Relationship between Anxiety and Resilience among Literate Incarcerated Men in Nairobi West Prison, Nairobi County, Kenya

Anyanda Ingato Nancy, Nzangi Alice, Mwalw'a Shem

Institute of Youth Studies (IYS), Tangaza University, Nairobi, Kenya

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ABSTRACT

Anxiety remains a major psychological concern among incarcerated populations and may negatively influence inmates' adaptability and sustained psychological stability. This study sought to examine the relationship between anxiety and resilience among literate incarcerated men in Nairobi West Prison, Nairobi County, Kenya. This study had three objectives: to determine the participants' levels of anxiety, to find out their levels of resilience, and to assess the relationship between anxiety and resilience. Guided by Cognitive Behavioural Theory and Resilience Theory, the study utilised a positivist, quantitative correlational design. The study used census sampling, targeting initially 234 literate incarcerated men aged 18 years and older. However, three (3) questionnaires were discarded due to more than 10% missing responses; thus, the analysis was based on a population of 231. The data were collected using the Beck Anxiety Inventory (BAI) and the Connor-Davidson Resilience Scale-10 (CD-RISC-10). The reliability of the instruments was established through a pilot study at Nairobi Remand and Allocation Maximum Prison, and validity was confirmed through expert review. Descriptive statistics and Pearson's product-moment correlation were analysed using SPSS Version 26. Findings revealed that 72.7% of inmates exhibited low anxiety levels, while 72.7% had high resilience levels. Inferential analysis indicated a statistically significant weak, negative correlation between anxiety and resilience ($r = -0.144$, $p = 0.029$, $n = 231$), thereby supporting the alternative hypothesis. The study recommended maintaining resilience-based psychosocial support programs within correctional facilities to mitigate anxiety further recurring among incarcerated individuals.

Keywords: Anxiety, Resilience, Literate Incarcerated Men.

INTRODUCTION

Anxiety is among the most common mental health conditions worldwide, and it carries considerable personal, social, and economic costs (WHO, 2022). Anxiety and resilience are two central psychological constructs that explain personal differences in emotional responses to difficulties, trauma, and stress. Anxiety is a psychological condition marked by persistent and excessive feelings of fear, heightened physiological arousal, and persistent apprehension about threats (Kupfer, 2015). According to cognitive theory, anxiety develops from distorted thought patterns that overestimate danger and underestimate one's coping capacity (Beck et al., 1988).

High levels of emotional distress and anxiety have been documented among vulnerable groups, especially in contexts of confinement or social adversity (WHO, 2022). Research indicates that prison inhabitants demonstrate considerably higher psychological distress levels, with anxiety levels being higher than those observed in the general population (Fazel et al., 2016; Thekkumkara, 2022). Correctional settings present unique psychosocial stressors that heighten vulnerability to anxiety. Incarcerated individuals frequently experience separation as well as the perception of inadequate family support, restricted autonomy, uncertainty regarding legal outcomes, overcrowding, stigma, lack of activity, and institutional control.

Globally, as of 2019, anxiety prevalence was recorded in the range of 8.3% to 78% in prison populations (Costa et al., 2020; Javaid et al., 2023; WHO, 2023). Evaluating inmate mental health across six correctional facilities within the 5th Regional Penitentiary Station in Pelotas, Southern Brazil, Costa et al. (2020) surveyed

643 prisoners (n=580 males, 90.2%; n=63 females, 9.8%) and recorded an overall anxiety prevalence rate of 19.9%, with female inmates exhibiting twice the likelihood of experiencing anxiety compared to their male counterparts. Although male inmates constituted the vast majority of the correctional population, female prisoners experienced disproportionately higher anxiety rates. These findings pointed out that institutional deprivations and prison-related stressors impact incarcerated individuals differently across gender groups.

Stawińska-Witożyńska et al. (2021) reported an overall Generalised Anxiety Disorder (GAD) prevalence of 7.4% within a sample of 591 male inmates (N=635 facility capacity) at Czerwony Bór prison in Podlaskie Voivodeship, Poland—a rate that significantly exceeded anxiety levels observed in the general population.

Similarly, Sharma et al. (2015) found a 9.2% anxiety prevalence in a sample size of 72 male inmates in India. The respondents were drawn from Hotwar, Ranchi, and Birsa Munda Central Jail, which, though lower, still surpassed that of the general population.

Regionally, in Northwest Amhara, Ethiopia, Dadi et al. (2016) found a 36.1% prevalence of anxiety among incarcerated males. Their 2015 cross-sectional study involved a sample of 649 participants (583 men and 66 women). This rate was higher than that of the general public. Their findings noted that anxiety was a commonly reported psychological health issue among male convicts in the research area.

Locally in Kenya, the general prison population across 105 facilities recorded a 63.2% prevalence of mental illness in 2019. However, the study did not specify a particular mental disorder. The majority of this percentage remains undiagnosed and therefore untreated (Museve et al., 2020). Dadi et al. (2016) argue that little consideration is devoted to psychological health services in developing nations, including Kenya. The issue is even more so for inmates, where general health care is inadequate. This raises concerns about inmates' ability to cope with distress without formal interventions and highlights resilience as a mitigating factor.

In institutions managed by the Kenya Prison Service, including Nairobi West Prison, inmates face structured routines and environmental constraints that may increase anxiety.

Such contextual stressors, Solbakken et al. (2024) note, can trigger anxiety symptoms, especially among individuals with limited coping resources, potentially leading to severe mental illnesses. Despite exposure to similar stressors, not all incarcerated individuals experience anxiety at the same intensity. This variation suggests the presence of protective psychological factors, among which resilience has received substantial scholarly attention.

Resilience refers to the capacity to adjust confidently and recover during hard times (Masten, 2001). Similarly, Connor and Davidson (2003) have defined resilience as an individual quality that enables individuals to prosper despite stress and hardship. It is not a permanent trait but rather an evolving process involving cognitive, emotional, and social resources that promote psychological stability. The relationship between anxiety and resilience is widely conceptualised as inverse and protective in nature.

Empirical studies indicate that higher resilience is related to lower rates of anxiety symptoms (Connor & Davidson, 2003; Masten, 2001). It is understood to buffer the psychological impact of stressors by enhancing adaptive coping, emotional regulation, and cognitive tractability. Resilient people are more likely to reconstrue stressful events in less catastrophic ways, thereby reducing maladaptive anxiety-related cognitions (Beck et al., 1988).

Additionally, resilience enhances problem-solving skills and self-efficacy, thereby reducing anxious responses (Connor & Davidson, 2003). These adaptive mechanisms may reduce psychological arousal and emotional dysregulation commonly associated with anxiety. Cohen and Wills (1985) proposed the stress-buffering model, a moderating model that explains how social support can buffer adverse effects of stress on psychological well-being.

On the global front, quantitative research was conducted by Villeza and San Jose (2025) in Western Visayas, Philippines. The aim was to evaluate the levels and association between mental distress and resilience in people deprived of liberty in one of the jails.

The correlation was evaluated in 100 respondents. The results found were [r = -0.115, p=0.253], indicating that these two variables are negatively correlated, but no significant correlation was found. Hence, these results suggest that there was no statistically significant association between psychological distress and resilience in the respondents.

Alfaiate et al. (2026) conducted cross-sectional research among 576 imprisoned people in mainland Portugal. The purpose was to evaluate psychological health signs (anxiety, depression, and stress), positive mental constructs (hope, mental well-being, and resilience) and substance use among adult imprisoned people, as well as examine factors related to resilience. The statistical results showed mean scores of 6.2 for stress, 4.7 for anxiety, and 4.9 for depression.

This study further recorded mean scores of 29.1 for resilience, 31.2 for hope, and 96.9 for psychological well-being. This study showed that psychological support before incarceration, among other aspects, was positively linked to higher levels of resilience. However, exposure to physical and/or verbal aggression was conversely related to resilience levels. The study results underscore the need to develop and execute structured, multidimensional, and evidence-based interventions to support resilience and enhance psychological well-being among incarcerated individuals.

While resilience can alleviate anxiety, some argue that the carceral environment may inhibit the development of resilience due to its inherently dehumanising and punitive nature (Arora, 2022). The focus on literate incarcerated men is particularly significant in understanding this interaction. Literacy may enhance access to information, participation in rehabilitative and educational programs, and cognitive engagement in self-improvement activities. These factors may strengthen resilience by fostering meaning-making, future orientation, and problem-solving skills. Consequently, literacy may indirectly influence anxiety by facilitating resilience-building processes within the correctional setting.

Understanding the interaction between anxiety and resilience within Nairobi West Prison contributes to both theoretical and practical knowledge. Theoretically, it extends cognitive and resilience frameworks into correctional psychology within the Kenyan context. Practically, it informs the establishment of targeted psychological interventions aimed at reinforcing resilience as a strategy to mitigate anxiety among incarcerated populations.

In Kenyan prisons, although research on mental health outcomes has begun to expand, most studies focus on depression, environmental influences on psychological well-being, or psychiatric morbidity. Few studies directly examine the relationship between anxiety and resilience in literate incarcerated men (Kasau et al., 2024; Museve et al., 2020; Muthoni & Kimani, 2022; Muturi et al., 2024). Specifically, at Nairobi West Prison in Nairobi County, there is a lack of empirical evidence linking anxiety and resilience among literate incarcerated inmates.

Addressing this gap is important because understanding these psychological dimensions will inform targeted interventions, such as educational, coping skills, and psychosocial support programs. Such interventions will enhance inmates' well-being, improve rehabilitation outcomes, and support successful reintegration after release. The above studies indicate that the association between anxiety and resilience has been explored across diverse populations and settings. However, no study has explored the connection between resilience and anxiety in literate incarcerated men in Nairobi West Prison, Nairobi County, Kenya. This identified gap informed the present study.

METHODOLOGY

A quantitative study design was used for this study to objectively explore the correlation between anxiety and resilience among literate incarcerated men in Nairobi West Prison, Kenya. The scientific approach used in this study was positivism because of its focus on measurement, objectivity, and empirical analysis of psychological concepts. This study adopted a quantitative correlational study design, which is a type of non-experimental methodology that was employed to examine the nature and strength of the association among two or more variables without manipulating them.

This research was undertaken at Nairobi West Prison, a medium-security correctional facility located in Lang-'ata Sub-County within Nairobi County, Kenya. This unit mainly houses adult male inmates serving medium-term sentences, including inmates nearing the end of their sentences and close to release. It is close to major courts and law enforcement agencies. The facility is known for its structured programs, an education centre offering learning at different levels, basic counselling services, and medical care. In the study, the targeted population comprised literate incarcerated men in Nairobi West Prison, Kenya. Based on prior engagement with the correctional facility during the researcher's practicum period between 2022 and 2023, the literate population was estimated at 234 men. Before the actual data collection date, this population was re-verified with the relevant prison authorities, confirming the figure. The sampling frame for the study included all registered literate male inmates in Nairobi West Prison, drawn from different classes within the education centre of the prison. The registers covered Form 1, Form 2, Form 4, TVET and university programmes. During the time of study, the Education Centre did not run a Form Three class due to limited resources, with much of the available education support being provided through donor funding. This research used the census technique to gather data. Thus, due to the small population, neither sampling techniques nor sample size calculations were used in this investigation. There were only 234 literate prisoners at the time at the education centre of the facility.

This study utilised two standardised psychometric instruments to measure the two key psychological constructs: anxiety and resilience. To assess anxiety levels among participants, this study used the Beck Anxiety Inventory (BAI), a broadly validated 21-item self-report questionnaire established by Beck et al. (1988). Each item describes a typical anxiety symptom, and participants indicated how much each symptom affected them during the preceding month using a four-point Likert scale from 0 ("Not at all") to 3 ("Severely"). The lowest score one can obtain is 21, while the highest score one can obtain from the 21 items is 63. According to established scoring guidelines (Steer et al., 1993; Wilson & de Beurs, 2004), the total scores were interpreted using the following cut-off ranges: 0 - 21: Low anxiety; 22 - 35: Moderate anxiety; 36 - 63: High anxiety. The second instrument utilised in this study was the 10-item Connor-Davidson Resilience Scale (10-item CD-RISC), adapted by Campbell-Sills and Stein (2007) from the original scale developed by Connor and Davidson (2003) to evaluate psychological resilience. The instrument assesses key resilience domains, including adaptability, problem-solving, emotional regulation, and stress tolerance. Participants rate each item on a 5-point Likert scale ranging from 0 (not true at all) to 4 (true nearly all the time). The lowest score one can obtain is 0, while the highest score one can obtain is 40. The 10-item CD-RISC has ranges for determining the levels of resilience that one can exhibit. The ranges for scoring are: 0–13 (low), 14–26 (moderate), and 27–40 (high resilience) (Campbell-Sills & Stein, 2007).

The researcher sought clearance from the following departments: authorisation letters from both the Director of Programmes in the Counselling Psychology Department, positioned under Youth Studies (IYS), and the Director of the Post-Graduate program at Tangaza University. The researcher submitted this authorisation letter and a copy of the proposal to obtain an institutional clearance letter granting permission from the Tangaza University Institutional Scientific Ethics Review Committee (TU-ISERC). After that, the researcher used the approval no. TU/ISERC2026/01/00177 issued to obtain further permit approval no. NACOSTI/P/26/4192056 from the National Commission for Science, Technology, and Innovation (NACOSTI) and permission from the Ministry of Interior and National Administration, Kenya Prisons Service.

RESULTS

Response Rate

The study targeted 234 literate incarcerated men in Nairobi West Prison, Kenya. Of the 234 questionnaires distributed, 234 were returned, while 3 were discarded due to more than 10% missing responses. Thus, the response rate was 98.7%, ensuring robust representativeness and providing a solid foundation for the study's findings and the generalisation of results. The results of the response rate were generated and presented in Table 1.

Table 1: ***Response rate***

Sample size	Distributed	Returned	Invalid	Valid	Percentage (%)
234	234	234	3	231	98.70%

According to Table 1, the current investigation had an initial sample size of 234. After being distributed, only 234 were returned. Out of 234 questionnaires, 3 were considered invalid due to missing items of up to 10%. This study adopted the strategy that entailed that any questionnaire having missing items amounting to 10% must be discarded and not considered for analysis, and hence 231 were considered for overall data analysis. Therefore, the response rate was 98.7%.

Social Demographics of Respondents

This current study assessed the relationship between anxiety and resilience among literate incarcerated men in Nairobi West Prison, Kenya. The researcher used the descriptive method to analyse the seven demographic variables generated from the demographic profiles of the respondents. The analysis was done on the following variables: age, education category, religious affiliation, country of origin, Duration of incarceration, frequency of being in prison, and type of offence. In the analysis, descriptive statistics were employed that targeted the range of some demographic items, the frequency, and the percentage. Thus, the social demographic characteristics were summarised and presented accordingly in Table 2.

Table 2: ***Social Demographics of Respondents***

Range	Frequency	Percentage
	Age	
18 -24	12	5.2
25 - 34	70	30.3
35 - 44	82	35.5
45 - 54	41	17.7
55 - above	26	11.3
Level of Education		
No formal education	0	0
Primary school (Class 1–8)	0	0
Secondary school (Form 1–4)	142	61.5
Post-secondary training/college	85	36.8
University education	4	1.7
Religion		
Christianity	192	83.1
Islam	25	10.8
Hinduism	1	0.4
Traditional African Religion	1	0.4
No religion	12	5.3
Country of Origin		
Kenyan	211	91.3
Non-Kenyan	20	8.7
Duration of Incarceration		
Less than 6 months	37	16
6–12 months	23	10
1–2 years	66	28.6

3–5 years	62	26.8
More than 5 years	43	18.6
Frequency of being in Prison		
First time	211	91.3
More than once	20	8.7
Type of Offence		
Violent	78	33.8
Non-violent crime	99	42.9
Drug-related	28	12.1
Financial/Economic	26	11.2

As indicated in Table 2, the age distribution showed that the highest frequency was among respondents aged 35–44 years, n = 82 (35.5%), followed by 25–34 years, n = 70 (30.3%), and 45–54 years, n = 41 (17.7%). Regarding the level of education, the population consisted of respondents whose education level started at secondary school, n = 142 (61.5%), followed by the post-secondary population, n = 85 (36.8%), and finally those with university education, n = 4 (1.7%). Concerning religious affiliation, the majority were Christians, 192 (83.1%); Muslims were 25 (10.8%); no religion was 12 (5.2%); and Hinduism and Traditional African Religion each had one person, representing 0.4% respectively. Regarding country of origin, 211 were Kenyans, representing 91.3%, and non-Kenyans were 20, representing 8.7%. Regarding the duration of incarceration, the statistics showed: less than 6 months were 37 (16.0%), 6–12 months were 23 (10.0%), 1–2 years were 66 (28.6%), 3–5 years were 62 (26.8%), and more than 5 years were 43 (18.6%). Additionally, the analysis of the frequency of being in prison showed that 211 (91%) were in prison for the first time and 20 (8.7%) were in prison many times. Finally, the statistics for the type of offence revealed that those for violent crime were 78 (33.8%), non-violent crime were 99 (42.9%), drug-related were 28 (12.1%), and financial or economic reasons were 26 (11.3%). Incidentally, 'drug-related' and 'financial/economic' offences were, in essence, also non-violent; however, the prison system still categorised them as such.

Reliability of Instruments

In this study, two key variables, which were anxiety and resilience, were measured using standardised scales. To ensure the reliability and validity of the research instruments before conducting the main study, we administered a pilot study to a small group of 20 literate incarcerated men from another facility, the Nairobi Remand and Allocation Maximum Security Prison. To evaluate the reliability, which is the internal consistency of the Beck Anxiety Inventory (BAI) and Resilience Scale (CD-RISC-10), Cronbach's Alpha was used. The analysis was conducted using SPSS version 26 for both scales to determine the internal consistency. The reliability analysis results from both the pilot and main studies were summarised and presented in Table 3.

Table 3: ***Scales Reliability***

RESULTS OF PILOT STUDY			
Scale	**Items**	**Sample Size (n)**	**Cronbach's Alpha**
BAI	21	20	0.86
CD-RISC-10	10	20	0.87
RESULTS OF MAIN STUDY			
Scale	**Items**	**Sample Size (n)**	**Cronbach's Alpha**
BAI	21	231	0.81
CD-RISC-10	10	231	0.92

According to Table 3, the findings from the pilot study indicated that the Cronbach's Alpha coefficients for the Beck Anxiety Inventory and Resilience Scale were α = .86 and α = .87, respectively, thus showing a high level of internal consistency. Similarly, in the main study, the results were α = .81 and .92 for the Beck Anxiety

Inventory and Resilience Scale, respectively, which also reflected good and acceptable internal reliability. Therefore, these results revealed that the items within the scales measured the same underlying construct reliably and thereby confirmed that both instruments exhibited acceptable levels of reliability.

Distribution of Data

Furthermore, in order to ascertain and add to the reliability of the analysis of the study data, the normality of the study data's distribution was checked using a histogram. The histogram was used to check visually if the distribution was symmetrical. In principle, when the diagram showed a symmetrical distribution, a normal distribution is often assumed (Hatem et al., 2022). Thus, the histograms were computed on two study variables, separately, in SPSS version 26, and the illustrations were shown in Figures 1 and 2, respectively.

Figure 1: ***Distribution of Anxiety***

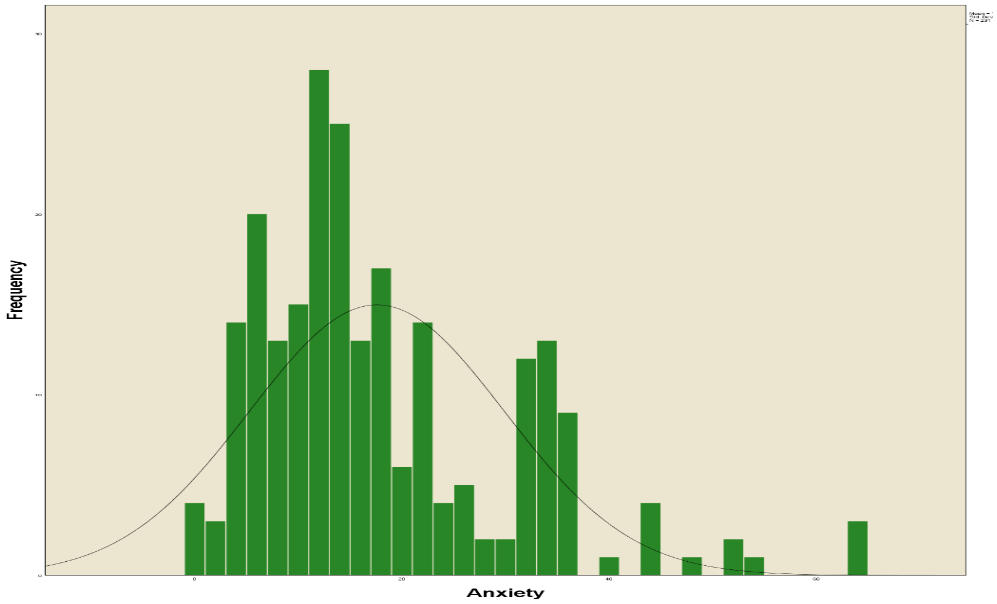
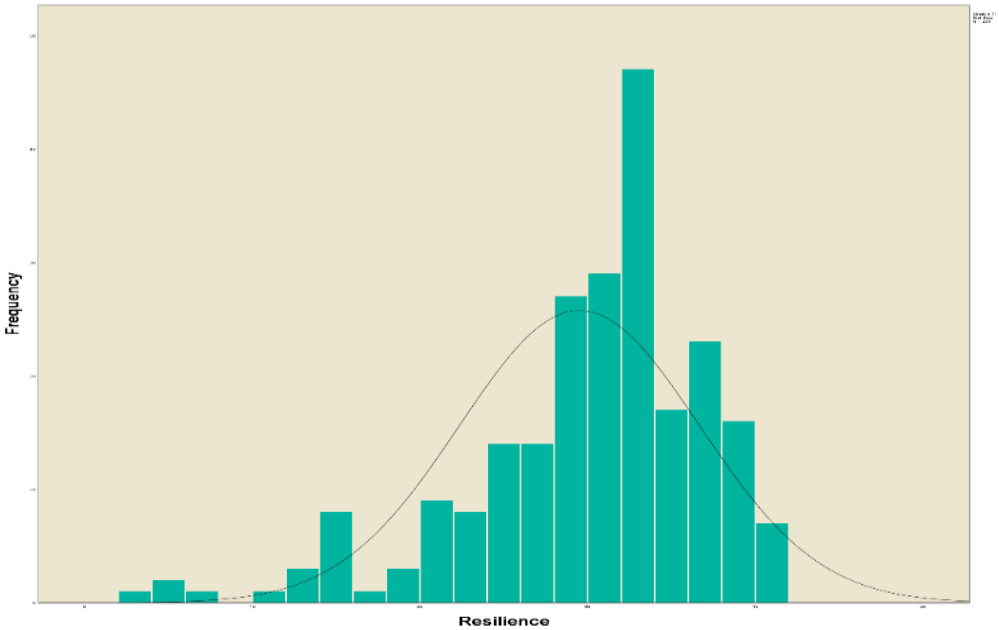


Figure 2: ***Distribution of Resilience***



The two histograms in Figure 1 and Figure 2 showed that the data distribution for both variables, anxiety and resilience, was symmetrically distributed, indicating a normal distribution. Skewness and Kurtosis were used to check the normality of the distribution of the study data. In principle, when skewness is between -1.0 and

+1.0, then the distribution can be considered acceptable or moderate; in this case, the data are said to be symmetrical. Additionally, widely accepted normality thresholds of kurtosis range between -2 and +2. The Skewness of the scale for resilience (CD-RISC-10) and anxiety were -1.208 and -1.242, respectively, and the kurtosis was 1.077 and 1.064, respectively. Therefore, all the figures fell within the stated range, which confirmed that the data of both scales were normally distributed.

Levels of Anxiety

The first objective of this study was to determine anxiety levels among literate incarcerated men in Nairobi West Prison, Kenya. This was achieved by using descriptive analysis, which examined respondents' scores across the twenty-one (21) item Beck Anxiety Inventory. According to the research-established scoring guidelines of the version of the Beck Anxiety Inventory used, the ranges used were 0 to 21, indicating low levels of anxiety; 22 - 35 indicated moderate anxiety; and 36 – 63 indicated high levels of anxiety (Steer et al., 1993). The results generated were summarised and presented in Table 4.

Table 4: ***Levels of Anxiety of Incarcerated Men***

Variable	levels	Range	Frequency	Percentage
Anxiety	low	0 - 21	168	72.7
	Moderate	22 - 35	43	18.6
	High	36 - 63	20	8.7
	Total		231	100

Table 4 presents the anxiety levels among literate incarcerated men in Nairobi West Prison, Kenya. The data interpretation showed that the majority of respondents, n = 168 (72.7%), were low in terms of anxiety levels. Those who were moderate in the levels of anxiety were n = 43 (18.6%), and those who were high were n = 20 (8.7%). Therefore, the predominant level of anxiety was low among literate incarcerated men in Nairobi West Prison, Kenya.

Levels of Resilience

The second objective of the study was to find out the levels of psychological resilience among literate incarcerated men at Nairobi West Prison, Kenya. Descriptive statistical analyses were conducted to establish these levels using standardised score interpretation criteria. Total scores on the 10-item Connor-Davidson Resilience Scale ranged from a minimum of 0 to a maximum of 40. In accordance with established evaluation frameworks for the instrument, resilience scores were categorised into three distinct descriptive levels: low resilience (0–13), moderate resilience (14–26), and high resilience (27–40) (Campbell-Sills & Stein, 2007; Connor & Davidson, 2003). The results were presented in Table 5.

Table 5: ***Levels of Resilience of Incarcerated Men***

Variable	levels	Range	Frequency	Percentage
Resilience	low	0 - 13	8	3.5
	Moderate	14 - 26	55	23.8
	High	27 - 40	168	72.7
	Total		231	100

Table 5 presents the levels of resilience among literate incarcerated men in Nairobi West Prison, Kenya. Following the ranges of the scale, the data interpretation showed that the majority had a high level of resilience, and these were n = 168 (72.7%); those in the moderate level were n = 55 (23.8%), and those in the low level were n = 8 (3.5%). According to this study, the majority of respondents expressed a very high level of resilience. These results the levels of resilience showed some resemblance to levels of anxiety, but the figures when critically looked at showed some minor differences.

The Relationship between Anxiety and Resilience

Pearson's Correlation Analysis was employed to address the third aim, which concerned the relationship between anxiety and resilience among literate incarcerated men in Nairobi West Prison, Kenya. The outcome of Pearson's correlation coefficients is summarised and presented in a Scatterplot in Figure 3 and Table 6, respectively.

Figure 3: ***Correlation between Anxiety and Resilience***

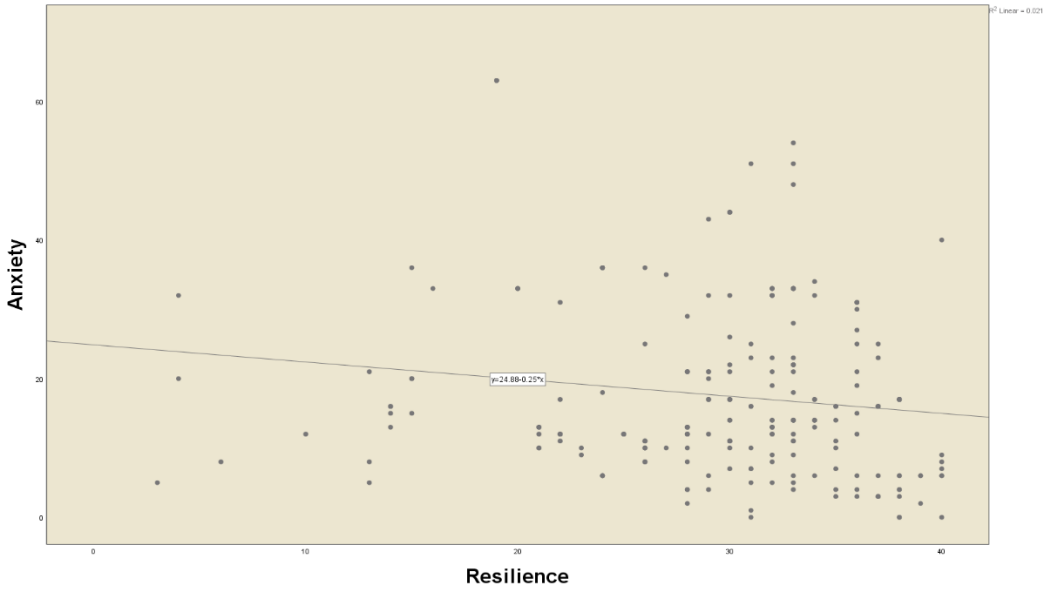


Figure 3 showed that the data were scattered and showed a low degree of relationship between anxiety and resilience. The scatter plot showed some signs of no relationship, as the dots are scattered around the fit line of the equation. To establish exactly whether the two variables were positively or negatively correlated, Pearson's Correlation Coefficient was employed, computed, and the statistical data generated by that test were presented in Table 5.

Table 6: ***Correlation between Anxiety and Resilience***

		Anxiety	**Resilience**
Anxiety	Pearson Correlation	1	-0.144*
	Sig. (2-tailed)		0.029
	N	231	231
Resilience	Pearson Correlation	-0.144*	1
	Sig. (2-tailed)	0.029	
	N	231	231
*. Correlation is significant at the 0.05 level (2-tailed).			

Table 6 showed that, in terms of strength, there existed a negative relationship (r = - .144, p = .029, n = 231) between anxiety and resilience among literate incarcerated men in Nairobi West Prison, Kenya. These results showed that in terms of significance, there was a weak, statistically significant negative association (r = -0.144, p = .029, n = 231). These results indicate that when one variable rises, the other tends to fall; the association is genuine rather than a coincidence, and the actual influence or predictive potential is small.

DISCUSSION

The first objective of this study was to examine anxiety levels among literate incarcerated men at Nairobi West

Prison, Nairobi County, Kenya. Findings indicated that a majority of participants, 72.7% (n = 168), demonstrated low anxiety levels, whereas 18.6% (n = 43) exhibited moderate anxiety and 8.7% (n = 20) presented with high anxiety levels. These results contrast with cross-sectional findings by Costa et al. (2020), who observed moderate-to-high proportions of psychological distress among institutionalised cohorts in the south of Brazil when screening via standardised diagnostic tools such as the Mini International Neuropsychiatric Interview (MINI) and self-report scales like the Beck Anxiety Inventory (BAI). The alignment between these findings and previous studies may be attributed to shared protective cognitive mechanisms and adaptive coping strategies associated with inmate literacy across different correctional contexts (Costa et al., 2020)

The anxiety levels observed in this study align with empirical findings reported by Butcher et al. (2021) among male prisoners in England, where 31.4% scored above 10, and 18.0% scored above 15 on the GAD-7 scale. This may be as a result of the restrictive prison environment that functions as a universal activating stimulus that triggers threat-related thoughts and anxiety. Statistical alignment across both studies reflects the use of validated psychometric screeners designed to capture standard anxiety reactions. Finally, shared characteristics of adult male prisoners facing a loss of autonomy and structured routine further account for the similar anxiety profiles observed across both settings.

The findings of the present study are consistent with the results of Dadi et al. (2016), who observed a 36.1% prevalence of elevated anxiety among 649 incarcerated individuals in North-East Amhara, Ethiopia. This may be due to a restrictive prison setting that acts as a universal activating stimulus that triggers threat-related thoughts and emotional distress across different settings. Statistically, both studies relied on validated standardised tools designed to measure anxiety responses in correctional facilities. Additionally, sample similarities—specifically adult male inmates facing institutional confinement and a loss of autonomy—further account for the comparable anxiety profiles observed across both East African contexts (Dadi et al., 2016).

The second objective was to examine the levels of resilience among literate incarcerated men in Nairobi West Prison, Nairobi County, Kenya. The findings in this study revealed that most respondents, 72.7% (n = 168), exhibited high resilience, and 23.8% (n =55) showed moderate resilience, while low resilience was reported in only 3.5% (n = 8) of the incarcerated men. These findings indicated that most of the incarcerated men in the present study demonstrated a high capacity to adapt to and cope with the challenges associated with incarceration.

The proportion of literate incarcerated men demonstrating high resilience in the present study (72.7%, $n = 168$) aligns with findings by Huang et al. (2020), who reported elevated resilience lSD $== 17.30$) among prisoners in China. These findings illustrate how similar internal assets—such as literacy, cognitive flexibility, and self-efficacy—serve as protective buffers against the psychological strain of confinement. Both studies captured high resilience profiles using validated assessment tools. Furthermore, shared sample characteristics, including cognitive capabilities and engagement in adaptive coping mechanisms, may have accounted for the comparable resilience observed across both correctional contexts (Huang et al., 2020).

The high resilience levels observed among literate incarcerated men in this study (72.7%, $n = 168$) align with findings by Çıvgın and Gün (2022), who reported elevated resilience scores ($M = 2.23$, $SD = 0.48$) among 474 male prisoners in Turkey. These consistent outcomes demonstrate how internal assets—such as literacy and cognitive flexibility—serve as protective buffers against confinement strain. Both studies utilised validated standardised scales to measure psychological adaptability in correctional settings. Furthermore, shared sample characteristics—adult male inmates drawing on personal coping strategies and social support—account for the comparable resilience observed across both cohorts (Çıvgın & Gün, 2022).

The findings of this study are supported by Agesin (2022), who examined the mediating role of resilience in the relationship between perceived prison environment and prisoners' adjustment among 478 inmates in South-West Nigeria. The study reported a mean resilience score of 79.09(SD=13.254). The consistent findings between the present study in Kenya and Nigeria may partly reflect similarities in the broader institutional and social environment within which correctional services operate. Both Kenya and Nigeria have established

multiparty democratic systems which may influence the development and availability of rehabilitation services, social support, and other protective resources within correctional facilities. These resources may, in turn, provide conditions that support individuals in incarceration to adapt to incarceration challenges. Wolff and Caravaca Sánchez (2019) found that protective factors such as personal resilience, family and social support, and supportive institutional environments can influence how incarcerated individuals cope with psychological distress and the challenges of prison.

The third objective was to assess the relationship between anxiety and resilience among literate incarceratedmen. Results from Pearson's correlation analysis revealed a weak negative and significant relationship between anxiety and resilience among literate incarcerated men in Nairobi West Prison (r = -0.144, p = 0.029, n = 231). The negative correlation indicated that the two variables, anxiety and resilience, tended to change in opposite directions. In other words, higher levels of anxiety tended to be associated with lower levels of resilience, although the association was weak.

The outcome of this study aligns with findings by Villeza and San Jose (2025), who reported a significant negative correlation ($r = -.491$, $p < .05$) between social anxiety and resilience among 140 prisoners in Indonesia. Internal psychological assets—such as literacy and cognitive flexibility—may have served as protective buffers during confinement. Both studies relied on validated psychometric tools to evaluate affective states and adaptive capacity, with both samples sharing similar characteristics (Villeza & San Jose, 2025). This was an indication that individuals with lower anxiety levels tended to report higher levels of resilience. Thus, resilience-related factors may be important in supporting incarcerated individuals to cope with anxiety and other psychological challenges associated with imprisonment.

Another study that revealed a consistent direction of results was the investigation by Ruiz et al. (2020), which examined psychological distress and resilience among 65 women deprived of liberty in Colombia. Their findings indicated a weak negative correlation between anxiety and resilience. Although the target population differed from that of the current study, the similarity of findings indicated an association between higher resilience and lower anxiety. These findings highlight the potential value of promoting resilience-based interventions among incarcerated individuals as part of broader psychological support aimed at helping them cope with anxiety and related psychological challenges.

The findings of this study align with empirical evidence by Adepoju et al. (2021), who demonstrated a significant positive relationship between psychological resilience and mental well-being ($t = 2.299, p = .025$) among male inmates in Bida, Nigeria. Internal resources —such as literacy, cognitive reappraisal, and self-efficacy—served as protective buffers that could mitigate mental distress during confinement. Both studies utilised standardised psychometric instruments in their evaluation, with study samples sharing similar characteristics (Adepoju et al., 2021). Resilience enables individuals to adapt to adversity and maintain positive functioning despite difficult circumstances (Masten, 2014; Southwick et al., 2014). Therefore, higher resilience may be associated with lower anxiety levels through supportive adaptation and adjustment.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Practically, no study is without limitations; this one had its own limitations. The first limitation was that the research was done in a single facility; even though the results will help improve that single facility, which is a good start for any positive change. Secondly, the study was a cross-sectional correlational design, which entails no possibility of causal inference. However, this gives room for another study to be done that will handle causal inference for that facility. Thirdly, self-report in a custodial setting can bring in issues of social desirability, although assurance of confidentiality helped a lot in restoring confidence in the respondents. Fourthly, the choice of cut-off bands of tools used is conditioned by the researchers who devised the scoring ranges, and there are different versions of the research tools. However, any study like this has no option but to limit itself to the use of tools selected and thought to be appropriate. Additionally, the use of the literate-only sample limits generalisation to all inmates. However, limiting the sample to the literate was the only viable way thought to be appropriate for the investigation. Future studies might consider employing a mixed method to get participant opinions directly from their mouths. Additionally, the use of mixed methods will reveal

perspectives and experiences on the reasons behind such levels of anxiety and resilience among the literate prisoners at Nairobi West Prison, Kenya, as well as the potential relationships between these two variables in the population under consideration for this study.

CONCLUSIONS

This research was conducted to assess the relationship between anxiety and resilience among literate incarcerated men in Nairobi West Prison, Nairobi County, Kenya. Based on the quantitative approach employed to address the three objectives of the study, the findings informed the conclusions that reflected the meaning and understanding of the selected phenomenon under study.

Concerning the level of anxiety, the study found that many literate incarcerated men in Nairobi West Prison demonstrated low anxiety levels. This lower prevalence of anxiety may be directly attributed to active facility-level interventions at Nairobi West Prison, including professional psychological counselling, organised sports and cultural events, and quarterly family visitation programs, which were verified by the researcher during the time of the study. These institutional support programs may have contributed to positive psychological adaptation, effectively mitigating environmental stress and lowering baseline anxiety observed among inmates, even though it was not measured.

Regarding resilience, the empirical findings demonstrated that a majority of literate incarcerated men at Nairobi West Prison exhibited high resilience levels as per the findings. Although specific external variables—such as familial safety nets, institutional programs, and social networks—were not directly operationalised or measured in the study's instrument, these high resilience scores align with established theoretical framework predictions regarding internal psychological assets (Masten, 2001, 2014b). From a cognitive-behavioural and resilience perspective, these unmeasured background protective factors, alongside individual confidence, serve as key buffers that enable inmates to adapt to high-stress prison environments and manage anxiety (Beck et al., 1979; Masten, 2014a).

This research clearly demonstrated that there was a weak, statistically significant negative association between anxiety and resilience. High levels of resilience allow individuals to cope with pressures and challenges more effectively. Resilience acts as a buffer and protective factor as prisoners try to bounce back from challenges, helping them manage and reduce the severity of anxiety. These findings emphasise the importance of resilience-based rehabilitation programmes in prison.

RECOMMENDATIONS

Based on the conclusions, the following recommendations were proposed for different institutions:

Prison administrators*:* This study recommends that correctional policymakers establish framework policies to help prison systems foster supportive environments. Because the empirical findings show that inmates can sustain high resilience alongside low anxiety despite institutional stressors, resilience operates as a key protective mechanism against prison-related distress.

Policymakers*:* This study recommends that correctional policymakers establish framework policies to help prison systems foster supportive environments. The empirical findings demonstrated that the incarcerated participants exhibited high levels of resilience alongside generally low anxiety levels, highlighting resilience as a prominent protective construct within this population. Consequently, establishing supportive institutional policies may serve to further reinforce psychological resilience and help maintain low anxiety among incarcerated individuals.

Incarcerated Individuals*:* This study recommended that incarcerated individuals focus keenly on building resilience by maintaining strong social relationships and staying active in available support programs within the prison setting to manage stress and anxiety. The findings of this study showed that high levels of resilience act as a buffer and protective factor, allowing individuals to cope with the pressures and challenges of the prison environment more effectively.

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