

Research Paper

Peer victimization, prison climate, resilience and psychological distress of incarcerated juvenile offenders in Ghana: A serial mediation examination



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ABSTRACT

Most Ghanaian research in the area of victimization among children has focused on the school setting. Little research has been done in an attempt to understand inmate-on-inmate victimization within the juvenile correctional facilities in Ghana. This study, therefore, investigated the extent to which peer victimization influences psychological distress among juvenile offenders in the Senior Correctional Center of Ghana. A cross-sectional design was used to purposively sample 115 juvenile offenders for the study. Following mediation analysis performed in PROCESS, the results revealed that prison climate and resilience serially mediated the relationship between peer victimization and psychological distress. Independently, both prison climate and resilience mediated the relationship between peer victimization and psychological distress. It was recommended that anti-bullying programs ought to be institutionalized to create mental health awareness within the correctional facilities. Also, support systems such as the Listener Scheme need to be deployed within the correctional facilities.

1. Introduction

Violence is commonly accepted as an unavoidable aspect of prison life.^{1,2} This is attributed primarily to the confinement of several people with antisocial behaviors in an overcrowded facility with limited resources and social deprivation.³ Extreme violence in some instances culminates in murder: for instance, from 1993 to 2000, 53 deaths as a result of inmate assault were reported among all prisoners held in federal, private, and state prisons in the United States.⁴ While homicide is considered to be rare in most prison centers, victimization is more common.⁵ Victimization in this context happens when victims experience direct and/or indirect aggression on several occasions primarily by the same or different perpetrators.⁶ Prisoners experience diverse forms of assault such as direct (being hit, slapped or punched) and indirect physical assault (coerced to stand, sit, and lie in awkward positions), theft-related and verbal assault such as speech belittled.^{6–8}

Several stakeholders worldwide advocate against the victimization of adolescents. The protection of children from various forms of violence is a fundamental right guaranteed by the Convention on the Rights of the

Child and other international treaties.⁹ To address the phenomenon of victimization, the United Nations (UN) captured it as a goal under the Sustainable Development Goals (SDGs, 16.2) to put an end to abuse, exploitation, trafficking, and all forms of abuse against children by 2030.¹⁰ To achieve this goal, Ghana, a UN member, has strengthened The Children's Act (Act 560, 1998) by putting in place systems to prevent any form of correction that is "unreasonable in kind or degree according to age, the physical and mental condition of a child" (p. 8).¹¹

Even though necessary stakeholders have made numerous efforts to combat the menace of victimization, some international treaties have yet to be ratified at the national level. Ghana, for instance, has ratified eight of the ten core international human treaties. The International Convention for the Protection of All Person from Enforced Disappearance and the Optional Protocol to the Convention against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment are the two treaties that remain to be ratified.¹² Besides, according to the United States' standard minimum rules for the treatment of prisoners, every prison or correctional facility should have a health-care service aimed at improving the physical and mental health of prisoners.¹³ Most of the

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correctional facilities in Ghana, however, have no mental health professional (psychologist or psychiatrist) stationed in the facility to provide mental health support for the young offenders.⁸ On a global dimension, a plethora of studies have been done on victimization and its consequences.^{6,7,14,15} Though victimization has received considerable attention in developed countries, only a few studies have examined victimization in juvenile prisons in African countries. Anecdotal evidence however suggests that there is a significant rise in the prevalence of victimization among juveniles in prison centers, especially in Africa with a prevalence rate of 30–64% in South Africa,¹⁶ Ghana^{8,17} and Kenya.¹⁸

Most studies indicate that prison environments that are not conducive and also expose prisoners to victimization could have a criminogenic effect on some prisoners.^{15,19} That is, a harsh prison environment to some extent could lead to physical confrontations among prisoners. This as such, creates opportunities for those who are perceived to be easy targets due to their age, race, level of education, employment history, and family status, to be victimized.²⁰

Generally, it is well placed in the literature that, prisoners who witness or are direct victims of assault are significantly more likely to suffer from long-term negative effects such as depression, suicide, anxiety, post-traumatic stress disorder, and other health-related issues.^{14,21–23} These psychological impacts of victimization are considered to be more problematic among juveniles. This situation is a great concern since the adolescent stage is the period these individuals are building a healthy personality into adulthood.²⁴

Although victimization is considered a risk factor for psychological distress, the mechanisms by which the environment, specifically, prison conditions, can cause psychological distress are not well documented. Research is increasingly highlighting the mediating role of factors such as low social support and parental maltreatment that may serve to illuminate the link between victimization and psychological distress.^{25,26} However, to the best of our knowledge, no studies have been done to establish the extent to which prison climate mediates the link between victimization and psychological distress.

Also, some individuals who happen to have experienced victimization tend to exhibit internal and external attributes of resilience.²⁷ Internal resiliency has been found to marginally mediate the relationship existing between victimization and internalizing problems such as depression, anxiety, and somatic complaint.^{27,28} Sygit-Kowalkowska et al. postulate that there is a significant negative relationship between resilience and the HADS-M scale (depression and anxiety). This indicates that higher levels of resilience lead to lower levels of depression and anxiety.²⁹

The dearth of research on victimization in developing countries leaves a glaring gap that needs to be filled regarding understanding the scope and nature of the influence of victimization on psychological distress since findings in the western countries cannot be generally applied to the Ghanaian context. Context and culture play a significant role in victimization experiences among adolescents and young adults.³⁰

Again, no anti-bullying policy has been implemented within Ghanaian prisons despite the high prevalence rate of victimization reported among adolescents.¹⁷ This, therefore, highlights the need for researchers to conduct a contextually relevant study that addresses the various psychological distress associated with victimization. The findings of this study would help in the development of anti-bullying intervention programmes for correctional facilities in Ghana.

1.1. Objectives of the study

As described above, research indicates that these variables (peer victimization, prison climate, resilience, and psychological distress) are closely related; however, the underlying processes tying some of these variables together are not yet understood. To expound on the unique relationships among these variables, this study aimed at proposing and evaluating a novel conceptual model to examine how prison climate and

resilience serially mediated the relationship between peer victimization and psychological distress.

1.2. Hypotheses

The present study was guided by two hypotheses. Based on existing research, it was first hypothesized that prison climate and resilience would independently mediate the relationship between peer victimization and psychological distress. Finally, it was also hypothesized that the prison climate and resilience would serially mediate the relationship between peer victimization and psychological distress.

2. Method

2.1. Study sample

A total of 115 juvenile offenders from Ghana's Senior Correctional Center were purposively sampled for the study. For regression analysis, a sample size of 115 was adequate. This was based on a software known as G Power (version 3.0.10).³¹ From the analysis of this software, a minimum sample size required for multiple regression at 0.05 significant errors and a medium effect size (0.15) was determined as 107. Participants' age ranged from 15 to 17 years with a mean age of 16.13 years (SD = 1.96). Approximately 69.6% (n = 80) of the juvenile offenders have been given a maximum sentence of 3 years, with 3.5% (n = 4) sentenced for a year and the remaining 27% sentenced within 2 years. Nearly, half of the sample (49.6%) were Junior High School (JHS) dropouts, while only 18 (15.7%) and 21 (18.3%) were Senior High School (SHS) and primary school dropouts, respectively.

2.2. Research setting

The current study was carried out in Ghana's Senior Correctional Facility. The facility is home to 198 male young offenders aged 14–20 years old from Ghana's 16 administrative regions. Before being transferred to the Senior Correctional Facility, a young offender is transferred to a Remand Home until the person is finally convicted of the crime by a Ghanaian court.³² Young offenders are imprisoned for offenses such as defilement, theft, armed robbery, murder, possession of stolen goods, and fraud. A juvenile who commits a serious crime usually faces a maximum sentence of 36 months in prison.³² When incarcerated in the correctional facility, the young offender is either enrolled in a basic education or vocational skills program based on the literacy level.

2.3. Study design and protocol

A cross-sectional study was used for this study. The study began immediately after the researchers received ethical approval from the University of Ghana's Ethics Committee for Humanities (ECH: 033/17–18). Following that permission was sought from the Ghana Prisons Service (OC/1082/V.1/2018/150A) in the administration of instruments to the prisoners. After approval was granted, a questionnaire package that included informed consent, demographic information, and instruments assessing the various variables were administered to the participants. We announced in advance, through brochures and regular intercom announcements, that researchers will be conducting interviews the following week. The advertisement assured the juvenile offenders of the confidentiality of information given out for the study and also about their right to refuse to answer any question. Individuals under the age of 18 who were willing to participate in the study were considered for inclusion in this study. Participants provided data for victimization during periods they had free time in prison schools or workshops. Participants who needed assistance to fill out the questionnaire were assisted by the investigators. It took approximately 20 min to complete the questionnaire and questionnaires were collected on the same day. Participants did not receive any form of compensation for

their participation in this study.

2.4. Study instrument

Three instruments were used in this study. These instruments were the Kessler Psychological Distress Scale (K-10), Multidimensional Peer Victimization Scale and Measuring Quality of Prison Life. K-10 is a well-structured instrument that consists of 2 subscales of 5 items each measuring depression and anxiety. The internal consistency for K-10 was 0.92. Items on the K-10 are scored on a 4-point Likert scale ranging from 0 = never to 4 = always. The reliability of K-10 has been well established within the African context.³³ A composite score of the entire items is taken to obtain a minimum score of 10 and a maximum score of 50. A low score indicates lower levels of psychological distress while a high score indicates higher levels of psychological distress. A score of 20–24 indicates mild psychological distress, whereas a score of 25–29 signifies moderate psychological distress. Also, a score of 30–50 indicates severe psychological distress.

Victimization was measured using Mynard and Joseph's Multidimensional Peer-Victimization Scale (MPVS) which is a 16-item scale that assesses the extent to which individuals experience victimization.³⁴ MPVS consists of four subscales namely physical victimization, verbal victimization, social manipulation, and attacks on property. Social manipulation is described as acts intended to manipulate another person's social surroundings to hurt or harm that person. Furthermore, these four subscales consist of four items each. The reliability for physical victimization, verbal victimization, social manipulation, and attacks on the property are 0.85, 0.75, 0.77, and 0.73 respectively.³⁴

Prison Climate was assessed using Measuring Quality of Prison Life (MQPL) which consists of 140 items rated by inmates to examine their experiences of staff-prisoner relationships, respect, safety, order, and other aspects of prison life. MQPL consists of 21 subscales which comprise entry into custody, respect/courtesy, relationships, humanity, decency, care for the vulnerable, help and assistance, staff professionalism, bureaucratic legitimacy, fairness, organization and consistency, policing and security, prisoner safety, prisoner adaptation, drugs and exploitation, conditions, family contact, personal development, personal autonomy, well-being, and distress.²²

For this study, only four subscales of the MQPL were used. The four subscales of MQPL used in this study were "caring for the vulnerable", "fairness", "policing and security", and "prisoner safety". Care for the vulnerable is a five-item subscale, which was used to assess the kind of care and support provided to inmates who are at risk of self-harm, suicide, and bullying. Fairness, on the other hand, consists of six items that measured the perceived impartiality, proportionality, and legality of punishments and procedures within the correctional center. Concerning policing and security, it consists of 9 items that assessed staff supervision and control of the prison environment. Lastly, prisoner safety consists of five items that assessed inmates' feelings of protection from harm, threat, or danger. The reliability of care for the vulnerable, fairness, policing and security, and prisoner safety is 0.80, 0.82, 0.75, and 0.73 respectively.²² The scale was measured on a five-point Likert scale ranging from 0 (never) through 2 (sometimes) to 4 (always). The scale was scored such that negative items were reverse-scored.

2.5. Statistical analysis

We began by examining the data for consistency with the parametric assumptions, such as normality. All items were normally distributed. To confirm construct dimensionality, exploratory factor analyses with the factor loading criterion (≥ 0.50) were used.³⁵ The dependability of internal consistency was then determined. Following that, we ran bivariate correlations between the main study variables. We then tested the mediating effects of prison climate (M1) and resilience (M2) between peer victimization (X) and psychological distress using the PROCESS macro (Model 6).^{36,37} This method allows for the separation of each

mediator's independent effects from the outcome variable.³⁸ With 5000 bootstrap samples, we determined the statistical significance of the mediating variable at 95% confidence intervals (CI). Indirect effects that did not include zero indicating a statistically significant mediation.³⁸

3. Results

3.1. Preliminary analyses

For normality, the skewness, kurtosis, and outliers of the continuous variables were examined. Skewness and kurtosis were within acceptable limits of -3 to $+3$.³⁹ Table 1 shows the means, standard deviations, and Cronbach's alphas for each scale. The predictors were significantly related, and the medium effect sizes were found to indicate that multicollinearity was not an issue in the path analysis.⁴⁰

3.2. Intercorrelation matrix

The results of Table 2 indicated that peer victimization positively correlated with psychological distress ($r = 0.69, p < .001$). This suggests that elevated levels of victimization are associated with higher levels of psychological distress (depression and anxiety) among juvenile prisoners. It was also noted that prison climate negatively correlated with victimization. This implies that lower levels of fairness, policing and safety, caring for the vulnerable, and prisoners' safety, lead to elevated levels of psychological distress among juvenile prisoners.

3.3. Serial multiple mediation analyses

3.3.1. The total effect of peer victimization on prison climate, resilience, and psychological distress

Total effects models produced significant results, firstly with peer victimization being directly related to prison climate ($B = -1.14, p < .001$) (see Table 3). Second, peer victimization ($B = -0.19, p < .05$) was related to resilience after controlling for prison climate ($B = 0.15, p < .01$). Finally, peer victimization was discovered to be a significant predictor of psychological distress ($B = 0.13, p < .05$). See Table 3. According to these findings, increasing victimization was independently related to low levels of prison climate, low levels of resilience, and high levels of psychological distress. It also demonstrates that prison climate was significantly related to resilience.

3.3.2. Direct effects of peer victimization, prison climate, resilience on psychological distress

In the direct effect model, peer victimization ($B = 0.13, p < .05$), prison climate ($B = -0.12, p < .05$), and resilience ($B = -0.43, p < .001$) were all found to be directly related to psychological distress. See Table 3. This result indicates that while controlling the effects of prison climate and resilience, victimization was significantly related to psychological distress.

3.3.3. Indirect effects of peer victimization on psychological distress mediated by prison climate and resilience

Fig. 1 depicts the serial multiple mediation analysis, with peer victimization as the predictor variable, prison climate and resilience as mediator variables, and psychological distress as the outcome variable, all with unstandardized coefficients on each regression pathway. According to these findings, peer victimization was linked to psychological distress via prison climate and resilience. In other words, a higher level of peer victimization was related to lower levels of prison climate ($a_1 = -1.14, p < .001$), which increased psychological distress ($B b_1 = -0.12, p < .05$). Also, a higher level of peer victimization was related to lower levels of resilience ($a_2 = -0.18, p < .05$), which increased psychological distress ($B b_2 = -0.43, p < .001$). Collectively, reporting high levels of peer victimization was associated with high psychological distress due to decreased levels of prison climate, which resulted in less resilience (B

Table 1
Summary of descriptive statistics of variables in the study.

Variable	Mean	SD	Min.	Max.	Skewness	Kurtosis	Alpha
Peer Victimization	34.49	15.31	1	58	-.60	-.82	.92
Resilience	16.90	10.43	2	40	.54	-1.15	.91
Prison Climate	38.17	22.44	7	91	.87	-.58	.94
Psychological Distress	30.37	10.82	10	47	-.35	-1.40	.92

Table 2
Bivariate correlation matrix for the study variables.

Variables	1	2	3	4	5	6
1. Psychological Distress	-					
2. Level of education	.24***	-				
3. Served one year in prison	.20*	-.17*	-			
4. Served two years in prison	-.20*	.17*	-.83***	-		
5. Peer Victimization	.69**	.20*	.20**	-.12	-	
6. Prison Climate	-.68***	-.10	-.18*	.09	-.82***	-

* Correlation significant at the 0.05 level.
** Correlation significant at 0.01 level.
*** Correlation significant at 0.001.

$d_{21} = 0.15, p < .05$). Overall, these findings confirmed that prison climate and resilience mediated the relationship between peer victimization and psychological distress.

The bootstrap estimation procedure (with a defined bootstrap sample of 5000) supports these significant indirect effects, as shown in Table 3. Peer victimization, had a statistically significant indirect effect on psychological distress via prison climate ($a_1b_1 = 0.10$; 95% CI: 0.03, 0.19), resilience ($a_2b_2 = 0.18$; 95% CI: 0.09, 0.30), and a combination of both mediators ($a_1d_{21}b_2 = 0.07$; 95% CI: 0.01, 0.15), as each confidence interval completely excluded zero.

To summarize, mediational analyses revealed an indirect relationship between high peer victimization and a high level of psychological distress. Lower levels of prison climate and low levels of resilience mediated this association.

4. Discussion

Bullying is a serious issue within any context. However, it is especially so among teenagers since these teens are in a critical and very sensitive stage of their development. A key finding of the current study which sought to investigate peer victimization and psychological distress was that prison climate and resilience significantly mediated the

relationship between victimization and psychological distress. The current study’s findings shed light on the mechanisms by which peer victimization is linked to psychological distress, providing insight into the process by which these psychological variables (prison climate and resilience) affect the association.

Prison climate and resilience independently mediate the relationship between peer victimization and psychological distress. This current result is consistent with previous studies documenting that resilience can serve as a mediator linking peer victimization and psychological distress.^{41,42} From the finding, peer victimization undermines resilience and consequently affects the mental health of juvenile offenders. Given the foregoing, one possible explanation is that adolescents with low resilience are disadvantaged in acquiring assets or resources for combating adversities, and thus their risk of experiencing psychological distress can be high when bullied. As a result, it explains why decreased resilience can significantly mediate the relationship between victimization and psychological distress. Peer victimization, thus, reduces resilience in areas such as supportive growing environments, social support, and attachment, as well as internal elements such as self-esteem, self-control, and self-efficacy.²⁸ Limited access to some of these external and internal elements could engender frustration, stress, and depression among these young offenders.⁴³ Bullying victims also

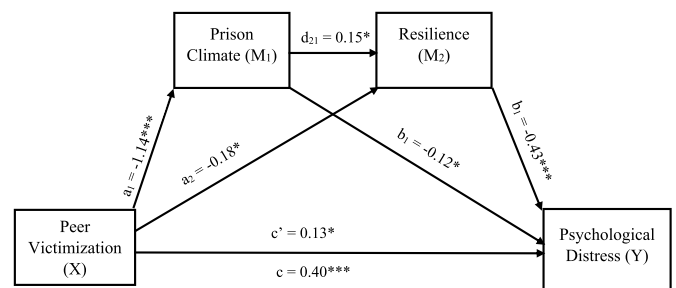


Fig. 1. An observed serial mediational model with unstandardized coefficients. Regression pathways a = IV to mediator path, b = mediator to DV path, c = total effect path, c' = direct effect path controlling for both mediators and d = serial mediation path. * $p \leq .05$; *** $p \leq .001$.

Table 3
Results of serial mediation pathways of Peer Victimization (PV), prison climate (PC), resilience (RS), and psychological distress (PD).

Paths	B	SE B	β	p-value	R	R ²	95% CI	
							Lower	Upper
Total effect								
PV→PD	.40	.06	.56	<.001	.56	.32	.29	.51
PV→PC	-1.14	.09	-.78	<.001	.78	.60	-1.31	-.97
PV→RS	-.18	.09	-.25	<.05	.53	.28	-.34	-.12
PC→RS	.15	.06	.32	<.05	.53	.28	.03	.26
Direct effect								
PV→PD	.13	.08	.16	<.05	.70	.49	.04	.27
PC→PD	-.12	.05	-.25	<.01	.70	.49	-.23	-.02
RS→PD	-.43	.08	-.41	<.001	.70	.49	-.59	-.26
Indirect effect								
PV→PC	0.14	0.07					BLLCI	BULCI
PV→RS	0.07	0.05					0.07	0.27
PV→PC→RS	0.07	0.04					0.02	0.13
							0.01	0.12

Note. B = unstandardized coefficient; β = standardized coefficient; 95% CI = confidence interval; SE = standard error. Bootstrapped samples = 5000. BLLCI=Bootstrapped Lower Limit. BULCI= Bootstrapped Upper Limit.

typically report more negative emotions and higher levels of emotion dysregulation than non-bullied individuals.^{44,45} It has been established that disruptions in emotion regulation may increase the risk of adolescents' internalizing problems, leading to depression and anxiety.⁴⁶ It was further noted that prison climate independently mediated the relationship between peer victimization and psychological distress. Peer victimization threatens the safety net of the environment.⁴⁷ Victimization may instill fear in victims, which may influence victims' perception of the prison environment as unsafe.¹⁵ This recurring assessment of the facility as unsafe may cause victims to be constantly on the edge, increasing their stress and anxiety levels.⁴⁸

The findings further revealed that prison climate and resilience jointly played the role of serial mediators in the relationship between peer victimization and psychological distress. From the finding, peer victimization influenced psychological distress through prison climate and subsequently resilience. Victims of bullying are less likely to regard the environment as friendly, accommodating, fair and safe, and their sense of belonging and participation in school or workshop activities in the correctional facility will significantly decline.^{15,47} Accordingly, both internal and external resilience elements such as supportive growing environments, social support, and attachment, as well as internal elements such as self-esteem, self-control, and self-efficacy will be negatively affected, ultimately leading to a significant increase in their psychological distress.

5. Limitations and future directions

The current study was not short of limitations. The first limitation has to do with the use of self-reports on peer victimization. Data on peer victimization was solely based on self-reports from juvenile offenders. This probably could lead to juvenile offenders' magnifying their reports of victimization to seek attention. Future research should therefore make effort to obtain prison officers' views and reports about victimization in correctional facilities. This would ensure that the personal experiences of the officers are captured and analyzed. It would further enrich the data and yet at the same time validate the responses from the juvenile offenders. The current study was also conducted with a sample of male juvenile offenders from only one Ghanaian institution. Care should, therefore, be taken in an attempt to generalize these findings to other prison centers. Research has suggested, for instance, that males and females differ in their preferred coping styles.^{49,50} The scope of coverage of the study should thus, be expanded to include other areas or institutions in Ghana. This would increase the degree to which the results can be generalized to a larger population of Ghanaian young offenders. Furthermore, the study was conducted using a cross-sectional design. This may have not been enough to gain adequate insight into juvenile offenders' experiences with the facility in terms of possible fluctuations in experiences over time, as a result of potential changes in juvenile offenders' conditions and circumstances surrounding victimization. Future researchers should consider a longitudinal study to gain sufficient information about potential trends in the juveniles' experiences of victimization and other potential factors in the correctional facility.

6. Implications and conclusion

In this population-based cross-sectional study that included juvenile offenders, we found that victimization was significantly associated with psychological distress; more importantly, resilience and prison climate independently as well as combined to explain the association between victimization and psychological distress. The findings of the study have implications, in that, increased awareness of youth exposure to bullying and its potential health consequences may lead to mental health promotion and disease prevention programs within the prison centers. To avoid victimization, stakeholders should develop education programs aimed at explaining prison policies and practices regarding young

offenders' rights and teaching them how to follow up on abuse allegations. Correctional facility stakeholders should also form a disciplinary committee to investigate juvenile abuse cases. Furthermore, based on the prevalence of bullying within the facility, anti-bullying programs that create awareness of prison policies and practices regarding juvenile offenders' rights need to be institutionalized. Support systems such as the Listener Scheme needs to be deployed. This Scheme would offer social support for juvenile offenders, by introducing individual officers to render support to assigned inmates. Again, mental health screening ought to be done for juvenile offenders before incarceration. This would ensure that juvenile offenders with mental health problems would be easily identified for immediate psychological intervention. To have a broader positive impact on the mental health of juvenile offenders, resilience-based intervention programs that focus on developing a sense of relatedness, optimism, trust, and tolerance must be nurtured. The correctional facility does not provide counseling to young offenders who have been traumatized or have had any psychological experiences. The Ghana Prisons Service thus should make a concerted effort to recruit clinicians to teach stress management techniques such as progressive muscle relaxation, and meditation, among others to juvenile offenders and prison officers.

Declaration of conflicts of interest

No conflicts of interest declared.

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