

# Emotional regulation and Psychological Distress among Inmates in Correctional Centres in Benue State, Nigeria: The Mediating role of Resilience

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## Abstract

*Psychological distress is a prominent mental health issue among inmates, often exacerbated by incarceration-related stressors such as overcrowding, violence, isolation, and inadequate mental health support. Nevertheless, literature is sparse in explaining this phenomenon in Benue State. This study examined the mediating role of resilience between emotional regulation and psychological distress among inmates in correctional centres in Benue State, Nigeria. A cross-sectional design was adopted, and data were collected from 613 inmates sampled from correctional centres in Makurdi, Gboko, and Otukpo. The Psychological distress scale, emotion regulation questionnaire and Brief resilience scale were used for data collection. Three hypotheses were formulated and tested. Findings revealed that emotion regulation and its dimensions significantly predicted psychological distress among inmates. Similarly, resilience significantly predicted psychological distress among inmates. Also, resilience significantly mediated the relationship between emotional regulation and psychological distress among inmates. It was recommended that the curriculum for rehabilitation in Nigerian correctional centres should incorporate emotion regulation skills and resilience strategies training for inmates. This is relevant to assist them to learn positive ways of coping with stress induced by incarceration.*

**Key Words:** *Emotion regulation, Resilience, Psychological Distress, Inmates*

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## Introduction

The mental health of incarcerated individuals is a pressing concern that has garnered increasing attention in global research and policy. Correctional facilities around the world house individuals who often experience a multitude of psychological challenges, including heightened

rates of psychological distress, depression, anxiety, and other mental health disorders (Sanderson et al., 2020). According to the World Health Organization (WHO), approximately 10% of the global inmate population suffers from severe mental health disorders (WHO, 2014). In addition, incarcerated individuals are at greater risk for experiencing psychological distress due to the extreme stressors in correctional centers, such as over-crowding, social isolation, violence, and lack of adequate mental health care (Fazel et al., 2016). Psychological distress is a significant public health concern, encompasses a spectrum of negative emotional experiences that impede daily functioning. This state can manifest as intense anxiety, sadness, or anger, alongside feelings of hopelessness, concentration difficulties, and sleep or appetite disturbances. Stressors such as personal loss, interpersonal conflict, financial hardship, or chronic illness can precipitate these experiences (Sanderson et al., 2020).

Incarceration can have a significant impact on the mental health of individuals who are incarcerated. Many inmates enter the prison system with pre-existing mental health conditions, such as depression, anxiety disorders, or post-traumatic stress disorder (PTSD) (Gomez-Figueroa & Camino-Proano, 2022). These pre-existing conditions may be further exacerbated by the stressors and challenges inherent in the incarceration setting. The highly restrictive and often isolating environment of a correctional facility can lead to heightened levels of psychological distress among inmates. Moreover, a significant proportion of individuals who are incarcerated have experienced trauma, including physical or sexual abuse, prior to their incarceration (Gomez-Figueroa & Camino-Proano, 2022). There are many determinants of psychological distress. Some of the likely factors include emotion regulation and resilience.

Emotion regulation refers to the process of managing one's emotions, thoughts, and behaviours in response to various internal and external stimuli. This skill is essential for inmates to develop, as it can significantly impact their psychological distress and promote mental health, interpersonal relationships, and successful reintegration into society upon release (Ford & Gross, 2018). In correctional centres, inmates often experience a wide range of emotions, including feelings of guilt, anger, sadness, fear, and anxiety. These emotions can be intensified by factors such as confinement, separation from loved ones, loss of freedom, and the stress of adjusting to a new environment (Levenson & Willis, 2019).

Incarceration negatively affects inmates' emotional regulation due to confinement, loss of freedom, and social isolation, leading to distress, loneliness, and anxiety (Adetunji, 2023; Haney, 2018). Limited access to support worsens emotional struggles, especially for those with prior mental health issues (Young et al., 2020). Emotion regulation involves modifying emotional responses, either consciously or unconsciously, to maintain balance (Manstead & Fischer, 2012; Koole, 2019). Poor emotion regulation increases psychological distress by making it harder for inmates to cope with stress, frustration, and isolation. Without effective regulation, negative emotions intensify, worsening mental health. Conversely, strong emotion regulation skills help mitigate distress and promote stability (Koole, 2019).

Resilience is one factor that can increase the influence of emotion regulation on psychological distress. Recognizing resilience as a mediating factor between emotional regulation, and psychological distress provides valuable insight for developing targeted interventions. Despite existing research on emotional regulation in incarcerated populations, the role of resilience as a mediator remains understudied.

### **Emotional Regulation and Psychological Distress**

Dworkin et al. (2020) investigated on the relationship between emotional regulation and psychological distress among a sample of incarcerated individuals in a medium-security correctional facility in the Midwestern United States. The results of the study revealed a significant negative correlation between emotional regulation and psychological distress among the inmate participants. The results of this study suggested that targeted interventions aimed at improving emotional regulation skills among incarcerated individuals may be a valuable approach to addressing psychological distress and promoting overall well-being within correctional settings.

Nwoke et al. (2020) examined the association between emotional regulation and psychological distress among incarcerated individuals in a maximum-security prison in Kaduna, Nigeria. The results revealed a significant negative correlation between emotional regulation and psychological distress among the inmate participants. Inmates who reported greater difficulties in emotional regulation, such as the inability to identify, understand, and manage their emotions, also reported higher levels of psychological distress, including symptoms of depression, anxiety, and trauma-related stress.

### **Resilience between Emotion Regulation and Psychological Distress**

Vaughan et al. (2019) explored emotion regulation as a mediator of the relationship between resilience and distress among inmates. They found that emotion regulation may mediate the relationship between resilience and distress in inmates, potentially reducing distress and improving well-being.

Huang et al. (2020) examined psychological resilience, self-acceptance, perceived social support and their associations with mental health of incarcerated offenders in China. After adjusting for socio-demographic factors, the scores of self-acceptance, perceived social support and psychological resilience were negatively associated with scores of mental health. Further SEM analyses suggested self-acceptance and resilience had not only mediating effects respectively, but also multiple mediating effects between perceived social support and mental health. They concluded that the levels of mental health, psychological resilience, self-acceptance and perceived social support among incarcerated offenders are generally low, and influenced by socio-demographic factors.

Davood and Ghahari (2017) investigated on the effectiveness of emotion regulation and distress tolerance skills on improving coping strategies and reduce perceived stress in prisoners. Results indicated that emotion regulation and distress tolerance skills have been effective on improving problem-focused coping strategies and reduce perceived stress in prisoners. It was concluded that emotion regulation and distress tolerance skills can improve problem-focused coping strategies and reduce the use of emotion-focused coping strategies and perceived stress in prisoners.

### **Hypotheses**

- i. Emotional regulation will significantly influence psychological distress among inmates of correctional centres in Benue state.
- iii. Resilience will significantly influence psychological distress among inmates of correctional centres in Benue State.
- v. Resilience will mediate the relationship between emotional regulation and psychological distress among inmates of correctional centres in Benue State.

## Design

For the purpose of this study, cross-sectional survey design was used. Cross-sectional surveys are snapshots of the populations about which they gather data and in this case, a sample of inmates in the study area was used. The researcher used this design because the use of questionnaire was adopted to carry out the study.

## Population

The total population of inmates in Benue State Correctional Centres is 754 inmates comprising of 520 from Makurdi Correctional Centre, 119 in Gboko Correctional Centre and 115 from Oturkpo correctional centre.

## Sampling Technique

In other to obtain participants for the study, census sampling technique was used. Census sampling is a method of selecting the entire population. In this study all inmates who were in the correctional centres (Makurdi, Gboko and Oturkpo) in Benue State were used for the study.

## Participants

A total of 754 participants were used for the study. Among them, 496 (80.9%) were male, 100 (16.3%) were female while 17 (2.8%) did not indicate their gender. Their age ranged from 17 – 58 years ( $M_{age}=28.76$ ,  $SD=7.91$ ). On their marital status, the result showed that 361 (58.9%) were single, 186 (30.3%) were married, 30 (4.9%) were divorced/separated, 19 (3.1%) were widowed, while 17 (2.8%) did not indicate their marital status. More so, 460 (75.0%) were of Christian religion, 90 (14.7%) were of Islam religion, 24 (3.9%) were of traditional religion while 39 (6.4%) did not indicate their religious affiliations. On their educational qualification, 45 (7.3%) had no formal education, 207 (33.8%) had primary education, 224 (36.5%) had secondary education, 62 (10.1%) had tertiary education while 75 (12.2%) did not indicate their educational qualification. As for the category of inmate, 456 (74.4%) were awaiting trial, 144 (23.5%) were convicted while 13 (2.1%) did not indicate their category. On their convicted duration, only 127 (20.7%) respondents indicated their duration of between 3 months to 26 years, while 486 (79.3%) did not indicate their convicted duration.

## Instruments

**Emotion Regulation Questionnaire:** This scale was developed by Gross and John (2003) to measure individual differences in emotion regulation processes. It is a 10-item scale designed to measure respondents' tendency to regulate their emotions in two ways: (i) Cognitive Reappraisal and (ii) Expressive Suppression. Respondents answer each item on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The reliability coefficient of the scale is .82. The scoring method showed that items 1, 3, 5, 7, 8, 10 make up the Cognitive Reappraisal facet while items 2, 4, 6, 9 make up the Expressive Suppression facet and the scoring is kept continuous with each facet's scoring kept separate. Sample items include: "when I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about", "I keep my emotions to myself".

**Brief Resilience Scale:** The resilience scale was developed by Smith et al. (2008). It is a 6-item scale designed to measure resilience. The response format is a 5-point Likert scale of 5 (strongly agree) to 1 (strongly disagree). The researchers found that the scale demonstrated excellent internal

consistency of .87. Sample items include: “I tend to bounce back quickly after hard times”, “I have a hard time making it through stressful events”.

**Psychological Distress Scale:** This scale was developed by Kessler (1994) to measure psychological distress. The scale consists of 10 questions on non-specific psychological distress and is about the level of anxiety and depressive symptoms a person may have experienced in the most recent four-week period. The researchers reported a Cronbach's alpha coefficient of .93. Sample items include ‘In the past 4 weeks, about how often did you feel tired out for no good reason?’, “In the past 4 weeks, about how often did you feel nervous?”

## Procedure

The researchers sought approval from the Controller of Corrections in Benue State to seek permission for the study. Following the approval, the researchers recruited and trained two research assistants to support the data collection process. The research assistants were carefully selected based on their ability to interact effectively with the study population and their understanding of ethical considerations in research involving inmates. Additionally, an official approval letter was obtained from the appropriate authorities, ensuring that all permissions were properly documented before proceeding to the study areas. The research was conducted in three correctional centers: Makurdi, Gboko, and Otukpo. The researchers and assistants distributed copies of the questionnaire directly to the inmates. Those who could read and write completed the questionnaire independently, while those with limited literacy were assisted through an oral administration process. After the data collection process was completed, the questionnaires were carefully reviewed to ensure completeness before being collated for analysis.

## Data Analysis

The researchers used descriptive and inferential statistics for data analyses. Specifically, multiple linear regression was used to test hypothesis one, simple linear regression for hypothesis two, while Hayes Process macro was used to test hypotheses three.

## Results

**Table 1: Summary of multiple regression showing the influence of emotion regulation (cognitive reappraisal and expressive suppression) on psychological distress among inmates in Correctional Centres in Benue State**

DV	Predictor(s)	R	R <sup>2</sup>	F	df	β	t	p
Psychological Distress	Constant	.293	.086	25.002**	2, 531			
	Cognitive Reappraisal					-.306	-8.280	.001
	Expressive Suppression					.289	6.586	.001

\*\*  $p < .001$

Result in table 1 shows that there was a significant influence of emotion regulation (cognitive reappraisal and expressive suppression) on psychological distress among inmates in Correctional Centres in Benue State [ $R=.293$ ;  $R^2=.086$ ;  $F(2, 531) = 25.002$ ;  $p<.001$ ]. Emotion regulation (cognitive reappraisal and expressive suppression) significantly accounted for 8.6% of the total variance observed in psychological distress among inmates in Correctional Centres in Benue State. On the independent basis, the result shows negative score on cognitive reappraisal [ $\beta = -.306$ ,  $t = -8.280$ ;  $p<.001$ ] meaning that inmates who engage in high level of cognitive reappraisal

significantly scored low on psychological distress while inmates who scored low on cognitive reappraisal significantly scored high on psychological distress. Also, expressive suppression showed positive score on psychological distress [ $\beta = .289$ ,  $t = 6.586$ ;  $p < .001$ ] meaning that inmates who scored high on expressive suppression significantly scored high psychological distress, while inmates who scored low on suppressive expression scored low on psychological distress.

**Table 2: Summary of simple linear regression showing the influence of resilience on psychological distress among inmates in Benue State**

Model		Unstandardized Coefficients		Standardized Coefficient	t	Sig
1		B	Std. Error	$\beta$		
Psychological Distress	Constant	30.896	.615		50.209	.000
	Resilience	-.067	.022	-.130	-3.074	.002

Result in table 2 shows that there was a significant influence of resilience on psychological distress among inmates of Correctional Centres in Benue State [ $\beta = -.130$ ,  $t = -3.074$ ;  $p = .002$ ]. This means that inmate with high level of resilience significantly scored low on psychological distress while those with low level of resilience significantly scored high on psychological distress.

**Table 3: Summary of Hayes Process Analysis showing the mediating role of resilience on the relationship between emotion regulation and psychological distress among inmates in Benue State**

Variable	R	R <sup>2</sup>	F	Df	$\beta$	t	Sig	LLCI	ULCI
Constant	.293	.086	25.00**	2, 531					
Emotion Regulation					-.292	-6.59	<.001	.205	.379
Resilience					.006	.280	>.05	-.039	.052
Int 1 (X * M)					.292	6.59	<.001	.205	.379

\*\*  $p < .001$

The result in table 3 shows that resilience significantly mediated the relationship between emotion regulation and psychological distress among inmates in Correctional Centres in Benue State [ $R = .293$ ,  $R^2 = .086$ ,  $F(2, 531) = 25.00$ ,  $Int\_1(X*M)$  ( $\beta = .292$ ,  $p < .001$ )].

## Discussion

Hypothesis one stated that emotional regulation will significantly influence psychological distress among inmates of correctional centres in Benue state. Findings indicated that emotional regulation significantly influenced psychological distress. Inmates who employed adaptive emotional regulation strategies, such as cognitive reappraisal, exhibited lower levels of distress compared to those who relied on maladaptive strategies, such as suppression. This finding agrees with Oladipo and Balogun (2010), who revealed that the use of cognitive reappraisal is associated with better psychological adjustment and lower rates of depressive symptoms among individuals



in confined settings. A study by Yusuf and Akinsola (2021) revealed that Nigerian inmates who are trained in cognitive-behavioral techniques including emotional reappraisal report fewer symptoms of psychological distress and demonstrate improved interpersonal relationships with both staff and fellow inmates. A study by Mefoh et al. (2015) found that emotion-focused coping strategies significantly predicted psychological well-being among prison inmates in Enugu State, Nigeria. Another study by Amoke et al. (2020) found that group cognitive-behavioral therapy (CBT) significantly reduced psychological distress among awaiting-trial prison inmates in Enugu State, Nigeria.

Hypothesis two stated that resilience will significantly influence psychological distress among inmates of correctional centres in Benue State. Findings confirmed this hypothesis and agrees with Masten's (2014) resilience theory, which states that resilience is not an extraordinary trait but rather a common and dynamic capacity that enables individuals to adapt effectively in the face of risk, adversity, or trauma. A study by Akinyemi and Adeoye (2017) indicates that inmates who maintain strong familial ties and participate actively in rehabilitative initiatives demonstrate higher resilience levels, which in turn mitigate the psychological distress associated with incarceration. A study by Eze and Okeke (2020) revealed that resilience-enhancing programs tailored to the cultural and contextual realities of Nigerian inmates such as integrating community values, spirituality, and peer support can significantly improve inmates' mental health outcomes. Research by Wright et al. (2020) and Bonanno (2019) also supports this finding, indicating that resilience acts as a buffer against stress and psychological distress. However, Ungar (2018) argued that resilience is highly context-dependent and may not always lead to positive outcomes, particularly when individuals face extreme deprivation and lack of external support.

Hypothesis three stated that resilience will mediate the relationship between emotional regulation and psychological distress among inmates of correctional centres in Benue State. Findings indicated that resilience was a significant mediator of the relationship between emotional regulation and psychological distress. This finding aligns with Aldao et al. (2010) who found that emotional regulation strategies directly impacted distress levels, with resilience acting as a mediator. Moreover, Olatunji and Oladipo (2018), found that interventions targeting emotional regulation skills such as mindfulness and cognitive reappraisal training yielded significant reductions in psychological distress independently of resilience enhancement. In addition, Moore et al. (2016) observed that resilience moderated the relationship between emotion regulation and mental health in adolescents. Research by Adeyemi and Oladipo (2019) showed that resilience's role fluctuates depending on these factors, with resilience playing a stronger moderating role in younger inmates or those with greater emotional dysregulation.

### **Recommendations**

It is recommended that the curriculum for rehabilitation in Nigerian correctional centres should incorporate emotion regulation skills and resilience strategies training for inmates. This is relevant to assist them to learn positive ways of coping with stress induced by incarceration.

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