



Emotional Regulation and Impulsivity as Predictors of Offender'S Status (Recidivism and Non Recidivism) Among Inmates In Awka Correctional Service.

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Abstract

Crime is a complex human phenomenon that has no universal approach in handling across cultures, religion or even countries. Nonetheless, incarceration is somewhat a global approach in managing violent offenders; aiming at extinguishing their criminal behaviour. Some offenders withdraw from crime after serving their first conviction while others go on and even become more hardened; leading to multiple incarcerations at different times, necessitating the search for psychological factors, (emotional regulation and impulsivity) that predict offender's status. 103 inmates in Awka Correctional Service participated in this study and they were all Christians and all male. Their age ranged from 18 to 45 years with mean age of 30.3 and standard deviation of 8.8. Among the 103 inmates, 83 (80.6%) were single while 20 (19.4%) were married. 28 (27.2%) were employed before incarceration while 75 (72.8%) were unemployed. 17 (16.5%) among them have Tertiary education, 76 (73.8%) have O, level, while 10 (9.7%) have first school leaving certificate. 48 (46.6%) were recidivist while 55 (53.4%) were none-recidivist. Two instruments were used for data collection: Emotion Regulation Questionnaire and Barratt Impulsiveness Scale. The research design was a correlational design while Binary logistic regression was adopted for analyses of the data. The result showed that Emotional regulation such as cognitive appraisal ($\beta = -.090$; OR = .914 with 95% CI (.861, .969)) significantly predicted offenders' status; nonetheless, emotional suppression was not associated with any increase in offenders' status. Impulsivity also significantly predicted offender's status at ($\beta = -.090$; OR = .914 with 95% CI (.861, .969)). Lastly, emotional regulation and impulsivity jointly predicted offender's status at $\chi^2(8, 103) = 49.984, p < .01$. Hence, it was recommended that family members of inmates should pay more attention to their psychological needs.

Keyword: Emotional Regulation, Impulsivity, Inmate, Correctional Service.

Introduction

Crime is a complex human phenomenon that has no universal approach in handling across cultures, religion as well as countries. Nonetheless, incarceration is somewhat a global approach in managing violent offender's; aiming at extinguishing their criminal behavior and making them more functionally in line with social norms. However, there is no uniform outcome in respect to positive changes among inmates in correctional service centers. Some among them withdraw from crime after serving their first sentence while many others go on and on in crime. Based on the foregoing, psychologists over the years have been working hard towards unraveling the reasons why people commit crime and factors that affect peoples' involvement in crime. Researchers have also gone further to investigate factors that prompts individuals to repeated criminal activities and other undesirable behaviours after experiencing negative consequences of those behavior. Hence, a detailed understanding of criminal behaviour requires consideration of those psychological factors or traits that could be responsible for criminal behaviours.

According to Gottfredson and Hirschi (1990), individual's traits may affect how an individual respond to his/her environments. As such, behavioural patterns such as emotional regulation and impulsivity were selected as study variables in this present study; aiming at investigating their relationship with offender's status (recidivism and none recidivism). Nonetheless, there are some Nigerian based studies on offender's status such as: Analysis of the causes and effects of recidivism in the Nigerian prison system by Otu, (2015; Personality and psychological health among crime suspects and non-suspects by Obi-Nwosu, Umeoji, Ifedigbo & Nwafor (2017) which examined the effects of recidivism, personality and crime; but not much to the best of the researchers knowledge has been done on emotional regulation and impulsivity as predictors of offender's status; hence, it is of notable research to investigate the aforementioned in other to fill the observed gap on emotional regulation and impulsivity on offender's status.

Emotional regulation as one of the study variables could be referred to as an attempts to control ones emotions as well as that of another (McRae & Gross, 2020). According to Gross and Jazaieri (2014), Emotional regulation has to do with the ability to comply with orders or requests; initiate or end a behavior as appropriate; adjust the intensity, frequency, and

duration of verbal and motor operations in social and educational environments; delay gratification; perform appropriate and acceptable social behaviors in the absence of external monitoring. It can either be activated automatic or may require some effort, could be conscious or unconscious; and occurs every time we (consciously or unconsciously) activate the goal to influence the emotion-generative process (Gross et al., 2011). Mauss et al., (2006), stated that emotional regulation is the processes by which we modify the trajectory of the component(s) of our emotional response; influences the type, intensity, time course, as well as the quality of our emotion; and could either be intrinsic/intrapersonal or extrinsic/interpersonal. Life events one encountered could as well affect the way the person think and behaviors. As such, if negative over time, could stimulate negative emotions as well as exhibition of impulsive behaviour.

Impulsivity on the other hand refers to a person's level of concern or consideration of future consequences; and could also be defined as an action without foresight, poorly conceived, prematurely expressed, risky, and unwarranted (APA, 2013). Psychology also sees impulsivity or impulsiveness as the possibility for sudden actions, behaving in an unplanned manner without considering the consequences of such behaviour (VandenBos, 2007). Impulsivity could as well be seen as functional (functional variety of impulsivity) when such actions resulted in desirable consequences. When there is a positive outcome to impulsive behavior, they seem not to be viewed as impulsivity, but as an evidence of boldness, spontaneity or courageousness (Daruna & Barnes, 1993).

However, impulsivity could be an aspect of personality as well as a major component of various psychological disorders which include but not limited to: ADHD, antisocial personality disorder, substance use disorders and could also be as a result of acquired brain injury or neurodegenerative diseases. According to Salmond et al, (2005), neurobiological findings suggested that there are some brain regions that are associated with impulsive behavior. Brain regions like: prefrontal cortex (PFC), anterior cingulate cortex (ACC), etc. Nonetheless, different brain networks could contribute to different manifestations of impulsivity, and genetics could also play a role in impulsivity.

Theoretically, this work was anchored on emotional intelligence developed by Caruso and Salovey (2004) which opined that the brain center for emotional regulation is an important

part in reasoning, thinking, and intelligence; making emotional intelligence a paramount component in understanding one's emotion as well as that of other. As such, impulsivity as a negative emotion could be seen as a form of emotional illiteracy. According to Ray and Zald, (2011), the association between impulsivity and emotional regulation is supported by research in neuroscience which opined that amygdala and the prefrontal cortex plays important roles in emotional regulation; as well as impulsive behaviors, risk-taking, decision making, etc.

There are some empirical findings that implied an association between the aforementioned psychological factors (emotional regulation and impulsivity) on recidivism: Avila, A., (2021; Garofalo & Velotti, 2017; Værøy, Western & Andersson, 2016; Oluyemi and Norm, 2014; Komarovskaya, Loper, & Warren (2007); they observed a relationship between emotional regulation and impulsivity on criminality and violent behaviours; however, none examined this psychological factors (emotional regulation and impulsivity) as predictors of recidivism.

Hypotheses

1. Emotional regulation (cognitive appraisal and emotion suppression) will significantly predict offender's status (recidivism and none recidivism) among inmates in Awka correctional service.
2. Impulsivity will significantly predict offender's status (recidivism and none recidivism) among inmates in Awka correctional service.
3. Emotional regulation and impulsivity will jointly and significantly predict offender's status (recidivism and none recidivism) among inmates in Awka correctional service.

Method

Participants

One hundred and three (103) inmates of Correctional Service in Awka participated in this study. All the participants were male and Christian. Their age ranged from 18 to 45 years

with mean age of 30.3 and standard deviation of 8.8. 83 (80.6%) among them were single while 20 (19.4%) others were married. 28 (27.2%) were employed before incarceration while 75(72.8%) were unemployed. 17 (16.5%) have Tertiary education, 76 (73.8%) have O, level, while 10 (9.7%) have first school leaving certificate. 48 (46.6%) were recidivist while 55 (53.4%) were none-recidivist.

Instrument

Two instruments were adopted for data collection; they are: Barratt Impulsive Scale (BIS-11) and Emotional Regulation Questionnaire (ERQ)

Emotion Regulation Questionnaire (ERQ)

ERQ is a 10-item self-report questionnaire developed by Gross and John (2003); designed to assess habitual use of emotional regulation using two subscales: cognitive reappraisal composed of six items example,(ie, I control my emotion by changing the way I think about the situation am in); and expressive suppression with four items; (ie, when I am feeling negative emotions, I make sure not to express them); with response pattern of 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Kulkarni (2010), reported the psychometric properties of ERQ on both the cognitive reappraisal subscale (Cronbach α = .75 to .82) and emotion suppression subscale (Cronbach α =.68 to .78) indicating that the instrument has a very good internal consistency and a three month test-retest reliability of (r = .69). Also, Chukwuemeka and Obi-Nwosu (2021) reported a Cronbach α = of .82 on cognitive reappraisal and .77 on expressive suppression.

Barratt Impulsiveness Scale (BIS-11; Patton et al., 1995): Barratt Impulsiveness Scale (BIS) was developed by Barratt (1959). However, BIS-11 was reversed by (Patton, Stanford & Barratt 1995) to assess the personality/behavioural construct of impulsiveness. BIS-11 comprises of 30 items describing common impulsive and non-impulsive behaviours and preferences. The items are scored on a 4-point likert scale: 1 = Rarely/Never, 2 = Occasionally, 3 = Often/Almost 4 = Always/Always. Items number 1, 7, 8, 9, 10, 12, 13, 15, 20, 29 and 30 are reversed scored. The items are summed and the total score ranges from 30-120; with higher scores indicating higher level of impulsivity. Scores greater than 70 indicates psychological impulsivity. The items reliability of BIS-11 was reported by

Agbeniga, Oyerinde, Adeoye, Raheem, Nana and Olaye (2017) with a Cronbach's alpha value of .81; a test-retest coefficient of .47, and a Guttman split-half coefficient of .45.

Procedure

The researchers obtained a letter of introduction from the Head of Department of Psychology, Nnamdi Azikiwe University, Awka, which introduced the researchers to the management of Awka Correctional Service. The introduction letter assisted the researchers in getting approval for data collection from the aforementioned establishment. The researchers were given appointment on the date for the research by the management. On the day for the research, the researchers went to Awka Correctional Service with a research assistant who assisted in distributing and collection of the questionnaires. With the help of the research assistant and two officers at the Correctional center, convenience sampling method was utilized in the selection of 130 inmates in Awka correctional service that were administered the questionnaires; however, 118 copies of the questionnaires were returned while 103 were properly filled. Those 103 properly filled copies of the questionnaires were used for data analyses.

Design and Statistics

This study was a correlational design and Binary logistic regression analysis was adopted as the statistical tools for analyses using Statistical Package for Social Sciences (SPSS) version 25.

Table 1: Means, Standard Deviations and Correlation Coefficients of impulsivity and emotional regulation on offender's status (recidivism and non-recidivism) among inmates in Awka correctional service.

Variables	Mean	Std.	1	2	3	4	5	6	7	8	9
Offenders' status	1.39	.49	1								
Attentional Impulsivity	21.76	34.93	.19	.05	.49**	.01	1				
Nonplanning Impulsivity	30.56	27.53	-.28**	-.29**	.35**	-.12	.35**	1			
Motor Impulsivity	64.61	29.74	-.60**	-.29**	.13	-.29**	-.14	.30**	1		
Cognitive Appraisal	11.72	19.13	-.30**	-.14	.67**	-.28**	.48**	.50**	.23*	1	

Suppression	25.16	7.86	.09	-.31**	-.24*	.01	.03	.24*	-	.	1
									.30	0	
									**	5	

Note. ** $p < .01$, * $p < .05$.

Table 1 above reported the correlation coefficient among the study variables. From the observation, dimensions of impulsivity such as attentional impulsivity did not correlate with offenders' status at $r = .19$, $p > .01$; whereas, non-planning and motor impulsiveness were negatively and significantly correlated with offenders' status among inmates respectively, $r = -.28$, $p < .01$; $-.60$, $p < .01$. This means that there is an inverse relationship between impulsivity and offenders' status. Thus, as non-planning and motor impulsiveness increases, offenders' status also increases in a negative way. In addition, emotional regulation strategies such as cognitive appraisal was negatively and significantly correlated with offenders' status, $r = -.30$, $p < .01$ whereas suppression appraisal did not correlate with offenders' status, $r = .09$, $p < .05$. This indicates that an increase in emotional regulation may potentially lead to decrease in offenders' status such as recidivism and non-recidivism behaviour among inmates.

Table 2: Binary logistic regression analysis of impulsivity, emotional regulation on offender's status (recidivism and non-recidivism) among correctional service inmates.

Step	Predictors	B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
1 ^a	Attentional Impulsivity	.025	.027	.884	1	.347	1.026	.973	1.082
	Motor Impulsivity	-.044	.021	4.46	1	.035	.957	.919	.997
				6					
	Nonplanning Impulsivity	.044	.026	2.78	1	.095	1.044	.992	1.099
				2					
	Cognitive Appraisal	-.090	.030	9.01	1	.003	.914	.861	.969
			0						
	Suppression	-.016	.054	.087	1	.768	.984	.884	1.095
	Constant	9.37	4.137	5.13	1	.023	11772.08		
		3		5			2		
Test				χ^2	Df	P			

Overall model evaluation			
Wald test		.475	1 .491
Overall Percentage	77.7		
Omnibus Tests of Model		49.9	8 .000
Coefficients		84	
Goodness-of-fit test			
Hosmer & Lemeshow Test		12.3	8 .135
		72	
Model Summary			
Cox and Snell R square	.384		
Nagelkerke R Square	.513		

a. Variable(s) entered on step 1: Attentional impulsivity, Motor impulsivity, Non-planning impulsivity, Cognitive appraisal, suppression.

In table 2 above, a logistic regression analysis was performed to ascertain the effects of impulsivity and emotional regulation on the likelihood that correctional service inmates have recidivism and non-recidivism. The logistic regression model was statistically significant, $\chi^2(8, 103) = 49.984, p < .01$. The pseudo-R-square statistics showed that the model explained 51.3% (Nagelkerke R^2) of the variance in recidivism and non-recidivism and correctly classified 77.7% of cases. This means that the model exhibits good sensitivity. The goodness of fit test (Hosmer and Lemeshow test) was adequate for the model, $X^2(8) = 12.372, p = .135$. Note, based on the assumption of Hosmer and Lemeshow test, it is expected to be greater than .05 in order to adequately describe the model. Thus, hypothesis 3 was accepted. This means that the predictor variables jointly predicted offenders' status among correctional service inmates, although in different directions.

It was as well observed that inmates with emotional regulation such as cognitive appraisal were .914 times more likely to be recidivists than non-recidivists ($\beta = -.090$; OR = .914 with 95% CI (.861, .969)), but suppression appraisal was not associated with an increase in the likelihood to become either recidivists or non-recidivists. The hypothesis first was also accepted. This means that emotional regulation significantly contributed to offenders' status (recidivism and non-recidivism) among correctional service inmates.

On the other hand, inmates with motor impulsiveness were .96 times more likely to be recidivists than non-recidivists ($\beta = -.044$; OR = .957 with 95% CI (.919, .997)). Thus, hypothesis 2 of the study was accepted. By implication, this means that impulsivity as a negative emotion significantly contributed to offenders' status (recidivism and non-recidivism). However, both attentional and non-planning impulsiveness were not associated with the increased likelihood to exhibit recidivism or non-recidivism behaviour.

Discussion

The result of this study titled emotional regulation and impulsivity as predictors of offender's status (recidivism and non-recidivism) among Awka correctional service inmates has a statistically significant result. Which indicated that emotional regulation and impulsivity were among the psychological factors that predicts offender's status (recidivism and none recidivism) among inmates in correctional service centers.

The first hypothesis of this study was confirmed which indicated that emotional regulation is among the factors that predicts offenders' status (recidivism and non-recidivism). This observation is in line with the study of Avila (2021), titled influence of emotion regulation, maladaptive coping, and criminal thinking on maladaptive behavior involving two hundred and twenty-seven Mechanical Turk (MTurk) workers within the United States. According to the researcher, maladaptive emotion regulation and coping predicted willingness to engage in maladaptive behavior. Also, they observed that deficit in emotion regulation is associated with aggressive behavior

Also, Garofalo and Velotti, (2017), conducted a study titled Negative emotionality and aggression in violent offenders: The moderating role of emotion dysregulation; involving two hundred and twenty-one incarcerated Italian inmates regarded as violent offenders. The researchers observed that negative emotionality was positively associated with physical aggression, while positive emotionality was negatively linked with physical aggression.

Furthermore, Oluyemi and Norm (2014) did a study which investigated emotional intelligence of male recidivists in some prisons in Lagos State, Nigeria; involving one

hundred and five recidivist males in Ikoyi Medium Security Prison. The researchers reported a significant difference in emotional intelligence of male recidivists. Also, it was observed that most male recidivists have low emotional intelligence

The second hypothesis was also confirmed indicating that impulsivity is also a factor that influences offender's status (recidivism and non-recidivism). The result is in consonance with the finding of Værøy, Western, and Andersson (2016) they did a study on the link between Facets of Impulsivity and Aggression in Extremely Violent Prisoners. The study involved seventy-three participants; comprising of fifteen violent offenders in a high security prison in Oslo Norway and fifty eight non offenders. The researchers observed a strong relationship between urgency and aggression subscales of hostility and anger

Also, Komarovskaya, Loper, and Warren (2007), investigated the relationships among impulsivity, antisocial and violent behavior, and personality disorders in five hundred and ninety female inmates of a maximum-security female prison in central Virginia. Their findings indicated that impulsivity was associated with personality psychopathology, aggressiveness and antisocial behavior.

Lastly, it was observed that emotional regulation (cognitive appraisal and emotional suppression) and impulsivity jointly predicted offender's status (recidivism and non-recidivism) among inmates in Awka correctional service; hence, the third hypothesis was as well accepted.

Implication of the Study

Theoretically, this present study added novel literature and empirical finding to the body of knowledge in respect to emotional regulation and impulsivity on offender's status which can be used for further elaboration of the theoretical framework of the study.

Since impulsivity as a negative emotion was observed to impact offender's status, psychologists working in correctional service have additional information on psychological factors to look out for in other to reduce recidivism.

Policy makers should benefit from the findings and make psychological service very accessible to inmates of correctional facilities

The finding from this study implies that emotional regulation and impulsivity are among the psychological factors to look out for when dealing with offender's status (recidivism and non-recidivism); hence, creating psychologically based activities in correctional centers that can improve these psychological factors can never be over emphasized.

Limitations of the Study

The major limitation in this study is that it involved only male participants; indeed, the generalization of the findings should be done putting into consideration the demographic profile of the participants in this study.

Recommendation

1. Family members of inmates should pay more attention to their psychological needs.
2. Managements of correctional services should have functional psychology units as well as ensure accessibility of psychological services for inmates.

Suggestion for Further Studies

The researchers suggests that future studies should utilize approaches that will involve both genders (male and female); as well as possibly involve more correctional service centers in future studies.

Conclusion

From the findings in this study titled emotional regulation and impulsivity as predictors of offender's status among inmates of Awka correctional service, the researcher conveys the fact that emotional regulation and impulsivity are important factors in dealing with offender's status (recidivism and none recidivism).

Furthermore, it can never be over emphasized, the need for psychologists as one of the lead members of correctional team in correctional centers so as to utilize the paradigms in

psychology in creating activities in correctional centers that could positively influence the emotional regulation and impulsivity among inmates in correctional centers in order to positively manage offender's status of inmates.

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