

**DISCLOSURE, SELF-EFFICACY, PERSONALITY, AND MENTAL HEALTH: THE  
CASE OF HIV POSITIVE WOMEN IN THE ASHANTI REGION.**

**BY**

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**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA – LEGON, IN  
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## DECLARATION

The thesis, “Disclosure, Self-efficacy, Personality, and Mental Health: The case of HIV Positive Women in the Ashanti Region” is a study submitted to the School of Graduate Studies (University of Ghana - Legon) for the award of a Master of Philosophy in Clinical Psychology. I hereby declare that apart from references cited which have been duly acknowledged, this research was conducted by me Angelina Pokua Aboagye under the supervision of the Late Dr. Samuel Atindanbila, Prof. Joseph Osafo and Dr. Angela Anarfi Gyasi-Gyamrah during the 2017/2018 academic year. This work has never been submitted in whole or part for the award of any Degree in the University of Ghana or elsewhere. Henceforth, I do take complete responsibility for any shortcomings in relation to this work.



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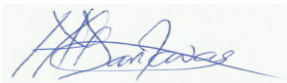


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## **DEDICATION**

With phenomenal gratitude and affection, I dedicate this dissertation first to the Almighty God for His loving-kindness towards me. And to my parents Mr. & Mrs. Aboagye and Joseph Johan Rouquart my grandpa for their unflagging love and care, motivation, support for me.

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**TABLE OF CONTENT**

<b>CONTENT</b>	<b>PAGE NUMBER</b>
DECLARATION.....	i
DEDICATION.....	ii
ACKNOWLEDGEMENT.....	iii
TABLE OF CONTENTS.....	iv-vi
LIST OF TABLES.....	vii
LIST OF FIGURES.....	viii
ABSTRACT.....	ix
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1 Background of the Study.....	1-7
1.2 Statement of the Problem.....	7-8
1.3 Aims and Objectives of the study.....	9
1.4 Relevance of the Study.....	10
CHAPTER TWO.....	11
LITERATURE REVIEW.....	11
2.1 Theoretical Framework .....	11
2.1.1 Rational Choice Theory.....	11-13
2.1.2 Social Cognitive Theory.....	13-14
2.1.3 Big Five Theory.....	14-17
2.2 Review of Related Studies.....	17
2.2.1 Disclosure of HIV/AIDS and Mental Health.....	17-20
2.2.2 Self-Efficacy and Mental Health.....	20-24
2.2.3 Personality and Mental Health.....	24-27
2.3 Rationale for the Study.....	27-30
2.4 Statement of Hypotheses.....	31

2.5 Research Questions.....	32
2.6 Operational Definitions.....	32
CHAPTER THREE.....	33
METHODOLOGY.....	33
3.1 Population, Sample and Sample Size.....	33-35
3.2 Research Measures/Instruments.....	35
3.2.1 Demographic Information.....	35
3.2.2 Measure of Self-Efficacy.....	35-36
3.2.3 Measure of Personality.....	36-37
3.2.4 Measure of Mental Health.....	37-39
3.2.5 Sample Questions in the Interview Guide for Qualitative Study.....	39
3.2.5.1 Semi-structured Interview Guide.....	39
3.3 Research Design.....	39-40
3.3.1 Sampling Technique.....	40
3.3.2 Inclusion Criteria.....	41
3.3.3 Pilot Study.....	42-43
3.3.4 Qualitative Data Analysis.....	43-44
3.4 Procedure.....	44-45
3.4.1 Ethical Consideration.....	45-46
CHAPTER FOUR.....	47
RESULTS.....	47-50
4.1 Preliminary Analysis.....	51
4.2 Test for Normality.....	52-53
4.3 Hypotheses Testing.....	53-66
4.4 Qualitative Findings.....	66-75
CHAPTER FIVE.....	75
SUMMARY, DISCUSSION, RECOMMENDATIONS AND CONCLUSION.....	75
5.1 Summary of Findings.....	75-77

5.2 Discussion of Findings.....	77
5.2.1 Findings on Self-Efficacy and Mental Health.....	77-78
5.2.2 Findings on Personality and Mental Health.....	78-80
5.2.3 Findings on Disclosure of HIV/AIDS and Mental Health.....	80-83
5.3 Limitations Recommendations.....	83-84
5.3.1 Recommended Research and Theory.....	84-85
5.4 Conclusion.....	85-86
REFERENCES.....	87-102
APPENDICES.....	103
Appendix A.....	103-107
Appendix B.....	108
Appendix C.....	109
Appendix D.....	110
Appendix E.....	111-113

**LIST OF TABLES**

<b>LIST OF TABLES</b>	<b>PAGE NUMBER</b>
Table 3.1: Reliability Statistics (Cronbach's Alpha) for Scales Piloted (N = 25).....	42
Table 4.1: Summary of Demographic Characteristics of Respondents – (N = 320).....	47-49
Table 4.2: Reliability Statistics (Cronbach's Alpha) for Scales Used.....	51
Table 4.3: Summary of the Means, Standard Deviation, Skewness and Kurtosis (N = 320).....	51-52
Table 4.4: Summary of Pearson Product Moment Correlation (Matrix) of Scales.....	53
Table 4.5 Summary of Regression Analysis for the variance of Personality traits in mental health (N = 320)...	55
Table 4.6: Summary of One-Way ANOVA indicating Differences in Mental Health Symptoms based on Age (N = 320).....	58
Table 4.7: Summary of Post Hoc Tests (Multiple Comparisons) for Differences in Mental Health Symptoms based on Age (N = 317).....	59
Table 4.8 Summary of Independent <i>t</i> test indicating Differences in Mental Health Symptoms based on Point of Awareness (N = 320).....	61
Table 4.9 Summary of Independent <i>t</i> test indicating Differences in Mental Health Symptoms based on Disclosure of HIV/AIDS status (N = 320).....	62
Table 4.10: Summary of One-Way ANOVA indicating Differences in Mental Health Symptoms based on Education (N = 320).....	63
Table 4.11: Summary of Post Hoc Tests (Multiple Comparisons) for Differences in Mental Health Symptoms based on Education (N = 320).....	64
Table 4.12: Summary of Status Disclosure of Qualitative study sample – (N=35).....	66-67

**LIST OF FIGURES**

<b>LIST OF FIGURES</b>	<b>PAGE NUMBER</b>
Figure 4.1: Means plot for Differences in Mental Health Symptoms based on Age.....	9-60
Figure 4.2: Means plot for Differences in Mental Health Symptoms based on Education.....	65

## ABSTRACT

This study has investigated disclosure, self-efficacy, personality, and mental health: the case of HIV positive women in the Ashanti Region. A sequential transformative mixed methods design was used. Three theories served as the backbone of the study; The Rational Choice, Social Cognitive and The Big Five Theories. Using a total of 320 women living with HIV (WLHIV), a significant positive correlation exists between self-efficacy and mental health symptoms among WLHIV. Personality traits account for 37.5% variance in mental health symptoms among WLHIV. Of these, neuroticism has the highest (17.6%) variance in mental health. Mental health problems fall as age increases among WLHIV whereas those who knew their status during or after pregnancy have high and poor mental health symptoms than those who knew before pregnancy. Those who have disclosed also have low mental illness symptoms than those who have not. Interview revealed that 37.143% have disclosed to their partners only, 14.286% have disclosed to other family other than their partners only, 2.857% have made disclosure to their friends only while the rest of 25.714% have made disclosure to others. While 20% have not disclosed. Concern for family, directive/admonition and peace of mind were the main factors which influenced disclosure of statuses. Emotional support and kindness, access to health care, relationship termination and abandonment, emotional abuse, stigma and discrimination factorized the experiences of women after disclosure of their status. Perceived stigma, fear of rejection and disapproval, fear of blame and self-reliance got exposed as factors which hindered status disclosure.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Health has been a very important phenomenon in human history. It is for that matter said that, a sound mind lives in a sound body. This anonymous statement alludes to the fact that, physical health and mental health are strongly related. However, a number of psychological factors makes physical illness more problematic than it should be, especially in cases where medications or treatment does not exist for its total healing or recovery but effective management. HIV/AIDS has over the years remained one of the most highly stigmatized disease in the world despite various educations and sensitization programs for the public. People living with HIV (PLWHIV) suffer negative labelling by society. Negative labelling by society has tremendous effect on one's emotions and self-image in general and therefore has the potentiality of negatively affecting one's mental health status (Aseidu & Myers-Bowman, 2014).

Women living in African settings such as Ghana have been known to be at greater risk of negative labelling when living with mental illness or HIV and thus pay higher prices for such negative labelling. HIV disease is considered a taboo in the Akan society of Ghana. Euphemisms such as “yarebone” and “adwamanyare” meaning “bad disease” and “promiscuous disease” respectively are used to negatively label HIV disease (Agyekum, 2010). Examples of such prices paid for disclosure of HIV status include, losing one's children to the external family or facing divorce when labelled as an “ashawo” meaning prostitute, especially in the case of the HIV positive women and job loss when tagged as a “witch” due to mental illness (Asiedu & Myers-Bowman, 2014).

Therefore, the HIV positive mothers (pregnant and postpartum period) in such a setting have challenges in their decisions of disclosure of their statuses.

One's self-efficacy as well as self-esteem have been known to be affected when one is negatively labelled. Self-efficacy is the belief in one's capabilities to organize and execute the course of action required to manage a prospective situation. HIV positive women therefore have their emotions and self-images affected by negative labels which have influence on their mental health. According to Bandura (1997), self-efficacy has an essential role in the regulation of emotional states. It has the potential of helping one deal with threatening situations as manageable, which helps one to feel less stressful. It can therefore be said that, HIV positive women with high self-efficacy are likely to be less stressed and depressed which will have a positive impact on their mental health.

Self-efficacy is a psychological construct often conceptualized as "a belief or confidence in one's own capabilities to control, organize, and execute a task or specific behavior in order to achieve a particular goal or outcome" (Bandura, 1997). Bandura theory explains that self-efficacy is altered through four experiences: 1) mastery of experience; 2) physiological and affective states; 3) verbal persuasion; and 4) vicarious experience. Mastery of experience is bound on a person's skill at a task, which improves with progressive exposure or practice (Kennedy, Rogers & Crossley, 2007). Physiological (e.g. less pain) and affective (e.g. good mood) states can provide reinforcement for a patient's health behaviors because behaviors that lead to pleasant or desired states are more likely to occur. Verbal persuasion is established when others provide support and boost confidence in personal ability. Vicarious experience is based on the theory of social learning which theorizes that learning happens through observation and the modeling of others (Brannon & Feist, 2004). Marks (2001) also associated self-efficacy with perseverance, attitude, mood, coping ability and effort which are vital to consider in implementing an intervention program particularly for chronic

disease like HIV/AIDS. While typical intervention plans usually provide relevant health information and advocate for positive behavioral changes, a patient's self-efficacy for managing HIV/AIDS is an essential factor to be considered (Jones, 2006).

Earlier research is in support of the idea that self-efficacy is susceptible and boosts the usage and effectiveness of self-management skills (Marks, Allegrante & Lorig, 2005a; Marks, Allegrante & Lorig, 2005b; Zhou, Li, Qiao, Shen & Zhou, 2017). Self-management programs which are health related that focus on boosting self-efficacy depict a broad range of behavioral health outcomes and positive affective for chronic disease such as HIV/AIDS. For example, Aglen, Hedlund and Landstad (2011) who conducted a study among 118 persons living with arthritis, chronic obstructive pulmonary disease, diabetes, mental health difficulties and stroke reported that, by improving self-efficacy through vicarious experience, problem solving, decision making, action planning, and resource utilization modeling tasks significant improvement in health was observed. For instance, they reported improvements in coping strategies, exercise frequency, symptom management, mobility, fewer hospital visits, and fatigue.

Personality has over the years been an interesting aspect of the individual to be explored. Studies have therefore shown that personality trait of an individual can either be a strength or weakness factor in the development of mental health. Personality refers to the individual differences in characteristic patterns of thinking, feeling and behaving (American Psychological Association [APA], 2015). Some individuals can be said to be more prone to mental illness development than others (Hampson & Friedman, 2008). Therefore, it is expected for different mothers living with HIV to think, feel and behave differently from one another in spite of similar conditions and settings. It is therefore interesting to figure out which personality type is an advantage or a

disadvantage to the development of mental health among pregnant and postpartum period women living with HIV in the Ashanti Region of Ghana.

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) of the American Psychiatric Association, personality traits are defined as the enduring patterns of perceiving, thinking, and relating to the environment and about oneself that are displayed in a wide range of personal and social context (American Psychiatric Association, 2010). An individual's personality has been found to predict how that individual reacts to other people, how he speaks and resolves challenges and how he is affected by stressful events in his environment (Schacter, Gilbert & Wegner, 2009; Shirazi, Khan & Ansari, 2012).

Trait theorists in Psychology using factor analysis acknowledged five personality traits they called the big five personality traits (John, Nuaman & Soto, 2008; Rothmann & Coetzer, 2003). They maintained that these five traits characterize the fundamentals of personality. The five traits are: openness to experience, agreeableness, neuroticism, conscientiousness, and extraversion. These traits have been associated to various characters of individuals and have been linked with mental health. For instance, McCrae and Cost (2008) debated that neuroticism was linked to irrational beliefs, low self-esteem, and pessimistic attitude. Extraversion was connected to having many friends, having enterprising vocational interests, participation in sports, and social skills. Furthermore, they opined that openness to experience was linked to diverse vocational interests, having many different hobbies, and having interest in travels.

Furthermore, agreeableness has been associated to having inoffensive language, having forgiving attitudes, and beliefs in cooperation (Aboaja & Duggan, 2011). With respects to conscientiousness the research related it to making long term plans, having leadership skills, technical expertise and

organized support network. Amongst these five factors, neuroticism is found to be significantly correlated with psychopathology particularly personality disorder (Glomez, Krings & Bangerter, 2008). It has been maintained that our feelings, thinking, and behavior as well as our unique individuality contribute more to our mental health. For instance, Hampson and Friedman (2008) and Wood and TARRIER (2017) both argue based on personality traits that some people are more likely to develop mental health problems than others.

World Health Organization defined mental health as a state of wellbeing whereby a person realizes his or her own capabilities and is able to cope with the normal stresses of life. Is able to work productively and fruitfully and able to contribute meaningfully to his or her community (WHO, 2010). Shirazi, Khan and Ansari (2012) points that mental health entails the ability of an individual to enjoy life and have a balance between life activities and efforts to achieve psychological resilience. WHO revealed that 12% of global diseases were as a result of mental health problems and that by the year 2020 the burden of mental health problem will further increase by nearly 15% and this will lead to a loss of disability adjusted life years to illness. Young adults in developing countries seem to be the most prone (WHO, 2013).

HIV/AIDS has been found to be a significant cause of disability and death especially in low and middle-income countries (WHO, 2013). The national prevalence rate of HIV/AIDS in Ghana was 1.69% by first quarter 2018 (Ghana AIDS Commission, 2018). From that report 273,403 persons live with HIV/AIDS currently in Ghana with the ration 3:2 for females and males respectively (60% females and 40% males). Of this, 241,697 (88.4%) are adults and 31,706 (11.6%) children. Incidence rate for HIV/AIDS is estimated at 0.08%, with 7,016 new infections and 3,005 AIDS-related deaths recorded in the first quarter 2018. Among those with HIV/AIDS, the report estimates

that approximately 9.4% are pregnant women. A foot note reads that, ‘this include both those who are previously aware of the HIV/AIDS positive status and those who are newly diagnosed.’

Of the persons living with HIV/AIDS, 25699 are pregnant women (Ghana AIDS Commission, 2018). Out of these HIV positive pregnant women, 16,961 representing 66% received anti-retroviral drugs as either prophylaxis treatment. More so, the number of HIV exposed babies screened for the virus in various facilities was 2,878 with 8% positive. These HIV statistics among pregnant women are so alarming, especially knowing that there has been a close association between HIV/AIDS and mental health. Mental health challenges are usually linked with increased risk of HIV infections while some others occur as a direct consequence of HIV infection (Feteke, Antoni, Duran, Kumar & Schneiderman, 2009; Sakitey, 2010).

To be able to curb the current national incline of HIV prevalence rate, the mental health of the pregnant and postpartum period women living with HIV needs to be given much attention. It has been brought to the limelight that, PLWHIV who have mental health challenges indulge in behaviors such as being non-adherent to Anti-Retroviral Therapy (ART) and poor breastfeeding practices which put their lives at risk as well as others (children and spouses) (Cook et. al., 2002; Bangsberg et al., 2001 & Pence, 2009).

Apparently, no thorough study has been done in the Ashanti Region which examines all of these three influential factors (disclosure of status, self-efficacy and personality) in relation to mental health of pregnant/postpartum period women living with HIV. Most of the known studies done in this area employ only single factor (e.g. only disclosure of status or only self-efficacy) on the mental health of PLWHIV living in the Ashanti Region. It is therefore in the interest of this study to figure out and explore how these factors (disclosure of status, self-efficacy, and personality)

singularly as well as interactively with each other influence HIV positive pregnant and postpartum period women's mental health in the Ashanti Region.

## **1.2 Statement of the Problem**

Interventions such as the Operation 90-90-90, Option B<sub>+</sub>, and the Treat-all policy, have been developed in an attempt to curb the prevalence rate of HIV/AIDS in Ghana which have however been insufficient and inefficient to meet target of decline in HIV prevalence (Sakitey, 2010). In 2016, Ghana had an increased in HIV prevalence rate. This has been exposed in the analysis of the national HIV Sentinel Survey (HSS) in 2014, 2015, and 2016 depicted by 1.47% in the 2014 survey, 1.8% in the 2015 survey but 2.4% in 2016 (HSS, 2016; HSS, 2017). In addition to that, the 2017 HSS reported a significant prevalence increment in the Ashanti Region with a rate of 3.2% which is the highest compared to the other regions in Ghana. This increment of prevalence rate in the Ashanti Region positions the Region as the second highest in 2016 and the highest in 2017 in the HSS placement in Ghana (NHARCON, 2018).

The Operation 90-90-90 is an intervention which is in three (3) folds. First 90 depicts that 90% of all people living with HIV will know their status. Second 90 stands for 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy and last 90 symbolizes that 90% of all people receiving antiretroviral therapy will have viral suspension. This three-fold 90% target is to be met by the end of the year 2020. The Option B<sub>+</sub> was also introduced as a policy for HIV positive pregnant women who although had high CD<sub>4</sub> count to continue taking their antiretroviral drugs after delivery. Lastly, the Treat-all policy seeks to enroll all positive diagnosed HIV clients on ART irrespective of HIV stage or CD<sub>4</sub> count level (United Nations [U.N], 2016). All these policies implemented failed to bring down the HIV prevalence rate in Ghana in 2016.

Meanwhile these targets are catapult to end the AIDS epidemic by the year 2030 (The joint United Nations Program on HIV/AIDS [UNAIDS], 2014).

Hence, this is a wakeup call to dig up findings which inhibit the potential efficacies of all these policies especially in the Ashanti region. Absence of such studies have failed to enlighten stakeholders of HIV prevention on the importance of these factors (status disclosure, self-efficacy and personality) on mental health of clients and its implications on HIV declination. This study therefore tops off other close related studies regarding the disclosure of status, self-efficacy, personality and mental health cases of HIV positive women in the Ashanti region.

The study sees the need for attention to be given to the individual (HIV positive client) who is the end user of all these potential policies. There would be imprecision of these policies implementation since the mental health care delivery to the HIV patients is not holistically approached. Therefore, there is a recognized gap between the end users (HIV positive clients) and policies which boils down to incapacitate clients to abide by all these good health protocols, such as failure to adhere to medication and good breastfeeding protocols. When the individuality differences of HIV positive women are understood and addressed, and policies made client-specific, there is the likelihood of improving on the prevention of transmission of virus from mother to child as well as to sexual partners which will help in the decrease of prevalence rate in Ghana.

### **1.3 Aims and Objectives of the Study**

The main aim of the study is to analyze the status disclosure, self-efficacy, personality, and mental health: the case of HIV positive women in the Ashanti region. The specific objectives are to:

- (1) examine the relationship between self-efficacy and mental health of women living with HIV.
- (2) access the variance personality traits and self-efficacy have on mental health of women living with HIV.
- (3) figure out the role of demographic variables such as age, point of awareness of HIV/AIDS positive status, disclosure, education and marital status play in mental health of women living with HIV.
- (4) explore the experiences of women living with HIV after disclosure as well as factors that hinder some from disclosing their status.

### **1.4 Relevance of the Study**

This study targeted HIV positive (HIV+) pregnant and postpartum women who are prone to mental health challenges to help provide holistic therapy which will be client-specific for them. Moreover, the study serves as a guideline in drawing effective measures for combating mental illness among HIV+ pregnant and postpartum women based on their specific personality traits. It throws more light on the importance of enhancing self-efficacy among HIV+ pregnant and

postpartum period women. Thus, the efficacy of disclosing one's status could also be increased among pregnant and postpartum period women living with HIV. In addition to the aforementioned relevance, is to support the promotion of mental health to empower women living with HIV. This will in turn serve as a check tool against HIV prevalence rate inclination in the Ashanti region and Ghana as a whole.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Theoretical Framework

For the purposes of this present study, three theories were used as a framework to empirically examine status disclosure, self-efficacy, personality, and mental health: the case of women living with HIV in the Ashanti Region. The Rational Choice Theory (Scott, 2000), the Social Cognitive Theory (Bandura, 2000), and the Big Five Theory (Digman, 1990) were profitably employed as the framework of this study.

##### 2.1.1 Rational Choice Theory – RCT (Scott, 2000)

The rational choice theory views “all human actions as fundamentally rational in character and that people calculate the likely cost and benefits of any actions before deciding what to do” (Scott, 2000, p.9). The theory does not give recognition to the existence of any other action besides a purely rational and calculated one. It debates that, “social action can be seen as rationally motivated, as instrumental action, even though they may appear irrational or non-rational” (Paternoster, Jaynes & Wilson, 2017, p.848). Central to the rational choice theory, there is an assumption that, complex social phenomenon could be explained in terms of the individual basic choices of action. This is termed as “methodological individualism”. It explains that, individual human action is the basic unit of social life. As a result, to explain social institution and social change is to show how they arise as a result of the action and the interaction of individuals.

In the rational choice theory, “individuals are seen as motivated by the wants or goals that express their preferences. They act within a certain time and space based on their knowledge of the

conditions under which they are acting” (Zafirovski, 2012, p.11). According to Scott (2000), persons must predict consequences of alternative courses of action and determine the best option that offers greatest pleasure. The rational choice theory also perceives social interactions as social exchange, modelled on economic action. The cost or punishment and benefits or rewards, gained from an action, function as source of motivation for people. Individuals are usually motivated by the potential benefit in pursuing a particular course of action (Lovett, 2006). Rational action is thus seen as “psychological conditioning.” Pedriana (2005, p.349) reasoned that, “human behavior is determined and shaped by rewards and punishments encountered. Individual’s behavior is reinforced via rewards and punishments.”

The relevance of this theory to this present research is the fact that disclosure of one’s health condition is largely a function of a rational choice (Collyer, Willis, Franklin, Harley & Short, 2015). Collyer et al. (2015) suggest that people do not just disclose their health status for no reason, it is for reasons such as emotional and cognitive support. Brown, Serovich, Kimberly and Bubu (2015) reported in this regard that, disclosure of HIV/AIDS status to a confidant is very important in Ghana because it helps the patient in ways such as adherence to medication and safe practices. Indeed, they reported that those who disclose are able to have someone care about their wellbeing constantly in terms of medication and safer sexual practices. It has also been reported that some patients living with HIV/AIDS choose to disclose their status so that they gain mutual trust and encouragement from the confidant (Bruce, Kahama, Bauermeister & Nichols, 2015). However, Brown et al. (2015) also reported that some person’s living with HIV/AIDS choose not to disclose because they realize that the cost of immediate shock from the other party, risk of spreading rumor about their health condition as well as stigma associated with HIV/AIDS in Ghana have made

some person's living with HIV/AIDS decide not to disclose. This therefore suggests that the desire to disclose or not to disclose HIV/AIDS status is largely a function of rational choice.

### **2.1.2 Social Cognitive Theory – SCT (Bandura, 2000)**

The social cognitive theory states that social behavior is a function of environmental influences and a person's cognition or thought processes (Isik, Ulubey & Kozan, 2018). Haegele, Kirk and Zhu (2018) points that the environmental influences on the individual in any social activity is not just through observational learning but also through rewards and punishment. Thus, in the event of observational learning and rewards or punishment a person's thought processes interplay to help them choose a particular course of action. This social cognitive theory is based on a comprehensive understanding approach to human action. It explains the interaction of society and the individual and that, the society influences the individual and vice-versa. Unlike the social learning theory (Bandura, 1989), the social cognitive theory acknowledges the importance or the role of self-efficacy on one's action (Bandura, 2000). The social cognitive theory therefore employs constructs as reciprocal determinism and self-efficacy.

According to Bordens and Horowitz (2008), reciprocal determinism explains the tricyclic interaction and influence of an individual (eg. HIV positive client), environment (eg. societal perception of HIV and attitude towards PLWHIV) and action or behavior (eg. disclosure and non-disclosure of status, social withdrawal, having low self-efficacy, being depressed, anxious or stressed). Self-efficacy has also been explained as one's (eg. HIV positive pregnant or postpartum period woman) level of confidence of ability to perform a behavior (eg.; adhering to medication, following good breastfeeding protocols, practicing of safe sex) successfully which is influenced

by personality factors and environmental factors (LaMorte, 2016). The social cognitive theory addresses not only how a particular trait is acquired, but the motive behind it (Rankin, Kuznesof, Frewer, Orr & Knox, 2016).

Various researchers have used the social cognitive theory as a theoretical underpinning to investigate self-efficacy in a variety of health and social settings (Chang, Yuan & Chen, 2018; Edwards, Jepson, McInnes, 2018; Sener & Simete, 2016). For example, Sener and Cimete used the social cognitive theory in their investigation of maternal self-efficacy and child behavior. In health, it is apparent that a person's behavior including self-efficacy and adopted traits is a function of what they have learnt from the environment and their cognition or thought processes. Self-efficacy of women living with HIV/AIDS therefore was a function of the environmental influences such as observation of other women living with HIV/AIDS, rewards or punishment from the society as well as their own thought processes.

### **2.1.3 Big Five Theory (Digman, 1990)**

The Big Five Model or Five Factor Model (FFM) is a theory that describes people's personality traits and their likely course of action. According to DeYoung (2015) the Big Five theory is one of the extensively researched theories in the field of personality. It has five distinct factors as central to personality which include; Conscientiousness, Openness to Experience, Extraversion, Neuroticism and Agreeableness. It is more easily remembered acronymically as "OCEAN." These various aspects of personality define individuals and how they live their course of life, as well as adapt or adjust to issues. Under each of the five personality traits, a number of related sub-factors are also listed. Goldberg (1993) explained into detail what each of these five traits mean:

*Openness to Experience:* (Inventive/Curious versus Consistent/Cautious). This trait features characteristics such as imagination and insight, and those high in this trait also tend to have a wide-range of interests. These people have appreciation for adventure, art, emotion, unusual ideas, variety of experience, and curiosity. Openness mirrors creativity, the degree of intellectual curiosity, and a preference for novelty and variety a person has. It is also described as the extent to which a person is imaginative or independent, and depicts a personal preference for a variety of activities over a strict routine. High openness can be perceived as unpredictability or lack of focus (Matthew, Deary & Whiteman, 2003). Furthermore, persons with high openness trait are said to pursue self-actualization precisely by seeking out intense, euphoric experiences, such as gambling, skydiving, and living abroad. (Matthew et al., 2003). Again, Specht, Egloff and Schmukle (2011) pointed out that, high scorers on the openness to experience are likely to be very creative and amenable to new ideas and activities. They typically possess a quality and fulfilling internal life, habitually spending their time thinking about concepts and contemplating on artwork recently seen or intellectual theories lately learned about. Conversely, Poropat (2009) argued that those with low openness seek to gain fulfilment through perseverance, and are characterized as pragmatic and data-driven (sometimes even perceived to be dogmatic and closed-minded).

*Conscientiousness* (efficient/organized versus easy-going/care). This trait describes a tendency to be dependable and organized, show self-discipline, aim for achievement, prefer planned and act dutifully rather than spontaneous action (Matthew et al., 2003). High conscientiousness is often seen as obsession and stubbornness. Again, Specht, Egloff and Schmukle (2011) explained that high scorers on conscientiousness tend to be very dependable and hard working. You are expected to see a high scorer creating many to-do lists and breaking down large goals into attainable steps. They rely much on organization and take a methodical approach

to accomplish their goals. They are willing to devote massive amount of effort to succeed. Low conscientiousness is linked with exuberance and flexibility, but such personality may also appear as unreliable or careless (Poropat, 2009).

*Extraversion* (outgoing/energetic versus solitary/reserved). Individuals with this trait demonstrate liveliness, talkativeness, assertiveness, positive emotions, surgency, sociability and the tendency to seek stimulation in the company of others. High extraversion is often characterized as domineering and attention-seeking. Low extraversion is linked to having a reserved, reflective personality, which can be perceived as self-absorbed or being aloof (Matthew et al., 2003).

*Agreeableness* (analytical/detached versus friendly/compassionate). This trait involves a predisposition to be cooperative and compassionate other than being suspicious and hostile towards other people. It is as well a degree of one's helpful and trusting nature, and whether a person is generally well-tempered or not. High agreeableness trait is often perceived as being naive or compliant. Low agreeableness personalities are usually challenging or competitive persons, which can be seen as untrustworthy or argumentative (Matthew et al., 2003).

Matthew et al. (2003) also discussed *Neuroticism* (sensitive/nervous versus secure/confident) as a trait which involves a possibility to exhibit unpleasant emotions easily, such as anxiety, anger, vulnerability and depression. Neuroticism also refers to the degree of emotional stability and impulse control and is sometimes referred to by its low pole emotional stability. A high need for stability presents as a stable and calm personality, but can be seen as "uninspiring and unconcerned." A low need for stability causes "a reactive and excitable personality, usually very dynamic persons, but they can be observed as "unstable or insecure" (Matthew et al., 2003).

The big five theory relates to the current research in the area of the effect of personality disorders on faith, hope and forgiveness among Christians. For one thing, we can say that, those who are open to experience would be forgiving; such ones would pursue self-actualization by also sticking to their convictions. However, those who are not open to experience might stick to old patterns of doing things and might be cautious or paranoid about the things going on around them. Moreover, those who are conscientious might be very hopeful since these ones according to Poropat (2009) are hardworking and they keep moving. Moving on is a function of hopefulness. However, less conscientious people might be less on hope. Again, those who are highly extraverted could develop a dependent personality disorder since they think about sociability and pleasing many others most of the time. However, those who are low on extraversion could also develop an antisocial personality disorder or avoidant personality type since they become withdrawn from society. Low agreeableness too could be present in people who are narcissistic since they focus on themselves rather than others as well. But neurotic people could suffer much stress, anxiety and depression which is present in borderline, schizotypal and schizoid personality disorder.

## **2.2 Review of Related Studies**

### **2.2.1 Disclosure of HIV/AIDS and Mental Health**

Chaudoir, Fisher and Simoni (2011) investigated the disclosure process model to understand disclosure in HIV/AIDS. They reported that disclosure is an essential component of HIV/AIDS

prevention and treatment efforts. Reviewing 210 articles which investigated a number of HIV patients in the light of the disclosure process model across the United States, African countries and in European countries, they reported that, disclosing illness involves antecedent goals. These antecedent goals begin with decisions such as why and benefits of disclosure, the disclosure event itself, mediating processes and outcomes, and a feedback loop. This finding indeed supports the rational choice model which is used as the theoretical framework for this study (Scott, 2000).

Furthermore, Santamaria, Dolezal, Marhefka and Mellins (2011) investigated the psychosocial implications of HIV seropositive status disclosure to youth with perinatal acquired HIV. They were concerned with the prevalence and timing of HIV disclosure to adolescents and the associations between the timing of disclosure and psychological functioning and other behavioral consequences. Using 196 youths and their caregivers, Santamaria et al. reported that, youths who had their HIV status been told to them were significantly less anxious or had less psychological problems than those who had not been told of their status. More so, youths who had the knowledge of their status for longer periods expressed higher intentions to disclose to their potential partners.

Vreeman, Scanlon, Marete, Mwangi and Nyandiko (2015) examined the characteristics of HIV-infected adolescents enrolled in a disclosure intervention trial in Western Kenya. Using 285 caregivers of children with HIV/AIDS, Vreeman et al. (2015) found that caregivers were more likely to disclose the child's HIV-positive status to him/her if the child knew about the parents. Again, caregivers of disclosed children testified significantly more positive views about disclosure compared to caregivers of non-disclosed children, who expressed fears of disclosure related to the child being too young to understand (75%), potential psychological trauma for the child (64%), and stigma and discrimination if the child told others (56%). Additionally, many of the children

scored within normal ranges on screenings for emotional and behavioral difficulties, quality of life and, depression, and did not vary by whether or not the child knew his/her HIV status.

Thompson, Havenga and Naude (2015) investigated the health literacy needs of women living with HIV/AIDS. These researchers emphasized that, women in Sub-Saharan Africa are disproportionately affected by the virus and constitute 60% of the total HIV/AIDS infections in this region. Objectives of their study was to explore and describe the health literacy needs of women living with HIV. Using qualitative explorative research design, eight women living with HIV/AIDS were sampled purposively and interviewed. Discovery was, that the women expressed a need to improve their knowledge about HIV/AIDS in order to have self-efficacy. The knowledge they needed ranged from basic pathophysiology about HIV/AIDS, to the impact of HIV/AIDS on their health, to an awareness of the modes of HIV transmission and methods of protecting others from being infected. Other significant health literacy needs related to correct antiretroviral use, self-care as well as the need for self-disclosure and psychosocial skills to build and maintain their relationships.

Lam, Naar-King and Wright (2017) investigated social support and disclosure as predictors of mental health in HIV-positive youth. Using a sample of 66 youths living with HIV/AIDS between the ages of 16 and 25, Lam et al. (2017) reported that these youths scored above the cutoff for clinically significant mental health symptoms, suggesting their need for mental health services. Mental health was measured using the Brief Symptom Inventory (BSI). Lam et al. also reported that, lower social support, higher viral load had a significant positive correlation with mental health. However, disclosure had a negative relationship to mental health. In fact, regression analysis done showed that, viral load, social support and disclosure predicted 32% of the variance in mental health symptoms.

Comer, Henker, Kemeny and Wyatt (2018) took the study of disclosure in mental health even further. Comer et al. (2018) reported that, women who disclosed their illness had enhanced health status. This first finding was based on the use of US samples. However, in a follow up study where people from ethnically diverse backgrounds were included (N = 176), Comer et al. reported that based on the stigmatization that accompanies HIV/AIDS infection, illness disclosure predicted poorer mental health. In fact, a third follow-up using Latina women also showed that disclosure of HIV/AIDS is associated to higher levels of psychological distress, depression, and pain.

Moreover, Rodkjaer, Sodemann, Ostergaard and Lomborg (2011) earlier had similar findings to that of Comer et al. (2018) who found among diverse ethnic groups that because of high rates of stigma, disclosure had severe impact on mental health. Rodkjaer et al. (2011) reported that the decision whether to disclose or not alone was a significant stressor for people living with HIV/AIDS and taxed their coping strategies significantly. Eventually, disclosing health status to a confidant did not relieve persons living with HIV/AIDS of the stress they endured.

### **2.2.2 Self-Efficacy and Mental Health**

Lee (2011) explored the predictors of antiretroviral adherence self-efficacy among people living with HIV/AIDS who use illicit drugs. 520 persons living with HIV and using illicit drugs were used from diverse ethnic backgrounds. It was found that self-efficacy was a higher predictor of adherence to antiretrovirals (ARV). Further, those who inject cocaine daily and being homeless, they significantly had lowered adherence to antiretroviral medications. In the end self-efficacy was an important predictor of mental health such that as self-efficacy rises, mental health symptoms fall and as self-efficacy lowers mental health symptoms rises.

Miller (2010) also examined the role self-efficacy, mindfulness and optimism plays in the management of HIV/AIDS. Their main aim was to investigate the extent to which mindfulness, personal meaning, and dispositional optimism are associated with self-efficacy for the management of a chronic disease among 57 people living who were with HIV/AIDS. Results indicated that self-efficacy accounted for 39% of variance in managing HIV/AIDS. This happened after controlling for the effects of age and gender.

Chesney, Ostergaard and Sodemann (2013) investigated HIV-infected individuals with high coping self-efficacy and their mental health. Chesney et al. agreed with Biswas (2007) who emphasized that one sure way to promote wellbeing among HIV/AIDS persons is to enhance their self-efficacy. In Chesney et al.'s initial study, they found that having effective ways to cope helps HIV-infected persons to maintain a good psychological and physical wellbeing. In their phase two aspect of the study, these researchers investigated the relationship between coping self-efficacy levels using the coping self-efficacy scale, HIV status disclosure and depression among people of Danish origin. Using 304 HIV-infected individuals and the Beck Depression Inventory to assess depression, Chesney et al. found that self-efficacy has a significant negative correlation with depression. Besides, those who scored higher on self-efficacy scores were able to live openly compared to those with low self-efficacy who only lived in closed doors most of their time. Again, the risk of depression was found to be four times higher in HIV-infected individuals who did not disclose their HIV status.

Rodkjaer, Seeberg and Ostergaard (2014) examined a holistic intervention on self-efficacy and risk of depression in HIV-infected individuals in Denmark. 30 persons living with HIV in Denmark were sampled and explored based on the self-efficacy intervention since literature review had consistently shown that self-efficacy reduced mental burden and stress associated with chronic

illness. Twenty individuals completed the intervention. According to Rodkjaer et al. (2014), coping self-efficacy and psychological health improved overall, and there was a significant decrease in depression to that effect. The qualitative interview results supported the questionnaire results, displaying changes in awareness, in bodily sensation, insight, in understanding, and in behavior and in actions as well as the development of new competences. The individuals felt more in balance (e.g. emotional stability), and this sentiment of being more competent in terms of managing the disease was upheld at the 12-month follow-up.

Sokhey (2016) investigated the role of coping strategies, self-efficacy and adherence to medical regime in quality of life of HIV/AIDS patients. Sokhey sampled 225 subjects (male=116 and female=109) in the age range of 20 to 50 years from lower and middle-class families. Scales such as the COPE inventory for measuring coping strategies, HIV self-efficacy questionnaire for measuring self-efficacy, medical outcome study for measuring adherence and the medical outcome survey – HIV health version was used to measure quality of life. Results revealed that, patients use both problem-focused coping style along with emotion-focused to circumvent the effect of stressors associated with the disease while inefficacious coping styles have damaging effect on quality of life. Various spheres of self-efficacy like managing symptoms, managing depression, managing fatigue, and getting support were found to be positively correlated with cognitive functioning, physical functioning, mental health, and quality of life. General adherence and specific adherence were found to be positively correlated with all the domains of quality of life. Again, self-efficacy and adherence accounted for 12% of variance in mental health.

Jani, Jamilian and Aramoon (2017) compared perceived stress, self-efficacy and mental health in patients with HIV and Hepatitis C. These researchers used a total of 200 participants involving 100 each of HIV patients and Hepatitis C. Instruments used in Jani et al.'s (2017) study involved

the Cohen Perceived Stress scale, Sherer's Self-Efficacy scale and Goldberg General Health Questionnaires. Results indicated that, both the HIV group and Hepatitis C group were significantly different in terms of perceived stress, self-efficacy and mental health. On perceived stress, the HIV group reported significantly higher mean whereas the Hepatitis C group reported significantly higher self-efficacy made the Hepatitis C group have better mental health than the HIV group especially when the HIV group also scored higher on depression, anxiety, social dysfunction and stress.

Kraaj, Garnefski, Schroevers, Veek and Maes (2018) also investigated cognitive coping, self-efficacy and mental/personal growth in HIV-infected homosexuals. Objective for Kraaj et al.'s study was to examine the relationships between cognitive coping strategies, goal self-efficacy and personal growth in HIV-positive men who are homosexuals. Methodologically, every member of a national organization for people who lived with HIV received a call for participation in the study. The Cognitive Emotion Regulation Questionnaire, Personal Growth Scale and the Goal Obstruction Questionnaire were filled out by 104 HIV-infected men at home at their homes. Results showed that thinking about pleasant and joyful issues instead of thinking about being HIV-positive, thoughts of attaching a positive meaning to being HIV-positive, thinking about what steps to take and how to handle being HIV-positive, thoughts of playing down the seriousness of being HIV-positive or emphasizing its relativity when compared to other events, thoughts of putting the blaming others of being HIV-positive (inversely) and the extent to which one considers oneself able to reengage in other meaningful goals were associated to personal development. Self-efficacy therefore emerged as a strong arbitrator in this regard strengthening mental growth among homosexuals with HIV.

### **2.2.3 Personality and Mental Health**

Salehi, Zarinfar and Noori (2016) investigated the relationship between personality traits and AIDS in patients with human immunodeficiency virus. These scholars did a meta-analysis involving several articles published in the name of personality traits and HIV patients. In comparison with the general population, Salehi et al. (2016) reported that, patients who were identified as an HIV-risk-behavior group such as injection drug users may be more likely to have a personality disorder, particularly antisocial personality or borderline personality disorder. Borderline personality and antisocial disorders are the two most prevalent personality disorders among substance-using patients, with reported estimates of 18% for borderline personality disorder and 22% for antisocial personality disorder. In addition to these findings, report stated that patients with antisocial personality and borderline disorders are more likely to participate in needle-sharing and sexual risk behaviors.

Rzeszutek, Oniszczenho, Schier, Kaluza and Gasik (2016) supports the findings of Salehi et al. (2016) with their study of temperament traits, social support, and trauma symptoms among HIV/AIDS and chronic pain patients. Rzeszutek et al. (2016) reported that, HIV/AIDS and chronic pain patients who are especially high leveled on neuroticism may have want for care but seem not to know how to accept it. This in effect, impacted negatively on good mental health outcomes compared to other personality traits. Rzeszutek et al. also found that, it was difficult for such patients with more of neuroticism to feel relaxed in a medical setting. In a qualitative interview of some selected patients who scored high on neuroticism, the perceived medical contexts with stigmatization for them. To them, accessing health services from an HIV/AIDS specialized clinic is so stigmatizing that, they felt the whole world was watching them seek HIV treatment. For that

reason, these patients had low adherence for the antiretroviral and honoring medical appointment which impacted badly on their mental health.

Furthermore, Trobst, Wiggins, Costa, Herbst and McCrae (2017) investigated HIV risks and the five-factor model. Trobst et al. (2017) review a program of research in a high-risk, disadvantaged population that illustrates the utility of the five-factor model in understanding health risk behavior. First aspect of their analyses indicated that behavior associated with the risk of HIV infection can be predicted from the personality dispositions of Neuroticism and (low) Conscientiousness. Subsequent analysis demonstrated that – among respondents objectively at risk – perceived risk of HIV infection is related to Openness to Experience. Low Openness may also inhibit accurate assessment of risk by restricting consideration of information and influencing other heuristic biases. Contrary to hypotheses based on the health belief model, perception of risk was not related to behavior change after a four-session intervention program, but conscientiousness was. Trobst et al.'s findings thus suggest that personality traits are related to health risk variables.

Moore and Renfro (2017) also investigated HIV/AIDS, personality dynamics and mental health in Oklahoma. Objectives of these researchers were to explore the impact of substance abuse on mental health of HIV/AIDS patients as well as personality dynamics in HIV/AIDS and mental health. Using 388 participants, Moore and Renfro reported that patients living with HIV/AIDS reported some serious mental health issues such as major depression (36% of participants), dysthymia (26%), generalized anxiety disorder (GAD; 16%), and panic attacks (11%). Among them, they found that the perception of stigma weighed significantly on their mental health symptoms. More so, failure to treat stigma worsened mental health symptoms. On the personality dynamic, Moore and Renfro found that, HIV/AIDS women who are victims of domestic violence appeared excessively emotional, or submissive, inhibited, and avoidant. Accessing all the

HIV/AIDS patients on personality, they reported that nearly half met the criteria for at least one personality disorder especially antisocial personality disorder, borderline personality disorder or narcissistic personality disorder.

Agarwal, Aswal, Gupta, Verma and Singhal (2012) investigated personality psychopathology in HIV infected patients. 50 newly diagnosed HIV patients with a CD4 count above 350 and have not yet been put on antiretroviral therapy formed the sample for the study. Results indicated that, 77% of the participants with substance use abuse background had a high disorder level of personality psychopathology compared to the others who were without history of substance abuse. Trait level personality psychopathology were found to be same for both male and female participants.

In Nigeria, Okwaraji, Onyebueke and Aguwa (2014) examined personality traits, loneliness and mental health among HIV clinic attendees. The General Health Questionnaire was used to measure health, whereas the Big Five Personality Inventory was used as personality traits measure and the University of California Los Angeles Loneliness Scale for loneliness on a total of 310 HIV/AIDS clinic attendees in Nigeria. Results showed that, the various aspects of personality traits varied in their prevalence. The highest prevalent was openness (27.4%), followed by neuroticism (25.5%), conscientiousness (19%), agreeableness (15.5%) and lastly extraversion (12.6%). Of these about 33.2% of the subjects indicated experiencing frequent loneliness, while 11.9% showed severe loneliness. Moreover 32.9% exhibited the presence of mental health problems as against 67.1% participants who indicated absence of mental illness.

Penedo, Gonzalez, Dahn, Antoni and Schneiderman (2018) investigated personality, quality of life and antiretroviral adherence among men and women living with HIV/AIDS. Using the Big Five

Inventory, Medication adherence scale and WHO quality of life scale to measure their main variables on a sample of 186 men and women living with HIV/AIDS. Penedo et al. (2018) reported that, those who failed to adhere to the ARV medications has significantly reduced quality of life compared to those who are adherents to the ARV therapy. More so, they found that men and women living with HIV/AIDS who are high on neuroticism have a high tendency not to adhere to antiretroviral, thus, significantly reduced quality of life.

### **2.3 Rationale for the Study**

Chaudoir, Fisher and Simoni (2011) who explored the disclosure process model to understand disclosure in HIV/AIDS found that disclosing illness involves antecedent goals – such as why and benefits of disclosure, the disclosure event itself, mediating processes and outcomes, and a feedback loop. In support, Santamaria et al. (2011) who reported that, youths who had been told their HIV status were less anxious or had less psychological problems compared to those who had not been told whereas youths who knew their HIV status for longer periods also reported higher intentions to disclose to their potential sex partners. Vreeman et al. (2015) who however found that there are barriers to disclosure which includes stigma and fear of psychological trauma or shock. For that reason, Thompson et al. (2015) investigated only women living with HIV/AIDS and found that, contrary to Vreeman et al.'s report, women living with HIV/AIDS expressed a health literacy need to self-care and correct antiretroviral use as well as, the need for self-disclosure and psychosocial skills to build and maintain their relationships. In support of Thompson et al. Lam et al. also indicated that viral load, social support, and disclosure predicted 32% of the variance in mental health symptoms.

Throughout these conflicting findings concerning self-disclosure and mental health of persons living with HIV/AIDS, Comer et al. (2017) suggested that the differences in finding might be due to socio-geographic differences. For that matter, they investigated people in the US living with HIV and reported that, to them self-disclosure had a good impact on their mental health, however, from people of ethnically diverse background involving blacks, disclosure impacted badly on mental wellbeing due to stigmatization. Rodkjaer et al. (2011) also reported that the decision whether to disclose or not alone was a significant stressor for people living with HIV/AIDS and taxed their coping strategies significantly. Eventually, disclosing health status to a confidant did not relieve persons living with HIV/AIDS of the stress they endured. For a fact, these conflicting findings suggest that, to be able to clinically help the vast majority of women living with HIV/AIDS in the Ashanti region of Ghana, there is the need to understand the role self-disclosure play on their mental health.

In terms of self-efficacy and mental health, Lee (2010) reported that self-efficacy was a higher predictor of adherence to anti-retroviral drugs. Again, self-efficacy was an important predictor of mental health such that as self-efficacy rises, mental health symptoms falls and as self-efficacy lowers mental health symptoms rises. Miller (2010) who also examined the role of self-efficacy in the management of HIV/AIDS found that self-efficacy accounted for 39% of variance in managing HIV/AIDS which is a direct support of Lee's finding. Similarly, Chesney et al. (2013) agrees with Lee and Miller in that, self-efficacy among HIV patients determined how their quality of life would be. Sokhey (2016) who took the argument further by investigating the role of coping strategies, self-efficacy and adherence to medical regime in quality of life of HIV/AIDS patients found that, self-efficacy and adherence accounted for 12% of variance in mental health. Jani et al. (2017) and Kraaj et al. (2018) also agree with Chesney et al.

Despite the widespread acceptance about the relationship between self-efficacy and mental health among researchers, there is a strong missing link. Norquist and Magruder (2017) who widely examined mental health among various populations including HIV/AIDS suggested that personality would largely play a role in self-efficacy and mental health. Moreover, Brandt, Zvolensky, Woods, Gonzalez and O’Cleirigh (2017) who also investigated anxiety symptoms and mental disorders among adults living with HIV and AIDS suggested further study into the relationship between self-efficacy and personality when it comes to patients living with HIV/AIDS. This shows that recent research directions are pointing not just to self-efficacy and mental health but the role of personality in self-efficacy among persons living with HIV/AIDS.

Some scholars also took interest in personality and mental health among persons living with HIV/AIDS. Salehi et al. (2016) who took interest in such relationships reported that personality disorders such as antisocial and borderline among persons living with HIV. Rzeszutek et al. (2016) took a dynamic turn by looking at personality traits in this regard using the Big Five model. They thus reported that, HIV/AIDS and chronic pain patients who are especially neuroticism may want care but not know how to receive it. This in effect, impacted negatively on good mental health outcomes compared to other personality traits. Trobst et al. (2017) also found patients who score high on neuroticism but low on conscientiousness as having poor mental health. Moore and Renfro (2017) supports the argument by reporting that, some serious mental health issues such as dysthymia (26%), major depression (36% of participants), generalized anxiety disorder (GAD) – 16% - and panic attacks (11%) exists among most patients with HIV whereas nearly half meet the criteria for at least one personality disorder especially antisocial personality disorder, borderline personality disorder or narcissistic personality disorder. Agarwal et al. (2012) indicated that, 77% of the participants with substance use abuse background had a high disorder level of personality

psychopathology compared to the others who were without history of substance abuse. Among these scholars, only Okwaraji et al. (2014) did a regression analysis of personality traits and mental disorders among person's living with HIV/AIDS. Even with that, they found the unconventional that openness to experience rather than neuroticism had the greatest variance in mental health among persons living with HIV/AIDS. These discrepancies therefore call for a critical approach to understanding disclosure, self-efficacy, personality and mental health among persons living with HIV/AIDS.

## **2.4 Statement of Hypotheses**

The following six (6) hypotheses are based on the objectives of the study and would be tested in this study quantitatively. They include:

H1. There will be a significant negative relationship between self-efficacy and mental health among women living with HIV/AIDS.

H2. Neuroticism personality trait would predict significant variance in mental health than openness and conscientious personality traits.

H3. Younger aged women living with HIV/AIDS would have significantly higher mental health symptoms than middle aged and older aged women.

H4. Women who knew their HIV/AIDS status before pregnancy would have significantly lower mental health symptoms than those who were made aware during or immediately after pregnancy.

H5. Women living with HIV/AIDS who have disclosed their health status would have significantly higher mental health symptoms than women who have not disclosed their status.

H6. Women living with HIV/AIDS who have their tertiary education would report significantly less mental health symptoms than women who have only secondary school and basic education.

## **2.5 Research Questions**

A semi-structured interview guide was used for the individual in-depth interviews. The interview guide captured participants' views and opinions on HIV status disclosure. The following questions would be answered in the course of this study:

1. What factors made women living with HIV/AIDS to disclose their health status?
2. What have been the experiences of women living with HIV/AIDS after disclosing their health status to a confidant?
3. What factors prevent some women from disclosing?

## **2.6 Operational Definitions**

*Younger Aged Women* – refers to women who are aged 18 – 29 years

*Middle Aged Women* – refers to women who are aged 30 – 39 years

*Older Aged Women* – refers to women who are aged 40 – 49 years

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Population, Sample and, Sample Size

The population for this study were women who have access to HIV/AIDS health services from the Prevention of Mother To Child Transmission (PMTCT) centers in the Ashanti Region. Ashanti Region was ranked as the second highest in Ghana with an HIV prevalence of 2.6% in the 2016 national HIV Sentinel Survey (HSS, 2017). By the first quarter 2018, the Region has been ranked as a bracket first along with the Greater Accra Region on the HIV/AIDS epidemiology (NHARCON, 2018). This Region has rich diversity with a population diverse in ethnicity, religiosity and education. It is also the biggest of all the Akan societies in Ghana.

According to the District Health Information Management System (2017), the PMTCT in Ashanti region registered 1,871 women with HIV/AIDS in 2017 alone. Women who are pregnant or in their postpartum period formed the basis for this study. This sample was taken from ten (10) PMTCT centers across nine (9) districts in the Ashanti Region. These centers are solely made up of women who are pregnant or in their postpartum period who are living with HIV and have been enrolled on antiretroviral therapy from various PMTCT centers across the Region. This population is made up of solely women who are pregnant or in their postpartum period who are living with HIV and have been enrolled on antiretroviral therapy from various PMTCT centers across the Region. 320 pregnant and postpartum women were sampled from selected PMTCT centers (Krejcie and Morgan, 1970). There are about 46 ART centers across the Region and they all provide PMTCT services. 10 PMTCT centers out of the 46 ART sites were conveniently employed in the sampling. The Suntreso Government Hospital, Konongo Government Hospital, St. Micheal

Hospital, Mampong Government Hospital, Asonomaso Hospital, Agogo Presbyterian Hospital, Kokofu Government Hospital, St. Martin's Hospital, Agona Government Hospital and, Aniwaa Memorial Health Centre are the ten (10) centers from which the sample was taken.

According to Saks and Allsop (2007), the sample size is dependent on the accuracy required and the possible variation of the population characteristics. To gain accuracy in research findings therefore, a sample size formula was used to arrive at the least desirable size. The sample size formula for studies that would involve the use of multiple regression is determined by Tabachnick and Fidel (2007) as " $N > 50 + 8m$  where  $m$  = number of independent variables." For the purpose of this work, there are eight independent variables. This means that  $N > 50 + 8(8) = 114$ . This implies that for the analysis of hypothesis that require multiple regression which would definitely be used in this present study based on hypotheses 2 and 3 to be possible/valid, the sample size should not be less than 114 participants. More so, Zhang, utter and Belin (2011) suggested after empirically testing several sample size determination procedures in clinical settings. Studies that take place in clinical settings may need a lot of higher sample sizes when they involve the use of survey techniques than what scholars such as Tabachnick and Fidel suggest. This is will help determine a difference when one truly exists. Besides, Kagee and Freeman (2017) who examined mental health and HIV/AIDS and Salehi, Zarinfar, and Noori (2016) who examined the relationship between personality traits and AIDS in patients with human immunodeficiency virus used 360 and 295 participants respectively.

Moreover, Employing the maximal variation sampling technique, a total of thirty-five (35) participants which represents little bit more than 10% of 320 (total sample size) were extracted for interviews.

### **3.2 Research Measures/Instruments**

This study employed three (3) main instruments to measure the quantitative aspects of the research while the qualitative aspect involved a structured interview guide. The quantitative instruments include the Self-Efficacy Scale (SES), the Big Five Personality Inventory, and the Depression Anxiety Stress Scale. To add up, the interview guide was meant to explore experiences about HIV/AIDS disclosure. Supportive instruments used therefore include the use of audio recorders, pens, and field notes.

#### **3.2.1 Demographic Information**

Demographic information which included age, highest level of education, marital status, employment status, point of awareness of HIV/AIDS positive status, disclosure, ethnicity and religion was sought from the participants. However, the names of participants were not taken nor recorded. Exclusion of names of participants gave them the sense of confidentiality as well as acting as a security check for the participants.

#### **3.2.2 Measure of Self-Efficacy**

*Generalized Self-Efficacy Scale* (Schwarzer & Jerusalem, 1995)

Self-efficacy was measured using Schwarzer and Jerusalem (1992) 8 items Generalized Self-Efficacy scale (GSE). GSE is a unidimensional scale which aims at a broad and stable sense of personal competence to deal effectively with a variety of stressful situations. It has been used in numerous research projects, where it is typically yielded internal consistencies between alpha = .75 and .90 (Kagee & Freeman, 2008; Webel & Okonsky, 2011). The scale is not only parsimonious and reliable, it has also proven valid in terms of convergent and discriminant

validity. For example, it correlates positively with self-esteem and optimism, and negatively with anxiety, depression and physical symptoms (Nokes, Verkuilen, Hickey, Borga & Shan, 2013). Responses to the items on the scale range from: Not at all (1) to Exactly true (4). Sample items on the scale include “Compared to other people, I can do my task very well” and “When facing difficult tasks, I am certain that I will accomplish them.” The scale is scored on a four-point Likert scale ranging from 1 to 4. Possible minimum and maximum scores are 8 and 32. A higher score reflect higher self-efficacy.

### **3.2.3 Measure of Personality**

#### ***Big Five Inventory*** (John & Srivastava, 1999)

The Big Five inventory (BFI) was developed by John and Srivastava (1999) and was used to measure the dimensions of personality which consists of agreeableness, extraversion, conscientiousness, openness and neuroticism. It is a scale of 44 items and it is a measure of 5-point rating from disagree strongly (1), disagree a little (2), Neither agree nor disagree (3), Agree a little (4), and Agree strongly (5). The 44 items are subdivided as follows:

Openness - Items 5, 10, 15, 20, 25, 30, 35, 40, 41, and 44

Conscientiousness – Items 3, 8, 13, 18, 23, 28, 33, 38, and 43

Extraversion – Items 1, 6, 11, 16, 21, 26, 31, and 36

Agreeableness – Items 2, 7, 12, 17, 22, 27, 32, 37, and 42

Neuroticism – Items 4, 9, 14, 19, 24, 29, 34, and 39.

BFI is scored by adding up all ratings. Items 2, 6, 8, 9, 12, 18, 21, 23, 24, 27, 31, 34, 35, 37, 41, and 43 are reverse scored. Higher scores point to the specific personality trait. BFI has a good reliability of .86 (Gurven & von Rueden, 2013).

### **3.2.4 Measure of Mental Health**

#### *Depression Anxiety Stress Scale* (Lovibond & Lovibond, 1995)

The Depression Anxiety and Stress Scale (DASS 21) was used for the measure of mental health. It actually measures depression, anxiety and stress. In other words, this DASS 21 is a conglomeration of “three self-report scales designed to measure the negative emotional states of depression, anxiety and stress” (Lovibond & Lovibond, 1995). Furthermore, the anxiety scale contains 7 items which assesses autonomic arousal, skeletal muscle effects, situation anxiety, and subjective experience of anxious affect. The stress aspect assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Respondents are asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the past week. The 4-point scale ranges from 0 to 3 with:

- 1 – did not apply to me at all;
- 2 – applied to me to some degree, or some of the time;
- 3 – applied to me to a considerable degree, or good part of time; and
- 4 – applied to me very much, or most of the time.

For scoring purposes, the score on the 4-point Likert scale is used as the raw score for each item. For example, if a participant should tick 2 for item one, he/she gets a raw score of 2 for that item. All raw scores are then summed up to form a general anxiety score. Lowest possible for the anxiety

scale is 0 indicating normal anxiety while highest possible score is 63 indicating extremely severe mental health symptom.

Specific items within the scale are categorized as follows:

Stress – Items 1, 6, 8, 11, 12, 14, and 18

Anxiety – Items 2, 4, 7, 9, 15, 19, and 20

Depression – Items 3, 5, 10, 13, 16, 17, and 21

No items are reverse-scored. Lovibond and Lovibond (1995) statistically established the following interpretative criteria for the DASS scores:

<b>Severity</b>		<b>Depression</b>	<b>Anxiety</b>	<b>Stress</b>
Normal	=	0 – 9	0 – 7	0 - 14
Mild	=	10 – 13	8 – 9	15 - 18
Moderate	=	14 – 20	10 – 14	19 - 25
Severe	=	21 – 27	15 – 19	26 - 33
Extremely Severe	=	28+	20+	34+

Note: Multiply all raw scores by 2 before using the interpretation table

The Depression Anxiety Stress Scale has a Cronbach alpha of .89 (Brown, Chorpita, Korotitsch & Barlow, 1997). This was tested in a clinical sample of 437 participants. According to Burns and Grove (2005, p.22), a reliability coefficient of 0.80 is considered to be lowest acceptable value for

a well-developed psycho-social instrument, and 0.70 is sufficient for a newly developed psycho-social instrument.

### **3.2.5 Sample Questions in the Interview Guide for Qualitative study.**

The following questions were answered in the course of this study by the aid of a semi-structured interview. The guide allowed the same questions to be explored by all participants. Results was by the means of thematic analysis:

- (1) What factors made women living with HIV/AIDS to disclose their health status?
- (2) What have been the experiences of women living with HIV/AIDS after disclosing their health status to a confidant?
- (3) What factors prevent some women from disclosing?

#### **3.2.5.1 Semi-structured Interview Guide**

1. Please for how long have you known your positive HIV status?
2. Have you disclosed your status? If 'Yes', to whom? If 'No' skip question 3, 4, 5, and 6.
3. Approximately how long did it take you to be able to disclose your status?
4. Why did you decide to disclose your status?
5. Can you please tell me about your disclosure experience?
6. Have you in anyway regretted to have made disclosure? Why or why not?
7. Why is your HIV status not disclosed?
8. Do you have the intentions for future disclosure of your status? Why or why not?
9. Any other extra contributions to this interview?

### 3.3 Research Design

Critically analyzing the research topic, “disclosure, self-efficacy, personality and, mental health: the case of HIV positive women in the Ashanti Region”, the researcher thought it best to use a sequential mixed methods design. Mixed methods research is the class of research where the researcher combines quantitative and qualitative research techniques, methods, approaches, and concepts or language into a single study (Creswell, 2013). According to Vrkljan (2009), Taking a non-purist or compatibilist or mixed position allows researchers to mix and match design components that offer the best chance of finding answers to their specific research questions.

Specific reasons why this research paradigm has been chosen for this study include the fact that, the researcher would like to make quantitative predictions about the relationship between self-efficacy, personality and mental health by even exploring the role participant variables such as age, education, disclosure and point of health status awareness play. Although, it might appear that a quantitative research approach should be enough to fulfill the aims of this research, Morse (2010) however highlighted with the use of quantitative research that, the researcher’s categories that are used may not reflect local constituencies’ understandings and knowledge produced may be too abstract and general for direct application to specific local situations, contexts, and individuals. Here is the case whereby the researcher seeks to produce local knowledge about the Ghanaian culture that could be used to enhance intervention services for women living with HIV/AIDS and especially in clinical work, therefore, considering what Johnson and Onwuegbuzie (2004) pointed

about qualitative research might be really indispensable because the data are based on the participants' own categories of meaning and therefore provides understanding and description of people's personal experiences of occurrences, and can help describe, in rich detail, phenomena as they are situated and entrenched in local contexts. However, qualitative studies alone have a high likelihood for biases to infiltrate findings (Clark, 2016). It is upon this basis that the sequential mixed methods design was used. To even warrant this research design, Chandra, Varghese and Supraja (2017) pointed that, studies involving women's mental health cannot be subjected to quantitative predictions to suggest holistic understanding unless at best, it involves the use of quantitative and qualitative research technique.

### **3.3.1 Sampling Technique**

The convenience sampling technique was employed for this study. Convenience Sampling involves enrolling participants on the basis of availability and the willingness to participate in a study (Gravetter & Forzano, 2006). According to Stommel and Wills (2004) this sampling technique is so far the most common approach in clinical studies and there are no better alternatives, given the resource restrictions that are applicable to most health projects. Atindanbila (2013) also pointed that, this non-probability sampling technique is desirable for people who are available as in the case of women living with HIV/AIDS who seek health service from the PMTCT.

### **3.3.2 Inclusion Criteria**

The following inclusion criteria was met for the study. Participants had to be:

- 1) 18 years and above

- 2) Pregnant or in their postpartum period
- 3) Actively enrolled on antiretroviral medication
- 4) Diagnosed of HIV/AIDS positive

### 3.3.3 Pilot Study

To determine the reliability of the Big Five Personality Inventory to measure personality, Self-Efficacy Scale to measure self-efficacy, and Depression Anxiety Stress Scale to measure mental health of women living with HIV/AIDS in the Ashanti Region, a pilot study of twenty-five (25) women living with HIV/AIDS was done. Below is a summary of the reliability statistics of the three major scales used on a total sample of 25 participants.

**Table 3.1: Reliability Statistics (Cronbach's Alpha) for Scales Piloted (N = 25)**

Scale	$\alpha$	No. of Items
1. Big Five Personality Inventory	.90	44
2. Depression, Anxiety Stress Scale	.87	21
3. Self-Efficacy Scale	.89	8

From table 3.1 above, it can be observed that the reliability coefficients for the Big Five Personality Inventory to measure personality, Self-Efficacy Scale to measure self-efficacy, and Depression Anxiety Stress Scale to measure mental health of women living with HIV/AIDS in the Ashanti Region as used for the piloting are above .70. According to Wells and Wollack (2003), a Cronbach's alpha of .70 and beyond can be considered reliable. This explains that they are very

high or good in reliability and for that matter can be used for mass data collection among women living with HIV/AIDS in the Ashanti Region of Ghana (Wells & Wollack, 2003).

### **3.3.4 Qualitative Data Analyses**

The qualitative data was analyzed using the Thematic analysis. Audio recordings was done for the interviews and transcribed for the analyses. Assistance with the transcription of the interviews was given by a PhD student with background in psychology and qualitative research methodology. Two other students with the same background were involved in the data analyses.

Coding and analyses were done in a six-staged process as projected by Braun and Clark (2006). Firstly, reading and re-reading of the transcribed interviews was done to make sense of the broad themes within the narratives. The transcription process was a major means of establishing familiarization with the data acquired. The transcribed data was cross-checked against the original audios to ensure exactness of the information provided.

Codes from the data were then generated. This stage certifies that the data was well organized into eloquent groups according to Tuckett (2005). In this study, coding was done across two main organizing themes with regards to the women living with HIV in the Ashanti Region.

#### **a. Disclosure decision**

- Influential factors of disclosure
- To whom disclosure was made
- Factors which discouraged disclosure

#### **b. Experience of disclosure decision**

- Advantages of disclosure and non-disclosure
- Consequences of disclosure and non-disclosure
- Participants views and opinions concerning decisions of disclosure

The next stage was done by the search for sub-themes across the broad themes of Disclosure decision and Experience of disclosure decisions.

The fifth stage involved examining the nature of the themes running through all the narratives of the disclosure experience of the women in the Ashanti Region living with HIV.

Lastly, details of the data were reported coherently. At this stage, what the data entailed was accounted. Moreover, the various themes with pertinent evidence were given by indicating quotes that speak to their respective themes.

### **3.4 Procedure**

Procedurally, introductory letters were collected from the Department of Psychology, University of Ghana, to enable ethical clearance from the Ethics Committee for Humanities (ECH) which forms the basis for an Institutional Review Board (IRB) approval. Following a series of reviews and resubmissions, the ECH finally gave its approval covering a span of six (6) months beginning 15<sup>th</sup> December, 2017 and ending 12<sup>th</sup> June, 2018 (See Appendix C). Letter of introduction and permission was obtained from the Regional Health Directorate of the Ghana Health Services. And copies of this letter were posted to all the selected hospitals of study by the Regional Health Directorate with the exception of two centers where a telephone call was made

by the Regional HIV/AIDS Coordinator for study permission. At each hospital, in-charges of these PMTCT centers were briefed of the study by the researcher and further permission was taken. Firstly, the nature and purpose of the study was explained to participants who were requested to join the study. Those who accepted to take part in the study were further given the informed consent form to sign before they were allowed in taking part in the study. In addition to that, participants were made known of the voluntary nature of the study, their reserved right to withdraw at any point without explanation or penalty. Their privacy and confidentiality were assured. After the study, any other concerns that participants had about the study were addressed in the form of debriefing.

Since three major scales namely the Big Five Personality Inventory to measure personality, Self-Efficacy Scale to measure self-efficacy, and Depression Anxiety Stress Scale to measure mental health of women living with HIV/AIDS were to be used, a pilot study was first done to ascertain the reliability of the scales among women living with HIV/AIDS in the Ashanti Region. Having established the reliability of the scales in the research setting, mass data collection began. The following ethical considerations were adhered to.

### **3.4.1 Ethical Consideration**

Ethical principles were more than essential for this study because studies involving HIV/AIDS would yield invalid or unreliable results if they are not upheld (Freeman, 2004). Variety of scholars who investigated women, mental health and HIV/AIDS adhered to a variety of ethical principles which was rationally modelled in this present study (Chandra et al., 2017; Fitzpatrick, McCray & Smith, 2004; Shin, Munoz, Caldas, Wu & Bayona, 2011).

Confidentiality was the first assured and ensured ethical principle upheld in this study. According to Shin et al. (2011), this is by far the most important to ensure that concerns about health and wellbeing are well explored. In fact, it was stated in the informed consent sheet that confidentiality was of utmost priority to the researcher.

Anonymity was also ensured. When Chandra et al. (2017) investigated mental health among working women, they highlighted that assurance of anonymity made the participants bring out more information pertaining to the subject. To ensure anonymity, no name or personally identifying information was put on the questionnaire or attached to the recorded audios.

Informed Consent was also strongly used. In fact, no one had access to the questionnaire without the informed consent sheet. This was strongly advised by Fitzpatrick et al. (2004). Moreover, informed consent for this study took two main forms, namely, institutional consent and individual consent. First approval for data collection had to be sought from the Ashanti Regional Health Directorate of the Ghana Health Service which upon critical perusal granted approval for data collection for the study to take place in a number of hospitals in the Ashanti Region (See Appendix D). After permission was granted individual consent was sought from each of the 320 participants used and allowed to participate in the study at their own free will. After individual consent was obtained for the quantitative aspect of the study, another individual consent was further sought from these same participants for the extraction of the 35 participants for the in-depth interviews.

## CHAPTER FOUR

Sequentially, the method of study was mixed. Quantitative study was successfully followed by an in-depth interview of the same sample. The six hypothesized statements were tested and the set objectives of the study were addressed.

## RESULTS

### Demographic Characteristics of the sample

**Table 4.1: Summary of Demographic Characteristics of Respondents – (N = 320)**

Item		Frequency	Percentage (%)
<b>Age</b>	18 – 29 years	101	31.6
	30 – 39 years	181	56.6
	40 – 49 years	38	11.9
<b>Education</b>	Basic School/O Level Education	212	66.3
	Secondary School/A Level Education	63	19.7
	Tertiary Education	45	14.1
<b>Marital Status</b>	Single	30	9.4
	Cohabiting	159	49.7
	Married	92	28.8

	Divorced/Separated	33	10.3
	Widowed	6	1.9
<b>Employment</b>	Unemployed	69	21.6
	Housewife	7	2.2
	Private Institution	16	5.0
	Government Institution	25	7.8
	Self-Employed	203	63.4
<b>HIV/AIDS Awareness</b>			
	Before Pregnancy	64	20.0
	During/After Pregnancy	256	80.0
<b>Religion</b>			
	Christian	270	84.4
	Muslim	50	15.6
<b>Disclosure Status</b>			
Yes, Disclosed (242)	Supportive	209	65.3
	Unsupportive	33	10.3
No, Not Disclosed		78	24.4

<b>Total (Of each Item)</b>	320	100
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Source: Prevention of Mother to Child Transmission Centers 2018 (N = 320)

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From table 4.1 above representing demography characteristics, it could be observed that the respondents had diverse age orientations spanning from 18 through 49 years. This age dynamics indicates that the findings pertaining to this study was indeed cross-sectional.

The educational background of participants as obtained for the research could be observed that more than half of the participants obtained had their basic level education (comprising 66.3%), yet, others even had their secondary school and tertiary education. This suggest that, the fair sampling based on educational background would allow for a fair analysis of differences in mental health based on education. It also suggests that, the participants obtained for this study could at least read and understand the questionnaires before answering them, thus, enhancing the validity and reliability of the any finding emanating from this study.

The participants came from various backgrounds pertaining to marital status/experience. It could especially be observed that, nearly half of the women living with HIV/AIDS are cohabiting (comprising 49.7%) while others are married (comprising 28.8%), divorced/separated (comprising 10.3%), single (comprising 9.4%) and widowed (6%).

It was therefore observed in this study, the role marital status of women living with HIV/AIDS plays in mental health. It was also observed that, most of the women living with HIV/AIDS as obtained for this study are self-employed (as indicated by 63.4%). 21.6% are unemployed whereas others work in private institutions, government institutions or serve as housewives. This indicates

that, the data reflects the cross-sectional research design chosen and allowed exploration of varied responses of the study.

Of the initial point at which WLHIV became aware of their HIV/AIDS positive status, it came to the knowing that, a greater number of women only became aware when they were pregnant or immediately after taking in seed (as represented by 80% of them). This study examined how this had impact on their mental health.

A greater number of women living with HIV/AIDS have disclosed their status to a confidant (as shown by 75.6). Of these, 65.3% admit they gain support from their confidant whereas 10.3% do not. A few representing 24.4% have not yet disclosed their status. This study took pride in investigating the role status disclosure or non-disclosure play in the mental health of women living with HIV/AIDS.

Lastly, the religious affiliation of respondents as obtained for the study indicated that a greater 84.4% are Christians while 15.6% are Muslims. It is so because Addo, Yawson, Addo, Dornoo and Seneadza (2014) who examined the HIV epidemic in Ghana reported that there are far more Christians in the Ashanti region than Muslims. This data shows that, the sampled data reflects women of various religious backgrounds.

#### 4.1 Preliminary Analysis

This aspect of the quantitative analysis examined the assumptions for the use of parametric tests. It consists of normality test, reliability and descriptive statistics for the variables investigated (that is, Big Five Personality Inventory to measure personality, General Self-Efficacy Scale to measure self-efficacy, and Depression Anxiety Stress Scale to measure mental health of women living with HIV/AIDS). A total of 3 major scales were used.

**Table 4.2: Reliability Statistics (Cronbach's Alpha) for Scales Used**

Scale	$\alpha$	No. of Items
1. Personality Inventory	.78	44
2. Depression, Anxiety, Stress Scale	.82	21
3. General Self-Efficacy Scale	.94	8

Source: Prevention of Mother to Child Transmission Centers 2018 (N = 320)

From table 4.2 above, it can be observed that the reliability coefficients for the Big Five Personality Inventory to measure personality, General Self-Efficacy Scale to measure self-efficacy, and Depression Anxiety Stress Scale to measure mental health of women living with HIV/AIDS as used for the analysis are beyond .70. According to Wells and Wollack (2003), a Cronbach's alpha of .70 and beyond can be considered reliable. This means that they are very high or good in reliability and for that matter can be used for testing the various hypotheses (Wells & Wollack, 2003).

## 4.2 Test for Normality

The normality assumption which is the extent to which the distribution of the sample data is consistent with a normal distribution (Fields, 2010) was ensured by inspecting the skewness and kurtosis values of all the variables. The results of this analysis are presented in table 4.9 below.

**Table 4.3: Summary of the Means, Standard Deviation, Skewness and Kurtosis (N = 320)**

Scale	Min	Max	Mean	SD	Skewness	Kurtosis
<b>1. Personality Inventory</b>	126.0	174.0	153.13	13.19	-.37	.89
<b>2. Depression Anxiety Stress Scale</b>	13.0	59.0	33.42	10.71	-.31	-.20
<b>3. Self-Efficacy</b>	8.0	31.0	19.09	7.09	.08	-1.28

Source: Prevention of Mother to Child Transmission Center 2018 (N = 320)

Table 4.3 above shows results of the descriptive statistics for scales used (that is, the Big Five Personality Inventory measured personality, Self-Efficacy Scale measured self-efficacy, and Depression Anxiety Stress Scale measured mental health of women living with HIV/AIDS). The skewness and kurtosis scores above show that all scores fall within the acceptable range of +2 to -2 and +3 to -3 respectively which shows that they are normally distributed and thus satisfy the condition for the use of parametric tests (Tabachnick and Fidell, 2007; Doane & Seward, 2011). Since these scores were observed to be within the acceptable range, they did not deviate from the normality required for hypotheses testing.

The data was also checked for multicollinearity, which is a situation where two variables strongly correlate (Field, 2010). Multicollinearity means that, the correlation between two set of variables should not be .90 or more. In doing this, all the variables (that is, the Big Five Personality Inventory to measure personality, Self-Efficacy Scale to measure self-efficacy, and Depression Anxiety

Stress Scale to measure mental health of women living with HIV/AIDS) were correlated among themselves using Pearson's r correlation and results are presented in table 4.4 below.

**Table 4.10: Summary of Pearson Product Moment Correlation (Matrix) of Scales**

Variables	1	1a.	1b.	1c.	1d.	1e.	2	2a.	2b.	2c.	3
<b>1. Personality</b>	-										
<b>1a. Openness to Experience</b>	.79*	-									
<b>1b. Conscientiousness</b>	.69*	.34*	-								
<b>1c. Extraversion</b>	.24*	-.06	.22*	-							
<b>1d. Agreeableness</b>	.73*	.55*	.50*	-.09	-						
<b>1e. Neuroticism</b>	.29*	.30*	-.05	-.38*	.02	-					
<b>2. Mental Health</b>	.29*	.33*	.14*	-.21*	.03	.57*	-				
<b>2.a Stress</b>	-.01	.20*	-.17*	-.12	-.24*	.33*	.86*	-			
<b>2b. Anxiety</b>	-.13	-.30*	-.11	.63*	-.70*	.48*	.94*	.54*	-		
<b>2c. Depression</b>	.24*	.21*	.27*	.24*	-.12	.42*	.86*	.54*	.98*	-	
<b>3. Self-Efficacy</b>	.59*	.34*	.41*	.01	.65*	.20*	-.40*	.10	-.23	.04	-

\* Significant at the .05 level of significance

From table 4.4 (Summary of Pearson Product Moment Correlation Matrix of Scales - that is, the Big Five Personality Inventory to measure personality, Self-Efficacy Scale to measure self-efficacy, and Depression Anxiety Stress Scale to measure mental health of women living with HIV/AIDS) it could be observed that no multicollinearity was observed since none of the *main* set of variables had a correlation coefficient of .90 or more. Moreover, it can be observed that, there is a positive correlation between mental health and personality ( $r = .29^*$ ,  $p < .05$ ), and a significant negative correlation between mental health and self-efficacy ( $r = .59^*$ ,  $p < .05$ ).

### 4.3 Hypotheses Testing

## **H1:**

Hypotheses one stated that, “There will be a significant negative relationship between self-efficacy and mental health among women living with HIV/AIDS.” Statistically, the Pearson product moment correlation was used because there are two continuous variables – self-efficacy and mental health – and this line of assumption seeks to test the relationship between the two continuous variables. From table 4.4 it could be observed that, the correlation coefficient between self-efficacy and mental health among women living with HIV/AIDS is  $-.40$  which is significant at the  $.05$  level of significance since  $P < .05$  alpha level. This therefore suggests that there is a significant negative correlation between self-efficacy and mental health among women living with HIV/AIDS. It could therefore be said that, as self-efficacy among women living with HIV/AIDS rises, their depression, anxiety and stress reduces; and as self-efficacy among women living with HIV/AIDS decreases, their depression, anxiety, and stress rises. For that matter, hypothesis one which stated that, “There will be a significant negative relationship between self-efficacy and mental health among women living with HIV/AIDS,” is confirmed.

## **H2:**

Hypothesis Two (2) stated that, “Neuroticism personality trait would predict significant variance in mental health than openness and conscientious personality traits.” This was analyzed using the Standard Multiple Regression. Reasons why the standard multiple regression was used was due to the fact that, this assumption aimed to find out the extent to which the five personality traits each accounted for variance in mental health symptoms. In order words, it was desired to find out which personality trait – namely, openness, conscientiousness, extraversion, agreeableness and neuroticism – influences depression, anxiety and stress among women living with HIV/AIDS. To

use multiple regression according to Pallant (2011), certain assumptions must be met. This include appropriate sample size, normality and multicollinearity. First, the sample size determination for use of multiple regression is determined by Tabachnick and Fidel (2007) as “ $N > 50 + 8m$  where  $m$  = number of independent variables.” For the purpose of this work, there are eight independent variables. This means that  $N > 50 + 8(8) = 114$ . This implies that for the analysis of hypothesis 2 to be possible/valid, the sample size should not be less than 114 participants. It is interesting to note that 320 participants responded to the informed consent and participated in the study; for that matter, the sample size assumptions were not violated. Furthermore, the data was checked for outliers and none was found.

**Table 4.5 Summary of Regression Analysis for the variance of Personality traits in mental health (N = 320)**

Model	Unstandardized		Standardized			
	$\beta$	SE	$\beta$	t	p	Part
<b>Model</b>	-14.45	6.39		-2.26	.02*	
<b>Openness</b>	.45	.12	.22	3.75	.00*	.17
<b>Conscientiousness</b>	.49	.14	.19	3.62	.00*	.16
<b>Extraversion</b>	-.15	.12	-.07	-1.31	.19	-.06
<b>Agreeableness</b>	-.40	.12	-.20	-3.37	.00*	-.15
<b>Neuroticism</b>	1.31	.14	.49	9.57	.00*	.42

\* Sig .05

$R = .621^a$ ;  $R^2 = .385$ ; Adjusted  $R^2 = .375$ ;  $P = .000$

- a. Predictors: (Constant) openness, conscientiousness, extraversion, agreeableness and neuroticism
- b. Dependent Variable: Mental Health

According to Pallant (2011), it is essential to run a multicollinearity checks before falling on the results of a standard multiple regression to make inferences. Multicollinearity is the extent to which the independent variables are highly correlated (that is,  $r = .9$  and above). From table 4.5 (Correlation matrix), it can be observed that, the relationship between all the aspects of personality and mental is not more than the .90. Under this, tolerance and VIF (Variance Inflation Factor) are calculated. Tolerance is an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model and is calculated using the formula  $1-R^2$  for each variable (Pallant, 2011). If this value is very small (less than .10) it indicates that the multiple correlation with other variables is high, suggesting the possibility of multicollinearity.

This assumption was not violated because from the data  $\text{Tolerance} = 1 - .375 = .625$

Moreover, the other value given is the VIF (Variance inflation factor), which is just the inverse of the Tolerance value (1 divided by Tolerance). VIF values above 10 would be a concern here, indicating multicollinearity (Pallant, 2011). This assumption was not violated because from the data  $\text{VIF} = 1 \div .625 = 1.6$ ; which is not more than 10.

From table 4.11, it can be observed that  $R^2 = .375$  which means that the aspects of Personality such as openness, conscientiousness, extraversion, agreeableness and neuroticism account for  $(.375 \times 100) = 37.5\%$  of the variance in mental health. This relationship can be trusted because the model was significant  $P (.00) < .05$  level of significance. However, to find the extent to which each of the aspects of Personality account for variance in mental health, it is essential to refer to beta values in the table 4.5.

From table 4.5, it can be observed that, neuroticism has much variance in mental health ( $\beta = .49$ ;  $t = 9.57$ ;  $P < .05$ ). Furthermore, it could also be observed that Openness ( $\beta = .22$ ;  $t = 3.75$ ;  $P < .05$ ), Conscientiousness ( $\beta = .19$ ;  $t = 3.62$ ;  $P < .05$ ) and Agreeableness ( $\beta = -.20$ ;  $t = -3.37$ ;  $P < .05$ ). In this case, to get the unique contribution of each of the significant aspects of personality on mental health, it was essential to examine the part relationships in table 4.5.

A part relationship of .42 is observed for neuroticism. According to Tabachnick and Fidel (2007), unique contributions is achieved by finding a square of the part relationship and multiplied by 100 to find its percentage value. This implies that neuroticism accounts for  $(.42^2 = 0.176 \times 100) = 17.6\%$  of variance in mental health symptoms. This means that, neuroticism plays a significant role for a woman living with HIV/AIDS to show higher forms of mental health symptoms which in this case is depression, anxiety and stress. In other words, depression, anxiety and stress is a strong function of neuroticism.

Other personally traits that play minimally significant role in mental health symptoms include openness  $(.17^2 = 0.029 \times 100) = 2.9\%$  variance in mental health symptoms, conscientiousness  $(.16^2 = 0.026 \times 100) = 2.6\%$  variance in mental health symptoms, and agreeableness  $(.15^2 = 0.023 \times 100) = 2.3\%$  variance in mental health symptoms. it should be highlighted that the part relationship for Agreeableness predicts a negative variance in mental health. This means that agreeableness among all the personality traits helps women living with HIV/AIDS to cope with their depression, anxiety and stress whereas neuroticism, openness and conscientiousness maximizes the symptoms. In all, neuroticism with its 17.6% plays the most significant role for women living with HIV/AIDS to show higher forms of mental health symptoms which in this case is depression, anxiety and stress. This is then followed by openness (2.9%), conscientiousness (2.6%) and agreeableness (2.5%). For that matter, hypothesis two which stated that, “Neuroticism personality trait would

predict significant variance in mental health than openness and conscientious personality traits” is supported at the .05 level of significance.

Hypothesis Three (3) stated that, “Younger aged women living with HIV/AIDS would have significantly higher mental health symptoms than middle aged and Older aged women.” Statistically, the One-Way ANOVA test was used as the appropriate statistical analysis since there is one discontinuous independent variable – Age – with three levels (that is, Younger aged women, middle aged women and older aged women) being measured against mental health symptoms. Table 4.6 contains a summary of the One-Way ANOVA analysis.

**Table 4.6: Summary of One-Way ANOVA indicating Differences in Mental Health Symptoms based on Age (N = 320)**

Age	N	Mean	SD	df	F	<i>p</i>
<b>Younger Women (18 – 29 yrs)</b>	101	37.44	9.45	2,317	13.68	.00*
<b>Middle Aged Women (30 – 39 yrs)</b>	181	32.27	10.69			
<b>Older Aged Women (40 – 49 yrs)</b>	38	28.18	10.65			

\* Sig .05

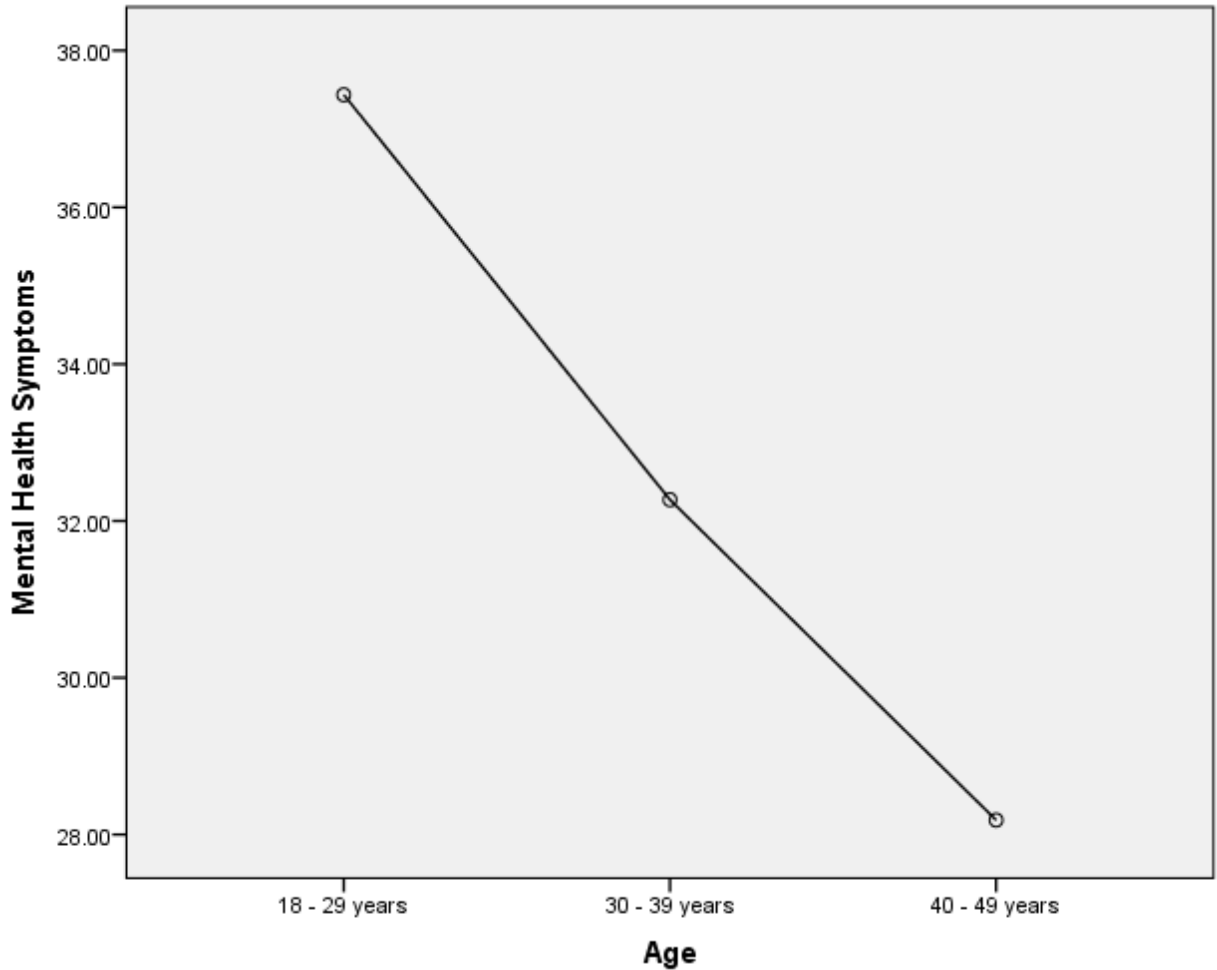
From table 4.6 ANOVA table above, it can be observed that the differences between women living with HIV/AIDS who are younger aged ( $M = 37.44$ ;  $SD = 9.45$ ), Middle Aged ( $M = 32.27$ ;  $SD = 10.69$ ), and Older Aged ( $M = 28.18$ ;  $SD = 10.65$ ) on mental health symptoms was significant  $P(.00$ ;  $F = 13.68$ ;  $df = 2,317) < .05$ . Taking a critical look at the table 4.13, it can be said that at least the differences in any two of the means in terms of mental health symptoms based on aged differences is significant. In view of that, the post-hoc multiple comparisons is presented as Table 4.7.

**Table 4.7: Summary of Post Hoc Tests (Multiple Comparisons) for Differences in Mental Health Symptoms based on Age (N = 317)**

Age	1	2	3
1. Younger Aged (18 – 29 years)	-		
2. Middle Aged (30 – 39 years)	-5.16*	-	
3. Older Aged (40 – 49 years)	-9.25*	-4.09*	-

\* Sig .05

**Figure 4.1: Means plot for Differences in Mental Health Symptoms based on Age**



From table 4.7, significant differences were observed between younger aged women and middle-aged women based on mental health symptoms ( $MD = -5.16$ ;  $P < .05$ ). Again, significant differences were observed between younger aged women and older aged women based on mental health symptoms ( $MD = -9.25$ ;  $P < .05$ ). This implies that, younger aged women have significantly higher forms depression, anxiety and stress. From the figure 4.1, it could be observed that mental health symptoms – that is, depression, anxiety and stress – among women living with HIV/AIDS declines/falls as one ages. For that matter, hypothesis 3 which stated that, “Younger aged women

living with HIV/AIDS would have significantly higher mental health symptoms than middle aged and Older aged women” was supported at the .05 alpha level.

Hypothesis Four (4) stated that, “Women who knew their HIV/AIDS status before pregnancy would have significantly lower mental health symptoms than those who were made aware during/immediately after pregnancy.” Statistically, the Independent *t* test was used as the appropriate statistical analysis since there is one discontinuous independent variable – Point of Awareness – with two levels (that is, Before Pregnancy and During/Immediately After Pregnancy) being measured against one dependent variable (mental health symptoms) Table 4.8 contains a summary of the Independent *t* test.

**Table 4.8 Summary of Independent *t* test indicating Differences in Mental Health Symptoms based on Point of Awareness (N = 320)**

Point of Awareness	N	Mean	SD	<i>t</i>	df	<i>p</i>
Before Pregnancy	64	27.30	12.69	-5.32	318	.00*
During/After Preg.	256	34.95	9.59			

\* Sig .05

From table 4.8, it can be observed that the differences between women who became aware of their HIV/AIDS status before pregnancy ( $M = 27.30$ ;  $SD = 12.69$ ) and during/after pregnancy ( $M = 34.95$ ;  $SD = 9.59$ ) in mental health symptoms was significant  $P(.00; t = -5.32; df = 318) < .05$ . Taking a critical look at the table 4.7, it could be seen that the mean of women who became aware of their HIV/AIDS status before pregnancy is indeed lower than the mean of women who became aware during/after pregnancy and the difference is significant. This means that, Women who knew

their HIV/AIDS status before pregnancy truly have significantly lower mental health symptoms than those who were made aware during/immediately after pregnancy. For that matter, hypothesis 4 which stated that, “Women who knew their HIV/AIDS status before pregnancy would have significantly lower mental health symptoms than those who were made aware during/immediately after pregnancy” is supported at the .05 level of significance.

Hypothesis Five (5) stated that, “Women living with HIV/AIDS who have disclosed their health status would have significantly higher mental health symptoms than women who have not disclosed their status.” Statistically, the Independent *t* test was used as the appropriate statistical analysis since there is one discontinuous independent variable – Disclosure of HIV/AIDS status – with two levels (that is, Disclosed or Not Disclosed) being measured against one dependent variable (mental health symptoms) Table 4.9 contains a summary of the Independent *t* test.

**Table 4.9 Summary of Independent *t* test indicating Differences in Mental Health Symptoms based on Disclosure of HIV/AIDS status (N = 320)**

<b>Disclosure</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b><i>t</i></b>	<b>df</b>	<b><i>p</i></b>
<b>Disclosed</b>	242	31.39	10.26	-6.32	318	.00*
<b>Not Disclosed</b>	78	39.71	9.64			

\* Sig .05

From table 4.9, it can be observed that the differences between women who have disclosed their HIV/AIDS status (M = 31.39; SD = 10.26) and those who have not disclosed (M = 39.71; SD = 9.64) in mental health symptoms was significant  $P(.00; t = -6.32; df = 318) < .05$ . Taking a critical look at the table 4.9, it could be seen that the mean of women who have disclosed their HIV/AIDS status is rather lower than the mean of women who have not disclosed and the difference is

significant. This means that, Women living with HIV/AIDS who have disclosed their HIV/AIDS status have significantly lower mental health symptoms – or depression, anxiety and stress – than those who have not disclosed their HIV/AIDS status. For that matter, hypothesis 5 which stated that, “Women living with HIV/AIDS who have disclosed their health status would have significantly higher mental health symptoms than women who have not disclosed their status” is not supported at the .05 level of significance; rather women living with HIV/AIDS who have disclosed their health status have significantly lower mental health symptoms than women who have not disclosed their status.

Hypothesis Six (6) stated that, “Women living with HIV/AIDS who have their tertiary education would report significantly less mental health symptoms than women who have only secondary school and basic education.” Statistically, the One-Way ANOVA test was used as the appropriate statistical analysis since there is one discontinuous independent variable – Education – with three levels (that is, Basic Education, Secondary School education and Tertiary education) being measured against mental health symptoms. Table 4.10 contains a summary of the One-Way ANOVA analysis.

**Table 4.10: Summary of One-Way ANOVA indicating Differences in Mental Health Symptoms based on Education (N = 320)**

<b>Educational Background</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>df</b>	<b>F</b>	<b><i>p</i></b>
<b>Basic/O Level Education</b>	212	34.73	9.28	2,317	6.36	.00*
<b>Secondary/A Level Education</b>	63	32.30	12.93			
<b>Tertiary Education</b>	45	28.78	12.31			

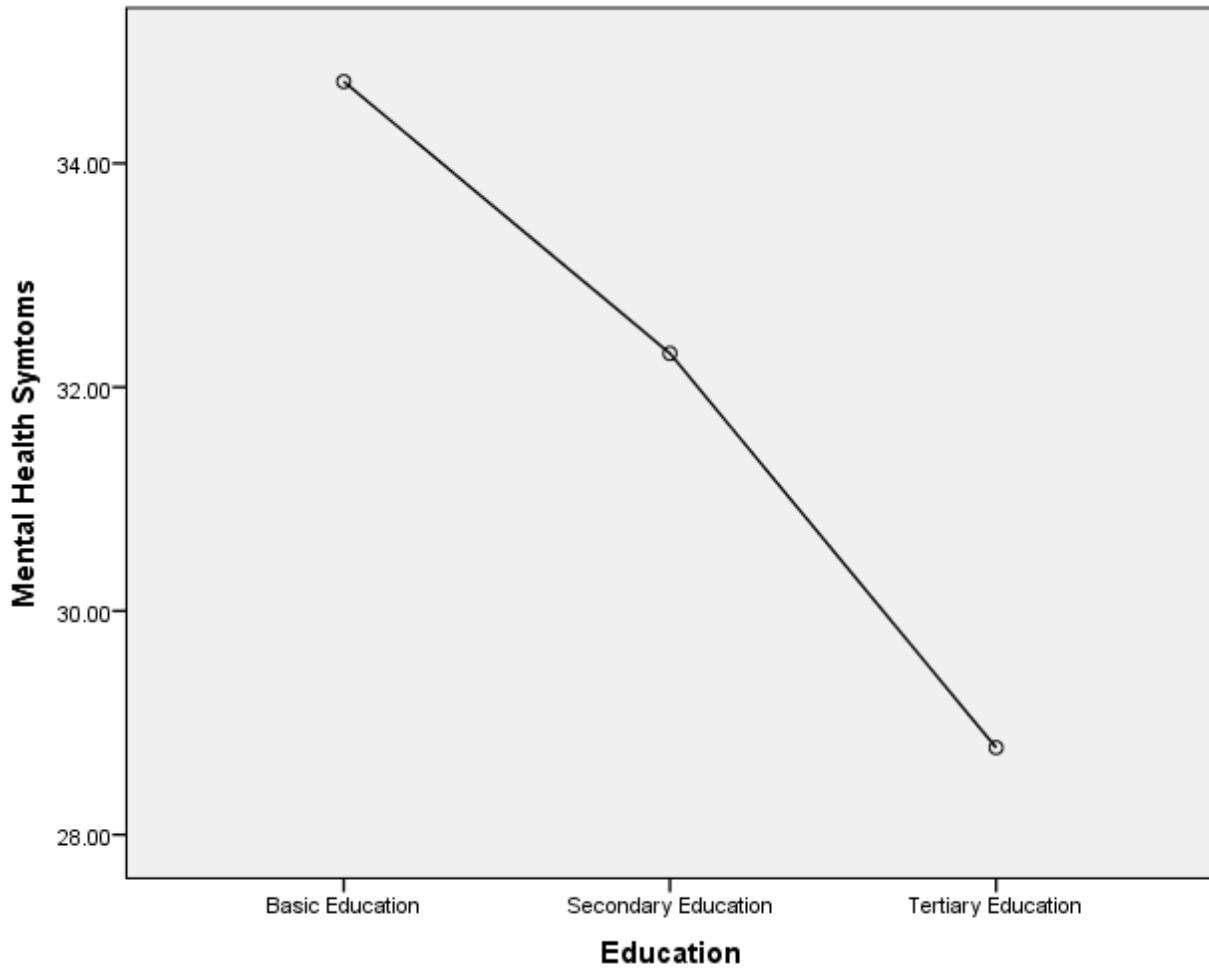
\* Sig .05

From table 4.10 ANOVA table above, it can be observed that the differences between women living with HIV/AIDS who have attained basic/O level education ( $M = 34.73$ ;  $SD = 9.28$ ), Secondary/A level education ( $M = 32.30$ ;  $SD = 12.93$ ), and Tertiary Education ( $M = 28.78$ ;  $SD = 12.31$ ) on mental health symptoms was significant  $P(0.00; F = 6.36; df = 2,317) < .05$ . Taking a critical look at the table 4.10, it can be said that at least the differences in any two of the means in terms of mental health symptoms based on differences in educational background is significant. In view of that, the post-hoc multiple comparisons are presented as Table 4.11.

**Table 4.11: Summary of Post Hoc Tests (Multiple Comparisons) for Differences in Mental Health Symptoms based on Education (N = 320)**

<b>Educational Background</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>1. Basic/O Level Education</b>	-		
<b>2. Secondary/A Level Education</b>	-2.43	-	
<b>3. Tertiary Education</b>	-5.95*	-3.52	-

\* Sig .05

**Figure 4.2: Means plot for Differences in Mental Health Symptoms based on Education**

From table 4.11, significant differences were observed between women living with HIV/AIDS who have attained tertiary education and those who have attained Basic/A Level Education based on mental health symptoms ( $MD = -5.95$ ;  $P < .05$ ) but not those with secondary/A level education ( $MD = -3.52$ ;  $p > .05$ ). From the figure 4.2, it could be observed that mental health symptoms – that is, depression, anxiety and stress – among women living with HIV/AIDS declines/falls as one attains higher education. For that matter, hypothesis 6 which stated that, “Women living with HIV/AIDS who have their tertiary education would report significantly less mental health symptoms than women who have only secondary school and basic education” was not supported

at the .05 alpha level, although, only women who attained tertiary education had significant decline in mental health symptoms compared to those who had basic education.

#### **4.4 Qualitative Findings**

To explore the disclosure experiences of women living with HIV and determine the factors which could have dissuaded others from disclosing their statuses, the maximal variation sampling technique was employed to extract 35 participants for the interview. The 35 participants were retaken from the already 350 sampled size. To ensure variation, at least three participants were extracted from each of the ten (10) already inclusive centers and one of the participants had to be pregnant at least. Interview was done with both closed and opened ended questions for in-depth exploration.

Of the 35 respondents; 28 (80 % of Total participants) respondents had made disclosure while 7 (20% of Total participants) of the respondents' statuses remained undisclosed. Of the 28 disclosed statuses, 13 (37. 143) disclosed to Spouses Only, 5 (14.286) disclosed to Family Only, 1 (2.857) disclosed to Friends Only and 9 (25.714) disclosed to Other persons and Family and or Friends.

**Table 4.12: Summary of Status Disclosure of Qualitative study sample – (N=35)**

<b>Status Disclosure</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Disclosed</b>		
Partner only	13	37.143
Family only	5	14.286
Friend only	1	2.857
Others	9	25.714
<b>Not Disclosed</b>		
None	7	20
<b>Total</b>	100	35

Source: Prevention of Mother to Child Transmission Centers 2018 (N = 320)

The following questions have been answered in the course of this study by means of thematic analysis: (1) What factors made women living with HIV/AIDS to disclose their health status? (2) What have been the experiences of women living with HIV/AIDS after disclosing their health status to a confidant? (3) What factors prevent some women from disclosing?

Concern for family, Directive/ Admonishing and Peace of mind are the three main themes which were gathered as factors which influenced the disclosure of statuses by women living with HIV.

Moreover, Emotional support and kindness, Access to health care, Relationship termination and abandonment, Emotional abuse, Stigma and discrimination factorize the experiences of women living with HIV after disclosure. Among non-disclosing women, the reasons which prevented disclosure included; Perceived stigma, Fear of rejection and disapproval, Fear of blame and Self-reliance.

Notwithstanding the fact that most women found it difficult to tell others about their statuses, Concern for family came up as one of the influential factors for status disclosure. Many participants had specific criteria for deciding to whom to disclose to. The predominate criteria was generally based on the quality of relationship the individual had with her partner or family member. And the perceived ability of this person to keep the information confidential. Partner's and child(ren)'s health instigated status disclosure. 11 (39% of Disclosed statuses) women mentioned medical reasons (transmission possibilities, physical health) as a factor for disclosure to family.

These statements expressed the participants concern for their family. One woman said *"I knew I had to tell my boyfriend with whom I am living so he could get tested as well because I strongly suspected he infected me."* (R14). Another respondent also revealed that, *"madam, as difficult as it was for me, I had to let my husband and child know so I don't mistakenly infect them too, they are all I have"* (R34). Sexual partners were often told because of the risk of infection in sexual relations for testing and medication if positive.

Also Love and trust for partner or relative fueled concern for family. Feeling of love for partner or being felt loved by their partner was a reason enough for some respondents to disclose her status. A newly wedded woman of 29years said, *"It took me like about 3 months and I had still not gathered enough courage but this thing I'm in, it's for better for worse, so I had to let him know"*

*and face whatever be the outcome, I just couldn't keep such information to myself" (R12). Many participants based their decision to disclose their HIV infection for reasons of trusting others with their 'secrets' for the love and or care for someone or based on the perceived love and care they receive from them (partner or family). A new mom of 21 years put it in this way, "look, I have sat down and decided to let only my own mother know about this, the child's father refused the pregnancy. I already have people gossiping about me, I won't survive in this town if this news gets to the wrong people. For my mother, she will always remain my mother no matter what, it's safe with her. "(R33)*

In addition to Concern for family is Directive/Admonishing. In spite of participants showing discretion in the disclosure of their positive statuses to others, some participants explained what it means to them to have a specific kind of people they found it a responsibility or found it in the right direction to also disclose their statuses to who were neither spouses, family nor friends. Among such people were, their health care providers, clergymen and akomfo (fetish priests). 9 of 28 disclosed statuses (25.714%) respondents had also disclosed to other persons (clergymen, akomfo, health care providers) in addition to their spouse and or family.

Based on received Directive of healthcare providers, some of the participants opened up about how they just had to tell their midwives about their statuses while some others talked of how they were asked by their service providers to bring someone along to guarantee for their intake of medications. A teenage mother confessed how she had to tell her grandma of her status so she could help act as a check for her adherence to medication. According to 3 mothers, they disclosed to their midwives when their time to conceive was almost due. They were told that their babies must receive medicine immediately after birth. For this directive, they disclosed their statuses to their health care providers. A participant expressed how she just had to obey. Saying, "Hmm, for

*me I repeatedly told maame nurse, so she doesn't forget the medicine. I didn't know whether she knew about me or not but I just had to tell her what I was asked to do and I gave her the medicine for the baby so they don't blame me should something happen to the child. "(R35). She further summarized saying, "when it comes to the midwives, I had to tell them but not the gossip ones though, ha-ha, they take care of me after all." (R35)*

Also is Directive from non – medical source. It was also discovered that some of the participants held the belief that their predicament could be explained or solved through supernatural means. Hence, they expressed faith in their spiritual leaders (clergymen, and okomfo (fetish priests)) for prayers and spiritual directions. A woman confessed; *"At our place, it's just prudent to tell him because God reveals everything to him and he might only ask to see if you will lie or not. During service he calls out people who have committed sins or hiding issues to be chastised and prayed for by the congregation so I chose to inform him for healing prayers before he even asked" (R32).*

Another participant also disclosed her status to her priest so he could help her in making disclosure to her partner amicably. She stated that, *"The okomfo (fetish priest) told my lord (spouse) that, I'm HIV positive and he should also get tested to verify if I got the disease physically or spiritually. He explained that, if it's physical my husband will also be reactive when tested but if it's spiritual, he will be tested negative. He told my husband that from all indications it was bought by witches for me...he took it calm towards me." (R26)*

Peace of mind was discovered as another theme which influenced disclosure among respondents. Even so disclosure remained difficult for most women, some participants admitted that disclosure was done absolutely for their own peace of mind. A new mother rhetorically quizzed; *"For how long could I have hidden this from the man I wake up on the same bed with every day? I had*

*become restless and he even questioned me about that, my stress level was so bad that I had to tell him, I was dying inside. For now, when I go to bed I sleep “(R24)*

The experiences of women living with HIV/AIDS face after disclosure came to light through the explored responses by participants. The responses revealed that in spite of the numerous reasons behind HIV disclosure to others, the experiences after disclosure cut across beneficial and detrimental themes as emotional support and kindness, access to good health care, relationship termination and abandonment, stigma and discrimination and emotional abuse (anxiety, anger and despair).

Emotional support and kindness theme were discovered as one of the experiences of participants after their status disclosure. *“See, the thing is; when you get someone to talk out your heart to, you feel good already” (R7)*. This is how a participant expressed her contentment after disclosure. Emotional support and the feeling of kindness towards PLWHIV is priceless. Most of the respondents felt anew and refreshed by the support they received from people they confided in and to them that act made a lot of changes to their lives and that of their born or unborn babies.

Such emotional support does not only aid in making future decisions as it gives hope where there seemed to be none but in dealing with HIV infection management. One woman said, *“I talked to my husband about my status and we decided to keep quiet about it and keep it between us. And afterwards, He never forgot to remind me of taking the ARVs. Since then I have been feeling better and better”*. (R 18). Others experience included these; *“I told my husband and parents, and I must admit that they have been very encouraging” (R5)*. *“My pastor keeps calling me to strengthen and encourage me and sometimes he would even pray with me over the phone” (R7)*. *“My husband keeps making sure that every 7am and 7pm I take my drugs. He would either call me or get me*

*some nice breakfast or super just to encourage me” (R18). “... sincerely I don’t know how and how it happened but my husband has been extremely nice since I informed him. He prays with me, cooks with me and sometimes he would caress my waist while we are working together. I would say this sickness has brought us together than tear us apart.” (R12). “My husband is the only one who is there for me and would drop me and pick me up for my medical appointments. There are times he even goes to pick up my drugs at the clinic for me when I'm down” (R34)*

Access to better health care. Most participants accepted that the medical treatment they received after disclosing their statuses to the midwives were very remarkable. Pregnant mothers revealed how they were given special attention and care because of their babies. All respondents who were pregnant and delivered confirmed their babies were free from the virus (HIV) with the exception of two women whose babies have been infected. Some participants acknowledged they were treated of other health related illnesses by the doctor at the ART clinic without them going through the usual routine of joining queue. And all these made accessing health care easier and better for them.

However, others reported ill experiences they had after disclosure. Relationship termination and abandonment was among the theme explored. While some respondents experienced support from people they made disclosure to, others reminiscent some painful separation they were subjected to by their partners. One woman recalled how her partner threw her out after disclosure. One woman said, *"I told my husband one evening after supper, he went out without a word and return the following day, since then things have never been the same" (R35)*. Other respondents were also abandoned by relatives they disclosed to. A respondent sadly stated; *"my own blood sister stopped visiting few months after disclosure, hmm, I can't blame her though. I just pray she doesn't 'sell' me." (R35)*

Stigma and Discrimination was not left out of the negative experiences after disclosure. Some participants revealed they could not access health care due to shame and self-doubt and this made their condition worse they believed. It was shocking to discover some participants and even among them heavily pregnant women who had to travel to far away towns from their inhabitants to conceal from suspicious neighbors their condition after rumors followed their disclosure to family and partners. And even at times health care workers were suspected to have had hand in the spread of such rumors. “Transportation fare alone is killing me. This is what a pregnant woman revealed when asked why she travels pass two PMTCT centers from where she lives for her ARVs; “Maame nurse has severally advised I take transfer to where I live but I’m not prepared to change my mind yet, here will help me, it’s safer here.” (R22). This revelation was made by nine (9) respondents of which seven (7) were from smaller town as compared to the dwelling places of the other participants.

The Emotional Abuse (anger, anxiety, fear) women living with HIV went through after disclosure of their statuses was highlighted. It has been revealed that most women went through emotional ordeal after disclosure of their statuses. This experience had mostly made the affected persons regretted ever disclosing to particular individuals or disclosure as a whole. *“It’s painful. Eii! So, getting HIV makes you dirty that you cannot prepare dish? The painful thing is they will intentionally tell you that, oh don’t worry to make the food eh, you need to rest. As if they care o, only hypocrisy.”* (R1). This was the heart pour of an unmarried pregnant woman of 32years who lived with her family and had made disclosure to her mother.

7 respondents representing 20% of the 35 participants revealed that their statuses remained undisclosed. Perceived stigma, Fear of rejection and disapproval, Fear of blame and Self-sufficiency are the themes bucketed through the study for influencing non-disclosure of status.

Stigma influences choice of status disclosure. HIV related stigma has been known in the Ashanti region and elsewhere to be associated with making HIV disclosure decisions. Therefore, instead of taking the chance of opening their privacy boundary and gambling on further humiliation and hurt, these respondents chose other protection rules other than disclosure. *“Gossipers all over! What has helped me is that when coming for my medicine, I always bring rubber bags. I pour my medicines into them and tie so that I don’t take the medicine container home” (R16)*. Most of the respondent who have not disclosed their status lamented on how women living with HIV exhibit a deep sense of shame from their family, friends, intimate partners and their community when disclosure issues are not handled confidentially. This feeling of perceived stigma and shame influenced their decisions of not disclosing their status.

Fear of rejection and disapproval are among the factors which hindered status disclosure. Most non-disclosed status participants expressed the fear of their families, partners or friends who may reject them after disclosure. One woman said, *“Me, before I had HIV, I saw it as bad people get HIV so if I am HIV today people will also think same about me” (R6)*. Such perception of disapproval unfavorably influenced their decision of their status disclosure to others. Some Participants further disclosed the fear of losing their societal respect and to the extreme even their parental power of their children if they (children) are to learn of their (mother’s) statuses.

Fear of blame was also uncovered to have hindered status disclosure. The commonly believed idea being that HIV infection is due to engaging in unsafe sex, surfaced as a factor which demotivated the women from disclosure of their statuses. To avoid their spouses (especially) of making accusation of they being unfaithful to them, they decided to keep their statuses as a secret. They told about how this blaming game could even send them packing from their matrimonial homes with their vulnerability as being women. *“... as for me being a woman, everybody will say I*

*brought this sickness home and the next thing, he will go for another woman... we are both living in it I have nowhere to go” (R16)*

Self-reliance. *“Maame (woman) in this town we live, walls have ears. The elders say even if you dig the ground and pour a secret into it, it will by all means come out. This is why I have decided to 'swallow' my issue” (R30).* Another said; *“But this issue is supposed to be a secret, you tell someone it's no longer a secret... as for me I'm not soft. I take care of myself better” (R9).* Women who had not disclosed their statuses to neither their partner, family, friend nor others (clergymen, fetish priest etc.) confessed of believing that the best person to keep their statuses a secret could be no other persons but themselves. These respondents also mentioned that they do not see the importance of telling others since they feel self-sufficient financially and retrieve emotional strength from within themselves. *“Why should I tell my husband, I'm working and can take care of myself” (R30).* Most mentioned their source of emotional strength to carry on as their children (born or unborn).

## CHAPTER FIVE

### SUMMARY, DISCUSSION, RECOMMENDATIONS AND CONCLUSION

#### 5.1 Summary of Findings

The following were found in the course of this study:

- There is a significant positive correlation between self-efficacy and mental health symptoms among women living with HIV/AIDS. This suggests that, as self-efficacy among women living with HIV/AIDS rises, their depression, anxiety and stress reduces; and as self-efficacy among women living with HIV/AIDS decreases, their depression, anxiety and stress rises.
- Personality traits account for 37.5% variance in mental health symptoms among women living with HIV/AIDS. Of these neuroticisms alone with its 17.6% plays the most significant role for women living with HIV/AIDS to show higher forms of mental health symptoms which in this case is depression, anxiety and stress. This is then followed by openness (2.9%), conscientiousness (2.6%) and agreeableness (2.5%).
- Personality traits alone accounts for 51.4% of self-efficacy among women living with HIV/AIDS. In all, Agreeableness with its 28% plays the most significant role for women living with HIV/AIDS to show higher forms of self-efficacy. This is then followed by Neuroticism (6.8%), Openness (1.9%), Extraversion (1.6%) and Conscientiousness (1.4%).
- Mental health symptoms – that is, depression, anxiety and stress – among women living with HIV/AIDS declines/falls as one ages such that older women living with HIV/AIDS

have significant lesser mental health symptom than Middle aged women living with HIV/AIDs and subsequently the younger aged.

- Women who knew their HIV/AIDS status before pregnancy have significantly lower mental health symptoms – that is, depression, anxiety and stress – than those who were made aware during or immediately after pregnancy.
- Women living with HIV/AIDS who have disclosed their health status have significantly lower mental health symptoms – that is, depression, anxiety and stress – than women who have not disclosed their status.
- Women who attained tertiary education have significant decline in mental health symptoms – that is, depression, anxiety and stress – compared to those who had basic education but not secondary school education.
- Interview revealed that 80% of women have disclosed while the other 20 have not disclosed. Of those who have disclosed 37.143% have disclosed to their partner only, 14.286 have disclosed to other family other than their partner only, 2.857 have made disclosure to their friends only while the rest of 25.714% have made disclosure to a third party in addition to their spouses and or family or friend.
- Concern for family, directive/admonition and peace of mind were the three main influential factors of status disclosure. Moreover, emotional support and kindness, access to health care, relationship termination and abandonment, emotional abuse, stigma and discrimination factorized the experiences of women after disclosure. However, perceived stigma, fear of rejection and disapproval, fear of blame and self-reliance got exposed as factors which prevented others from not disclosing their status.

## **5.2 Discussion of Findings**

Comparing the discoveries of this present study to that reviewed, it could be said that, the present finding supports some literature reviewed while rejecting others sharply. It is also fascinating to note that, it fills in a number of gaps in research which was acknowledged in the rationale of the study. Also, theories employed as the framework succeeded in the predictions, explanations, and understanding of this present study.

### **5.2.1 Findings on Self-Efficacy and Mental Health**

To begin with, this present study found that, a significant positive correlation between self-efficacy and mental health symptoms among women living with HIV/AIDS exists. This suggests that, as self-efficacy among women living with HIV/AIDS rises, their depression, anxiety and stress reduces; and as self-efficacy among women living with HIV/AIDS decreases, their depression, anxiety, and stress rises. Comparatively, this present finding does not support that of Rodkjaer et al. (2011) who reported that the decision whether to disclose or not alone was a significant stressor for people living with HIV/AIDS and taxed their coping strategies significantly. For that matter, disclosing health status to a confidant did not relieve persons living with HIV/AIDS of the stress they endured. This finding however supports that of Lee (2010) who reported that self-efficacy was a higher predictor of adherence to antiretroviral therapy. Again, self-efficacy was an important predictor of mental health such that as self-efficacy rises, mental health symptoms decrease and as self-efficacy lowers mental health symptoms rises. In this regard, Kennedy et al. (2007) emphasized that one aspect of self-efficacy is mastery of experience, it is therefore not surprising that among other things, as a woman living with HIV/AIDS keeps mastering her health experiences her mental health symptoms keeps dwindling.

### **5.2.2 Findings on Personality and Mental Health**

In terms of personality traits and mental health symptoms, this present study found that, personality traits accounted for 37.5% variance in mental health symptoms among women living with HIV. Of these, neuroticism alone with its 17.6% plays the most significant role for women living with HIV to show higher forms of mental health symptoms which in this case is depression, anxiety and stress. This is then followed by openness (2.9%), conscientiousness (2.6%) and agreeableness (2.5%). Indeed, it fills in a gap in knowledge produced by Salehi et al. (2016) who took interest in such relationships and reported that personality disorders such as antisocial and borderline can be found among persons living with HIV, yet failed to examine actual personality traits. This present finding agrees with Rzesutek et al. (2016) who took a dynamic turn by looking at personality traits in this regard using the Big Five model. They thus reported that, HIV/AIDS and chronic pain patients who are especially identified with neuroticism may want care but not know how to accept it. This in effect, impacted negatively on good mental health outcomes compared to other personality traits. It also supports, Trobst et al. (2017) who found patients who score high on neuroticism but low on conscientiousness as having poor mental health. It is not surprising that those who scored high on neuroticism were found to have higher mental health symptoms because John and Srivastava (1999) emphasized that, these ones are usually anxious, angry/hostile, depressive, self-conscious, impulsive and vulnerable. In treatment/therapy therefore, women living with HIV/AIDS who are high on neuroticism therefore require much help in terms of psychosocial support to aid them live gracefully despite their health condition.

Findings concerning the role of personality traits in mental health symptoms as found in this present study indeed supports and fills in gaps in knowledge in Moore and Renfro's (2017) study. These researchers reported that, some serious mental health issues such as major depression (36%

of participants), dysthymia (26%), generalized anxiety disorder (GAD) – 16% - and panic attacks (11%) exists among most patients with HIV whereas nearly half meet the criteria for at least one personality disorder especially antisocial personality disorder, borderline personality disorder or narcissistic personality disorder. More so, the present findings fill in gaps in knowledge in Agarwal et al.'s (2012) study that indicated that, 77% of the participants with substance use abuse background had a high disorder level of personality psychopathology compared to the others who were without history of substance abuse. Present study does not support the findings of Okwaraji et al. (2014) who did a regression analysis of personality traits and mental disorders among person's living with HIV/AIDS and found that openness to experience rather than neuroticism had the greatest variance in mental health among persons living with HIV/AIDS. In fact, Okwaraii et al. may fail to justify why openness to experience which is characterized by ideas, fantasy, aesthetics, actions, feelings and values may have worse mental health symptoms than neuroticism which is characterized by anxious, angry/hostile, depressive, self-conscious, impulsive and vulnerable traits (John & Srivastava, 1999).

Furthermore, it was found that, mental health symptoms – that is, depression, anxiety and stress – among women living with HIV/AIDS declines/falls as one ages such that older women living with HIV have significant lesser mental health symptom than women living with HIV/AIDS who are of middle aged and subsequently younger aged. This present finding fills in a great gap in knowledge. Sokhey (2016) who sampled 225 subjects (male=116 and female=109) in the age range of 20 to 50 years from lower and middle-class families should have presented knowledge in this regard concerning age dynamics in mental health among persons living with HIV/AIDS, however, that wasn't achieved. Rodkjaer et al. (2014) also reported that mental health among HIV/AIDS patients may be affected by age, yet the researchers couldn't establish the directions. This present study

has shown that younger women with HIV/AIDS suffer intense mental health symptoms that middle-aged women who in turn suffer intense mental health symptoms than older women. In terms of intervention, this should inform areas of much focus.

### **5.2.3 Findings on Disclosure of HIV/AIDS and Mental Health**

In the aspect of status disclosure, Chaudoir et al., (2011) who investigated the disclosure process model to understand disclosure in HIV/AIDS found that disclosing illness involves antecedent goals – such as the why and benefits of disclosure, the disclosure event itself, mediating processes and outcomes, and a feedback loop. In view of this, Santamaria et al.'s (2011) report that, youths who had been told their HIV status were significantly less anxious or had less psychological problems than those who had not been told whereas youths who knew their status for longer periods reported higher intentions to disclose to their potential sex partners was supported by the present study. This present study thus found that, women living with HIV who have disclosed their health status have significantly lower mental health symptoms – that is, depression, anxiety and stress – than women who have not disclosed their status. This finding from the quantitative aspect of the study does not support, Comer et al. (2017) who suggested that the contradictory differences in finding between self-disclosure and mental health of persons living with HIV/AIDS might be due to socio-geographic differences. For that matter, they investigated people in the US living with HIV and reported that, to them self-disclosure had a good impact on their mental health, however, from people of ethnically diverse background involving blacks, disclosure impacted badly on mental wellbeing due to stigmatization. This present study involved black women living with HIV/AIDS, yet, disclosure no matter how hard it seems for some women initially proved to be mental health symptom reducing factor for them, thus, pointing to the need to encourage women living with HIV-positive who are reluctant to disclose to give it a careful consideration and try.

Vreeman et al.'s (2015) finding that, there are barriers to disclosure which includes stigmatization and fear of psychological trauma or shock is supported by the qualitative findings for this present study. The qualitative findings further revealed that women, especially those who had not disclosed their statuses were having challenges with perceived stigma. They lived by shame, fear of blame, fear of rejection and perceived disapproval from others. Some other women who had made disclosure of their statuses were also inhumanly subjected to unfair discrimination, relationship termination and abandonment by people they had disclosed to. These sour experiences had fueled their decision to travel afar to attend clinic and to pick up their ARVs. Others had even given up on life and had little hope for their babies' future security. Out of pain, those with negative experiences who had disclosed their statuses expressed regret for their decision. It was also uncovered that, few others who chose not to disclose their statuses attributed their decision to self-reliance. Self-reliance was mostly in the aspect of financial independence and emotional strength. Amazingly, the few women who chose self-reliance over status disclosure were found to be self-efficacious which in turn shielded their mental health from falling.

Interestingly, the present finding also supports Thompson et al. (2015) who investigated only women living with HIV/AIDS and found that, contrary to Vreeman et al.'s report, women living with HIV/AIDS expressed a health literacy need to self-care and correct antiretroviral use as well as, the need for self-disclosure and psychosocial skills to build and maintain their relationships. In support of Thompson et al., Lam et al. (2016) also indicated that social support, viral load and disclosure predicted 32% of the variance in mental health symptoms. For this present discussion, Vreeman et al. and Thompson et al. may appear to have contradictory findings but this study has bridged the discrepancy in knowledge here that, woman living with HIV/AIDS first have anxiety and fear about disclosing their health status to someone, yet, they also have the desire to let

someone know their problem so that they could gain social support. Among the women who had made disclosure of their statuses, most of them found it rewarding for their decision. They disclosed the peace of mind they had enjoyed after their disclosure. Kindness, love and financial support were listed as other benefits they have received from persons they disclosed to. They also had access to better health care than before disclosure.

The positive experiences enjoyed by women living with HIV (disclosed or not) had propitious impact on their adherence to medications and breastfeeding advices. They therefore expressed hope for the future of their born and unborn babies. This is particularly true in Ghana where there is stigma for HIV/AIDS which induces fear in disclosure yet, our largely collectivistic culture also suggests that we rely on mutual relationships, trust and support from each other to thrive in our environment. That explains why those women living with HIV who eventually overcame their fears to disclose enjoy lesser mental health symptoms.

### **5.3 Limitations and Recommendations**

There are limitations that should guide interpretations and applications of the findings in this study. Firstly, since men in the Ashanti region living with HIV/AIDS were not involved in the study, it would not be empirically prudent to juxtapose intervention for women and men living with HIV/AIDS based on this study alone. Again, it is worth noting that, this study is culturally based (Ashanti Region) and there is the issue of environment (culture) and its influences on human actions and inactions.

More so, Tsai, Bangsberg, Frongillo, Hunt and Weiser (2012) who examined depression and social support among people living with HIV/AIDS in Uganda reported that, studies involving HIV/AIDS in Africa especially should consider social desirability effect since most participants endeavor to save face due to their perceived stigma even from health workers and researchers in the field. It could be possible that, social desirability effect could exist among some respondents in this study. However, it could be said that, the variety of research approaches and analytical techniques used should rule out this issue of social desirability effect. For example, both qualitative and quantitative research approaches were used so that the weakness of one technique may be overcome by the strength of the other. More so, the quantitative analysis showed a good reliability for the data used whereas data was normal (based on skewness and kurtosis values).

The findings of this study therefore support a variety of researches done in the field and findings make practical sense too. Based on the empirical findings of this present study it is therefore recommended that:

- Clinical intervention for women living with HIV/AIDS should measure their self-efficacy levels using standardized scales for the population so that, therapy would focus on maximizing the self-efficacy of those who score low since it was found in this present study that self-efficacy is needed in cases of poor mental health. And it has been established that, high self-efficacy level serves as a coping mechanism in dealing with living with HIV/AIDS.
- Clinical intervention for women living with HIV/AIDS should always focus more critically on those who are high on neuroticism since they report more mental health symptoms such as depression, anxiety and stress.

- Intervention to promote mental wellbeing should focus especially on women aged 18-29 years, and 30 – 39 years since they suffer much mental health symptoms arising from HIV/AIDS.
- Policy-wise, the Ministry of Health’s directive to get an HIV/AIDS patient to disclose his/her status to a confidant is very insightful and therapeutic and should therefore be encouraged. This is because, women who disclose their HIV/AIDS status enjoy significantly lower mental health symptoms than those who have not disclosed.

### **5.3.1 Recommended Research and Theory**

The following recommendations are made for research and theory:

- It became evident through this study that women living with HIV/AIDS in the Ashanti Region do suffer higher forms of depression, anxiety and stress. However, Brandt et al. (2017) and Vreeman et al. (2015) pointed that, most measures of mental health do neglect suicide. Indeed, if stigma is a serious cause preventing disclosure among some women, then what role does suicide play in the entire relationship? It is therefore expedient to investigate the role of personality, suicidal ideation, self-efficacy, and mental health among women living with HIV/AIDS.
- Since it was found that status disclosure appears difficult for some women, yet, those who have been able to overcome the difficulty to disclose enjoy significantly lesser mental health symptoms, it would be imperative then to examine effective ways of ensuring disclosure for the benefit of the persons living with HIV/AIDS and society at large.

## 5.4 Conclusion

The study made considerable empirical findings on status disclosure, self-efficacy, personality and mental health: the case of women living with HIV in the Ashanti Region. Evidence has been brought to book that women living with HIV/AIDS undergo a variety of mental health symptoms. This is suggesting that, these women need intervention or therapy to help them adjust to their health situation in life. Intervention approaches should focus especially on younger and middle-aged women since these are most affected by mental health symptoms. It is very common for most women in Ghana to know their HIV status during pregnancy because of the series of tests involving HIV test hospitals perform for pregnant women for a fact, most women who reported knowing their HIV status at the point of pregnancy. Research direction indicates that, these women suffer a surge of mental health symptoms which requires immediate therapeutic intervention to help them throughout their pregnancy ordeal. Much can be done through education, for that matter, all stakeholders of health and education should encourage women living with HIV/AIDS to avail themselves to every form of education since it enhances their mental wellbeing. By this way, women living with HIV/AIDS would not give up working to focus on the mental health symptoms but would also work productively to promote national development.

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## APPENDIX A

### DEMOGRAPHIC DATA

#### Section 1

1. Age.....
2. Highest educational level
  - a. Primary
  - b. Junior High School
  - c. 'O' Level
  - d. Senior High School
  - e. 'A' Level/ Middle School Leaving Certificate (MSLC)
  - f. Tertiary
3. Marital status
  - a. Single
  - b. Cohabiting
  - c. Married
  - d. Divorced
  - e. Widow
  - f. Separated
4. Employment status
  - a. Unemployed
  - b. Housewife

- c. Private Institution employee
  - d. Government Institution employee
  - e. Self-employed/entrepreneur
  - f. Other (specify)
5. Point of knowing HIV status
- a. Before Pregnancy
  - b. After/during Pregnancy
6. HIV status disclosed?
- a. Yes
  - b. No
7. If disclosed,
- a. Supportive (i.e. Financial, emotional, and or spiritual support)
  - b. Not Supportive
8. Religion
- a. Christian
  - b. Muslim
  - c. Traditionalist
  - d. Other (specify)

\*NB: Please tick what applies only.

## Section 2

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Disagree strongly 1	Disagree a little 2	Neither agree nor disagree 3	Agree a little 4	Agree Strongly 5
---------------------------	---------------------------	------------------------------------	------------------------	------------------------

### I see Myself as Someone Who...

- |  |   |
|--|---|
| ___ 1. Is talkative                            | ___ 23. Tends to be lazy                              |
| ___ 2. Tends to find fault with others         | ___ 24. Is emotionally stable, not easily upset       |
| ___ 3. Does a thorough job                     | ___ 25. Is inventive                                  |
| ___ 4. Is depressed, blue                      | ___ 26. Has an assertive personality                  |
| ___ 5. Is original, comes up with new ideas    | ___ 27. Can be cold and aloof                         |
| ___ 6. Is reserved                             | ___ 28. Perseveres until the task is finished         |
| ___ 7. Is helpful and unselfish with others    | ___ 29. Can be moody                                  |
| ___ 8. Can be somewhat careless                | ___ 30. Values artistic, aesthetic experiences        |
| ___ 9. Is relaxed, handles stress well         | ___ 31. Is sometimes shy, inhibited                   |
| ___ 10. Is curious about many different things | ___ 32. Is considerate and kind to almost everyone    |
| ___ 11. Is full of energy                      | ___ 33. Does things efficiently                       |
| ___ 12. Starts quarrels with others            | ___ 34. Remains calm in tense situations              |
| ___ 13. Is a reliable worker                   | ___ 35. Prefers work that is routine                  |
| ___ 14. Can be tense                           | ___ 36. Is outgoing, sociable                         |
| ___ 15. Is ingenious, a deep thinker           | ___ 37. Is sometimes rude to others                   |
| ___ 16. Generates a lot of enthusiasm          | ___ 38. Makes plans and follows through with them     |
| ___ 17. Has a forgiving nature                 | ___ 39. Gets nervous easily                           |
| ___ 18. Tends to be disorganized               | ___ 40. Likes to reflect, play with ideas             |
| ___ 19. Worries a lot                          | ___ 41. Has few artistic interests                    |
| ___ 20. Has an active imagination              | ___ 42. Likes to cooperate with others                |
| ___ 21. Tends to be quiet                      | ___ 43. Is easily distracted                          |
| ___ 22. Is generally trusting                  | ___ 44. Is sophisticated in art, music, or literature |

**Section 3**

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

- 0 Did not apply to me at all  
 1 Applied to me to some degree, or some of the time  
 2 Applied to me to a considerable degree or a good part of time  
 3 Applied to me very much or most of the time

1 (s)	I found it hard to wind down	0	1	2	3
2 (a)	I was aware of dryness of my mouth	0	1	2	3
3 (d)	I couldn't seem to experience any positive feeling at all	0	1	2	3
4 (a)	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5 (d)	I found it difficult to work up the initiative to do	0	1	2	3
6 (s)	things I tended to over-react to situations	0	1	2	3
7 (a)	I experienced trembling (e.g. in the hands)	0	1	2	3
8 (s)	I felt that I was using a lot of nervous energy	0	1	2	3
9 (a)	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10 (d)	I felt that I had nothing to look forward to	0	1	2	3
11 (s)	I found myself getting agitated I found it	0	1	2	3
12 (s)	difficult to relax	0	1	2	3
13 (d)	I felt down-hearted and blue	0	1	2	3
14 (s)	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15 (a)	I felt I was close to panic	0	1	2	3
16 (d)	I was unable to become enthusiastic about anything	0	1	2	3
17 (d)	I felt I wasn't worth much as a person	0	1	2	3
18 (s)	I felt that I was rather touchy	0	1	2	3
19 (a)	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
20 (a)	I felt scared without any good reason	0	1	2	3
21 (d)	I felt that life was meaningless	0	1	2	3

**Section 4.**

To what extent does each statement describe you? Indicate your level of agreement by choosing the appropriate response on the right. 4=strongly disagree, 3=disagree, 2=agree, 1=strongly agree.

I will be able to achieve most of the goals that I have set for myself. 1., 2., 3., 4.

When facing difficult tasks, I am certain that I will accomplish them. 1., 2., 3., 4.

In general, I think I can obtain outcomes that are important to me. 1., 2., 3., 4.

I believe I can succeed at most any endeavor to which I set my mind. 1., 2., 3., 4.

I will be able to successfully overcome many challenges. 1., 2., 3., 4.

I am confident that I can perform effectively on many different tasks. 1., 2., 3., 4.

Compared to other people, I can do most task very well. 1., 2., 3., 4.

Even when things are tough, I can perform quite well. 1., 2., 3., 4.

## APPENDIX B

### QUALITATIVE ANALYSIS

The following questions was answered in the course of this study by the aid of a semi-structured interview and analyzed using thematic analysis:

- (4) What factors made women living with HIV/AIDS to disclose their health status?
- (5) What have been the experiences of women living with HIV/AIDS after disclosing their health status to a confidant?
- (6) What factors prevent some women from disclosing?

#### **Semi-structured Interview Guide**

10. Please for how long have you known your positive HIV status?
11. Have you disclosed your status? If 'Yes', to whom? If 'No' skip question 3, 4, 5, and 6.
12. Approximately how long did it take you to be able to disclose your status?
13. Why did you decide to disclose your status?
14. Can you please tell me about your disclosure experience?
15. Have you in anyway regretted to have made disclosure? Why or why not?
16. Why is your HIV status not disclosed?
17. Do you have the intentions for future disclosure of your status? Why or why not?
18. Any other extra contributions to this interview?

APPENDIX C



UNIVERSITY OF GHANA  
ETHICS COMMITTEE FOR THE HUMANITIES (ECH)

P. O. Box LG 74, Legon, Accra, Ghana

My Ref. No.....

15<sup>th</sup> December, 2017

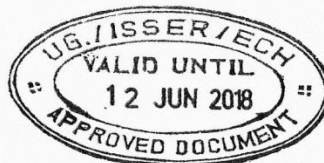
Ms. Angelina Pokua Aboagye  
Department of Psychology  
University of Ghana  
Legon

Dear Ms. Aboagye,

**ECH 078/17-18: THE DISCLOSURE, SELF-EFFICACY AND PERSONALITY OF HIV POSITIVE PREGNANT AND POSTPARTUM WOMEN ON THEIR MENTAL HEALTH IN ASHANTI REGION**

This is to advise you that the above reference study has been presented to the Ethics Committee for the Humanities for a full board review and the following actions taken subject to the conditions and explanation provided below:

Expiry Date: 12/06/18  
On Agenda for: Initial Submission  
Date of Submission: 13/11/17  
ECH Action: Approved  
Reporting: Quarterly




Please accept my congratulations.

Yours Sincerely,

Rev. Prof. J. O. Y. Mante  
ECH Chair

CC: Dr. Maxwell Asumeng, Department of Psychology, University of Ghana.

**APPENDIX D**

  
DR. FRED ADOMAKO-BOATENG  
DEPUTY DIRECTOR OF CLINICAL CARE  
for: REG. DIR. OF HEALTH SERVICES  
ASHANTI.

In cc:  
and  
should be quoted

My Ref: GHS/ASH/DA/11  
Your Ref. No:  
Tel: 233-051-22089/23651  
Fax: 233-03220-26219  
E-mail: rdhs.ar@ghsmail.org



TE  
KUMASI

20<sup>TH</sup> April, 2018

**MEDICAL DIRECTOR  
KUMASI SOUTH HOSPITAL**

**MED SUPTS  
SUNTRESO  
KONONGO  
ST. MICHAEL, PRAMSO  
MAMPONG  
ASONOMASO  
PRESBY HOSP, AGOGO  
KOKOFU  
ST. MARTIN'S**

**RE: "THE DISCLOSURE, SELF-EFFICACY AND PERSONALITY OF HIV POSITIVE PREGNANT AND POST PARTUM WOMEN OF THEIR MENTAL HEALTH IN THE ASHANTI REGION"**

As part of the requirements for MPhil Programme at University of Ghana, Ms. Angelina Pokua Aboagyee is under taken a study on The disclosure, self-efficacy and personality of HIV positive pregnant and postpartum women on their mental health in the Ashanti Region."

The RDH has study the protocol and finds the topic suitable for the improvement of HIV care and management in Ghana.

Your facilities have been selected for the study. I shall be grateful if you could kindly allow her access to facilities for data collection.

Find attached (1) Ethical Approval and (2) Study protocol.

I count on your usual cooperation

**APPENDIX E**



UNIVERSITY OF GHANA



Official Use only Protocol number
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**Ethics Committee for Humanities (ECH)**

PROTOCOL CONSENT FORM
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Section A- BACKGROUND INFORMATION
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Title of Study: THE DISCLOSURE, SELF-EFFICACY AND PERSONALITY OF HIV POSITIVE PREGNANT AND POSTPARTUM WOMEN ON THEIR MENTAL HEALTH IN THE ASHANTI REGION.	
Principal Investigator: ANGELINA POKUA ABOAGYE	
Certified Protocol Number	

Section B- CONSENT TO PARTICIPATE IN RESEARCH
---

**General Information about Research**

This study seeks to find out the impact of disclosure, self-efficacy and personality of HIV positive women on their mental health in the Ashanti Region. It employs both filling of questionnaires and interviews. Participants will first fill questionnaires before they are interviewed. However, not all participants who take part in filling the questionnaires will be interviewed. Any participant who is selected for the interview, does so in their free will and consent. Filling of the questionnaires by participants will take approximately 20 minutes. The interview is expected to last for approximately 25 minutes.

**Benefits/Risks of the study**

This study is expected to be of benefit to people living with HIV, especially pregnant women and women in their postpartum (after birth) period living with HIV. This study seeks to help understand and throw more light on how and the extent of impact to which the disclosure of status, self-efficacy and personality of pregnant and postpartum women have on their mental health. Knowledge derived from this study is to help influence the implementation of strategic policies which will enhance mental health of people living with HIV/AIDS especially pregnant and postpartum period women. Also, the study could influence policies which seek for the empowerment of pregnant and postpartum period women living with HIV in societies. This is further expected to influence policies to help curb the HIV prevalence rate in the Ashanti Region and Ghana as a whole. However, due to the sensitivity of study topic on disclosure of status, participants may experience emotional/psychological disturbances. Counselors at every participating Prevention of Mother to Child Transmission (PMTCT) Centre will be on alert to

handle such emotional/psychological disturbed participants if they should occur. Also participants who show signs of any possible severe emotional/psychological disturbances will be advised and humbly requested to withdraw from study.

### **Confidentiality**

Confidentiality of study is highly assured. Every information (questionnaire and interview) retrieved from participants will not be in any case exposed to other person(s) other than for the purpose of study. No traceable identification information of participants other than for the benefit of sampling of interviewees for qualitative part of study will be attained. All signed/thumb-printed forms will be securely locked up and completely destroyed after its usage for the study. All recordings will be strictly audio and will be completely destroyed after it has served its purpose for this study. No other person(s) other than the researcher of this study and trained research assistant (s) (if any) will get direct access to study information. Moreover, all information (filled questionnaires, signed or thumb-printed consent forms and recorded interviews) for study will be in the secured possession of the researcher only.

### **Compensation**

There will be no monetary compensation to be received by participants of this study. However, snacks will be made available for participants at the end of both parts of the study.

### **Withdrawal from Study**

Participation in the study is strictly voluntary and participants may withdraw at any time without suffering any kind of penalty. Persons who decline to participate will not be affected in any way. Participant's legal representative will be informed in a timely manner if information becomes available that may be relevant to the participant's willingness to continue participation or withdrawal from study. Participant who exhibits symptoms of severe emotional/psychological disturbances will be advised and humbly requested to discontinue study and to be attended to by a counselor.

### **Contact for Additional Information**

Please contact the researcher for answers to any questions about the research and on research-related injury. Below is the contact details of researcher.

Angelina Pokua Aboagye

University of Ghana

Email: [espcylina@gmail.com](mailto:espcylina@gmail.com)

Contact number: +233(0) 267904371

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@isser.edu.gh](mailto:ech@isser.edu.gh) / [ech@ug.edu.gh](mailto: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 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.

\_\_\_\_\_  
Name of Person who Obtained Consent

\_\_\_\_\_  
Signature of Person Who Obtained Consent

\_\_\_\_\_  
Date