between trust and psychological distress in urban areas. This could be attributed to several factors characteristic of the urban society. First among them is that urban areas are usually distinguished by greater diversity in population, culture, and socioeconomic class. The presence of diversity in these settings may result in a more fractured sense of trust, leading to a lesser effect on psychological distress (Laurence & Bentley, 2016; Mendolia et al., 2016; Erdem et al., 2017). Another probable reason is that in highly populated urban areas, individuals residing near one another may experience reduced levels of direct social engagement, resulting in a perception of anonymity (Dimant, 2019; Scott, 2022). This decrease in social engagement has the potential to undermine the influence of trust on an individual's psychological well-being.

University of Ghana http://ugspace.ug.edu.gh

As also shown in this study, in both urban and rural areas there was a statistically significant inverse relationship between the perceived helpfulness of community members and psychological distress. Individual household members' perception of high levels of helpfulness and support from their neighbours and community was linked to lower levels of psychological distress.

The tradition of social support within communities in Ghana like other communities in SSA has a long-standing historical foundation that spans many generations. The act of communal support, resource sharing, and emotional solace particularly during events such as child naming, marriage, and funerals has long been a defining characteristic of community life both in urban and rural areas through the ages. Today, despite the rapid modernisation of our societies along with its obstacles, this age-old tradition of social support remains a vital source of strength and resilience for both urban and rural populations. In each community, the presence of a reliable support system helps alleviate feelings of isolation and loneliness, both of which lower the likelihood of experiencing psychological distress (Terry & Townley, 2019; Menec et al., 2020; Zhao et al., 2022). Moreover, the presence of a supportive community has the potential to bolster the resilience of individuals residing within it when confronted with challenging circumstances. Individuals who have a sense of support tend to possess enhanced abilities to manage stress and recover from challenging circumstances, hence diminishing the probability of enduring distress for extended periods (Pohl et al., 2019; Boersma & Vahratian, 2021; Uchino et al., 2022). Furthermore, the perception of helpfulness has the potential to enhance individuals' access to resources and information within their community. This can encompass pragmatic necessities, such as the provision of healthcare services, monetary aid, or employment prospects, which can mitigate factors that contribute to psychological distress (Kelley et al., 2017; Pohl et al., 2019; Rivers & Sanford, 2020).

University of Ghana http://ugspace.ug.edu.gh

Furthermore, the study also revealed a statistical significance between individual household members' perception of the need to be alert when dealing with community members and psychological distress among rural dwellers. The findings of the study observed that in rural areas there was a decrease in psychological distress among household members as they became more vigilant in their dealings with community members. This could be so because vigilance enables individuals to effectively uphold their personal boundaries and safeguard their privacy. Despite the presence of trust, individuals may nevertheless place importance on maintaining their personal space and liberty. Secondly, in rural settings, the proficient administration of communal resources such as water, land, grazing area, or shared utilities may also necessitate being alert to ensure equitable use and mitigate the risk of excessive exploitation. The state of being alert has the potential to cultivate a feeling of psychological empowerment, wherein individuals hold the belief that they possess the capability to confront challenges and exert influence over their own circumstances (Adomako, 2021; Daniel et al., 2021). This, in turn, leads to a decrease in the emotional burden associated with feelings of helplessness.

Finally, the study again showed that individual household members' willingness or unwillingness to commit time to a community project that was not of benefit to them, or their household members but to the community was statistically significant with psychological distress. In both urban and rural areas, it was found that compared to individuals willing to commit time those who were unwilling to commit time were more likely to be psychologically distressed. This may be the case because engaging in community projects may yield a profound sense of satisfaction and purpose. Individuals who choose not to participate may forego possible occasions for experiencing this sense of satisfaction, which could probably result in emotions of void or psychological distress (Attree et al., 2011; Gorski et al., 2015; Davis, 2018). In addition, declining involvement in

University of Ghana http://ugspace.ug.edu.gh

community projects can lead to a weakened connection to the community's identity and values, which may contribute to feelings of isolation, unease, and eventual psychological distress (Mezzina et al., 2006; Smith et al., 2014).

In summary, findings of this study have revealed that in urban areas higher educational attainment and business ownership are linked to lower psychological distress. On the other hand, increase in age and being female were associated with higher psychological distress over time in urban areas. However, in rural areas being a farm owner and increase in age lessened the likelihood of psychological distress over time. Moreover, in both urban and rural areas being in a former union was linked to higher psychological distress over time.

University of Ghana http://ugspace.ug.edu.gh

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.0 Introduction

This final chapter provides a summary of the main findings of the study by focusing on evidence from each objective. The chapter then provides the limitations of the study, conclusions, policy, and recommendations for further research.

7.1 Summary of main findings

7.1.1 Psychological distress prevalence among urban and rural dwellers in Ghana

The overall prevalence of psychological distress was higher (66.1 percent) among respondents in rural areas compared to urban areas (52.9 percent). Specifically, the Upper West region recorded the highest overall prevalence of psychological distress in both urban (80.2 percent) and rural (85.7 percent) areas. Moreover, the study found higher prevalence rates of psychological distress among respondents of various marital statuses in rural areas compared to those in urban areas. The prevalence of psychological distress also varied among the different SES groups. However, overall prevalence of distress was higher among respondents in urban (64.3 percent) and rural (70.8 percent) areas with no educational qualification. Respondents of households living in rent-free dwellings, those with no access to fixed line telephone services, and mobile phones had higher prevalence of psychological distress in both urban and rural areas. Finally, the study found a higher prevalence of psychological distress in both urban and rural areas among respondents who perceived the need of being alert when engaging with members of the community.

University of Ghana http://ugspace.ug.edu.gh

7.1.2 Assessing the effect of sociodemographic and SES factors on the psychological well-being of urban and rural dwellers in Ghana over time

This section employed the panel fixed effects model to examine the sociodemographic and SES factors which affected psychological in urban and rural areas over time. In urban areas the study found that various socioeconomic factors exhibited a statistically significant positive relationship with psychological distress. These factors included individuals with no educational qualifications, those with educational qualifications such as MSCL/BECE/O' Level/Other education, individuals possessing SSCE/A' Level/Prof. Cert., and individuals who did not own a business. This implies that individuals with lower levels of educational attainment and those who did not own a business are more likely to experience psychological distress over time.

In relation to sociodemographic attributes of respondents within urban areas, it was observed that the female gender, increasing age, and formerly in a union had a positive correlation with psychological distress. Moreover, respondents residing in regions namely: Volta, Brong Ahafo, Northern, Upper East, and Upper West, exhibited a higher propensity for experiencing psychological distress. On the contrary, there existed a negative and statistically significant association between psychological distress and factors such as being a child, being born in current community, and living in regions such as Western and Ashanti.

Among rural dwellers, however, the study revealed that the only SES variable that showed a positive significant relationship with psychological distress was not being a business owner. This suggests that a lack of involvement in business ownership increased the likelihood of experiencing psychological distress in rural areas over time. On the other hand, concerning sociodemographic characteristics in rural areas, the study found that age and being a spouse of the household head

University of Ghana http://ugspace.ug.edu.gh

were negatively associated with psychological distress, while household size was positively associated with distress over time.

7.2.3 Appraising the effects of household and community factors on the psychological well-being of urban and rural dwellers in Ghana over time

This study was also interested in knowing which household and community factors of respondents affected their psychological well-being in urban and rural areas over time. In urban areas, several household factors were found to significantly impact psychological distress. Respondents' household wealth quantile, the absence of household debt, and no receipt of in-transfer of income of cash or goods were associated with reduced psychological distress. Conversely, individuals residing in households not paying rent, who did not have access to fixed telephone, mobile phones, personal computers, and e-commerce experienced higher psychological distress.

At the community level in urban areas, the study found that respondents' perception of the helpfulness of community members exhibited a negative and significant effect on psychological distress. In contrast, the respondents in urban areas who were unwilling to contribute time to community projects which did not benefit their household were found to be more distressed, indicating the importance of community engagement and social support.

Similarly, in rural areas the study also found that respondents' household wealth quintile, the absence of household debt, and no receipt of in-transfer of income or goods were linked to lower psychological distress. The study further indicated that respondents' households with no access to mobile phones was a positive predictor of psychological distress in rural areas over time.

Rural community factors such as respondents' perceived trustworthiness, helpfulness, and alertness of community members were negatively associated with psychological distress.

University of Ghana http://ugspace.ug.edu.gh

However, psychological distress was found to be positively linked with respondents who were not willing to contribute time to community projects deemed unbeneficial to their household.

7.2 Limitations of the study

The present study provides significant contributions to our understanding of the prevalence and factors influencing psychological distress among individuals residing in urban and rural areas of Ghana. However, it is important to acknowledge the limitations that may affect the generalizability and scope of the findings.

Firstly, it is worth conceding that the primary source of data for this study predominantly consists of self-reported information provided by the respondents. Individual perceptions and biases can influence the experience of psychological distress, socioeconomic status, and other characteristics. The presence of social desirability bias has the potential to impact the precision of responses, which could result in the underrepresentation or overrepresentation of distress and its associated components.

Secondly, the use of the fixed effects models for interpreting the results at the multivariate analysis could pose a limitation. This is because the fixed effects models assume that all time-varying heterogeneity is observed and that there are no unobserved time-varying factors influencing the dependent variable which might not always be the case in practice.

Conclusions

In conclusion, the investigation into psychological distress in Ghana's urban and rural areas reveals a complex and multifaceted landscape. There are regional differences in psychological distress, as evidenced by the higher prevalence of psychological distress in rural areas, especially in the Upper West. Distress levels are influenced by a complex interaction of socioeconomic characteristics

University of Ghana http://ugspace.ug.edu.gh

such as educational attainment, business ownership in urban areas and farm ownership in rural areas. Sociodemographic factors like age and marital status were found to influence psychological distress in urban and rural areas, though at different magnitudes. It is impossible to overestimate the importance of household and community dynamics, with community support emerging as a critical mitigating factor, in both urban and rural settings. These results highlight the necessity of context- and region-specific policies and programs.

The results of this study align with the Social Determinants of Health (SDH) theory, which posits that an individual's health and well-being are greatly influenced by where one is born, live, work, and age. Regional differences in psychological distress, which showed higher levels in rural areas such as the Upper West, are indicative of the ways in which socioeconomic such as less access to economic opportunities and poorer educational attainment, influence psychological distress outcomes. In a similar vein, the impact of sociodemographic variables such as age and marital status as well as the critical function of social support in reducing distress highlight the ways in which both specific situations and larger societal contexts contribute to health inequalities.

7.5 Recommendations

7.5.1 Policy recommendations

Based on the research findings, it is evident that psychological distress is a significant concern, especially in the context of urban and rural areas in Ghana. To address the complex interplay of sociodemographic, socioeconomic, household, and community factors on psychological distress, a few policy recommendations are proposed:

This study has revealed that people with lower or no educational qualifications, particularly in urban areas, are more likely to experience psychological distress. The study recommends that the

University of Ghana http://ugspace.ug.edu.gh

Ministry of Education (MOE) revisits policies on formal education enrolment in Ghana. Specifically, the Free Compulsory Universal Basic Education (FCUBE), the Ghana School Feeding Programme (GSFP), and the Free Senior High School policy should be re-looked at to ensure their efficient and effective implementation. This would provide the younger generation with the required knowledge and skills that enhance career opportunities and employability.

In the case of adult illiterates, the MOE through its Non-Formal Education Division (NFED) should increase the promotion of non-formal trainings in literacy and skills acquisition by ensuring that such trainings are made more accessible and tailored to boost their skills and confidence.

Secondly, the study found that business and farm ownership were important mediators of psychological distress in urban and rural areas, respectively. The National Entrepreneurship and Innovation Programme (NEIP) has been established by the Government of Ghana (GOG) to train and provide financial support for start-ups and small businesses in Ghana. It is therefore, recommended for the creation of awareness and ease of accessibility of this program to the numerous Ghanaians in the informal sector devoid of political intrusion.

Moreover, the study revealed that psychological distress increased with increasing age in urban areas in Ghana over time. This could be attributed to the growing nucleation of families especially in urban areas in Ghana with inadequate care for the aged as one of the consequences. Taking this into consideration, it is recommended that the Ministry of Gender, Children and Social Protection (MoGCSP) begins to consider long-term care (LTC) policies and strategies to meet the needs of the increasing ageing population of Ghana, particularly, in urban areas. In addition, social protection interventions, such as the Livelihood Empowerment Against Poverty (LEAP) program should consider increasing enrolment for the aged in urban areas in Ghana.

University of Ghana http://ugspace.ug.edu.gh

7.5.2 Recommendations for future studies

Building upon the insightful findings of this study, it is imperative to ascertain potential areas for additional scholarly inquiry that can enhance our understanding of psychological distress within urban and rural communities in Ghana. Several suggestions for future research activities are put forward:

Firstly, it is recommended that longitudinal studies are conducted to explore the trajectories of psychological distress over time. By examining changes and persistence in distress levels among urban and rural dwellers, researchers will be able to identify critical periods and factors influencing long-term psychological well-being.

Secondly, further studies should examine the accessibility and effectiveness of psychological health services in urban and rural areas. Research on the availability of psychological health resources, the quality of care, and the stigma associated with seeking help can inform policies aimed at improving access to mental health services.

Finally, studies should aim at investigating the resilience and coping mechanisms employed by individuals and communities to manage psychological distress in both urban and rural areas. Identifying adaptive strategies and protective factors can contribute to the development of resilience-focused interventions. This research can shed light on the cultural and community strengths that promote psychological well-being.

University of Ghana http://ugspace.ug.edu.gh

REFERENCES

Abadi, N., Techane, A., Tesfay, G., Maxwell, D., & Vaitla, B. (2018). *The impact of remittances on household food security: A micro perspective from Tigray, Ethiopia* (No. 2018/40). WIDER Working Paper.

Abdullah, A., Marzbali, M. H., & Tilaki, M. J. M. (2020). The Role of Social Control on the Relationship between Fear of Crime and Self-Rated Health in Urban Neighbourhoods: A Case Study of Penang, Malaysia. *IJASOS-International E-journal of Advances in Social Sciences*, *5*(15), 1266-1274.

Aberese-Ako, M., Immurana, M., Dalaba, M. A., Anumu, F. E., Ofosu, A., & Gyapong, M. (2022). The socio-economic and health effects of COVID-19 among rural and urban-slum dwellers in Ghana: A mixed methods approach. *PLoS One*, *17*(7), e0271551.

Aboderin, I. (2004). Decline in material family support for older people in urban Ghana, Africa: Understanding processes and causes of change. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *59*(3), S128-S137.

Achdut, N., Refaeli, T., & Schwartz Tayri, T. M. (2021). Subjective poverty, material deprivation indices and psychological distress among young adults: the mediating role of social capital and usage of online social networks. *Social Indicators Research*, *158*(3), 863-887.

Achore, M., & Bisung, E. (2022). Experiences of inequalities in access to safe water and psycho-emotional distress in Ghana. *Social Science & Medicine*, *301*, 114970.

Ackah, C., Adjasi, C., & Turkson, F. (2014). *Scoping study on the evolution of industry in Ghana* (No. 2014/075). WIDER Working Paper.

Addai, I., Opoku-Agyeman, C., & Amanfu, S. K. (2015). Marriage and subjective well-being in Ghana. *African Review of Economics and Finance*, *7*(1), 53-79.

Adedoyin, R. (2021). An econometric analysis of entrepreneurship and unemployment for sub-Saharan Africa: 2006-2016. *Int. J. Socia. Scie. Human. Invent*, *8*, 6371-6381.

Adepoju, A. (2011). Reflections on international migration and development in sub-Saharan Africa. *African Population Studies*, *25*(2).

Adomakoh, C. C. (1972). Mental hospital patients: A Castle Road profile. *Ghana med. J*, *2*, 65-71.

Adomako, S. (2021). Entrepreneurial alertness and product innovativeness: Firm-level and environmental contingencies. *International Journal of Innovation Management*, *25*(02), 2150023.

Adu, J., Mulay, S., & Owusu, M. F. (2021). Reducing maternal and child mortality in rural Ghana. *Pan African Medical Journal*, *39*(1).

University of Ghana http://ugspace.ug.edu.gh

Ae-Ngibise, K. A., Doku, V. C. K., Asante, K. P., & Owusu-Agyei, S. (2015). The experience of caregivers of people living with serious mental disorders: a study from rural Ghana. *Global health action*, *8*(1), 26957.

Ae-Ngibise, K., Cooper, S., Adiibokah, E., Akpalu, B., Lund, C., Doku, V., & Mhapp Research Programme Consortium. (2010). 'Whether you like it or not people with mental problems are going to go to them': A qualitative exploration into the widespread use of traditional and faith healers in the provision of mental health care in Ghana. *International review of psychiatry*, *22*(6), 558-567.

Agyeman, J., & Neal, S. (2009). Rural identity and otherness.

Agyemang, F. S., Amedzro, K. K., & Silva, E. (2017). The emergence of city-regions and their implications for contemporary spatial governance: Evidence from Ghana. *Cities*, *71*, 70-79.

Agyeman, S. A. (2018). Impacts of urban sprawl on livelihoods and ecology in peri-urban fringe of the Greater Accra Metropolitan Area. *West African Journal of Applied Ecology*, *26*, 100-117.

Ahmad, W. I. W., Ismail, Z., & Rahman, A. H. A. (2011). Aging and economic participation of older population in rural Malaysia. *International Journal of Humanities and Social Science*, *9*(1), 128-133.

Ahn, S., Kim, S., & Zhang, H. (2017). Changes in depressive symptoms among older adults with multiple chronic conditions: Role of positive and negative social support. *International journal of environmental research and public health*, *14*(1), 16.

Aierken, A., Ding, X., Pan, Y., Chen, Y., & Li, Y. (2022). Association between dependency on community resources and social support among elderly people living in rural areas in China: a cross-sectional study. *BMC geriatrics*, *22*(1), 589.

Alali, D. W. Y. (2022). Influence The Education Levels on Income Worldwide: Empirical Evidence. *Available at SSRN 4299192*

Alarima, C. I. (2018). Factors influencing rural-urban migration of youths in Osun State, Nigeria. *Agro-Science*, *17*(3), 34-39.

Alcañiz, M., Riera-Prunera, M. C., & Solé-Auró, A. (2020). "When I retire, I'll move out of the city": mental well-being of the elderly in rural vs. urban settings. *International Journal of Environmental Research and Public Health*, *17*(7), 2442.

Allen, J., Inder, K., Kelly, B., Attia, J., & Lewin, T. (2011). P2-496 An interaction of social support and remoteness in the prediction of psychological distress. *Journal of Epidemiology & Community Health*, *65*(Suppl 1), A358-A358.

Allen, J., Inder, K. J., Lewin, T. J., Attia, J., & Kelly, B. J. (2012). Social support and age influence distress outcomes differentially across urban, regional and remote Australia: an exploratory study. *BMC public health*, *12*, 1-11.

University of Ghana http://ugspace.ug.edu.gh

Allen, J., Balfour, R., Bell, R., & Marmot, M. (2014). Social determinants of mental health. *International review of psychiatry*, *26*(4), 392-407.

Alonso, J., Chatterji, S., He, Y., & Kessler, R. C. (2014). The burden of illness. *Essentials of Global Mental Health*, 11-26.

Amegbor, P. M., Braimah, J. A., Adjaye-Gbewonyo, D., Rosenberg, M. W., & Sabel, C. E. (2020). Effect of cognitive and structural social capital on depression among older adults in Ghana: A multilevel cross-sectional analysis. *Archives of Gerontology and Geriatrics*, *89*, 104045.

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders. Arlington, VA: American Psychiatric Association; 2013.

Amissah, N. B., Amissah, C. M., & Amponsah, B. (2022). Assessing psychosocial distress associated with homelessness in Ghana: A springboard for interventional policy design. *Journal of Health Psychology*, *27*(14), 3085-3096.

Amidu, M., Abor, J. Y., & Issahaku, H. (2019). Left behind but included: the case of migrant remittances and financial inclusion in Ghana. *African Finance Journal*, *21*(2), 36-63.

Amoah, A., Korle, K., & Asiama, R. K. (2020). Mobile money as a financial inclusion instrument: what are the determinants? *International journal of social economics*, *47*(10), 1283-1297

Amu, H., Osei, E., Kofie, P., Owusu, R., Bosoka, S. A., Konlan, K. D., ... & Gyapong, J. O. (2021). Prevalence and predictors of depression, anxiety, and stress among adults in Ghana: a community-based cross-sectional study. *PloS one*, *16*(10), e0258105.

An, R., Zhang, S., Ji, M., & Guan, C. (2018). Impact of ambient air pollution on physical activity among adults: a systematic review and meta-analysis. *Perspectives in public health*, *138*(2), 111-121.

Anakpo, G., & Kollamparambil, U. (2023). Family structure and household well-being: Evidence from South Africa. *Development Southern Africa*, *40*(1), 57-75.

Anarfi, K., Hill, R. A., & Shiel, C. (2020). Highlighting the sustainability implications of urbanisation: A comparative analysis of two urban areas in Ghana. *Land*, *9*(9), 300.

Anders, J. (2015). Does socioeconomic background affect pay growth among early entrants to high-status jobs?

Andres, L. (2022). Higher Education and the Marriage Market: Educational Attainment, Educational Homogamy, and Inequality. *Canadian Journal of Higher Education*, *52*(1), 51-69.

Anim, M. T. (2012). Psychosocial factors influencing marital distress in Ghanaian married couples.

Annan, F., & Archibong, B. (2023). *The value of communication for mental health* (No. w31638). National Bureau of Economic Research.

University of Ghana http://ugspace.ug.edu.gh

Annim, S. K., Awusabo-Asare, K., & Amo-Adjei, J. (2015). Household nucleation, dependency, and child health outcomes in Ghana. *Journal of Biosocial Science*, *47*(5), 565-592.

Antunes, C., Magalhaes, E., Ferreira, C., Cabral, J., & Jongenelen, I. (2021). When subjective social status matters: Moderating effects in the association between victimization and mental health. *Victims & Offenders*, *16*(2), 165-182.

Araki, S. (2022). Does education make people happy? Spotlighting the overlooked societal condition. *Journal of Happiness Studies*, *23*(2), 587-629.

Araque, J. C., Maiden, R. P., Bravo, N., Estrada, I., Evans, R., Hubchik, K., ... & Reddy, M. (2013). Computer usage and access in low-income urban communities. *Computers in Human Behaviour*, *29*(4), 1393-1401.

Araújo, J. A. T., & de Oliveira Lima, A. (2016). Separation and loss: A study on the impact of divorce. *Interpersona: An International Journal on Personal Relationships*, (10), 3-9.

Asamoah, E. O. (2020). Rural-Urban Migration in Ghana: Policy Implications.

Asante, K. O. (2012). Social support and the psychological wellbeing of people living with HIV/AIDS in Ghana. *African journal of psychiatry*, *15*(5), 340-345.

Asante, K. O., & Andoh-Arthur, J. (2015). Prevalence and determinants of depressive symptoms among university students in Ghana. *Journal of affective disorders*, *171*, 161-166.

Asante, L. A., Gavu, E. K., Quansah, D. P. O., & Osei Tutu, D. (2018). The difficult combination of renting and building a house in urban Ghana: analysing the perception of low- and middle-income earners in Accra. *GeoJournal*, *83*(6), 1223-1237.

Assari, S. (2017). Social determinants of depression: The intersections of race, gender, and socioeconomic status. *Brain Sciences*, *7*(12), 156.

Atkinson, R., & Millington, G. (2018). *Urban criminology: The city, disorder, harm, and social control*. Routledge.

Attree, P., French, B., Milton, B., Povall, S., Whitehead, M., & Popay, J. (2011). The experience of community engagement for individuals: a rapid review of evidence. *Health & social care in the community*, *19*(3), 250-260.

Australian Bureau of Statistics. (2019). Kessler psychological distress scale-10 (K10).

Awel, A. M. (2013). Determinants of poverty in rural Ethiopia: A household level analysis.

Awumbila, M., & Ardayfio-Schandorf, E. (2008). Gendered poverty, migration, and livelihood strategies of female porters in Accra, Ghana. *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, *62*(3), 171-179.

Awumbila, M., Owusu, G., & Teye, J. K. (2014). Can rural-urban migration into slums reduce poverty? Evidence from Ghana (Working Paper 13)

University of Ghana http://ugspace.ug.edu.gh

Aye, W. T., Lien, L., Stigum, H., Win, H. H., Oo, T., & Bjertness, E. (2020). The prevalence of mental distress and the association with education: a cross-sectional study of 18-49-year-old citizens of Yangon Region, Myanmar. *BMC public health*, *20*, 1-12.

Baah-Boateng, W. (2015). Unemployment in Ghana: a cross sectional analysis from demand and supply perspectives. *African Journal of Economic and Management Studies*, *6*(4), 402-415.

Babones, S. J. (2009). The consistency of self-rated health in comparative perspective. *Public health*, *123*(2), 199-201.

Bai, Z., Xu, Z., Xu, X., Qin, X., Hu, W., & Hu, Z. (2020). Association between social capital and depression among older people: evidence from Anhui Province, China. *BMC public health*, *20*(1), 1-11.

Baker, E. H. (2014). Socioeconomic status, definition. *The Wiley Blackwell encyclopedia of health, illness, behaviour, and society*, 2210-2214.

Baker, S., Warburton, J., Hodgkin, S., & Pascal, J. (2017). The supportive network: rural disadvantaged older people and ICT. *Ageing & Society*, *37*(6), 1291-1309.

Bako, A. I., Bello, N. A., Abdulyeken, A. O., & Balogun, F. A. (2018). A review of urban residential neighbourhood security. *KIU Journal of Humanities*, *3*(3), 139-150.

Barbonetti, A., Cavallo, F., Felzani, G., Francavilla, S., & Francavilla, F. (2012). Erectile dysfunction is the main determinant of psychological distress in men with spinal cord injury. *The journal of sexual medicine*, *9*(3), 830-836.

Baron, J. N., & Bielby, W. T. (2018). Organizational barriers to gender equality: Sex segregation of jobs and opportunities. In *Gender and the life course* (pp. 233-252). Routledge.

Basta, T. B., Shacham, E., & Reece, M. (2009). Symptoms of psychological distress: a comparison of rural and urban individuals enrolled in HIV-related mental health care. *AIDS patient care and STDs*, *23*(12), 1053-1057.

Bastagli, F., Hagen-Zanker, J., Harman, L., Barca, V., Sturge, G., & Schmidt, T. (2019). The impact of cash transfers: a review of the evidence from low-and middle-income countries. *Journal of Social Policy*, *48*(3), 569-594.

Baum, N. (2007). "Separation guilt" in women who initiate divorce. *Clinical Social Work Journal*, *35*, 47-55.

Baxter, A. J., Vos, T., Scott, K. M., Ferrari, A. J., & Whiteford, H. A. (2014). The global burden of anxiety disorders in 2010. *Psychological medicine*, *44*(11), 2363-2374.

Belo, P., Navarro-Pardo, E., Pocinho, R., Carrana, P., & Margarido, C. (2020). Relationship between mental health and the education level in elderly people: mediation of leisure attitude. *Frontiers in Psychology*, *11*, 573

University of Ghana http://ugspace.ug.edu.gh

Benbow-Buitenhuis, A. (2014). A feminine double-bind? Towards understanding the commercialisation of beauty through examining anti-ageing culture. *Social Alternatives*, *33*(2), 43-49.

Berger, L. M., Collins, J. M., & Cuesta, L. (2016). Household debt and adult depressive symptoms in the United States. *Journal of Family and Economic Issues*, *37*, 42-57.

Berry, H. (2008). Perceptions about community participation and associations with psychological distress. *Australasian Epidemiologist*, *15*(3), 4-9.

Best, J. (2018). Questioning Quintiles: Implications of Choices of Measures for Income Inequality and Social Mobility. *Numeracy*, *11*(2), 6.

Best, R., Strough, J., & Bruine de Bruin, W. (2023). Age differences in psychological distress during the COVID-19 pandemic: March 2020–June 2021. *Frontiers in Psychology*, *14*, 1101353.

Bhowmick, S., & Sorathia, K. (2019). Findings of the user study conducted to understand the training of rural ASHAs in India. In *Proceedings of the Tenth International Conference on Information and Communication Technologies and Development* (pp. 1-5).

Bigoni, M., Bortolotti, S., Casari, M., & Gambetta, D. (2012). Trustworthy by convention.

Bilodeau, J., Marchand, A., & Demers, A. (2020). Psychological distress inequality between employed men and women: a gendered exposure model. *SSM-Population Health*, *11*, 100626.

Blanchflower, D. G., & Oswald, A. J. (2008). Is well-being U-shaped over the life cycle? *Social science & medicine*, *66*(8), 1733-1749.

Boadi, K. O., & Kuitunen, M. (2005). Environment, wealth, inequality, and the burden of disease in the Accra metropolitan area, Ghana. *International Journal of Environmental Health Research*, *15*(3), 193-206.

Boakye, A., Nwabufo, N., & Dinbabo, M. (2022). The impact of technological progress and digitization on Ghana's economy. *African Journal of Science, Technology, Innovation, and Development*, *14*(7), 1981-1986.

Boateng, W. (2012). Evaluating the efficacy of focus group discussion (FGD) in qualitative social research. *International Journal of Business and Social Science*, *3*(7).

Boateng, J. K. (2019). Education, Social Capital, Physical, and Psychological Access to Healthcare Among Female Migrants in Informal Settlements in Accra City, Ghana. In *Learning Cities, Town Planning, and the Creation of Livelihoods* (pp. 205-232). IGI Global.

Boersma, P., & Vahratian, A. (2021). Perceived Social and Emotional Support Among Adults: United States, July-December 2020.

Boima, V., Tetteh, J., Yorke, E., Archampong, T., Mensah, G., Biritwum, R., & Yawson, A. E. (2020). Older adults with hypertension have increased risk of depression compared to their

University of Ghana http://ugspace.ug.edu.gh

younger counterparts: Evidence from the World Health Organization study of Global Ageing and Adult Health Wave 2 in Ghana. *Journal of affective disorders*, *277*, 329-336.

Bolyard, A., & Savelyev, P. A. (2022). Understanding the educational attainment polygenic score and its interactions with SES in determining health in young adulthood. *Available at SSRN 3397735*.

Bond, E. (2010). Managing mobile relationships: Children's perceptions of the impact of the mobile phone on relationships in their everyday lives. *Childhood*, *17*(4), 514-529.

Booysen, F., Van Der Berg, S., Burger, R., Von Maltitz, M., & Du Rand, G. (2008). Using an asset index to assess trends in poverty in seven Sub-Saharan African countries. *World Development*, *36*(6), 1113-1130.

Borst, J. B. (2015). A systematic review of the effects of family conflict: Focusing on divorce, infidelity, and attachment style.

Bougie, E., Arim, R. G., Kohen, D. E., & Findlay, L. C. (2016). Validation of the 10-item Kessler psychological distress scale (K10) in the 2012 aboriginal peoples survey. *Health reports*, *27*(1).

Bosiakoh, T. A., Tuot, C. A. I., Marfo, S. O., & Andoh, P. (2014). The dynamics of north-south migration in Ghana: Perspectives of Nandom migrants in Accra. *Ghanaian Journal of Economics*, *2*(1), 97-118.

Bourassa, K. J., Sbarra, D. A., & Whisman, M. A. (2015). Women in very low-quality marriages gain life satisfaction following divorce. *Journal of Family Psychology*, *29*(3), 490.

Boyce, C. J., Delaney, L., Ferguson, E., & Wood, A. M. (2018). Central bank interest rate decisions, household indebtedness, and psychiatric morbidity and distress: Evidence from the UK. *Journal of affective disorders*, *234*, 311-317.

Brailovskaia, J., Schönfeld, P., Kochetkov, Y., & Margraf, J. (2019). What does migration mean to us? USA and Russia: Relationship between migration, resilience, social support, happiness, life satisfaction, depression, anxiety, and stress. *Current Psychology*, *38*(2), 421-431.

Brouillard, C., Brendgen, M., Vitaro, F., Dionne, G., & Boivin, M. (2018). Links between the mother–adolescent and father–adolescent relationships and adolescent depression: A genetically informed study. *Journal of Clinical Child & Adolescent Psychology*, *47*(sup1), S397-S408.

Brown, S., & Gray, D. (2014). Household finances and well-being: an empirical analysis of comparison effects.

Bukuluki, P., Kisaakye, P., Wandiembe, S. P., & Besigwa, S. (2021). Suicide ideation and psychosocial distress among refugee adolescents in Bidibidi settlement in West Nile, Uganda. *Discover Psychology*, *1*, 1-9.

University of Ghana http://ugspace.ug.edu.gh

Bulte, E., Wang, R., & Zhang, X. (2018). Forced gifts: The burden of being a friend. *Journal of Economic Behaviour & Organization*, *155*, 79-98.

Callanan, G. A. (2015). They reap but do not sow: How multinational corporations are putting an end to virtuous capitalism. *Business and Society Review*, *120*(3), 363-384.

Camacho-Ballesta, J. A., Melikhova, Y., & Hernández-Peinado, M. (2014). Localization of business services in European regions: large urban areas stand out. *European Planning Studies*, *22*(10), 2094-2115.

Campbell, R. T., & Parker, R. N. (1983). Substantive and statistical considerations in the interpretation of multiple measures of SES. *Social Forces*, *62*(2), 450-466.

Canavan, M. E., Sipsma, H. L., Adhvaryu, A., Ofori-Atta, A., Jack, H., Udry, C., ... & Bradley, E. H. (2013). Psychological distress in Ghana: associations with employment and lost productivity. *International Journal of Mental Health Systems*, *7*(1), 1-9.

Carhuatanta, K. A., Shea, C. J., Herman, J. P., & Jankord, R. (2014). Unique genetic loci identified for emotional behaviour in control and chronic stress conditions. *Frontiers in behavioural neuroscience*, *8*, 341.

Carr, D., Sonnega, J., Nesse, R. M., & House, J. S. (2014). Do special occasions trigger psychological distress among older bereaved spouses? An empirical assessment of clinical wisdom. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *69*(1), 113-122.

Carson, J., & Mattingly, M. (2017). " Not very many options for the people who are working here" Rural Housing Challenges Through the Lens of Two New England Communities.

Carstensen, L. L. (1991). Selectivity theory: Social activity in life-span context. *Annual review of gerontology and geriatrics*, *11*(1), 195-217.

Carver, L. F., Beamish, R., Phillips, S. P., & Villeneuve, M. (2018). A scoping review: Social participation as a cornerstone of successful aging in place among rural older adults. *Geriatrics*, *3*(4), 75.

Castellacci, F., & Tveito, V. (2016). *The Effects of ICTs on Well-being: A Survey and a Theoretical Framework* (No. 20161004). Centre for Technology, Innovation and Culture, University of Oslo.

Cattaneo, A., Nelson, A., & McMenomy, T. (2021). Global mapping of urban–rural catchment areas reveal unequal access to services. *Proceedings of the National Academy of Sciences*, *118*(2), e2011990118.

Cénat, J. M., McIntee, S. E., Guerrier, M., Derivois, D., Rousseau, C., Dalexis, R. D., ... & Makila-Balayulu, O. (2021). Psychological distress among adults from the urban and rural areas affected by the Ebola virus disease in the Democratic Republic of the Congo. *Social psychiatry and psychiatric epidemiology*, *56*, 57-62.

University of Ghana http://ugspace.ug.edu.gh

Champion, J. D. (2023). Development, Pre-Testing and Feasibility Testing of Multi-Component Interventions, Critical for Mental Health Promotion in Primary Care among Mexican-American Adolescents Living in Rural America. *Children*, *10*(3), 465.

Chan, V., Marcus, L., Burlie, D., Mann, R. E., Toccalino, D., Cusimano, M. D., ... & Colantonio, A. (2022). Social determinants of health associated with psychological distress stratified by lifetime traumatic brain injury status and sex: Cross-sectional evidence from a population sample of adults in Ontario, Canada. *Plos one*, *17*(8), e0273072.

Charles, S. T. (2010). Strength and vulnerability integration: a model of emotional well-being across adulthood. *Psychological bulletin*, *136*(6), 1068.

Chen, Y. Y., Lai, Y. J., Wang, J. P., Shen, Y. C., Wang, C. Y., Chen, H. H., ... & Chou, P. (2018). The association between glaucoma and risk of depression: a nationwide population-based cohort study. *BMC ophthalmology*, *18*(1), 1-8.

Chen, J., Gong, L., & Xie, S. (2021). Psychological Distress in Urbanizing China: How Does Local Government Effectiveness Matter? *International Journal of Environmental Research and Public Health*, *18*(4), 2042.

Chirwa, G. C., Suhrcke, M., & Moreno-Serra, R. (2020). The impact of Ghana's National Health Insurance on psychological distress. *Applied Health Economics and Health Policy*, *18*, 249-259.

Choy, B., Arunachalam, K., Gupta, S., Taylor, M., & Lee, A. (2021). Systematic review: Acculturation strategies and their impact on the mental health of migrant populations. *Public Health in Practice*, *2*, 100069.

Cismaş, L. M., & Banu, A. M. (2016). Education, Economic Welfare Generator. *Sciences*, *5*(1), 31-38.

Clemente Miranda, E., Ehst, M., Kelly, T. J. C., Oppan, D., Kunicova, J., Mattern, M. W., ... & Varghese, M. M. (2019). Ghana Digital Economy Diagnostic: Stock-Taking Report.

Cohen, S. (2000). Social support measurement and intervention. *Social support measurement and intervention. A guide for 356 health and social scientists*, 13.

Cohen-Cline, H., Beresford, S. A., Barrington, W., Matsueda, R., Wakefield, J., & Duncan, G. E. (2018). Associations between social capital and depression: A study of adult twins. *Health & place*, *50*, 162-167.

Colantone, I., Crinò, R., & Ogliari, L. (2015). The hidden cost of globalization: Import competition and mental distress.

Cook, C. C., Crull, S. R., Bruin, M. J., Yust, B. L., Shelley, M. C., Laux, S., ... & White, B. J. (2009). Evidence of a housing decision chain in rural community vitality. *Rural Sociology*, *74*(1), 113-137.

University of Ghana http://ugspace.ug.edu.gh

Corbière, M., Negrini, A., & Dewa, C. S. (2013). Mental health problems and mental disorders: Linked determinants to work participation and work functioning. In *Handbook of work disability: Prevention and management* (pp. 267-288). New York, NY: Springer New York.

Couture, V., Gaubert, C., Handbury, J., & Hurst, E. (2019). *Income growth and the distributional effects of urban spatial sorting* (No. w26142). National Bureau of Economic Research.

Crnkovic, C., Quiring, R., Chapple, A. G., Bronstone, A., Krause, P. C., & Dasa, V. (2022). Low rates of reporting race, ethnicity, and socioeconomic status in studies published in top orthopaedic journals. *JBJS*, *104*(14), 1244-1249.

Cuartas Ricaurte, J., Karim, L. L., Martínez Botero, M. A., & Hessel, P. (2019). The invisible wounds of five decades of armed conflict: inequalities in mental health and their determinants in Colombia. *International Journal of Public Health*, *64*, 703-711.

Cuijpers, P., Smits, N., Donker, T., Ten Have, M., & de Graaf, R. (2009). Screening for mood and anxiety disorders with the five-item, the three-item, and the two-item Mental Health Inventory. *Psychiatry research*, *168*(3), 250-255.

Curry, O. S., Rowland, L. A., Van Lissa, C. J., Zlotowitz, S., McAlaney, J., & Whitehouse, H. (2018). Happy to help? A systematic review and meta-analysis of the effects of performing acts of kindness on the well-being of the actor. *Journal of Experimental Social Psychology*, *76*, 320-329.

Daghagh Yazd, S., Wheeler, S. A., & Zuo, A. (2019). Key risk factors affecting farmers' mental health: A systematic review. *International journal of environmental research and public health*, *16*(23), 4849.

Daly, M., & Robinson, E. (2021). Longitudinal changes in psychological distress in the UK from 2019 to September 2020 during the COVID-19 pandemic: Evidence from a large nationally representative study. *Psychiatry research*, *300*, 113920.

Daly, M., & Robinson, E. (2022). Depression and anxiety during COVID-19. *The Lancet*, *399*(10324), 518.

Dana, D., Andre, H., & Lika, T. (2020). Rapid rural population growth and its determinant factors in Wolaita zone, Ethiopia. *Journal of Science and Inclusive Development*, 1-20.

Daniel, A. D., Adeel, S., & Botelho, A. (2021). Entrepreneurial alertness research: Past and future. *Sage Open*, *11*(3), 21582440211031535.

Danquah, M., & Iddrisu, A. M. (2018). Access to mobile phones and the wellbeing of non-farm enterprise households: Evidence from Ghana. *Technology in Society*, *54*, 1-9.

Danso-Wiredu, E. Y. (2018). Housing strategies in low-income urban communities in Accra, Ghana. *GeoJournal*, *83*(4), 663-677.

University of Ghana http://ugspace.ug.edu.gh

Darghouth, S., Brody, L., & Alegría, M. (2015). Does marriage matter? Marital status, family processes, and psychological distress among Latino men and women. *Hispanic Journal of Behavioural Sciences*, *37*(4), 482-502.

Davey, G. (2017). Rural-to-urban migration, identity, and Life quality of the Badaga people in South India. *Identity Flexibility During Adulthood: Perspectives in Adult Development*, 129-150.

Davis, S. W. (2018). Imagination Practices and Community-Based Learning. *Engaged Scholar Journal: Community-Engaged Research, Teaching, and Learning*, *4*(1), 213-223.

Debele, E. T. (2020). Urban unemployment patterns: challenges, coping mechanisms, and self-employment trends in Ethiopian urban centres. *International Journal of Science, Technology and Society*, *8*(2), 18.

de Bondt, G., Gieseck, A., & Tujula, M. (2020). Household wealth and consumption in the euro area. *Economic Bulletin Articles*, *1*.

De Falco, S., & Corbino, A. (2021). Sustainable Cities: Some Reflections on Companies' Settlements. *Sustainability*, *13*(22), 12622.

Demyttenaere, K. (2004). WHO World Mental Health Survey Consortium: Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. *Jama*, *291*, 2581-2590.

Denary, W., Fenelon, A., Schlesinger, P., Purtle, J., Blankenship, K. M., & Keene, D. E. (2021). Does rental assistance improve mental health? Insights from a longitudinal cohort study. *Social science & medicine*, *282*, 114100.

De Oliveira, G., Cianelli, R., Gattamorta, K., Kowalski, N., & Peragallo, N. (2017). Social determinants of depression among Hispanic women. *Journal of the American Psychiatric Nurses Association*, *23*(1), 28-36.

Dery, I., & Bawa, S. (2019). Agency, social status and performing marriage in postcolonial societies. *Journal of Asian and African Studies*, *54*(7), 980-994.

Dery, I., & Apusigah, A. A. (2021). 'So Kuoɔ Kye Bɛ Yi': disrupting constructions of masculinities among the Dagaaba of Northwestern Ghana. *NORMA*, *16*(1), 6-22.

Deslauriers, V., Bignami, S., & Sandberg, J. (2024). A typology of social network interactions in sub-Saharan Africa: Evidence from a rural population in Senegal. *Population Studies*, 1-1 18

Dewan, M. N., Khan, N. M., & Rahman, P. M. M. (2020). Socioeconomic Status Measurement: An Analysis of Incorporation of Mixed Variables into Principal Component Approach. *Economy*, *7*(1), 36-41.

University of Ghana http://ugspace.ug.edu.gh

Deyessa, N., Berhane, Y., Alem, A., Hogberg, U., & Kullgren, G. (2008). Depression among women in rural Ethiopia as related to socioeconomic factors: a community-based study on women in reproductive age groups. *Scandinavian journal of public health*, *36*(6), 589-597.

Dhingra, S. S., Strine, T. W., Holt, J. B., Berry, J. T., & Mokdad, A. H. (2009). Rural-urban variations in psychological distress: findings from the Behavioural Risk Factor Surveillance System, 2007. *International Journal of Public Health*, *54*, 16-22.

Diao, X., Fang, P., Magalhaes, E., Pahl, S., & Silver, J. (2017). *Cities and rural transformation: A spatial analysis of rural youth livelihoods in Ghana* (Vol. 1599). Intl Food Policy Res Inst.

Diao, X., Magalhaes, E., & Silver, J. (2019). Cities and rural transformation: A spatial analysis of rural livelihoods in Ghana. *World Development*, *121*, 141-157.

Díaz, C., Dodel, M., & Menese, P. (2022). Can one laptop per child reduce digital inequalities? ICT household access patterns under Plan Ceibal. *Telecommunications Policy*, *46*(9), 102406.

Di Blasi, M., Albano, G., Bassi, G., Mancinelli, E., Giordano, C., Mazzeschi, C., ... & Salerno, L. (2021). Factors related to women's psychological distress during the covid-19 pandemic: evidence from a two-wave longitudinal study. *International Journal of Environmental Research and Public Health*, *18*(21), 11656.

Didham, R. (2015). Re-gendering of the workforce: Women and men in "non-traditional" occupations and industries. *Labour, Employment and Work in New Zealand*.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*, 542–575

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, *49*(1), 71-75.

Diener, E. (2009). *The science of well-being: The collected works of Ed Diener* (Vol. 37, pp. 11-58). New York: Springer.

Diener, E., Lucas, R. E., & Oishi, S. (2018). Advances and open questions in the science of subjective well-being. *Collabra: Psychology*, *4*(1), 15.

Dığrak, E., Koçoglu, D., & Akın, B. (2014). An identification of mental problems experienced by adults in a rural area. *Journal of Psychiatric Nursing*, *5*(3), 122-128.

Dimant, E. (2019). Contagion of pro-and anti-social behaviour among peers and the role of social proximity. *Journal of Economic Psychology*, *73*, 66-88.

Djurfeldt, A. A., Djurfeldt, G., & Sarpong, D. B. (2014). Community, cohesion, and context: agrarian development and religion in Eastern Region, Ghana. *Geoforum*, *52*, 78-89.

Dobson, M., & Schnall, P. L. (2018). From stress to distress: the impact of work on mental health. In *Unhealthy Work* (pp. 113-132). Routledge.

University of Ghana http://ugspace.ug.edu.gh

Domènech-Abella, J., Mundó, J., Leonardi, M., Chatterji, S., Tobiasz-Adamczyk, B., Koskinen, S., ... & Haro, J. M. (2018). The association between socioeconomic status and depression among older adults in Finland, Poland, and Spain: A comparative cross-sectional study of distinct measures and pathways. *Journal of Affective Disorders*, *241*, 311-318.

Domfe, G., & Aryeetey, E. B. D. (2016). Household Composition and Well-Being of Older Persons in Ghana. *Ghana Studies*, *19*(1), 130-153.

Dosa, C. E., & Dabu, I. S. (2023). Decision-making factors for job choice in Romanian rural areas. Employment on the strand of options, capabilities, and access. *Academicus International Scientific Journal*, *14*(27), 143-153.

Drapeau, A., Marchand, A., & Forest, C. (2014). Gender differences in the age-cohort distribution of psychological distress in Canadian adults: findings from a national longitudinal survey. *BMC Psychology*, *2*(1), 1-13.

Duarte, F., & Jiménez-Molina, Á. (2022). A longitudinal nationwide study of psychological distress during the COVID-19 pandemic in Chile. *Frontiers in psychiatry*, *13*, 744204.

Duchaine, C. S., Ndjaboué, R., Levesque, M., Vézina, M., Trudel, X., Gilbert-Ouimet, M., ... & Brisson, C. (2017). Psychosocial work factors and social inequalities in psychological distress: a population-based study. *BMC Public Health*, *17*, 1-10.

Duko, B., Dana, L. M., & Ayano, G. (2020). Psychological distress among TB patients in sub-Saharan Africa. *The International Journal of Tuberculosis and Lung Disease*, *24*(11), 1200-1204.

Duman, A. (2020). Subjective social class and individual preferences for redistribution: Cross-country empirical analysis. *International Journal of Social Economics*, *47*(2), 173-189.

Duncan, B. A. (2010). Cocoa, marriage, labour, and land in Ghana: Some matrilineal and patrilineal perspectives. *Africa*, *80*(2), 301-321.

du Plooy, D. R., Lyons, A., & Kashima, E. S. (2019). The effect of social support on psychological flourishing and distress among migrants in Australia. *Journal of immigrant and minority health*, *21*, 278-289.

Duthé, G., Rossier, C., Bonnet, D., Soura, A. B., & Corker, J. (2016). Mental health and urban living in sub-Saharan Africa: major depressive episodes among the urban poor in Ouagadougou, Burkina Faso. *Population Health Metrics*, *14*(1), 1-10.

Dwyer, R. E., & Phillips Lassus, L. A. (2015). The great risk shift and precarity in the US housing market. *The ANNALS of the American Academy of Political and Social Science*, *660*(1), 199-216.

Dzator, J., Dzator, M., Asante, F., & Ahiadeke, C. (2016). Common mental disorders, economic growth, and development: Economic consequences and measurement issues. *The Journal of Developing Areas*, *50*(5), 13-26.

University of Ghana http://ugspace.ug.edu.gh

Elgar, F. J., Gariépy, G., Torsheim, T., & Currie, C. (2017). Early-life income inequality and adolescent health and well-being. *Social science & medicine*, *174*, 197-208.

Elwell-Sutton, T., Folb, N., Clark, A., Fairall, L. R., Lund, C., & Bachmann, M. O. (2019). Socioeconomic position and depression in South African adults with long-term health conditions: a longitudinal study of causal pathways. *Epidemiology and psychiatric sciences*, *28*(2), 199-209.

Endalew, B., & Tassie, K. (2018). Determinants of Rural Household Poverty Across Agro-Ecology in Amhara Region, Ethiopia: Evidence from Yilmana Densa Woreda. *Journal of Economics and Sustainable Development*, *9*(7), 87-97.

Ennin, C. C., Nyarko, P. K., Agyeman, A., Mettle, F. O., & Nortey, E. N. N. (2011). Trend analysis of determinants of poverty in Ghana: logit approach. *Research Journal of Mathematics and Statistics*, *3*(1), 20-27.

Erdem, Ö., Van Lenthe, F. J., Prins, R. G., Voorham, T. A., & Burdorf, A. (2016). Socioeconomic inequalities in psychological distress among urban adults: the moderating role of neighbourhood social cohesion. *PloS one*, *11*(6), e0157119.

Erdem, Ö., Burdorf, A., & Van Lenthe, F. J. (2017). Ethnic inequalities in psychological distress among urban residents in the Netherlands: A moderating role of neighbourhood ethnic diversity? *Health & place*, *46*, 175-182.

Espinosa, A., & Rudenstine, S. (2020). The contribution of financial well-being, social support, and trait emotional intelligence on psychological distress. *British Journal of Clinical Psychology*, *59*(2), 224-240.

Fang, M., Mirutse, G., Guo, L., & Ma, X. (2019). Role of socioeconomic status and housing conditions in geriatric depression in rural China: a cross-sectional study. *BMJ Open*, *9*(5), e024046.

Farayibi, A. (2015). Entrepreneurship as a driver of economic growth: evidence from enterprise development in Nigeria. *Available at SSRN 2852865*.

Faruqi, H., & Pratisti, W. D. (2018). *Psychological Well-Being Pada Atlet Difabel* (Doctoral dissertation, Universitas Muhammadiyah Surakarta).

Fatoki, O. (2015). The causes and consequences of household over-indebtedness in South Africa. *Journal of social sciences*, *43*(2), 97-103.

Feng, D., Ji, L., & Xu, L. (2015). Effect of subjective economic status on psychological distress among farmers and non-farmers of rural China. *Australian Journal of Rural Health*, *23*(4), 215-220.

Ferris-Day, P., Hoare, K., Wilson, R. L., Minton, C., & Donaldson, A. (2021). An integrated review of the barriers and facilitators for accessing and engaging with mental health in a rural setting. *International Journal of Mental Health Nursing*, *30*(6), 1525-1538.

University of Ghana http://ugspace.ug.edu.gh

Filmer, D., & Pritchett, L. H. (2001). Estimating wealth effects without expenditure data—or tears: an application to educational enrolments in states of India. *Demography*, *38*(1), 115-132.

Fors Connolly, F., Johansson Sevä, I., & Gärling, T. (2021). The bigger the better? Business size and small-business owners' subjective well-being. *Journal of Happiness Studies*, *22*, 1071-1088.

Forsman, A. K. (2012). The importance of social capital in later life: Mental health promotion and mental disorder prevention among older adults (Doctoral dissertation, Nordic School of Public Health NHV Göteborg, Sweden).

Fromell, H., Grohmann, T., & Lensink, R. (2020). Remittances and development. In *Contemporary Issues in Development Finance* (pp. 104-139). Routledge.

Gallet, W. (2016). Social Connectedness: The role of the local church in building community. *Pointers: Bulletin of the Christian Research Association*, *26*(4), 1-5.

Gan, D. R., Cheng, G. H. L., Ng, T. P., Gwee, X., Soh, C. Y., Fung, J. C., & Cho, I. S. (2022). Neighbourhood makes or breaks active ageing. Findings from cross-sectional path analysis. *International journal of environmental research and public health*, *19*(6), 3695.

Garnham, L., Rolfe, S., Anderson, I., Seaman, P., Godwin, J., & Donaldson, C. (2022). Intervening in the cycle of poverty, poor housing, and poor health: the role of housing providers in enhancing tenants' mental wellbeing. *Journal of housing and the built environment*, *37*(1), 1-21.

Garcia, D., Al Nima, A., Kjell, O. N., Granjard, A., & Sikström, S. (2020). The (Mis) measurement of happiness: words we associate to happiness (semantic memory) and narratives of what makes us happy (Episodic Memory). *Statistical semantics: Methods and applications*, 165-189.

Gardner, J., & Oswald, A. J. (2006). Do divorcing couples become happier by breaking up? *Journal of the Royal Statistical Society Series A: Statistics in Society*, *169*(2), 319-336.

Garip, F., & Asad, A. L. (2016). Network effects in Mexico–US migration: Disentangling the underlying social mechanisms. *American Behavioural Scientist*, *60*(10), 1168-1193.

Garvey, G., Cunningham, J., Janda, M., Yf He, V., & Valery, P. (2018). Psychological distress among Indigenous Australian cancer survivors. *Supportive Care in Cancer*, *26*, 1737-1746.

Gehring, K. (2012). *Benefit or burden? Unravelling the effect of economic freedom on subjective well-being* (No. 531). Discussion Paper Series.

Ghana Statistical Service (2019). Ghana Living Standards Survey round 7 (GLSS7), Main Report. *Ghana Statistical Service*, *1*, 1-343.

Ghana Statistical Service (2021). Census Report

University of Ghana http://ugspace.ug.edu.gh

Ghazali, N. M., Marzukhi, M. A., Leh, O. L. H., & Othman, R. N. R. (2020). Urban high-density living effects on mental health. *Environment-Behaviour Proceedings Journal*, *5*(15), 453-458.

Gkartzios, M., & Ziebarth, A. C. (2016). Housing: a lens to rural inequalities. In *Routledge international handbook of rural studies* (pp. 495-508). Routledge.

German, J. (2019). The Relationship Between Socioeconomic Status and Mood Disorders.

Geyer, H. S., & Geyer, H. S. (2015). Disaggregated population migration trends in South Africa between 1996 and 2011: A differential urbanisation approach. In *Urban Forum* (Vol. 26, pp. 1-13). Springer Netherlands.

Gloster, R., Buzzeo, J., Marvell, R., Tassinari, A., Williams, J., Williams, M., ... & Newton, B. (2015). The contribution of Further Education and skills to social mobility. *London: BIS Research Paper*, (254).

Goldberg, D. P., & Huxley, P. (1992). *Common mental disorders: a bio-social model*. Tavistock/Routledge.

Gopikumar, V. (2014). Understanding the Mental ill Health-Poverty-Homelessness Nexus in India: Strategies that promote distress alleviation and social inclusion.

Gordeev, V. S., & Egan, M. (2015). Social cohesion, neighbourhood resilience, and health: evidence from New Deal for Communities programme. *The Lancet*, *386*, S39.

Gorski, I., Obeysekare, E., Yarnal, C., & Mehta, K. (2015). Responsible engagement: Building a culture of concern. *Journal of Community Engagement and Scholarship*, *8*(2), 16-25.

Goswami, H., & Narwal, S. (2014). E-Commerce: Challenges And Opportunities for Developing Countries. *ZENITH International Journal of Business Economics & Management Research*, *4*(1), 90-99.

Graham, E. A., Thomson, K. H., & Bambra, C. L. (2018). The association between diabetes and depressive symptoms varies by quality of diabetes care across Europe. *European journal of public health*, *28*(5), 872-878.

Grant, F., Guille, C., & Sen, S. (2013). Well-being and the risk of depression under stress. *PLoS One*, *8*(7), e67395.

Graves, J. M., Abshire, D. A., Amiri, S., & Mackelprang, J. L. (2021). Disparities in technology and broadband internet access across rurality: implications for health and education. *Family & community health*, *44*(4), 257.

Greif, M. J., & Dodoo, F. N. A. (2015). How community physical, structural, and social stressors relate to mental health in the urban slums of Accra, Ghana. *Health & place*, *33*, 57-66.

Gunther, P. W., Sanches, M., Smits, C. C. F., & Krishnadath, I. S. K. (2017). Prevalence of psychological distress in Suriname in urban and rural areas: the Suriname health study. *Journal of Human Psychology*, *1*(1), 8-17.

University of Ghana http://ugspace.ug.edu.gh

Gust, D. A., Gvetadze, R., Furtado, M., Makanga, M., Akelo, V., Ondenge, K., ... & McLellan-Lemal, E. (2017). Factors associated with psychological distress among young women in Kisumu, Kenya. *International Journal of Women's Health*, 255-264.

Guveli, A., Ganzeboom, H. B., Platt, L., Nauck, B., Baykara-Krumme, H., Eroğlu, Ş., ... & Spierings, N. (2016). Friends and Social Networks. *Intergenerational Consequences of Migration: Socio-economic, Family and Cultural Patterns of Stability and Change in Turkey and Europe*, 165-182.

Gyan, C., Abbey, E., & Baffoe, M. (2020). Proverbs and patriarchy: Analysis of linguistic prejudice and representation of women in traditional Akan communities of Ghana. *Social Sciences*, *9*(3), 22.

Gyan, S. E., & Kpoor, A. (2022). 'Why give birth to many children when you cannot take care of them?' Determinants of family size among dual-earner couples in Ghana. *Current Sociology*, 00113921221093097.

Gyasi, R. M., Yeboah, A. A., Mensah, C. M., Ouedraogo, R., & Addae, E. A. (2019). Neighbourhood, social isolation, and mental health outcome among older people in Ghana. *Journal of Affective Disorders*, *259*, 154-163.

Gyasi, R. M., Abass, K., & Adu-Gyamfi, S. (2020). How do lifestyle choices affect the link between living alone and psychological distress in older age? Results from the AgeHeaPsyWel-HeaSeeB study. *BMC public health*, *20*, 1-9.

Gyasi, R. M., & Phillips, D. R. (2020). Risk of psychological distress among community-dwelling older adults experiencing spousal loss in Ghana. *The Gerontologist*, *60*(3), 416-427.

Hagen, B. N., Sawatzky, A., Harper, S. L., O'Sullivan, T. L., & Jones-Bitton, A. (2022). "Farmers aren't into the emotions and things, right?": A qualitative exploration of motivations and barriers for mental health help-seeking among Canadian farmers. *Journal of agromedicine*, *27*(2), 113-123.

Halbmeier, C., & Grabka, M. M. (2019). Wealth changes and their impact on subjective well-being. *Wealth (s) and subjective well-being*, 401-414.

Hale, S., Myerson, J., Strube, M. J., Green, L., & Lewandowski, A. B. (2023). Distress Signals: Age Differences in Psychological Distress before and during the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, *20*(4), 3549.

Handley, T., Davies, K., Rich, J., & Perkins, D. (2017). Understanding the mental health of rural young adults: risk and protective factors. *Int J Mental Health Psychiatry*, *3*(4), 104172.

Harpham, T., Grant, E., & Thomas, E. (2002). Measuring social capital within health surveys: key issues. *Health policy and planning*, *17*(1), 106-111.

Harriman, N. W., Williams, D. R., Morgan, J. W., Sewpaul, R., Manyaapelo, T., Sifunda, S., ... & Reddy, S. P. (2021). Racial disparities in psychological distress in post-apartheid South

University of Ghana http://ugspace.ug.edu.gh

Africa: results from the SANHANES-1 survey. *Social psychiatry and psychiatric epidemiology*, 1-15.

Harwell, M. (2018). Don't Expect Too Much: The Limited Usefulness of Common SES Measures and a Prescription for Change. *National Education Policy Centre*.

Hasanović, M., Šmigalović, D., & Fazlović, M. (2020). Migration and acculturation: What we can expect in the future. *Psychiatria Danubina*, *32*(suppl. 3), 386-395.

Hausmann, A., Rutz, W., & Benke, U. (2008). Women seek for help-men die! Is depression really a female disease? *Neuropsychiatric: Klinik, Diagnostic, Therapy und Rehabilitation: Organ der Gesellschaft Osterreichischer Nervenarzte und Psychiater*, *22*(1), 43-48.

Hawton, K., Comabella, C. C., Haw, C., & Saunders, K. (2013). Risk factors for suicide in individuals with depression: a systematic review. *Journal of affective disorders*, *147*(1-3), 17-28.

Hedayati Marzbali, M., Abdullah, A., Maghsoodi Tilaki, M. J., & Safizadeh, M. (2021). Moving the 2030 agenda ahead: Exploring the role of multiple mediators toward perceived environment and social sustainability in residential neighbourhoods. *Land*, *10*(10), 1079.

Hege, A., Ball, L., Christiana, R. W., Wallace, C., Hubbard, C., Truesdale, D., ... & Fleming, H. (2018). Social determinants of health and the effects on quality of life and well-being in 2 rural appalachia communities: the community members' perspective and implications for health disparities. *Family & community health*, *41*(4), 244-254.

Henning-Smith, C., Alberth, A., Bjornestad, A., Becot, F., & Inwood, S. (2022). Farmer mental health in the US Midwest: key informant perspectives. *Journal of agromedicine*, *27*(1), 15-24.

Hicks, J., & Hicks, D. L. (2019). Lucky late bloomers? Consequences of delayed marriage for women in rural Western Kenya. *Consequences of Delayed Marriage for Women in Rural Western Kenya (June 2019)*.

Hiilamo, A. (2020). Debt matters? Mental wellbeing of older adults with household debt in England. *SSM-Population Health*, *12*, 100658.

Hiilamo, A., & Grundy, E. (2020). Household debt and depressive symptoms among older adults in three continental European countries. *Ageing & Society*, *40*(2), 412-438.

Hiselius, L. W., Rosqvist, L. S., & Clark, A. (2012). E-shopping and changed transport behaviour. In *European Transport Conference 2012Association for European Transport (AET) Transportation Research Board*.

Hjálmsdóttir, A., & Bjarnadóttir, V. S. (2021). "I have turned into a foreman here at home": Families and work–life balance in times of COVID-19 in a gender equality paradise. *Gender, Work & Organization*, *28*(1), 268-283.

University of Ghana http://ugspace.ug.edu.gh

Hoebel, J., & Lampert, T. (2020). Subjective social status and health: Multidisciplinary explanations and methodological challenges. *Journal of Health Psychology*, *25*(2), 173-185.

Hoffman, J., Cossie, Q., Ametaj, A. A., Kim, H. H., James, R., Stroud, R. E., ... & Gelaye, B. (2022). Construct validity and factor structure of the Kessler-10 in South Africa. *BMC psychology*, *10*(1), 177.

Holloway, L., & Kneafsey, M. (2017). Geographies of rural cultures and societies: introduction. In *Geographies of rural cultures and societies* (pp. 1-11). Routledge.

Hope, S., Rodgers, B., & Power, C. (1999). Marital status transitions and psychological distress: longitudinal evidence from a national population sample. *Psychological medicine*, *29*(2), 381-389.

Howard, A. K., Holyfield-Moss, B., & Murty, K. S. (2022). Health Disparities for Rural Youth. *Journal of Public Health Issues and Practices*, *6*(1).

Huang, C. I. (2013). Intra-household effects on demand for telephone service: Empirical evidence. *Quantitative Marketing and Economics*, *11*, 231-261.

Huang, B., Ma, L., & Huang, L. (2022). My work is meaningless: the consequences of perceived occupational stigma for employees in high-prestige occupations. *Frontiers in Psychology*, *13*, 715188.

Hughes, B. T., Srivastava, S., Leszko, M., & Condon, D. M. (2022). Occupational prestige: The status component of socioeconomic status.

Hugo, G. J. (2019). Demographic and welfare implications of urbanization: direct and indirect effects on sending and receiving areas. *Urbanization and urban policies in Pacific Asia*, 136-165.

Hyams, A. V., Wayde, E. N., Crowther, M. R., & Scogin, F. R. (2015). Does race moderate social support and psychological distress among rural older adults? *Clinical gerontologist*, *38*(5), 412-427.

Iddrisu, A. M., Danquah, M., & Quartey, P. (2017). Analysis of school enrolment in Ghana: A sequential approach. *Review of Development Economics*, *21*(4), 1158-1177.

Idemudia, E., Boehnke, K., Idemudia, E., & Boehnke, K. (2020). Viewpoints of Other Scientists on Migration, Mental Health, and PTSD: Review of Relevant Literature. *Psychosocial Experiences of African Migrants in Six European Countries: A Mixed Method Study*, 83-117.

Inmpey, J. C. (2019). Urbanization and urban housing policy implementation in Enugu metropolis: A review of issues, challenges, and prospects for sustainable development. *Sapientia Global Journal of Arts, Humanities and Development Studies*, *2*(2).

University of Ghana http://ugspace.ug.edu.gh

Institute of Health Metrics and Evaluation (2022). Global Health Data Exchange (GHDx)

Islam, F. M. A. (2019). Psychological distress and its association with socio-demographic factors in a rural district in Bangladesh: a cross-sectional study. *PloS one*, *14*(3), e0212765.

Jangi, P., Azizi, L., Sangani, A., (2020). A Proposed Framework for Psychological Well-Being Based on the Spiritual Intelligence Dimensions in the Elderly. 7(1):41-47. Doi: 10.29252/JHSME.7.1.41

Jackman, K. B., Dolezal, C., & Bockting, W. O. (2018). Generational differences in internalized trans negativity and psychological distress among feminine spectrum transgender people. *LGBT health*, *5*(1), 54-60.

Jacob, A. M. (2021). Healthcare Delivery Systems in Rural Areas. In *Rural Health*. Intech Open.

Jaisoorya, T. S., Desai, G., Beena, K. V., Beena, M., Ellangovan, K., & Thennarasu, K. (2017). Prevalence and correlates of psychological distress in adolescent students from India. *East Asian archives of psychiatry*, *27*(2), 56-62.

Janus, E., & Filar-Mierzwa, K. (2019). Prestige of selected medical professions in the opinion of representatives of these professions/prestiz wybranych zawodow medycznych w opinii reprezentantow tych zawodow. *Medycyna Pracy*, *70*(5), 587-596.

Jenkins, R., Mbatia, J., Singleton, N., & White, B. (2010). Common mental disorders and risk factors in urban Tanzania. *International journal of environmental research and public health*, *7*(6), 2543-2558.

Jibril Mohammed, S., Fenta Gebeyehu, K., & Aynetu Bitew, E. (2019). The Prevalence and Contributing Factors of Urban Unemployment in Metropolitan Centres of Amhara National Regional State, Ethiopia.

Jimenez, D., Valdes, S., & Salinas, M. (2019). Popularity comparison between e-commerce and traditional retail business. *International Journal of Technology for Business*, *1*(1), 10-16.

Jiménez-Solomon, O., Garfinkel, I., Wall, M., & Wimer, C. (2024). When money and mental health problems pile up: The reciprocal relationship between income and psychological distress. *SSM-Population Health*, *25*, 101624.

Joarder, M. A. M., Harris, M., & Dockery, A. M. (2017). Remittances and happiness of migrants and their home households: Evidence using matched samples. *The Journal of Development Studies*, *53*(3), 422-443.

Jokela, M., & Fuller-Rowell, T. E. (2022). Changing associations between socioeconomic status and self-reported discrimination from the 1990s to the 2010s in the United States. *International Journal of Psychology*, *57*(6), 760-765.

Jones, W. H. (1923). Hippocrates I. Loeb classical library.

Jones, W. H. S. (1923). Hippocrates Vol II: Prognostics. Loeb Classical Library No 148.

University of Ghana http://ugspace.ug.edu.gh

Jowell, A., Wulfovich, S., Kuyan, S., & Heaney, C. (2018). Ethnic identity, resilience, and well-being: a study of female Maasai migrants. *International journal of public health*, *63*, 703-711.

Judd, F. K. (2006). Progressing the agenda for rural mental health research. *Rural and Remote Health*, *6*(3), 1-4.

Kagan, M. (2021). Social support moderates the relationship between death anxiety and psychological distress among Israeli nurses. *Psychological Reports*, *124*(4), 1502-1514.

Kalra, G., Gill, S., & Tang, T. S. (2020). Depression and diabetes distress in South Asian adults living in low-and middle-income countries: A scoping review. *Canadian Journal of Diabetes*, *44*(6), 521-529.

Kamei, A., & Nakamura, S. (2022). Urban Agglomerations and Wage and Self-employment Jobs in Ethiopia. *The Journal of Development Studies*, *58*(9), 1693-1710.

Kamp, K. S., O'Connor, M., Spindler, H., & Moskowitz, A. (2019). Bereavement hallucinations after the loss of a spouse: Associations with psychopathological measures, personality, and coping style. *Death studies*, *43*(4), 260-269.

Kaneez, S. (2015). Grief, traumatic loss and coping following bereavement: case study of women. *The International Journal of Indian Psychology*, *2*(3), 17-23.

Kelley, D. E., Lewis, M. A., & Southwell, B. G. (2017). Perceived support from a caregiver's social ties predicts subsequent care-recipient health. *Preventive medicine reports*, *8*, 108-111.

Keopasith, T., & Neng, S. (2020). Then Effects of rural-urban migration on economic status of rural residents: Empirical evidence from the Borikhan District, Lao PDR. *International Journal of Research in Business and Social Science (2147-4478)*, *9*(6), 154-160.

Kessler, R. C., Angermeyer, M., Anthony, J. C., De Graaf, R. O. N., Demyttenaere, K., Gasquet, I., ... & Üstün, T. B. (2007). Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World psychiatry*, *6*(3), 168.

Kessler, R. C., Sampson, N. A., Berglund, P., Gruber, M. J., Al-Hamzawi, A., Andrade, L., ... & Wilcox, M. A. (2015). Anxious and non-anxious major depressive disorder in the World Health Organization World Mental Health Surveys. *Epidemiology and psychiatric sciences*, *24*(3), 210-226.

Keyes, C. L. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of health and social behaviour*, 207-222.

Keyes, K. M., Nicholson, R., Kinley, J., Raposo, S., Stein, M. B., Goldner, E. M., & Sareen, J. (2014). Age, period, and cohort effects in psychological distress in the United States and Canada. *American Journal of Epidemiology*, *179*(10), 1216-1227.

University of Ghana http://ugspace.ug.edu.gh

Khare, C., Mueser, K. T., Fulford, D., Watve, V. G., Karandikar, N. J., Khare, S., ... & McGurk, S. R. (2020). Employment functioning in people with severe mental illnesses living in urban vs. rural areas in India. *Social Psychiatry and Psychiatric Epidemiology*, *55*, 1593-1606.

Khatiwada, J., Muzembo, B. A., Wada, K., & Ikeda, S. (2021). The effect of perceived social support on psychological distress and life satisfaction among Nepalese migrants in Japan. *Plos one*, *16*(2), e0246271.

Khokhar, S., Pathan, H., Raheem, A., & Abbasi, A. M. (2020). Theory Development in Thematic Analysis: Procedure and Practice. *Review of Applied Management and Social Sciences*, *3*(3), 423-433.

Kibret, F. D. (2014). Unemployment and labour market in urban Ethiopia: Trends and current conditions. *Sociology and Anthropology*, *2*(6), 207-218.

Kidd, G., & Anderson, S. (2015). Community safety, perceptions, and psychosocial factors: A selective review. *International Journal of Humanities and Social Science*, *5*, 1-10.

Kidwai, R. (2014). Demographic factors, social problems, and material amenities as predictors of psychological distress: a cross-sectional study in Karachi, Pakistan. *Social psychiatry and psychiatric epidemiology*, *49*, 27-39.

Kim, H., & Sim, M. S. (2015). Social Welfare Practice from the Perspective of Social Ecology in Rural Areas Focusing on the Case of the 'Yeo-min-dong-nak Community'. *Korea District Social Welfare*, *52*, 29-50

Kim, B. J., Nakaoka, S., & Underwood, C. (2017). The impacts of social support and cognitive function on depression among community-dwelling older Japanese Americans. *Social Work in Public Health*, *32*(2), 82-93.

King, G., Murray, C. J., Salomon, J. A., & Tandon, A. (2004). Enhancing the validity and cross-cultural comparability of measurement in survey research. *American political science review*, *98*(1), 191-207.

Kist, J. M., Smit, G. W., Mairuhu, A. T., Struijs, J. N., Vos, R. C., van Peet, P. G., ... & Numans, M. E. (2021). Large health disparities in cardiovascular death in men and women, by ethnicity and socioeconomic status in an urban based population cohort. *EClinicalMedicine*, *40*.

Kjell, O. N. E., Daukantaitė, D., Hefferon, K., & Sikström, S. (2016). The harmony in life scale complements the satisfaction with life scale: Expanding the conceptualization of the cognitive component of subjective well-being. *Social Indicators Research*, *126*, 893-919.

Kjell, O. (2018). *Conceptualizing and measuring well-being using statistical semantics and numerical rating scales*. Lund University.

University of Ghana http://ugspace.ug.edu.gh

Kolakowsky-Hayner, S. A., Goldin, Y., Kingsley, K., Alzueta, E., Arango-Lasprilla, J. C., Perrin, P. B., ... & Constantinidou, F. (2021). Psychosocial impacts of the COVID-19 quarantine: A study of gender differences in 59 countries. *Medicine*, *57*(8), 789.

Koutra, K., Pantelaiou, V., & Mavroeides, G. (2023). Why Don't Young People Seek Help for Mental Illness? A Cross-Sectional Study in Greece. *Youth*, *3*(1), 157-169.

Kpessa-Whyte, M. (2018). Aging and demographic transition in Ghana: State of the elderly and emerging issues. *The Gerontologist*, *58*(3), 403-408.

Kpobi, L., & Swartz, L. (2018). Explanatory models of mental disorders among traditional and faith healers in Ghana. *International Journal of Culture and Mental Health*, *11*(4), 605-615.

Krabbendam, L., van Vugt, M., Conus, P., Söderström, O., Empson, L. A., van Os, J., & Fett, A. K. J. (2021). Understanding urbanicity: how interdisciplinary methods help to unravel the effects of the city on mental health. *Psychological medicine*, *51*(7), 1099-1110.

Kuehl, S., Timberlake, K., Peissig, K. B., & Handrick, L. (2016). Investing in healthy rural communities–lessons learned and future directions. *Health Care*, *10*, 5.

Kumar, T. (2021). The housing quality, income, and human capital effects of subsidized homes in urban India. *Journal of Development Economics*, *153*, 102738.

Kushlev, K., & Leitao, M. R. (2020). The effects of smartphones on well-being: Theoretical integration and research agenda. *Current opinion in psychology*, *36*, 77-82.

Kushitor, M. K., Peterson, M. B., Asante, P. Y., Dodoo, N. D., Boatemaa, S., Awuah, R. B., ... & de-Graft Aikins, A. (2018). Community and individual sense of trust and psychological distress among the urban poor in Accra, Ghana. *PloS one*, *13*(9), e0202818.

Kyalo, P. (2012). A reflection on the African traditional values of marriage and sexuality. *International Journal of Academic Research in Progressive Education and Development*, *1*(2), 211-219.

Labinjo, T., Ashmore, R., Serrant, L., & Turner, J. (2020). A Pilot study exploring the experiences of mental health among internal migrants in Nigeria. *Journal of Mental Health and Substance Abuse*, *1*(1).

Lagakos, D. (2020). Urban-rural gaps in the developing world: Does internal migration offer opportunities? *Journal of Economic perspectives*, *34*(3), 174-192.

Lago, S., Cantarero, D., Rivera, B., Pascual, M., Blázquez-Fernández, C., Casal, B., & Reyes, F. (2018). Socioeconomic status, health inequalities and non-communicable diseases: a systematic review. *Journal of Public Health*, *26*, 1-14.

Lagnado, A. M., Gilchrist, K., Smastuen, M. C., & Memon, A. (2017). Is subjective wellbeing associated with depression? A cross-sectional survey in southeast England Anjum Memon. *European Journal of Public Health*, *27*(suppl_3).

University of Ghana http://ugspace.ug.edu.gh

Lai, L. (2014). Guest Editor's Introduction: The Local Intimacies of China's Rural-Urban Divide. *positions: east Asia cultures critique*, *22*(3), 543-550.

Lambon-Quayefio, M. P., Adjei-Mantey, K., & Adu-Danso, E. (2023). Structural Transformation in Rural Ghana: The Trends and Drivers.

Lang, I. A., Llewellyn, D. J., Hubbard, R. E., Langa, K. M., & Melzer, D. (2011). Income and the midlife peak in common mental disorder prevalence. *Psychological medicine*, *41*(7), 1365-1372.

Lapping, M. (2016). *Rural Housing, Ex urbanization, and Amenity-Driven Development: Contrasting the 'Haves' and the 'Have Nots'*. Routledge.

Larrison, C. R., Nackerud, L., Risler, E., & Sullivan, M. (2002). Welfare recipients and the digital divide: Left out of the new economy? *Journal of Technology in Human Services*, *19*(4), 1-12.

Lattof, S. (2017). *Migration and health: a mixed-methods study among female migrants in Accra, Ghana* (Doctoral dissertation, London School of Economics and Political Science).

Laurence, J., & Bentley, L. (2016). Does ethnic diversity have a negative effect on attitudes towards the community? A longitudinal analysis of the causal claims within the ethnic diversity and social cohesion debate. *European Sociological Review*, *32*(1), 54-67.

Lee, J., Jang, S. N., & Cho, S. I. (2017). Gender differences in the trajectories and the risk factors of depressive symptoms in later life. *International Psychogeriatrics*, *29*(9), 1495-1505.

Lee, J., & Xu, J. (2020). Why do businesses grow faster in urban areas than in rural areas? *Regional Science and Urban Economics*, *81*, 103521.

Lee, H. J., Han, S. H., & Boerner, K. (2022). Psychological and physical health in widowhood: does marital quality make a difference? *Research on Aging*, *44*(1), 54-64.

Leekoi, P. I., Abdul Jalil, A. Z., & Harun, M. (2014). An empirical study on risk assessment and household characteristics in Thailand. *Middle East Journal of Scientific Research*, *21*(6), 962-967.

Lenzi, C., & Perucca, G. (2021). Not too close, not too far: Urbanisation and life satisfaction along the urban hierarchy. *Urban Studies*, *58*(13), 2742-2757.

Leo, A., Holdsworth, E. A., Wilcox, K. C., Khan, M. I., Ávila, J. A. M., & Tobin, J. (2022). Gendered impacts of the COVID-19 pandemic: a mixed-method study of teacher stress and work-life balance. *Community, Work & Family*, *25*(5), 682-703.

Lloyd-Sherlock, P., Agrawal, S., Amoakoh-Coleman, M., Adom, S., Adjetey-Sorsey, E., Rocco, I., & Minicuci, N. (2019). Old age and depression in Ghana: assessing and addressing diagnosis and treatment gaps. *Global Health Action*, *12*(1), 1678282.

Li, C. (2008a). The ideal of harmony in ancient Chinese and Greek philosophy. *Dao*, *7*, 81-98.

University of Ghana http://ugspace.ug.edu.gh

Li, C. (2008b). The philosophy of harmony in classical Confucianism. *Philosophy compass*, *3*(3), 423-435.

Li, W., Liu, E., Balezentis, T., Jin, H., & Streimikiene, D. (2021). Association between socioeconomic welfare and depression among older adults: Evidence from the China health and Retirement Longitudinal Study. *Social Science & Medicine*, *275*, 113814.

Li, M. (2021, July). Rural-Urban Migration, Urban-Rural Migration and Urbanization in China. In *The 2021 12th International Conference on E-business, Management, and Economics* (pp. 480-486).

Liao, Y. (2019). Does Education Improve Intergenerational Income Mobility? *Open Journal of Social Sciences*, *7*(5), 86-98.

Lim, G. C., & Tsiaplias, S. (2019). Household income requirements and financial conditions. *Empirical Economics*, *57*, 1705-1730.

Lima, N. N. R., de Souza, R. I., Feitosa, P. W. G., de Sousa Moreira, J. L., da Silva, C. G. L., & Neto, M. L. R. (2020). People experiencing homelessness: Their potential exposure to COVID-19. *Psychiatry research*, *288*, 112945.

Lindberg, M. H., Chen, G., Olsen, J. A., & Abelsen, B. (2022). Combining education and income into a socioeconomic position score for use in studies of health inequalities. *BMC public health*, *22*(1), 1-11.

Link, B. G., & Phelan, J. (2010). Social conditions as fundamental causes of health inequalities. *Handbook of medical sociology*, *6*(3), 17.

Ljajić, S., Meta, M., & Mladenović, Ž. (2016). Globalization: Economic and psychological aspects. *Ekonomski signali: poslovni magazin*, *11*(1), 39-62.

Listl, S., & Jürges, H. (2015). 11 Social inequalities in oral health–towards targeted health policy interventions. *Ageing in Europe: Supporting policies for an inclusive society*, 127.

Loesch, M. (2018). Mind the gap: The relationship between socioeconomic status and educational outcomes: A literature review. *Maneto Undergraduate Research Journal*, *1*(1).

Lovell, S. A., Gray, A. R., & Boucher, S. E. (2015). Developing and validating a measure of community capacity: Why volunteers make the best neighbours. *Social Science & Medicine*, *133*, 261-268.

Lucas, R. E. (2016). Internal migration in developing economies: an overview of recent evidence. *Geopolitics, History, and International Relations*, *8*(2), 159-191.

Luginaah, I., Arku, G., & Baiden, P. (2010). Housing and health in Ghana: The psychosocial impacts of renting a home. *International Journal of Environmental Research and Public Health*, *7*(2), 528-545.

Luo, W., & Zhao, M. (2021). Trends and socioeconomic differentials in depression prevalence in China, 2010–2018. *Chinese Journal of Sociology*, *7*(4), 535-556.

University of Ghana http://ugspace.ug.edu.gh

Ma, L., Gao, L. W., Rahman, A., Johnson, B. T., Yan, A. F., Shi, Z. M., ... & Xue, Q. L. (2021). Mental distress and its associations with behavioural outcomes during the COVID-19 pandemic: a national survey of Chinese adults. *Public Health*, *198*, 315-323.

Macdonald, G., Kelly, G. P., Higgins, K. M., & Robinson, C. (2017). Mobile phones and contact arrangements for children living in care. *British Journal of Social Work*, *47*(3), 828-845.

Macheras, A., & Stanley, M. (2017). Diversification and Specialization Across Urban Areas. *Econ Focus*, (4Q), 36-39.

Maddux, J. E. (2017). Subjective Well-Being and Life Satisfaction: An Introduction to Conceptions, Theories, and Measures. 3-31. Doi: 10.4324/9781351231879-1

Madigan, A., & Daly, M. (2023). Socioeconomic status and depressive symptoms and suicidality: the role of subjective social status. *Journal of affective disorders*, *326*, 36-43.

Mark, A. (2016). The topology of communities of trust. *Социологическое обозрение*, *15*(4), 30-56.

Marth, S., Sabitzer, T., Hofmann, E., Hartl, B., & Penz, E. (2020). The influence of regulation on trust and risk preference in sharing communities. *Frontiers in Psychology*, *11*, 1369.

Martínez, L. M., Estrada, D., & Prada, S. I. (2019). Mental health, interpersonal trust, and subjective well-being in a high violence context. *SSM-Population Health*, *8*, 100423.

Matiullah, S., Généreux, M., & Petit, G. (2021). Rural and urban variation in psychological distress among adults: results of the 2014–2015 Eastern Townships Population Health Survey (ETPHS). *Canadian Journal of Public Health*, *112*, 253-261.

Matud, M. P., Díaz, A., Bethencourt, J. M., & Ibáñez, I. (2020). Stress and psychological distress in emerging adulthood: A gender analysis. *Journal of Clinical Medicine*, *9*(9), 2859.

Matusitz, J., & Payano, P. (2012). Globalisation of popular culture: From Hollywood to Bollywood. *South Asia Research*, *32*(2), 123-138.

Maurer, B. (2012). Mobile money: Communication, consumption and change in the payments space. *Journal of Development Studies*, *48*(5), 589-604.

Mba, C. J. (2004). Population ageing and survival challenges in rural Ghana. *Journal of Social Development in Africa*, *19*(2).

Mbanuzuru, A. V., Anyaoku, C. S., Ojimba, A. O., Mbanuzuru, M. C., Ezenyeaku, A. C., Obi, D. C., ... & Okonkwo, U. P. (2022). Prevalence of Anxiety Disorders Among in-school Adolescents in Urban and Rural Areas of Anambra State-a Comparative Study.

McGuire, J., Kaiser, C., & Bach-Mortensen, A. (2020). The impact of cash transfers on subjective well-being and mental health in low-and middle-income countries: A systematic review and meta-analysis.

University of Ghana http://ugspace.ug.edu.gh

McLachlan, K. J., & Gale, C. R. (2018). The effects of psychological distress and its interaction with socioeconomic position on risk of developing four chronic diseases. *Journal of psychosomatic research*, *109*, 79-85.

McMaughan, D. J., Oloruntoba, O., & Smith, M. L. (2020). Socioeconomic status and access to healthcare: interrelated drivers for healthy aging. *Frontiers in public health*, *8*, 231.

McQuillan, J., Greil, A. L., White, L., & Jacob, M. C. (2003). Frustrated fertility: Infertility and psychological distress among women. *Journal of Marriage and Family*, *65*(4), 1007-1018.

Mendolia, S., Tosh, A., & Yerokhin, O. (2016). Ethnic diversity and trust: new evidence from Australian data. *Economic Record*, *92*(299), 648-665.

Menec, V. H., Newall, N. E., Mackenzie, C. S., Shooshtari, S., & Nowicki, S. (2020). Examining social isolation and loneliness in combination in relation to social support and psychological distress using Canadian Longitudinal Study of Aging (CLSA) data. *PloS one*, *15*(3), e0230673.

Mensah, J. K. (2023). Recognizing, supporting, and embracing the urban informal economy in Ghana: A local economic development perspective. *Urban Research & Practice*, *16*(1), 25-43.

Meyer, S. R., Lasater, M., & Tol, W. A. (2017). Migration and mental health in low-and middle-income countries: a systematic review. *Psychiatry*, *80*(4), 374-381.

Mezzina, R., Davidson, L., Borg, M., Marin, I., Topor, A., & Sells, D. (2006). The social nature of recovery: Discussion and implications for practice. *Archives of Andrology*, *9*(1), 63-80.

Minor, T., Astill, G., Raszap, S., Thornsbury, S., Buzby, J. C., Hitaj, C., ... & Richards, T. J. (2020). *Economic Drivers of Food Loss at the Farm and Pre-Retail Sectors: A Look at the Produce Supply Chain in the United States* (No. 1476-2020-048).

Mokrova, I. L., Vernon-Feagans, L., & Garrett-Peters, P. (2017). Rural parenting: Cumulative risk and parenting process. *Rural education research in the United States: State of the science and emerging directions*, 203-229.

Molini, V. (2015). *Ghana-Work program (FY15): poverty and inequality profile* (No. ACS13977, pp. 1-97). The World Bank.

Monk, J. K., Kanter, J. B., & Ogan, M. A. (2022). Prior on–off relationship instability and distress in the separation and divorce transition. *Family process*, *61*(1), 246-258.

Monroe, S. M., & Anderson, S. F. (2015). Depression: The shroud of heterogeneity. *Current Directions in Psychological Science*, *24*(3), 227-231.

Monson, E., Paquet, C., Daniel, M., Brunet, A., & Caron, J. (2016). Place and posttraumatic stress disorder. *Journal of traumatic stress*, *29*(4), 293-300.

Montgomerie, J., & Tepe-Belfrage, D. (2017). Caring for debts: How the household economy exposes the limits of financialisaton. *Critical Sociology*, *43*(4-5), 653-668.

University of Ghana http://ugspace.ug.edu.gh

Moore, S., & Kawachi, I. (2017). Twenty years of social capital and health research: a glossary. *J Epidemiol Community Health*, *71*(5), 513-517.

Morelli, S. A., Ong, D. C., Makati, R., Jackson, M. O., & Zaki, J. (2017). Empathy and well-being correlate with centrality in different social networks. *Proceedings of the National Academy of Sciences*, *114*(37), 9843-9847.

Morgan, A. K., Cobbold, J., Awafo, B. A., Katey, D., Quartey, T., & Ibrahim, R. (2021). COVID-19 and psychological distress among older adults in Ghana. In *Anxiety, Uncertainty, and Resilience During the Pandemic Period-Anthropological and Psychological Perspectives*. Intech Open.

Moss, R. H., Kelly, B., Bird, P. K., & Pickett, K. E. (2023). Examining individual social status using the MacArthur Scale of Subjective Social Status: Findings from the Born in Bradford study. *SSM-Population Health*, *23*, 101463.

Mthembu, J. C., Mabaso, M. L. H., Khan, G., & Simbayi, L. C. (2017). Prevalence of psychological distress and its association with socio-demographic and HIV-risk factors in South Africa: findings of the 2012 HIV prevalence, incidence, and behaviour survey. *SSM-population health*, *3*, 658-662.

Muianga, E. A. D., da Silva, V. G., Kowaltowski, D. C., de Carvalho Moreira, D., Granja, A. D., Oliva, C. A., & da Silva, R. F. (2021). Critical analysis of housing condition impacts on residents' well-being and social costs. *Gestão & Tecnologia de Projetos*, *16*(4), 33-66.

Muñoz, I. G., & Santos-Lozada, A. R. (2021). Educational attainment and psychological distress among working-age adults in the United States. *SSM-Mental Health*, *1*, 100003.

Mũrage, A., Ngunjiri, A., Oyekunle, A., & Smith, J. (2023). Social determinants of mental health among older adolescent girls living in urban informal settlements in Kenya and Nigeria during the COVID-19 pandemic. *Global Public Health*, *18*(1), 2264946.

Murphy, S. A., Duxbury, L., & Higgins, C. (2007). The individual and organizational consequences of stress, anxiety, and depression in the workplace: A case study. *Canadian Journal of Community Mental Health*, *25*(2), 143-157.

Murry, V. M., Cooper, S. M., Burnett, M., & Inniss-Thompson, M. N. (2020). Rural African Americans' family relationships and well-being. *Rural families and communities in the United States: Facing challenges and leveraging opportunities*, 169-200.

Mthembu, J. C., Mabaso, M. L. H., Khan, G., & Simbayi, L. C. (2017). Prevalence of psychological distress and its association with socio-demographic and HIV-risk factors in South Africa: findings of the 2012 HIV prevalence, incidence, and behaviour survey. *SSM-population health*, *3*, 658-662.

Nadler, J. T., Voyles, E. C., Cocke, H., & Lowery, M. R. (2016). Gender disparity in pay, work schedule autonomy and job satisfaction at higher education levels. *North American Journal of Psychology*, *18*(3), 623-623

University of Ghana http://ugspace.ug.edu.gh

Najdzionek, P., McIntyre-Wood, C., Amlung, M., & MacKillop, J. (2023). Incorporating socioeconomic status into studies on delay discounting and health via subjective financial status: An initial validation in tobacco use. *Experimental and Clinical Psychopharmacology*.

Nanewortor, F. (2011). The impact of religiosity, Afrocentric values, and psychological distress on adolescent suicidal ideation in Ghana. *Unpublished master's thesis). Department of Psychology, University of Ghana, Legon, Accra*.

Narendra, M. (2023). Without Spouse: Phenomenology of Widowhood among Hindu Young Widows. *OMEGA-Journal of Death and Dying*, 00302228231153252.

Nasiar, N., & Rani, A. (2018). Detrimental Effects of Mobile Phone Radiations on Human Health. In *2018 3rd International Conference and Workshops on Recent Advances and Innovations in Engineering (ICRAIE)* (pp. 1-6). IEEE.

National Centre for Health Statistics (US. (2013). Health, United States, 2012: With special feature on emergency care.

National Collaborating Centre for Mental Health. (2011). Common mental health disorders: the NICE guideline on identification and pathways to care. National clinical guideline number 123. *National Institute for Health and Care Excellence*.

Navamuel, E. L., Morollón, F. R., & Vázquez, E. F. (2019). Does the urban population pay more for food? Implications in terms of poverty. *Applied Spatial Analysis and Policy*, *12*, 547-566.

Navarro-Carrillo, G., Alonso-Ferres, M., Moya, M., & Valor-Segura, I. (2020). Socioeconomic status and psychological well-being: Revisiting the Role of Subjective Socioeconomic Status. *Frontiers in Psychology*, *11*, 1303.

Naveed, S., Waqas, A., Chaudhary, A. M. D., Kumar, S., Abbas, N., Amin, R., ... & Saleem, S. (2020). Prevalence of common mental disorders in South Asia: a systematic review and meta-regression analysis. *Frontiers in psychiatry*, *11*, 573150.

Neely, A. H., & Ponshunmugam, A. (2019). A qualitative approach to examining health care access in rural South Africa. *Social Science & Medicine*, *230*, 214-221.

Nikolaev, B. (2018). Does higher education increase hedonic and eudaimonic happiness? *Journal of happiness Studies*, *19*, 483-504.

Nkyi, A. K., Djankpa, G. B., & Osae, S. (2021). Psychological Distress and Life Satisfaction of Konkomba Widows in the Saboba District, Ghana. *Journal of Advanced Psychology*, *3*(1), 1-23.

Nolan, B., & Weisstanner, D. (2022). Rising income inequality and the relative decline in subjective social status of the working class. *West European Politics*, *45*(6), 1206-1230.

University of Ghana http://ugspace.ug.edu.gh

Novignon, J. (2017). Household income inequality in Ghana: A decomposition analysis. *African Journal of Economic and Management Studies*, *8*(4), 515-526.

Novignon, J., Ofori, B., Tabiri, K. G., & Pulok, M. H. (2019). Socioeconomic inequalities in maternal health care utilization in Ghana. *International journal for equity in health*, *18*(1), 1-11.

Nwaru, C. A., Berglund, T., & Hensing, G. (2021). Occupational prestige and sickness absence inequality in employed women and men in Sweden: a registry-based study. *BMJ open*, *11*(6), e050191.

Obeng-Odoom, F., & Amedzro, L. (2011). Inadequate housing in Ghana. *Urbani izziv*, *22*(1).

Ochodo, C., Ndetei, D. M., Moturi, W. N., & Otieno, J. O. (2015). Impacts of External Built Residential Environment that is Associated with Anxiety Disorders of Children. *Children*, *34*, 0-0.

Ofori-Boateng, K. (2017). Analysis of severity of poverty and social cohesion among the urban poor migrants in Ghana. *Journal of Poverty*, *21*(3), 265-287.

Oh, Y. A. (2014). Life satisfaction of the families of migrants in the Philippines. *Asian and Pacific Migration Journal*, *23*(3), 249-271.

Oishi, S., & Talhelm, T. (2012). Residential mobility: What psychological research reveals. *Current Directions in Psychological Science*, *21*(6), 425-430.

Olowu, D. (2014). Poverty, migration, and the incidence of HIV/AIDS among rural women in Lesotho: a rights-based approach to public health strategies. *Gender and Behaviour*, *12*(2), 6317-6328.

Oppong Asante, K., Osafo, J., & Nyamekye, G. K. (2014). An exploratory study of factors contributing to divorce among married couples in Accra, Ghana: A qualitative approach. *Journal of Divorce & Remarriage*, *55*(1), 16-32.

Opoku Mensah, A., Asamani, L., & Asumeng, M. (2017). The effect of marital status on psychological distress among single and partnered mothers in Ghana: The moderating role of employment status.

Ortiz, R. W., Green, T., & Lim, H. (2011). Families and home computer use: Exploring parent perceptions of the importance of current technology. *Urban Education*, *46*(2), 202-215.

Osafo, J., Oppong Asante, K., Ampomah, C. A., & Osei-Tutu, A. (2021). Factors contributing to divorce in Ghana: an exploratory analysis of evidence from court suits. *Journal of Divorce & Remarriage*, *62*(4), 312-326.

Osayomi, T., & Adegboye, O. A. (2017). Gender and psychological distress: a geographical perspective. *Papers in Applied Geography*, *3*(1), 30-43.

Osei-Assibey, E. (2014). Nature and dynamics of inequalities in Ghana. *Development*, *57*(3-4), 521-530.

University of Ghana http://ugspace.ug.edu.gh

Osumanu, I. K., Kosoe, E. A., & Dapilah, F. (2016). Residential housing in Ghana's low-income urban areas: An analysis of households living conditions in the Wa Municipality.

Otchia, C. S. (2021). Returns to Educational Attainment in Urban Ghana: The Role of Job-to-Job Transition. *Progress in Development Studies*, *21*(1), 51-67.

Othman, A. (2022). A conceptual paper on subjective poverty as perceived lasting socioeconomic insecurity among low-income household during MCO and COVID 19 pandemic. *Journal of Islamic Philanthropy & Social Finance (JIPSF)*, *4*(2), 37-44.

Owusu, G., Oteng-Ababio, M., Owusu, A. Y., & Wrigley-Asante, C. (2016). Can poor neighbourhoods be correlated with crime? Evidence from urban Ghana. *Ghana Journal of Geography*, *8*(1), 11-31.

Owusu, L., & Yeboah, T. (2018). Living conditions and social determinants of healthcare inequities affecting female migrants in Ghana. *GeoJournal*, *83*, 1005-1017.

Oyenubi, A., & Kollamparambil, U. (2022). Does Socioeconomic status mediate the relationship between income loss and depression scores? Evidence from South Africa. *Current Psychology*, 1-12.

Özdin, S., & Bayrak Özdin, Ş. (2020). Levels and predictors of anxiety, depression, and health anxiety during COVID-19 pandemic in Turkish society: The importance of gender. *International Journal of Social Psychiatry*, *66*(5), 504-511.

Pan, X., & Xiao, E. (2016). It's not just the thought that counts: An experimental study on the hidden cost of giving. *Journal of Public Economics*, *138*, 22-31.

Pan, Y., Aierken, A., Ding, X., Chen, Y., & Li, Y. (2022). Socioeconomic Status Association with Dependency from Objective and Subjective Assessments: A Cross-Sectional Study. *Frontiers in psychiatry*, *13*, 898686.

Park, D. J., Kang, J. H., Lee, K. E., Kang, S. W., Kwok, S. K., Kim, S. K., ... & Lee, S. S. (2018). Association of depression with socioeconomic status, anticardiolipin antibodies, and organ damage in patients with systemic lupus erythematosus: results from the KORNET registry. *Clinical and experimental rheumatology*, *36*(4), 627-635.

Park, K., & Seo, W. (2020). Effects of residential instability of renters on their perceived health status: findings from the Korean welfare panel study. *International Journal of Environmental Research and Public Health*, *17*(19), 7125.

Pearson, A. L., Mack, E., & Namanya, J. (2017). Mobile phones and mental well-being: Initial evidence suggesting the importance of staying connected to family in rural, remote communities in Uganda. *PloS one*, *12*(1), e0169819.

Peen, J., & Dekker, J. (2004). Is urbanicity an environmental risk-factor for psychiatric disorders? *Lancet*, *363*(9426), 2012-2012.

University of Ghana http://ugspace.ug.edu.gh

Peprah, C., Oduro-Ofori, E., & Asante-Wusu, I. (2015). The socio-economic conditions of caretaker families living in uncompleted houses in the Awutu-Senya East Municipality, Ghana. *Journal of Sustainable Development*, *8*(3), 309.

Perkins, D., Farmer, J., Salvador-Carulla, L., Dalton, H., & Luscombe, G. (2019). The Orange Declaration on rural and remote mental health. *Australian Journal of Rural Health*, *27*(5), 374-379.

Pohl, J. S., & Woods, N. F. (2019). Don't give up on social support: a topic of inquiry important for a healthy society. *Menopause*, *26*(7), 691-693.

Polavieja, J. G. (2008). The effect of occupational sex-composition on earnings: Job-specialization, sex-role attitudes, and the division of domestic labour in Spain. *European Sociological Review*, *24*(2), 199-213.

Porras-Segovia, A., Valmisa, E., Gutiérrez, B., Ruiz, I., Rodríguez-Barranco, M., & Cervilla, J. (2018). Prevalence and correlates of major depression in Granada, Spain: results from the GranadΣp study. *International Journal of Social Psychiatry*, *64*(5), 450-458.

Putrik, P., Van Amelsvoort, L., Mujakovic, S., Kunst, A. E., van Oers, H., Kant, I., ... & De Vries, N. K. (2019). Assessing the role of criminality in neighbourhood safety feelings and self-reported health: results from a cross-sectional study in a Dutch municipality. *BMC public health*, *19*, 1-12.

Puyat, J. H., Gastardo-Conaco, M. C., Natividad, J., & Banal, M. A. (2021). Depressive symptoms among young adults in the Philippines: Results from a nationwide cross-sectional survey. *Journal of Affective Disorders Reports*, *3*, 100073.

Quartey, P., Ackah, C., & Lambon-Quayefio, M. P. (2019). Inter-linkages between remittance and savings in Ghana. *International Journal of Social Economics*, *46*(1), 152-166.

Ramírez Pasillas, M., Lundberg, H., & Umuhire, S. (2018). Entrepreneurship Policy for the Health Sector in Rwanda: A Quest for Contextual Social Inclusion. *African Entrepreneurship: Challenges and Opportunities for Doing Business*, 289-324.

Rathore, A. S., Chauhan, A., & Sharma, C. (2019). *Impact of Advance Digital & Mobile Technology on Work Culture* (No. 2179). Easy Chair.

Ravikumar, T., Sriram, M., Kannan, N., Elias, I., & Seshadri, V. (2023). Relationship between financial stress and financial well-being of micro and small business owners: evidence from India.

Rega, A., Nappo, R., Simeoli, R., & Cerasuolo, M. (2022). Age-related differences in psychological distress during the COVID-19 pandemic. *International journal of environmental research and public health*, *19*(9), 5532.

Rehim, M. H., AL-Tkhayneh, K. M., & Jabarah, T. A. (2023). The Causes of Delayed Marriage among Young Men: An Analytical Descriptive Study of a Sample of Al Ain University Students.

University of Ghana http://ugspace.ug.edu.gh

Reilly, M. (2021). Health Disparities and Access to Healthcare in Rural vs. Urban Areas. *Theory in Action*, *14*(2).

Reis, H. T., & Gable, S. L. (2003). Toward a positive psychology of relationships.

Ritzer, G., & Dean, P. (2015). *Globalization: A basic text*. John Wiley & Sons.

Rivers, A. S., & Sanford, K. (2020). When we say, "perceived support," what do we mean? Contexts and components of support among people with serious medical conditions. *Journal of Social and Personal Relationships*, *37*(10-11), 2758-2778.

Roberts, G., Raihani, N., Bshary, R., Manrique, H. M., Farina, A., Samu, F., & Barclay, P. (2021). The benefits of being seen to help others: indirect reciprocity and reputation-based partner choice. *Philosophical Transactions of the Royal Society B*, *376*(1838), 20200290.

Robinette, J. W., Charles, S. T., & Gruenewald, T. L. (2016). Vigilance at home: longitudinal analyses of neighbourhood safety perceptions and health. *SSM-population health*, *2*, 525-530.

Robinette, J. W., Piazza, J. R., & Stawski, R. S. (2021). Neighbourhood safety concerns and daily well-being: A national diary study. *Wellbeing, space, and society*, *2*, 100047.

Roller, C., Rulff, C., & Tamminga, M. M. (2020). It's a mismatch! Overeducation and career mobility in Germany. *German Economic Review*, *21*(4), 493-514.

Rolleston, C. (2009). *Human Capital, Poverty, Educational Access, and Exclusion: The Case of Ghana 1991-2006. CREATE Pathways to Access. Research Monograph No. 22*.

Rostampoor-Vajari, M. (2012). Growing urbanization and its impact on the mental health of people in developing countries. *Hyperbolic Problems Theory Numerics & Applications*, *67*(2), 889-98.

Rotem-Mindali, O. (2013). E-commerce: implications for travel and the environment. In *Handbook of sustainable travel* (pp. 293-305). Dordrecht: Springer Netherlands.

Routhier, G. (2019). Beyond worst case needs: Measuring the breadth and severity of housing insecurity among urban renters. *Housing Policy Debate*, *29*(2), 235-249.

Rubalcaba, L., Gallego, J., Gallo, M. T., & Garrido, R. (2013). Business services location and market factors in major European cities. *Cities*, *31*, 258-266.

Ruiz-Tagle, J., & Urria, I. (2022). Household overcrowding trajectories and mental well-being. *Social Science & Medicine*, *296*, 114051.

Ryan, G., Qureshi, O., & Salaria, N. (2018). Mental health and the 2030 Sustainable Development Agenda: global inaction on mental health is putting the brakes on development. *London, UK: London School of Hygiene and Tropical Medicine*.

Ryff, C. D. (1989a). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology*, *57*(6), 1069.

University of Ghana http://ugspace.ug.edu.gh

Salomon, J. A., Tandon, A., & Murray, C. J. (2004). Comparability of self-rated health: cross-sectional multi-country survey using anchoring vignettes. *Bmj*, *328*(7434), 258.

Salone, M. A. (2019). *Social Networks and Sense of Community Effects on Psychological Distress Among Community X Residents* (Doctoral dissertation, Walden University).

Samari, E., Teh, W. L., Roystonn, K., Devi, F., Cetty, L., Shahwan, S., & Subramaniam, M. (2022). Perceived mental illness stigma among family and friends of young people with depression and its role in help-seeking: a qualitative inquiry. *BMC psychiatry*, *22*(1), 1-13.

Sbarra, D. A., & Whisman, M. A. (2022). Divorce, health, and socioeconomic status: An agenda for psychological science. *Current opinion in psychology*, *43*, 75-78.

Schiller, J. S., Lucas, J. W., & Peregoy, J. A. (2012). Summary health statistics for US adults: national health interview survey, 2011.

Ścigała, K. A., Schild, C., & Zettler, I. (2020). Dishonesty as a signal of trustworthiness: Honesty-Humility and trustworthy dishonesty. *Royal Society Open Science*, *7*(10), 200685.

Scott, S. (2022). Social nothingness: A phenomenological investigation. *European Journal of Social Theory*, *25*(2), 197-216.

Sebbeh, B. J. (2022). The Philosophy, Culture, Changing Lifestyle and Rural Poverty in the 21St Century Ghana. *European Journal of Philosophy, Culture and Religion*, *6*(1), 1-18.

Seifert, A., & Cotten, S. R. (2023). Digital Distance in Times of Physical Distancing: ICT Infrastructure and Use in Long-Term Care Facilities. *American Behavioural Scientist*, 00027642231155361.

Sen, A. (2002). Health: perception versus observation: self-reported morbidity has severe limitations and can be extremely misleading. *Bmj*, *324*(7342), 860-861.

Seo, Y. (2023). Community attachment as a factor in the subjective well-being of older adults in urban and rural areas: a case study in Tokyo, Osaka, and Shikoku region in Japan. *Asia-Pacific Journal of Regional Science*, 1-18.

Serdiuk, L. (2022). Internal Resources of Personal Psychological Well-Being. *The global psychotherapist*, *2*(2), 17-23.

Seruwagi, G., Nakidde, C., Lugada, E., Ssematiko, M., Ddamulira, D. P., Masaba, A., ... & Lawoko, S. (2022). Psychological distress and social support among conflict refugees in urban, semi-rural and rural settlements in Uganda: burden and associations. *Conflict and health*, *16*(1), 1-12.

Šerý, M., & Daňková, M. (2021). When regional identities differ over generation: Deinstitutionalisation of regions and regional identities in a regional amalgam. *Journal of Rural Studies*, *82*, 430-441.

University of Ghana http://ugspace.ug.edu.gh

Setyasalma, H., & Muflikhati, I. (2019). Financial management and assets ownership toward subjective well-being on entrepreneurial family. *Journal of Consumer Sciences*, *4*(1), 25-36.

Shahjehan, A., Shah, S. I., Qureshi, J. A., & Wajid, A. (2021). A Meta-Analysis of Smartphone Addiction and Behavioural Outcomes. *International Journal of Management Studies*, *28*(2), 103-125.

Shaikh, P. A., Shaikh, A. A., & Muhammad, F. (2023). Decoding The Challenges of Promoting Decent Work in Rural and Urban Labor Markets. *Pakistan Journal of International Affairs*, *6*(2).

Singh, A., Aitken, Z., Baker, E., & Bentley, R. (2020). Do financial hardship and social support mediate the effect of unaffordable housing on mental health? *Social psychiatry and psychiatric epidemiology*, *55*, 705-713.

Sipsma, H., Ofori-Atta, A., Canavan, M., Osei-Akoto, I., Udry, C., & Bradley, E. H. (2013). Poor mental health in Ghana: who is at risk? *BMC public health*, *13*, 1-9.

Smith, D., Tiwari, R., & Lommerse, M. (2014). Navigating Community Engagement. *M² Models and Methodologies for Community Engagement*, 1-21.

Somasundram, S. (2020). Impact of E-Commerce on the Urban Landscape. In *Strategies and Tools for Managing Connected Consumers* (pp. 34-45). IGI Global.

Sowmya, D., & Vidya, M. (2017). Family structure, education, and women's employment in rural India. *WIDER Working Papers*, (195).

Srikanth, S., Patel, H., Nagarajan, J. S., Tavarez, J., Matai, P., Cuello-Ramirez, A., ...& Desai, R. (2022). Association of hhouseholds income with Osa hospitalizations and outcomes: A Population-based analysis. *Chest*, *162*(4), A2530.

Srivastava, S., Purkayastha, N., Chaurasia, H., & Muhammad, T. (2021). Socioeconomic inequality in psychological distress among older adults in India: a decomposition analysis. *BMC psychiatry*, *21*(1), 1-15.

Steel, Z., Marnane, C., Iranpour, C., Chey, T., Jackson, J. W., Patel, V., & Silove, D. (2014). The global prevalence of common mental disorders: a systematic review and meta-analysis 1980–2013. *International journal of epidemiology*, *43*(2), 476-493.

Stávková, J., Souček, M., & Birčiaková, N. (2013). Income situation of households as a social status indicator. *Acta Universitatis Agriculture et Silviculturae Mendelianae Brunensis*, *61*(4), 1121-1128.

Stewart, K., & Townley, G. (2020). How far have we come? An integrative review of the current literature on sense of community and well-being. *American Journal of Community Psychology*, *66*(1-2), 166-189.

University of Ghana http://ugspace.ug.edu.gh

Stone, A. A., Schwartz, J. E., Broderick, J. E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. *Proceedings of the National Academy of sciences*, *107*(22), 9985-9990.

Subramanian, S. V., Subramanyam, M. A., Selvaraj, S., & Kawachi, I. (2009). Are self-reports of health and morbidities in developing countries misleading? Evidence from India. *Social science & medicine*, *68*(2), 260-265.

Sulemana, I., Doabil, L., & Anarfo, E. B. (2021). Psychological distress in Ghana: Are unemployed people more afflicted? *Journal of health psychology*, *26*(10), 1587-1596.

Sun, K. S., Lam, T. P., Lam, K. F., Chan, H. Y., Lo, T. L., Chao, D. V. K., ... & Lam, E. W. W. (2020). Associations between demographic factors and psychological distress among Chinese residents in Hong Kong: beyond socioeconomic classes. *Psychology, Health & Medicine*, *25*(9), 1049-1061.

Sweetland, A. C., Norcini Pala, A., Mootz, J., Kao, J. C. W., Carlson, C., Oquendo, M. A., ... & Wainberg, M. (2019). Food insecurity, mental distress, and suicidal ideation in rural Africa: Evidence from Nigeria, Uganda, and Ghana. *International Journal of Social Psychiatry*, *65*(1), 20-27.

Tabor, E., Patalay, P., & Bann, D. (2021). Mental health in higher education students and non-students: evidence from a nationally representative panel study. *Social psychiatry and psychiatric epidemiology*, *56*(5), 879-882.

Tach, L. M., & Greene, S. S. (2014). "Robbing Peter to pay Paul": Economic and cultural explanations for how lower-income families manage debt. *Social Problems*, *61*(1), 1-21.

Tanle, A., Ogunleye-Adetona, C. I., & Arthor, G. (2020). Rural-urban migration and household livelihood in the Agona West Municipality, Ghana. *Journal of Geography and Regional Planning*, *13*(1), 1-18.

Tavares, L. P., & Aassve, A. (2013). Psychological distress of marital and cohabitation breakups. *Social science research*, *42*(6), 1599-1611.

Tawiah, P. E., Adongo, P. B., & Aikins, M. (2015). Mental health-related stigma and discrimination in Ghana: Experience of patients and their caregivers. *Ghana Medical Journal*, *49*(1), 30-39.

Taylor, A. W., Chittleborough, C., Gill, T. K., Winefield, H., Baum, F., Hiller, J. E., ... & Hugo, G. (2012). Relationship of social factors including trust, control over life decisions, problems with transport and safety, to psychological distress in the community. *Social psychiatry and psychiatric epidemiology*, *47*, 465-473.

Tchankoni, M. K., Gbeasor-Komlanvi, F. A., Bitty-Anderson, A. M., Sewu, E. K., Zida-Compaore, W. I. C., Alioum, A., ... & Ekouevi, D. K. (2020). Prevalence and factors associated with psychological distress among key populations in Togo, 2017. *PloS one*, *15*(4), e0231726.

University of Ghana http://ugspace.ug.edu.gh

Terry, R., & Townley, G. (2019). Exploring the role of social support in promoting community integration: An integrated literature review. *American Journal of Community Psychology*, *64*(3-4), 509-527.

Thai, H. C. (2014). *Insufficient funds: The culture of money in low-wage transnational families*. Stanford University Press.

Thakre, M. N., Sathe, H. S., & Talapalliwar, M. R. (2022). Psychometric properties of Kessler's Psychological Distress Scale (K10) in cancer patients. *Archives of Mental Health*, *23*(2), 101-106.

Thomas, A. J., Witherspoon, K. M., & Speight, S. L. (2008). Gendered racism, psychological distress, and coping styles of African American women. *Cultural Diversity and Ethnic Minority Psychology*, *14*(4), 307.

Thomas, B. S. P. (2013). The global phenomenon of urbanization and its effects on mental health. *Issues in Mental Health Nursing*, *34*(3), 139-140.

Tippens, J. A., Hatton-Bowers, H., Honomichl, R., Wheeler, L. A., Miamidian, H. M., Bash, K. L., ... & Teufel-Shone, N. I. (2021). Psychological distress prevalence and associated stressors and supports among urban-displaced Congolese adults in Kenya. *American Journal of Orthopsychiatry*, *91*(5), 626.

Tlhajoane, M., Eaton, J. W., Takaruza, A., Rhead, R., Maswera, R., Schur, N., ... & Gregson, S. (2018). Prevalence and associations of psychological distress, HIV infection and HIV care service utilization in East Zimbabwe. *AIDS and Behaviour*, *22*, 1485-1495.

Tokhirov, A. (2018). Remittances and subjective well-being of the left behinds in Tajikistan. *Economics Bulletin*, *38*(4), 1735-1747.

Torgerson, M., & Edwards, M. E. (2013). Demographic determinants of perceived barriers to community involvement: Examining rural/urban differences. *Nonprofit and Voluntary Sector Quarterly*, *42*(2), 371-390.

Trembath, D., Conti-Ramsden, G., Xie, G., Cook, F., & Reilly, S. (2021). The relationship between language difficulties, psychosocial difficulties, and speech–language pathology service access in the community. *International Journal of Language & Communication Disorders*, *56*(2), 248-256.

Trindade, I. A., Marta-Simões, J., Ferreira, C., & Pinto-Gouveia, J. (2018). Chronic illness-related cognitive fusion explains the impact of body dissatisfaction and shame on depression symptoms in breast cancer patients. *Clinical psychology & psychotherapy*, *25*(6), 886-893.

Tsai, C. Y., Huang, C. E., & Wu, M. T. (2014). The relevant study of leisure motivation, leisure attitude and health promotion lifestyle of elderly people in Taiwan. *International Journal of Humanities and Social Sciences*, *8*(8), 2423-2426.

Tulaev, B., Daminov, O., Khakimov, J., & Turdiev, J. (2020). Developing competencies in the development of information and communication technologies. *Journal of critical reviews. ISSN–2394-5125*, *7*(2), 296-298.

University of Ghana http://ugspace.ug.edu.gh

Tulin, M., & Smith, S. (2020). Poverty and mental health among migrants: When is ingroup exposure more protective than social ties? *SSM-Population Health*, *11*.

Turel, O., Matt, C., Trenz, M., & Cheung, C. M. (2020). An intertwined perspective on technology and digitised individuals: Linkages, needs and outcomes. *Information systems journal*, *30*(6), 929-939.

Turunen, E., & Hiilamo, H. (2014). Health effects of indebtedness: a systematic review. *BMC public health*, *14*(1), 1-8.

Tyler, J., Lam, J., Scurrah, K., & Dite, G. (2020). The association between chronic disease and psychological distress: an Australian twin study. *Twin Research and Human Genetics*, *23*(6), 322-329.

Uchino, B. N., Bowen, K. S., de Grey, R. G. K., & Tacana, T. (2022). Social support and mental health.

Uphoff, E. P., Pickett, K. E., Cabieses, B., Small, N., & Wright, J. (2013). A systematic review of the relationships between social capital and socioeconomic inequalities in health: a contribution to understanding the psychosocial pathway of health inequalities. *International journal for equity in health*, *12*(1), 1-12.

Vadwala, A. Y., & Vadwala, M. M. S. (2017). E-Commerce: Merits and demerits a review paper. *International Journal of Trend in Scientific Research and Development*, *1*(4), 117-120.

Van Der Kruk, S. R., Butow, P., Mesters, I., Boyle, T., Olver, I., White, K., ... & Clinical Oncological Society of Australia. (2022). Psychosocial well-being and supportive care needs of cancer patients and survivors living in rural or regional areas: A systematic review from 2010 to 2021. *Supportive Care in Cancer*, 1-44.

van der Sanden, R. L., Pryor, J. B., Stutterheim, S. E., Kok, G., & Bos, A. E. (2016). Stigma by association and family burden among family members of people with mental illness: The mediating role of coping. *Social psychiatry and psychiatric epidemiology*, *51*, 1233-1245.

Vargas, T., Conley, R. E., & Mittal, V. A. (2020). Chronic stress, structural exposures, and neurobiological mechanisms: A stimulation, discrepancy, and deprivation model of psychosis. *International review of neurobiology*, *152*, 41-69.

Vauclair, C. M., & Bratanova, B. (2017). Income inequality and fear of crime across the European region. *European journal of criminology*, *14*(2), 221-241.

Velghe, F. (2012). Deprivation, distance, and connectivity: The adaptation of mobile phone use to a life in Westbank, a post-Apartheid township in South Africa. *Discourse, Context & Media*, *1*(4), 203-216.

Verma, S., & Mishra, A. (2020). Depression, anxiety, and stress and socio-demographic correlates among general Indian public during COVID-19. *International Journal of Social Psychiatry*, *66*(8), 756-762.

University of Ghana http://ugspace.ug.edu.gh

Viertiö, S., Kiviruusu, O., Piirtola, M., Kaprio, J., Korhonen, T., Marttunen, M., & Suvisaari, J. (2019). Gender and psychological distress: contribution of work-family balance. *European Journal of Public Health*, *29*(Supplement_4), ckz187-116.

Viganò, L., & Castellani, D. (2020). Financial decisions and risk management of low-income households in disaster-prone areas: Evidence from the portfolios of Ethiopian farmers. *International journal of disaster risk reduction*, *45*, 101475.

Vigo, D., Thornicroft, G., & Atun, R. (2016). Estimating the true global burden of mental illness. *The Lancet Psychiatry*, *3*(2), 171-178. Vigo, D., Thornicroft, G., & Atun, R. (2016). Estimating the true global burden of mental illness. *The Lancet Psychiatry*, *3*(2), 171-178.

Viljoen, C. (2015). *An analysis of the economic geography of labour market outcomes in South Africa* (Doctoral dissertation).

Villasis Keever, R., & Arista Castillo, L. (2018). The Perception of Urban Insecurity and Its Implications for Sustainable Development. *Sustainable Development Research and Practice in Mexico and Selected Latin American Countries*, 531-544.

Villeneuve, L., Trudel, G., Dargis, L., Préville, M., Boyer, R., & Bégin, J. (2014). Marital functioning and psychological distress among older couples over an 18-month period. *Journal of Sex & Marital Therapy*, *40*(3), 193-208.

Vinke, C. M. (2021). Introduction to the special issue on Clinical ethology. *Behaviour*, *1*(aop), 1-3.

Vos, S. D. (2005). Indicating socioeconomic status among elderly people in developing societies: an example from Brazil. *Social Indicators Research*, *73*(1), 87-108.

Vos, T., Abajobir, A. A., Abate, K. H., Abbafati, C., Abbas, K. M., Abd-Allah, F., ... & Criqui, M. H. (2017). Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet*, *390*(10100), 1211-1259.

Vousoura, E. (2014). *Psychological distress among mothers of young children in rural Ghana and Uganda and its association with child health and nutritional status*. Columbia University.

Vyas, S., & Kumaranayake, L. (2006). Constructing socio-economic status indices: how to use principal components analysis. *Health policy and planning*, *21*(6), 459-468.

Walsh, K., O′ Shea, E., Scharf, T., & Shucksmith, M. (2014). Exploring the impact of informal practices on social exclusion and age-friendliness for older people in rural communities. *Journal of Community & Applied Social Psychology*, *24*(1), 37-49.

Wang, R., Xue, D., Liu, Y., Chen, H., & Qiu, Y. (2018). The relationship between urbanization and depression in China: the mediating role of neighbourhood social capital. *International journal for equity in health*, *17*(1), 1-10.

University of Ghana http://ugspace.ug.edu.gh

Wang, Y., & Lim, S. S. (2020). Digital asymmetries in transnational communication: Expectation, autonomy, and gender positioning in the household. *Journal of Computer-Mediated Communication*, *25*(6), 365-381.

Wang, Y., Liu, H., Jiang, Y., Shi, X., Shao, Y., & Xu, Z. X. (2020). Meta-analysis of 5-hydroxytryptamine transporter gene promoter region polymorphism and post-stroke depression. *Journal of International Medical Research*, *48*(6), 0300060520925943.

Wang, H., Sha, H., Liu, L., & Zhao, H. (2022). Exploring the Relationship between Perceived Community Support and Psychological Well-Being of Tourist Destinations Residents. *International Journal of Environmental Research and Public Health*, *19*(21), 14553.

Wang, K. (2022). Housing instability and socioeconomic disparities in health: evidence from the US economic recession. *Journal of Racial and Ethnic Health Disparities*, *9*(6), 2451-2467.

Warren, N., Kisely, S., & Siskind, D. (2021). Maximizing the uptake of a COVID-19 vaccine in people with severe mental illness: a public health priority. *JAMA Psychiatry*, *78*(6), 589-590.

Warto, W. (2016). Rural Community Self-support through Mutual Cooperation. *Jurnal Penelitian Kesejahteraan Sosial*, *15*(3), 281-294.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, *54*(6), 1063.

Weiss, F. (2013). Postsecondary educational careers and social inequality: an analysis of social origin differences in educational career trajectories and their labour market outcomes in the US, Sweden, and Germany.

Wen, M., Zheng, Z., & Niu, J. (2017). Psychological distress of rural-to-urban migrants in two Chinese cities: Shenzhen and Shanghai. *Asian Population Studies*, *13*(1), 5-24.

Whiteford, H. A., Degenhardt, L., Rehm, J., Baxter, A. J., Ferrari, A. J., Erskine, H. E., ... & Vos, T. (2013). Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *The lancet*, *382*(9904), 1575-1586.

Williams, D. G., Carr, T. L., & Clifton, N. S. (2006). Technology and urban youth: Emergent issues regarding access. In *Technology and Education: Issues in Administration, Policy, and Applications in K12 Schools* (pp. 101-113). Emerald Group Publishing Limited.

Williams, M., & Moser, T. (2019). The art of coding and thematic exploration in qualitative research. *International Management Review*, *15*(1), 45-55.

Winters, J. V. (2018). Do higher levels of education and skills in an area benefit wider society? *IZA World of Labor*.

University of Ghana http://ugspace.ug.edu.gh

Wohlfarth, T. (1997). Socioeconomic inequality and psychopathology: Are socioeconomic status and social class interchangeable? *Social Science & Medicine*, *45*(3), 399-410.

World Health Organization. (2019). *Suicide in the world: global health estimates* (No. WHO/MSD/MER/19.3). World Health Organization.

Woroniecka, G. (2016). Old-new Problems with Housing after 27 Years of Transformation F Questions Regarding the Sociology of Dwelling.

Wong, A., Chau, A. K., Fang, Y., & Woo, J. (2017). Illuminating the psychological experience of elderly loneliness from a societal perspective: A qualitative study of alienation between older people and society. *International journal of environmental research and public health*, *14*(7), 824.

Woodyatt, C. R., Finneran, C. A., & Stephenson, R. (2016). In-person versus online focus group discussions: A comparative analysis of data quality. *Qualitative health research*, *26*(6), 741-749.

World Health Organization. (2001). The World Health Report 2001: Mental health: new understanding, new hope.

World Health Organization. (2018). Mental health action plan 2013–2020. Geneva: World Health Organization; 2013.

World Health Organization. (2022). Mental health and COVID-19: early evidence of the pandemic's impact: scientific brief, 2 March 2022. In *Mental health and COVID-19: early evidence of the pandemic's impact: scientific brief, 2 March 2022*.

World Health Organization (2022). Ghana WHO special initiative for mental health situational assessment. WHO. 2022.

Wright, A., De Livera, A., Lee, K. H., Higgs, C., Nicholson, M., Gibbs, L., & Jorm, A. (2022). A repeated cross-sectional and longitudinal study of mental health and wellbeing during COVID-19 lockdowns in Victoria, Australia. *BMC Public Health*, *22*(1), 1-14.

Wu, Y. Y., Walkover, M., & Zhang, W. (2021). Trends in psychological distress and COVID-19 incidence across 15 US metropolitan statistical areas in 2020. *Social Science & Medicine*, *285*, 114285.

Xie, Y., Killewald, A., & Near, C. (2016). Between-and within-occupation inequality: The case of high-status professions. *The Annals of the American Academy of Political and Social Science*, *663*(1), 53-79.

Zabai, A. (2020). How are household finances holding up against the Covid-19 shock? Bank for International Settlements, No. 22.

Zamora-Racaza, G., Azizoddin, D. R., Ishimori, M. L., Ormseth, S. R., Wallace, D. J., Penserga, E. G., ... & Weisman, M. H. (2018). Role of psychosocial reserve capacity in anxiety and

University of Ghana http://ugspace.ug.edu.gh

depression in patients with systemic lupus erythematosus. *International journal of rheumatic diseases*, *21*(4), 850-858.

Zereyesus, Y. A., Shanoyan, A., Ross, K. L., & Amanor-Boadu, V. (2016). The determinants of household-level well-being in Northern Ghana. *Development Studies Research*, *3*(1), 1-10.

Zhang, W., Chen, H., & Feng, Q. (2015). Education and psychological distress of older Chinese: Exploring the longitudinal relationship and its subgroup variations. *Journal of aging and health*, *27*(7), 1170-1198.

Zhang, R. J. (2020). Social trust and satisfaction with life: A cross-lagged panel analysis based on representative samples from 18 societies. *Social Science & Medicine*, *251*, 112901.

Zhang, D., Lin, Z., Chen, F., & Li, S. (2023). Reconfiguring social disconnectedness and its link to psychological well-being among older adults in rural China. *Journal of Applied Gerontology*, *42*(1), 99-110.

Zhang, X., Ren, H., Gao, L., Shia, B. C., Chen, M. C., Ye, L., ... & Qin, L. (2023). Identifying the predictors of severe psychological distress by auto-machine learning methods. *Informatics in medicine unlocked*, *39*, 101258

Zhang, L., Dailey, R., Brook, R. D., Opara, I. N., Liu, X., Carbone, J. T., & Levy, P. D. (2024). Lower socioeconomic status, psychological distress, and self-reported hypertension: A longitudinal moderated mediation analysis. *American Journal of Hypertension*, *37*(3), 207-219

Zhao, S., Du, H., Li, Q., Wu, Q., & Chi, P. (2021). Growth mindset of socioeconomic status boosts subjective well-being: A longitudinal study. *Personality and Individual Differences*, *168*, 110301.

Zhao, X., Jin, A., & Hu, B. (2022). How Do Perceived Social Support and Community Social Network Alleviate Psychological Distress During COVID-19 Lockdown? The Mediating Role of Residents' Epidemic Prevention Capability. *Frontiers in Public Health*, *10*, 763490.

Zhao, M., Huang, C. C., Mendoza, M., Tovar, X., Lecca, L., & Murray, M. (2023). Subjective socioeconomic status: an alternative to objective socioeconomic status. *BMC Medical Research Methodology*, *23*(1), 73.

Zhou, L., & Chen, J. (2017). Life events and hopelessness depression: The influence of affective experience. *PloS one*, *12*(11), e0187898.

Zhou, S., Gao, L., Liu, F., Tian, W., Jin, Y., & Zheng, Z. J. (2021). Socioeconomic status and depressive symptoms in older people with the mediation role of social support: A population-based longitudinal study. *International journal of methods in psychiatric research*, *30*(4), e1894

Ziebarth, A. (2015). Renting in rural America. *Family and Consumer Sciences Research Journal*, *44*(1), 88-104.

University of Ghana http://ugspace.ug.edu.gh

Zou, H., Xiong, Q., & Xu, H. (2020). Does subjective social status predict self-rated health in Chinese adults and why? *Social Indicators Research*, *152*, 443-471.

Zumbro, T. (2014). The relationship between homeownership and life satisfaction in Germany. *Housing Studies*, *29*(3), 319-338.

https://www.afro.who.int/countries/ghana/news/sustaining-mental-health-agenda-ghana

https://floodlist.com/africa/ghana-floods-northern-regions-september-2018

https://www.ndpc.gov.gh/media/Ministry_of_Education_APR_2018

https://reliefweb.int/report/ghana/ghana-northern-floods-situation-report-1-14th-september-2010

https://www2.statsghana.gov.gh/IBES_main.html

https://statsghana.gov.gh/gssmain/fileUpload/pressrelease/SUMMARY%20REPORT_FINAL_FINAL_24-5-16.pdf

University of Ghana http://ugspace.ug.edu.gh

LIST OF APPENDICES

APPENDIX A

Table A1 Panel regression analysis results of pooled OLS fixed and random effects models for respondents' SES and sociodemographic characteristics in urban areas.

Variable	Pooled OLS	Fixed effects	Random effects
Highest education qual.			
Bachelors (RC)			
None	2.956 *** (0.348)	2.745*** (0.510)	2.956*** (0.348)
MSCL/BECE/O' Level/Other	1.534*** (0.341)	1.490*** (0.496)	1.534*** (0.341)
SSCE/A' Level/Prof. Cert.	1.110 *** (0.357)	0.802 (0.520)	1.110*** (0.357)
Teacher Training/HND/ Prof. Diploma	0.090 (0.402)	0.419 (0.584)	0.090 (0.402)
Other, specify	0.829 (0.767)	0.775 (1.118)	0.829 (0.767)
Occupational status			
Paid employee			
Yes (RC)			
No	0.883(0.164)	0.088 (0.235)	0.088 (0.164)
Business owner			
Yes (RC)			
No	0.865 *** (0.138)	0.724*** (0.196)	0.865*** (0.138)
Farm owner			
Yes (RC)			
No	0.256 (0.187)	0.327 (0.270)	0.256 (0.187)
SSS	-0.826 *** (0.024)	-0.060 (0.350)	-0.083*** (0.024)
Gender			
Male (RC)			
Female	0.764*** (0.150)	0.867*** (0.216)	0.764*** (0.150)
Age	0.260*** (0.005)	0.032*** (0.007)	0.26 *** (0.005)

University of Ghana http://ugspace.ug.edu.gh

Table A1 continued

Variable	Pooled OLS	Fixed effects	Random effects
Marital status			
In Union (RC)			
Formerly in Union	0.833*** (0.196)	0.780*** (0.276)	0.833*** (0.196)
Never in union	-0.357 (0.221)	-0.119 (0.320)	-0.036 (0.221)
Relationship to HHH			
Head (RC)			
Spouse	-0.506** (0.198)	-0.487 (0.285)	-0.506 ** (0.198)
Child	-0.977*** (0.247)	-0.747* (0.356)	-0.977*** (0.247)
Other relatives/non-relatives	-0.467 (0.323)	0.276 (0.464)	-0.467 (0.323)
Household size	0.025 (0.032)	-0.020 (0.454)	0.025 (0.032)
Born in comm.			
Yes (RC)			
No	-0.637*** (0.120)	0.708*** (0.173)	-0.637*** (0.120)
Region			
Greater Accra (RC)			
Western	-0.561** (0.249)	-0.723* (0.358)	-0.561** (0.249)
Central	0.352 (0.242)	0.282 (0.347)	0.352 (0.242)
Volta	1.931*** (0.255)	1.970*** (0.361)	1.931*** (0.255)
Eastern	0.732*** (0.212)	0.575 (0.305)	0.732*** (0.212)
Ashanti	-1.106*** (0.177)	-1.273*** (0.255)	-1.106*** (0.177)
Brong Ahafo	0.368 (0.237)	0.809 ** (0.337)	0.368 (0.237)
Northern	1.273 *** (0.231)	1.377 *** (0.331)	1.273*** (0.231)
Upper East	1.902*** (0.437)	2.016 ** (0.643)	1.902*** (0.437)
Upper West	2.826*** (0.555)	3.060*** (0.806)	2.826*** (0.555)
Cons	13.508 (0.504)	13.423*** (0.718)	13.508*** (0.504)
Number of observations	9,544	9,544	9,544
Number of groups	4,898	4,898	4,898

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

University of Ghana http://ugspace.ug.edu.gh

Table A2 Panel regression analysis results of pooled OLS fixed and random effects models for respondents' SES and sociodemographic characteristics in rural areas

Variable	Pooled OLS	Fixed Effects	Random Effects
Highest edu. qualification			
Bachelors (RC)			
None	2.964*** (0.597)	-1.007 (1.252)	2.947*** (0.607)
MSCL/BECE/O' Level/Other	1.760*** (0.598)	-1.125 (1.230)	1.758 *** (608)
SSCE/A' Level/Prof. Cert.	1.861*** (0.622)	-0.010 (1.196)	1.863*** (0.631)
Teacher Training/HND/ Prof. Diploma	1.073 (0.699)	-0.415 (1.074)	1.068 (0.703)
Other, specify	1.066 (1.165)	-1.391 (1.834)	1.040 (1.168)
Occupational status			
Paid employee			
Yes (RC)			
No	0.441** (0.193)	0.329 (0.308)	0.436 ** (0.194)
Business owner			
Yes (RC)			
No	0.509*** (0.132)	0.077 (0.205)	0.503*** (0.134)
Farm owner			
Yes (RC)			
No	0.232 (0.122)	0.451* (0.186)	0.264** (0.123)
SSS	-0.027(0.148)	-0.003 (0.025)	-0.023 (0.018)
Gender			
Male (RC)			
Female	0.794*** (0.143)	1.523 (1.154)	0.797*** (0.146)
Age	0.034 *** (0.003)	-0.120*** (0.012)	0.033*** (0.004)

University of Ghana http://ugspace.ug.edu.gh

Table A2

Variable	Pooled OLS	Fixed Effects	Random Effects
Marital status			
In Union (RC)			
Formerly in Union	1.127*** (0.172)	0.338 (0.330)	1.101*** (0.176)
Never in union	-0.649*** (0.207)	-0.752 (0.501)	-0.684*** (0.210)
Relationship to HHH			
Head (RC)			
Spouse	-0.542*** (0.177)	-1.003* (0.427)	-0.562 *** (0.181)
Child	-0.949*** (0.224)	-1.574 (0.839)	-0.978 *** (0.227)
Other relatives/Nonrelatives	-0.432 (0.259)	-0.583 (0.815)	-0.438 (0.263)
Household size	0.026 (0.021)	0.103* (0.045)	0.030 (0.022)
Born in comm.			
Yes (RC)			
No	-0.434*** (0.101)	-0.321 (0.187)	-0.448*** (0.103)
Region			
Greater Accra (RC)			
Western	0.923 *** (0.312)	-0.032 (1.714)	0.961*** (0.322)
Central	0.324 (0.326)	-0.898 (1.715)	0.356 (0.337)
Volta	1.442*** (0.308)	-0.371 (1.282)	1.484*** (0.318)
Eastern	2.125*** (0.306)	1.036 (1.180)	2.155*** (0.315)
Ashanti	0.518 (0.297)	-1.106 (1.133)	0.545 (0.307)
Brong Ahafo	0.437 (0.309)	1.101 (1.507)	0.469 (0.319)
Northern	1.797*** (0.298)	-0.293 (1.507)	1.826*** (0.308)
Upper East	2.121*** (0.320)	-0.202 (1.619)	2.161*** (0.331)
Upper West	2.767*** (0.336)	0.772 (2.273)	2.785*** (0.347)
Cons	12.558*** (0.690)	24.112*** (1.814)	12.543*** (0.703)
Number of observations	16,323	16,323	16,323
Number of groups	8,219	8,219	8,219

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

University of Ghana http://ugspace.ug.edu.gh

Table A3 Panel regression analysis result of pooled OLS fixed and random effects models for respondents' household and community characteristics in urban areas

Variables	Pooled OLS	Fixed Effects	Random Effects
HH Wealth quintile	-0.254*** (0.044)	-0.240*** (0.064)	-0.254*** (0.044)
Household Debt			
Yes (RC)			
No	-0.445*** (0.133)	-0.475* (0.191)	-0.445*** (0.133)
Household in-transfer			
Yes (RC)			
No	-0.631*** (0.121)	-0.783*** (0.174)	-0.631*** (0.121)
Rent			
Yes (RC)			
No	0.636*** (0.130)	0.664*** (0.187)	0.636*** (0.130)
Fixed line telephone			
Yes (RC)			
No	0.416(0.297)	1.006* (0.427)	0.416 (0.297)
Mobile phone			
Yes (RC)			
No	2.467*** (0.232)	2.493*** (0.331)	2.467*** (0.232)
Personal computer			
Yes (RC)			
No	1.062*** (0.179)	0.906*** (0.258)	1.062*** (0.179)
E-commerce			
Yes (RC)			
No	0.903*** (0.273)	1.176** (0.398)	0.902*** (0.273)
Internet			
Yes (RC)			
No	0.177(0.157)	-0.181 (0.226)	0.177 (0.157)

University of Ghana http://ugspace.ug.edu.gh

Table A3 continued

Variables	Pooled OLS	Fixed Effects	Random Effects
Comm. Trustworthiness	0.071(0.057)	0.158 (0.083)	0.071(0.057)
Comm. Helpfulness	-0.153** (0.058)	-0.223** (0.085)	-0.153** (0.058)
Comm. Alertness	-0.010 (0.051)	-0.018 (0.074)	-0.010(0.051)
Comm. Project			
Will contribute (RC)			
Will not contribute	1.512*** (0.126)	1.673*** (0.179)	1.512*** (0.126)
Cons	15.584 *** (0.126)	15.137*** (0.699)	15.584*** (0.491)
Number of observations	9544	9,544	9,544
Number of groups	4,898	4,898	4898

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table A4 Panel regression analysis result of pooled OLS, fixed and random effects models for respondents' household and community characteristics in rural areas

Variables	Pooled OLS	Fixed Effects	Random Effects
HH Wealth quintile	-0.366*** (0.033)	-0.444*** (0.060)	-0.373*** (0.034)
Household debt			
Yes (RC)			
No	-0.704*** (0.105)	-0.875*** (0.150)	-0.736*** (0.105)
Household in-transfer			
Yes (RC)			
No	-1.210*** (0.098)	-0.937*** (0.148)	-1.185*** (0.099)
Rent			
Yes (RC)			
No	1.054*** (0.178)	-0.048 (0.318)	1.010*** (0.182)
Fixed line telephone			
Yes (RC)			
No	1.531** (0.660)	1.001 (0.901)	1.437** (0.654)

University of Ghana http://ugspace.ug.edu.gh

Table A4 continued

Variables	Pooled OLS	Fixed Effects	Random Effects
Mobile phone			
Yes (RC)			
No	1.767*** (0.118)	0.837*** (0.178)	1.663*** (0.119)
Personal computer			
Yes (RC)			
No	1.150*** (0.278)	0.407 (0.439)	1.060*** (0.280)
E-commerce			
Yes (RC)			
No	1.707*** (0.366)	0.601 (0.520)	1.617*** (0.364)
Internet			
Yes (RC)			
No	0.963*** (0.178)	-0.461 (0.250)	0.819*** (0.175)
Comm. trustworthiness	-0.095** (0.047)	-0.130* (0.064)	-0.093** (0.046)
Comm. Helpfulness	-0.182*** (0.047)	-0.175** (0.065)	-0.179*** (0.047)
Comm alertness	-0.198*** (0.039)	-0.186*** (0.053)	-0.197*** (0.039)
Comm. Project			
Will contribute (RC)			
Will not contribute	2.162*** (0.101)	2.345*** (0.125)	2.189*** (0.099)
Cons	15.445*** (0.806)	20.464*** (1.180)	15.875*** (0.805)
Number of observations	16,224	16,224	16,224
Number of groups	8,187	8,187	8,187

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

APPENDIX B

Table B1: Cross-sectional changes in respondents' individual, household, and community characteristics across waves

Variable	Wave 1 (N=8,667)		Wave 2 (N= 8,303)		Wave 3 (N= 8,954)	
Sociodemographic	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**
Age group (years)						
Less than 36 years	30.3	29.3	27.9	25.9	26.9	25.4
36-45	23.4	21.8	22.5	21.9	20.4	19.4
46-55	19.5	17.5	20.0	18.6	19.4	19.4
56-60	12.7	13.5	14.0	14.4	16.1	14.8
61+	14.1	17.9	15.6	19.3	17.1	21.1

University of Ghana http://ugspace.ug.edu.gh

Table B1 continued

Variable	Wave 1 (N=8,667)		Wave 2 (N= 8,303)		Wave 3 (N= 8,954)	
Sociodemographic	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**
Marital status						
In union	58.3	72.2	54.5	65.9	53.2	63.3
Formerly in union	18.4	14.9	21.0	17.9	19.7	17.5
Never in union	23.1	12.2	24.6	16.2	27.1	19.2
HH membership status						
Head	59.5	53.9	60.4	54.2	60.6	57.3
Spouse	24.0	32.9	21.2	29.0	20.2	25.4
Child	11.9	9.1	13.7	11.9	15.7	13.1
Other relatives/non-relatives	4.6	4.1	4.7	4.8	3.5	4.2
Household size						
1	17.7	10.7	19.7	12.7	20.3	14.3
2-3	30.9	23.7	35.4	28.4	34.4	29.4
4-6	40.5	41.8	37.8	40.8	37.5	41.0
7+	10.9	23.9	7.2	18.2	7.8	15.2
Born in comm.						
Yes	38.4	32.9	42.1	51.1	49.1	55.5
No	61.6	67.1	57.9	48.9	50.9	44.5

University of Ghana http://ugspace.ug.edu.gh

Table B1 continued

Variable	Wave 1 (N=8,667)		Wave 2 (N= 8,303)		Wave 3 (N= 8,954)	
Sociodemographic	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**
Religion						
None	4.2	6.6	4.0	7.6	3.4	4.9
Christian	75.5	59.8	76.4	61.6	77.6	64.6
Muslim	16.2	19.3	18.1	20.2	17.5	21.0
Traditional	1.2	12.4	0.7	9.1	1.2	9.2
Other	2.7	2.0	0.7	1.5	0.2	0.3
Region of residence						
Western	7.8	10.1	6.9	8.9	6.9	9.5
Central	7.0	6.7	8.3	6.9	8.8	6.8
Greater Accra	24	2.3	22.9	3.1	20.5	4.0
Volta	7.2	11.3	6.4	9.4	7.5	10.4
Eastern	12.6	11.4	11.0	11.2	11.6	11.0
Ashanti	20.7	14.9	20.8	14	22.5	13.9
Brong Ahafo	9.0	10.2	9.4	9.8	8.8	10.5
Northern	9.1	19.2	10.8	20.7	10.6	20.5
Upper East	1.7	7.9	2.4	9.2	1.6	7.5
Upper West	1.1	6.0	1.2	6.8	1.2	5.9

University of Ghana http://ugspace.ug.edu.gh

Table B1 continued

Variable	Wave 1 (N=8,667)		Wave 2 (N= 8,303)		Wave 3 (N= 8,954)	
Socioeconomic status	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**
Highest edu. qual.						
None	39.7	72.0	38.1	69.8	34.8	64.3
MSLC/BECE/O' Level	40	22.9	38.3	23	36.2	25.4
SSCE/A' Level/Prof. Cert.	12.5	3.5	14.7	4.8	17.8	7.3
Teacher Training/HND/ Prof. Diploma	5.2	1.3	5.1	1.4	5.5	1.5
Bachelor's degree+	2.3	0.2	3.3	0.7	4.5	1.1
Other, specify	0.2	0.0	0.6	0.2	1.3	0.4
Subjective social status (SSS)						
Low	42.6	45.0	42.9	48.9	35.6	41.5
High	38.1	32.4	41.5	36.7	45.7	40.9
Very High	19.2	22.5	15.6	14.4	17.9	16.8
Occupational status						
Paid employee						
No	Missing	Missing	77.0	92.0	80.0	91.2
Yes	Missing	Missing	23.0	8.0	20.0	8.8

University of Ghana http://ugspace.ug.edu.gh

Table B1 continued

Variable	Wave 1 (N=8,667)		Wave 2 (N= 8,303)		Wave 3 (N= 8,954)	
Occupational status	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**
Business owner						
No	Missing	Missing	64.5	80.6	66.3	18.0
Yes	Missing	Missing	35.5	19.4	33.7	82.0
Farm owner						
No	Missing	Missing	85.0	52.1	85.8	43.3
Yes	Missing	Missing	15.0	47.9	14.2	56.8
Household factors						
Wealth quintile						
Poorest	13.2	32.8	12.4	29.9	13.0	18.2
Poor	19.1	18.4	18.2	20	19.1	18.6
Middle	23.1	18.4	21.8	15.8	22.4	18.4
Rich	21.3	14.2	22.6	16.5	22.4	23.3
Richest	23.4	16.1	25	17.9	23.1	21.6
Household debt						
No	78.6	75.3	66.9	66.6	71.9	70.4
Yes	21.4	24.7	33.1	33.4	28.1	29.6
Household in-transfer						
No	65.5	69.6	57.0	59.4	54.2	53.9
Yes	34.5	30.4	43.0	40.6	45.8	46.1
Rent						
Yes	32.5	6.0	30.1	8.2	28.2	9.7
No	67.5	94.0	69.9	91.8	71.8	90.3

University of Ghana http://ugspace.ug.edu.gh

Table B1 continued

Variable	Wave 1 (N=8,667)		Wave 2 (N= 8,303)		Wave 3 (N= 8,954)	
Household factors	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**
Fixed line telephone						
Yes	12.0	1.1	1.3	0.4	0.6	0.1
No	88.0	98.9	98.7	99.6	99.4	99.9
Mobile phone						
Yes	88.6	62.0	93.8	80.6	95.6	86.9
No	11.4	38.0	6.2	19.4	4.4	13.1
Personal computer						
Yes	16.1	1.9	14.9	3.2	17.4	4.9
No	83.9	98.1	85.1	96.8	82.6	95.1
E-commerce						
Yes	10	2.8	2.2	0.5	4.4	2.1
No	90	97.2	97.8	99.5	95.6	97.9
Internet						
Yes	20.7	1.2	0.0	0.0	44.5	24.4
No	79.3	98.8	100.0	100.0	55.5	75.6
Community factors						
Trustworthiness						
Agree	38.1	62.2	36.4	57	39.2	55.9
Neutral	16.7	11.2	16.6	12.3	8.9	7.4
Disagree	43.2	26.1	47.0	30.8	51.3	36.4

University of Ghana http://ugspace.ug.edu.gh

Table B1 continued

Variable	Wave 1 (N=8,667)		Wave 2 (N= 8,303)		Wave 3 (N= 8,954)	
Community factors						
Helpfulness	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**	**Urban (%)**	**Rural (%)**
Agree	36.6	57.7	35.0	56.5	39.0	55.1
Neutral	16.3	12.1	18.1	13.2	11.1	8.7
Disagree	45.1	29.7	46.9	30.3	48.8	35.6
Alertness						
Agree	61.4	48.4	67.4	60.6	79.5	70.2
Neutral	12.8	10.2	14.0	14.7	5.4	6.7
Disagree	23.7	40.6	67.4	24.7	14.2	22.5
Community project participation						
Will contribute	15.3	10.6	82.9	87.5	87.4	89.5
Will not contribute	84.7	89.4	17.1	12.5	12.6	10.5

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

Table B2: Cross-sectional changes in respondents' mean psychological distress levels across waves.

	Wave 1		Wave 2				Wave 3			
Variable	**Urban**	**Rural**	**Urban**	**Rural**			**Urban**	**Rural**		
Socio-demographic characteristics	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean diff (W2-W1)-ur**	**Mean diff (W2-W1)-ru**	**Mean (SD)**	**Mean (SD)**	**Mean diff (W3-W2)-ur**	**Mean diff (W3-W1)-ru**
Sex										
Male	17.9 (5.8)	20.3 (6.3)	15.8 (5.1)	17.2 (5.6)	-2.1	-3.10	16.2 (5.6)	17.7 (6.2)	0.4	0.5
Female	19.4 (6.4)	21.3 (6.3)	16.5 (5.3)	18.2 (5.9)	-2.9	-3.1	17.2 (6.1)	18.9 (6.5)	0.7	0.7
Age group (yrs.)										
Less than 36 years	17.6 (5.6)	19.7 (6.0)	15.3 (5.1)	16.1 (5.4)	-2.3	-3.6	15.9 (5.7)	16.9 (5.9)	0.6	0.8
36-45	18.3 (5.8)	20.8 (6.0)	15.8 (4.9)	17.3 (5.5)	-2.5	-3.5	16.9 (5.9)	18.0 (6.1)	1.0	0.6
46-55	19.1 (6.5)	20.8 (6.0)	16.5 (5.0)	17.8 (5.5)	-2.6	-3.0	16.5 (5.6)	18.6 (6.3)	0.0	0.8
56-60	19.2 (6.3)	20.9 (6.3)	16.5 (5.2)	18.3 (5.8)	-2.7	-2.6	16.9 (6.0)	19.1 (6.3)	0.4	0.9
61+	21.2 (7.1)	22.7 (7.0)	17.8 (5.9)	20.0 (6.1)	-3.4	-2.7	18.3 (6.4)	19.7 (6.7)	0.5	-0.3
Marital status										

INTEGRI PROCEDAMUS

In Union	18.6 (6.0)	21.0 (6.2)	16.1 (4.9)	17.6 (5.5)	-2.5	-3.4	16.6 (5.7)	18.1 (6.2)	0.5	0.5
Formerly in Union	21.1 (6.7)	22.2 (6.7)	17.6 (5.7)	20.0 (6.4)	-3.5	-2.3	18.5 (6.7)	20.0 (6.6)	0.9	0.8
Never in Union	17.4 (5.8)	18.1 (5.9)	15.3 (5.3)	15.8 (5.6)	-2.1	-2.3	15.9 (5.6)	16.9 (6.2)	0.5	1.0
HH membership status										
Head	19.0 (6.2)	20.9 (6.4)	16.5 (5.2)	18.1 (5.9)	-2.5	-2.8	17.1 (6.1)	18.6 (6.3)	0.7	0.5
Spouse	18.7 (6.0)	21.3 (5.9)	16.2 (4.9)	17.6 (5.4)	-2.6	-3.7	16.8 (5.6)	18.2 (6.4)	0.6	0.6
Child	17.5 (6.1)	18.3 (6.2)	15.2 (5.2)	16.2 (5.7)	-2.3	-2.2	15.6 (5.4)	16.9 (6.0)	0.4	0.8
Other Relatives/non-relatives	19.1 (7.2)	20.9 (7.0)	16.5 (5.9)	17.9 (6.3)	-2.6	-3.0	16.5 (6.2)	19.3 (6.6)	0.0	1.4
Household Size										
1	19.0 (5.9)	20.7 (6.6)	16.6 (5.4)	18.2 (6.4)	-2.4	-2.5	17.0 (6.0)	18.8 (6.7)	0.4	0.6
2-3	19.0 (5.9)	20.5 (6.4)	16.2 (5.4)	17.9 (5.8)	-2.7	-2.7	17.1 (6.1)	18.8 (6.4)	0.9	0.9
4- 6	18.3 (6.3)	20.7 (6.3)	15.9 (5.0)	17.4 (5.6)	-2.3	-3.3	16.3 (5.7)	18.2 (6.3)	0.4	0.8
7+	19.1 (6.6)	21.3 (6.2)	16.8 (4.9)	17.8 (5.8)	-2.3	-3.5	17.0 (6.2)	17.3 (6.0)	0.3	-0.5

INTEGRI PROCEDAMUS

Born in Comm										
Yes	18.0 (5.8)	20.9 (6.3)	16.5 (5.5)	18.0 (5.9)	-1.5	-3.0	16.9 (6.1)	18.3 (6.3)	0.40	0.4
No	19.2 (6.4)	20.8 (6.3)	16.0 (6.0)	17.6 (5.7)	-3.2	-3.2	16.7 (5.7)	18.4 (6.4)	0.7	0.8
Religion										
None	20.1 (7.0)	21.2 (6.7)	16.9 (6.1)	18.1 (6.0)	-3.2	-3.1	17.5 (6.5)	18.6 (6.8)	0.7	0.6
Christian	18.3 (5.9)	20.0 (6.3)	15.8 (5.0)	17.3 (5.7)	-2.5	-2.8	16.7 (5.7)	18.4 (6.2)	1.0	1.2
Muslim	20.5 (6.9)	21.6 (6.1)	17.7 (5.2)	18.5 (5.6)	-2.8	-3.1	16.6 (6.6)	17.7 (6.5)	-1.1	-0.8
Traditional	21.3 (7.1)	23.2 (5.6)	21.9 (8.7)	18.8 (6.1)	0.6	-4.4	22.3 (7.7)	19.4 (6.6)	0.4	0.6
Other	19.4 (7.5)	20.4 (6.6)	19.1 (6.2)	18.5 (6.2)	-0.2	-1.8	18.9 (6.9)	14.3 (4.3)	-0.3	-4.3
Region										
Western	17.3 (5.5)	19.6 (5.7)	14.9 (4.5)	17.0 (5.4)	-2.4	-2.6	16.3 (6.3)	18.2 (7.0)	1.4	1.2
Central	21.5 (7.9)	18.8 (5.4)	15.1 (4.6)	16.7 (5.1)	-6.4	-2.1	17.5 (6.2)	18.6 (6.3)	2.3	1.9
Greater Accra	17.8 (4.6)	16.4 (4.9)	16.0 (4.7)	17.5 (4.9)	-1.8	1.1	16.3 (4.7)	17.8 (6.6)	0.3	0.3

INTEGRI PROCEDAMUS

Volta	18.8 (5.9)	18.8 (5.6)	19.9 (6.6)	19.7 (6.9)	1.1	0.9	18.9 (6.3)	19.0 (6.1)	-1.0	-0.7
Eastern	20.5 (6.7)	22.4 (6.6)	14.8 (4.6)	16.5 (5.6)	-5.7	-6	17.9 (6.0	20.1 (5.7)	3.1	3.6
Ashanti	15.9 (5.2)	18.8 (6.7)	15.7 (5.5)	16.9 (6.1)	-0.2	-1.9	15.9 (5.7)	18.0 (6.2)	0.3	1.1
Brong Ahafo	21.1 (5.8)	21.1 (5.5)	15.2 (4.7)	15.8 (4.8)	-5.9	-5.3	16.8 (6.2)	16.7 (5.9)	1.6	0.8
Northern	22.1 (7.5)	23.8 (5.9)	18.8 (5.1)	18.4 (5.7)	-4.1	-5.5	15.6 (6.1)	17.0 (6.0)	-3.2	-1.4
Upper East	17.9 (4.9)	22.1 (6.2)	18.0 (4.6)	18.8 (6.3)	0.1	-3.2	19.1 (6.4)	19.4 (6.7)	1.1	0.6
Upper West	19.1 (4.7)	21.0 (5.5)	18.9 (3.0)	20.2 (4.0)	-0.3	-0.8	22.8 (7.7)	21.2 (6.5)	3.9	1.0
Socioeconomic Status										
Ever Attended Sch.										
Yes	18.0 (5.8)	19.3 (5.7)	15.8 (5.0)	16.8 (5.6)	-2.2	-2.4	16.4 (5.7)	17.9 (6.1)	0.6	1.0
No	21.9 (7.1)	22.5 (6.3)	18.3 (5.6)	18.9 (5.8)	-3.5	-3.6	18.8 (6.8)	19.0 (6.7)	0.5	0.1
Highest Edu. Qual.										
None	20.7 (6.9)	21.7 (6.3)	17.6 (5.5)	18.3 (5.9)	-3.1	-3.4	18.4 (6.6)	19.0 (6.6)	0.8	0.7

INTEGRI PROCEDAMUS

MSLC/BECE/O' Level	17.8 (5.4)	18.7 (5.7)	15.6 (4.9)	16.5 (5.4)	-2.2	-2.3	16.5 (5.5)	17.5 (5.9)	0.8	1.1
SSCE/A' Level/Prof. Cert.	17.4 (5.6)	17.8 (5.3)	14.9 (5.0)	16.5 (5.5)	-2.5	-1.3	15.5 (5.4)	16.8 (5.7)	0.6	0.3
Teacher Training/HND/ Prof. Diploma	15.7 (4.1)	17.9 (6.0)	15.2 (4.0)	17.0 (6.2)	-0.5	-0.9	14.8 (4.1)	15.9 (5.2)	-0.4	-1.1
Bachelor's degree+	16.5 (5.2)	16.8 (5.4)	15.0 (4.5)	15.1 (5.3)	-1.5	-1.7	14.8 (4.3)	15.2 (4.7)	-0.2	0.1
Subjective Social Status										
Low	18.8 (6.6)	21.3 (6.8)	16.5 (5.4)	17.8 (6.0)	-2.3	-3.6	17.6 (6.6)	18.5 (6.7)	1.1	0.8
High	18.4 (5.8)	20.3 (5.8)	16.0 (5.1)	17.6 (5.5)	-2.4	-2.8	16.2 (5.3)	18.0 (7.0)	0.2	0.4
Very High	19.5 (6.2)	20.5 (6.0)	16.1 (4.9)	18.0 (5.8)	-3.3	-2.5	16.5 (5.9)	18.8 (6.4)	0.4	0.7
Occupational Status										
Paid Employee										
Yes	17.7 (5.4)	18.5 (5.7)	15.7 (5.0)	16.2 (5.3)	f-2	-2.3	16.0 (5.3)	17.0 (6.0)	0.3	0.8
No	19.1 (6.4)	21.0 (6.3)	16.4 (5.3)	17.9 (5.8)	-2.7	-3.1	17.0 (6.1)	18.5 (6.4)	0.6	0.6
Business Owner										

INTEGRI PROCEDAMUS

Yes	18.6 (6.2)	20.3 (6.1)	16.0 (4.9)	17.4 (5.4)	-2.6	-2.9	16.8 (5.7)	18.3 (6.1)	0.8	0.9
No	18.8 (6.2)	20.9 (6.3)	16.3 (5.4)	17.8 (5.9)	-2.5	-3.1	16.8 (6.1)	18.3 (6.4)	0.4	0.5
Farm Owner										
Yes	20.0 (6.0)	21.2 (6.3)	16.7 (5.1)	18.0 (5.6)	-3.3	-3.3	17.3 (6.1)	18.7 (6.3)	0.6	0.7
No	18.6 (6.2)	20.5 (6.3)	16.1 (5.2)	17.5 (6.0)	-2.5	-3	16.7 (5.9)	18.1 (6.4)	0.6	0.6
Household Characteristics										
Wealth Quintile										
Poorest	21.1 (7.0)	22.9 (6.0)	18.5 (4.9)	19.0 (5.7)	-2.6	-3.9	17.0 (6.8)	19.1 (6.6)	-1.5	0.1
Poor	18.8 (5.7)	19.6 (5.8)	16.2 (4.9)	17.4 (5.5)	-2.6	-2.2	17.0 (5.8)	18.2 (6.6)	0.8	0.9
Middle	16.9 (5.8)	19.4 (5.8)	16.2 (5.2)	16.4 (5.1)	-0.7	-3	16.2 (5.4)	17.5 (6.5)	0.0	1.1
Rich	19.0 (6.5)	21.1 (6.8)	15.1 (4.6)	16.5 (5.7)	-4	-4.6	18.2 (6.0)	19.2 (6.1)	3.2	2.7
Richest	18.7(5.9)	19.4 (6.3)	16.1 (5.9)	18.3 (6.5)	-2.6	-1.1	16.1 (5.9)	17.5 (5.9)	0.0	-0.8
Household Debt										
No	18.7 (6.1)	20.6 (6.2)	16.2 (5.3)	17.9 (5.9)	-2.4	-2.7	16.4 (5.7)	17.9 (6.1)	0.2	0.0

INTEGRI PROCEDAMUS

Yes	18.8 (6.4)	21.5 (6.7)	16.2 (5.1)	17.4 (5.6)	-2.57	-4.1	17.7 (6.5)	19.4 (6.7)	1.5	2.1
Household In-transfer										
No	18.3 (5.9)	20.7 (6.2)	16.1 (5.1)	17.2 (5.5)	-2.2	-3.4	16.3 (5.7)	17.5 (6.2)	0.2	0.3
Yes	19.5 (6.6)	21.1 (6.5)	16.4 (5.4)	18.4 (6.1)	-3.1	-2.7	17.4 (6.2)	19.3 (6.4)	1.0	0.9
Rent										
Yes	17.8 (5.8)	18.8 (6.0)	15.7 (4.9)	16.4 (5.7)	-2.1	-2.4	16.3 (5.7)	17.4 (6.1)	0.6	1.0
No	19.2 (6.4)	20.9 (6.3)	16.4 (5.4)	17.8 (5.8)	-2.8	-3.1	17.0 (6.0)	18.4 (6.4)	0.6	0.6
Fixed line telephone										
Yes	16.8 (6.2)	17.0 (6.9)	14.4 (5.3)	17.2 (6.5)	-2.4	0.2	15.4 (5.1)	14.6 (3.4)	1.0	-2.6
No	19.0 (6.2)	20.9 (6.3)	16.2 (5.2)	17.7 (5.8)	-2.8	-3.2	16.8 (5.9)	18.3 (6.4)	0.6	0.6
Mobile phone										
Yes	18.4 (6.1)	20.0 (6.0)	16.1 (5.2)	17.4 (5.7)	-2.3	-2.6	16.6 (5.8)	18.1 (6.2)	-0.8	0.7
No	21.3 (6.8)	22.2 (6.5)	17.8 (5.6)	19.2 (6.2)	-3.5	-3.0	20.2 (7.2)	19.9 (6.9)	1.0	0.7
Personal computer										

INTEGRI PROCEDAMUS

Yes	17.0 (5.4)	17.1 (5.8)	15.3 (4.6)	16.1 (5.3)	-1.7	-0.3	15.2 (4.8)	16.4 (5.7)	-0.1	0.3
No	19.1 (6.3)	20.9 (6.3)	16.4 (5.3)	17.8 (5.8)	-2.6	-3.1	17.1 (6.1)	18.4 (6.4)	0.7	0.6
E-commerce										
Yes	16.8 (5.8)	17.9 (5.4)	15.4 (4.2)	17.6 (5.0)	-1.4	-0.3	14.0 (4.5)	15.4 (6.1)	-1.4	-2.2
No	19.0 (6.2)	20.9 (6.3)	16.2 (5.2)	17.7 (5.8)	-2.8	-3.2	16.9 (6.0)	18.4 (6.3)	0.7	0.7
Internet										
Yes	17.4 (5.9)	17.8 (6.9)	Missing	Missing	Missing	Missing	16.1 (5.3)	16.7 (5.9)	Missing	Missing
No	19.1 (6.3)	20.8 (6.3)	16.2 (5.2)	17.7 (5.8)	-2.9	-3.1	17.4 (6.3)	18.9 (6.4)	1.2	1.2
Community Social Support										
Weak	18.8 (6.6)	21.3 (6.8)	16.5 (5.4)	17.8 (6.0)	-2.3	-3.5	17.6 (6.6)	18.5 (6.6)	1.1	0.7
Moderate	18.4 (5.8)	20.3 (5.8)	16.0 (5.1)	17.6 (5.5)	-2.4	-2.7	16.2 (5.3)	17.9 (6.0)	0.2	0.3
Strong	19.5 (6.2)	20.5 (6.0)	16.1 (4.9)	18.0 (5.8)	-3.4	-2.5	16.5 (5.9)	18.8 (7.9)	0.4	0.8

Source: Computed from Ghana Socio-economic Panel Survey Data; 2010, 2014 & 2018

INTEGRI PROCEDAMUS

University of Ghana http://ugspace.ug.edu.gh

APPENDIX C

Title: Socioeconomic Status (SES) and Psychological Distress among Urban and Rural Dwellers in Ghana

Interview Guide: (To be administered as FGDs)

To be completed by the interviewer

Section A Respondents' Background Information

1. Region of current residence of respondent: …….
2. District of current residence of respondent: ……...
3. Community type: Urban/Rural
4. Sex of respondent: Male/Female
5. Age:
6. Ethnicity:
7. Marital status:
8. Level of education completed:
9. Religion:
10. Occupation:
11. How many dependents do you have?
12. Tell me any additional information about yourself if any.
13. How long have you lived in this community (Probe whether the respondent (s) was born here, whether the respondent has lived in another community for at least six months, was it in Ghana or abroad? Why the respondent moved, why the respondent returned)

(i) Have you ever migrated to live in other places in Ghana/abroad for at least six months?

University of Ghana http://ugspace.ug.edu.gh

(ii). If never migrated, and lived here throughout, why?

OR

(iii). Is a migrant living in this community (Probe for number of years lived in this community, reasons for moving into this community, future migration intentions)

Section B ***SES and Psychological Well-being***

14. What things do you think constitute one's socioeconomic status?
15. Does SES differ between urban and rural dwellers? What are the differences in SES between urban and rural dwellers in Ghana?
16. What is your understanding of psychological well-being? (Probe for psychological well-being and their meaning)
17. How is SES linked to well-being? (Probe for how one's educational status, educational attainment, occupational status, wealth status etc influence psychological well-being).
18. Does this differ among urban and rural dwellers in Ghana? If "yes/no", explain
19. How do sociodemographic factors influence one's psychological well-being? (Probe for how one's sociodemographic characteristics such as age, sex, marital status, migrant status, religion, region of residence, household composition etc influence his/her psychological well-being).
20. Does this differ among urban and rural dwellers in Ghana? If "yes/no", explain.

University of Ghana http://ugspace.ug.edu.gh

21. What factors do you think can help improve people's well-being? (Probe for Self-rated Health, Household Debt, Household Receipt of Remittance, Household Composition, social cohesion (trustworthiness, helpfulness, alertness)
22. Now can you tell me about major events which occurred in your community in 2009, 2014 and 2018 which had a positive or negative impact on community members?

I have come to the end of the interview. Is there something else you would want to add or question you would want to ask?

Thank you for your time.

University of Ghana http://ugspace.ug.edu.gh

APPENDIX D

UNIVERSITY OF GHANA

Ethics Committee for Humanities (ECH)

Official Use only
Protocol number

PROTOCOL CONSENT FORM

Section A- BACKGROUND INFORMATION

Title of Study:	**Socioeconomic Status and Psychological Distress among of Urban and Rural Dwellers in Ghana**
Principal Investigator:	Kpadam Opuni
Certified Protocol Number	*ECH 078/ 22-23*

Section B– CONSENT TO PARTICIPATE IN RESEARCH

General Information about Research

Hello… my name is Kpadam Opuni, a doctoral researcher at the Regional Institute for Population Studies (RIPS), University of Ghana, Legon currently working on my PhD thesis on the topic: "**Socioeconomic Status (SES) and Psychological Distress among Urban and Rural Dwellers in Ghana**". The purpose of this interview is to collect data from individuals that will help in understanding how changes in socioeconomic status serve as a proxy for psychological distress and self-rated health in urban and rural areas in Ghana over time. This study will collect information on participants' sociodemographic characteristics and their knowledge of socioeconomic status characteristics in urban and rural areas. The study will further gather information on how the socioeconomic status of individuals can pose as a likely predictor of psychological distress and self-rated health. Approximately, 42 individual in-depth interviews will

University of Ghana http://ugspace.ug.edu.gh

be conducted across eight regions of Ghana. Participants for this interview will be selected conveniently and each interview session with a participant will take approximately 1 hour to complete. Interview sessions will be recorded using an audio-taped recorder with the permission of the respondent.

Benefits/Risks of the study

This study has no direct benefit to the participants who will be interviewed. However, respondents will be informed that their participation is greatly appreciated and is extremely valuable to the success of my efforts to understand the interrelationship between socioeconomic status and mental health over time. I acknowledge that the interviews will take some of the time of respondents and they may get tired, bored, or distracted in the course of the interview. During the interview, a respondent is allowed to take breaks in order to rest or attend to urgent personal activities. They are also free to decide to interrupt or discontinue the interview at any point in time. Refusing to participate or discontinuing an interview will involve no penalty to a respondent.

Confidentiality

I will not disclose any personally identifiable information about any respondent, their family, or their children to anyone outside of this study. I will keep everything that they tell me private and confidential. Names will be kept private and separate from the information they provide on a password-protected computer. All data will be reported in the aggregate only and reports developed from the study that will be disseminated will contain only aggregate-level data. Data collected for the study will be maintained in a secure location, according to standard study procedures, and will be destroyed once all reporting activities are completed.

Compensation

I acknowledge that I cannot give enough to pay for the time spent in answering my questions, but in appreciation of respondents' participation, I give a small token in the form of GHS10 worth of telephone recharge units that will be presented to the respondent at the end of the interview.

Withdrawal from Study

Participation in the study is entirely voluntary. The decision to participate or not participate will not affect anybody. If a respondent chooses to participate in this study, they are still free to refuse to answer any of the questions that may make them uncomfortable, and they also have the option to end the interview at any time. Respondents do not have to answer any question they do not want to answer. If they have any problems, or if they feel uncomfortable answering any question, they can choose to stop talking with the interviewer at any time. They can also stop the interview at any time to clarify the questions or ask to repeat something if they do not understand.

Contact for Additional Information

For additional information about the study, respondents can contact the Student Investigator:

Kpadam Opuni at the Regional Institute for Population Studies, University of Ghana, Legon.

University of Ghana http://ugspace.ug.edu.gh

Mobile: 0243141938 Email: kopuni001@st.ug.edu.gh

- If you have any questions about your rights as a research participant in this study you may contact the Administrator of the Ethics Committee for Humanities, ISSER, University of Ghana at ech@ug.edu.gh or 00233- 303-933-866.

Section C- PARTICIPANT AGREEMENT

"I have read or have had someone read all of the above, asked questions, received answers regarding participation in this study, and am willing to give consent for me, my child/ward to participate in this study. I will not have waived any of my rights by signing this consent form. Upon signing this consent form, I will receive a copy for my personal records."

_____

Name of Participant

_____ _____

Signature or mark of Participant Date

If a participant cannot read and or understand the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered, and the volunteer has agreed to take part in the research.

_____

Name of witness

_____ _____

Signature of witness / Mark Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_____

University of Ghana http://ugspace.ug.edu.gh

Name of Person who Obtained Consent

_____

Signature of Person Who Obtained Consent Date

University of Ghana http://ugspace.ug.edu.gh

APPENDIX E

UNIVERSITY OF GHANA

ETHICS COMMITTEE FOR THE HUMANITIES (ECH)

P. O. Box LG 74, Legon, Accra, Ghana

My Ref. No…ECH 078/ 22-23

February 03, 2023

Kpadam Opuni

Regional Institute for Population Studies

University of Ghana

Legon

ETHICAL CLEARANCE

(ECH 078/ 22-23)

The Ethics Committee for the Humanities (ECH) conducted a full board review and approved your protocol titled:

SOCIOECONOMIC STATUS AND PSYCHOLOGICAL DISTRESS AMONG URBAN AND RURAL DWELLERS IN GHANA

PRINCIPAL INVESTIGATOR: KPADAM OPUNI

Please note that the final review report must be submitted to the Committee at the completion of the study. Your research records may be audited at any time during or after the implementation. Any modification of this research project must be submitted to ECH for review and approval prior to implementation.

Please report all serious adverse events related to this study to ECH within seven (7) days verbally and in writing within fourteen (14) days.

This certificate is valid till February 02, 2024. You are required to submit annual reports for continuing review.

Please accept my congratulations.

Yours Sincerely,

University of Ghana http://ugspace.ug.edu.gh

Professor C. Charles Mate-Kole
ECH Chair

Cc: Dr Abu Mumuni, Regional Institute for Population Studies, UG

Dr. Lily Kpobi, Regional Institute for Population Studies, UG

Tel: +233-303933866 Email: ech@ug.edu.gh

University of Ghana http://ugspace.ug.edu.gh

APPENDIX F

Table E1: Sociodemographic distribution for Focus Group Discussion Participants

Variable	Frequency (N=90)	Percent
Sex		
Male	44	48.0
Female	46	52.0
Age group (yrs.)		
Less than 36	31	34.0
36-40	9	10.0
41-45	13	14.4
46-50	14	15.6
51-55	9	10.0
56-60	5	5.6
61+	9	10.0
Marital status		
In union	67	74.4
Formerly in union	13	14.4
Never in union	10	11.1
Religion		
None	4	4.4
Christian	48	53.3
Muslim	38	42.2
Highest Edu. Qual.		
None	35	38.9
MSLC/BECE/O' Level	23	25.6
SSCE/A' Level/Prof. Cert.	19	21.1
Bachelor's degree+	13	14.4

University of Ghana http://ugspace.ug.edu.gh

Occupational status		
Paid employee	18	20.0
Business owner	36	40.0
Farm owner	36	40.0
Locality type		
Urban	41	45.6
Rural	49	54.4
Region		
Greater Accra	24	26.7
Brong Ahafo	37	41.1
Upper West	29	32.2

Source: Computed from field focus group discussions