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PRISONERS' CRIMINAL THINKING AND PERCEPTIONS ON QUALITY OF LIFE IN PRISON AS CORRELATED WITH DEPRESSION: THE CASE OF JIMMA ZONE CORRECTIONAL CENTER

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ABSTRACT

This study relies on assessing of prisoners' criminal thinking, perceptions of quality of their life in prison and their level of depression. It was carried out in Jimma Zone Correctional Center (JZCC). Out of 741 prisoners 253 were recruited by the sample size estimation formula. Regarding length of time they spent in prison, they were categorized into 56 short term prisoners and 197 long-term prisoners. For such data, Criminal Thinking Scale (CTS) and Measuring Quality of Prison Life (MQPL) were applied to measure the influence of criminal thinking and prisoners' perceptions of quality of their prison life while Beck Depression Inventory (BDI) was used to measure the depression level of JZCC prisoners. Results indicate that out of 253 prisoners 58 (22.92%) fell in the severe depression range, 23 (9.0%) in the moderate depression range, 110 (43.48%) in the mild depression range and 62 (24.51%) in the minimal or no depression range. Majority of JZCC prisoners who had shown symptoms of severe depression rated high criminal thinking and negative perceptions of their quality of life in the prison. In contrast, most of the prisoners with mild and minimal depression had low criminal thinking and positive perceptions of quality of their life in the prison. The correlation of criminal thinking and measures of depression inventory of the prisoners was .825. The correlation of MQPL and BDI of prisoners was -.857 and significant at 0.01 level which indicates the existence of a strong negative correlation. The current study also indicates that the frequency and mean score of having depression for the short-term prisoners was higher in the severe range but lower in the minimal depression level than those who were long-term prisoners. Overall the researchers have found that 79.3 % of the depression level of the prisoners was significantly accounted by prisoners' age, time spent in prison, criminal thinking and perceptions of quality of their life in prison.

INTRODUCTION

The thought processes, or thinking styles, of people who engage in crime are often different from those of non-criminalist that they support irresponsibility and manipulation. Research evidence consistently shows that offenders think differently than non-offenders and that their set of attitudes, values, beliefs, and cognitions are predictive of criminal involvement. However, it is interesting to note that people who engage in crime are unaware that their thinking is irresponsible or marked by errors. To them, their thinking is "normal".

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To this regard, as scholars stated distinct thinking errors that influence criminal behavior and concluded that changing antisocial behavior required changing erroneous thinking patterns (Morgan, Fisher and Wolff, 2010). Prisons have become more difficult places in which to adjust and survive over the last several decades; that especially in light of these changes, adaptation to modern prison life exacts certain psychological costs of most incarcerated persons; that some groups of people are somewhat more vulnerable to the pains of imprisonment than others. Persons who suffer the acute pains of imprisonment necessarily manifest psychological disorders or other forms of personal pathology, that psychotherapy should be the exclusive or even primary tool of prison rehabilitation, or that therapeutic interventions are the most important (Haney, 2001).

In this connection the existed government policy and strategy on prisoners have changed from punishment-centered to correction and rehabilitation-focused, even if the policy and strategies have not been applied in the manner it is stated on the paper. It has not been applied in all prisoners in the same way. This is to mean that the rehabilitation services which prisoners are currently provided with are not the same both in qualities and quantities in all prisons in the country. Jimma Zone Correctional Center is one of these prisons. Correction and rehabilitation activities are not fully developed in this prison yet and the numbers of prisoners who are participating in the existing services are very small (JZCC, 2014).

Prison conditions are hard on mental health in general, because of overcrowding, violence, lack of privacy, lack of meaningful activities, isolation from family and friends, uncertainty about life after prison, and inadequate health services. The impact of these problems is worse for prisoners whose thinking and emotional responses are impaired by schizophrenia, bipolar disease, major depression, and other serious mental illnesses. The mentally ill in prison also face inadequate mental health services that leave them undertreated or mistreated. In addition, poor mental health services leave many prisoners receiving, inappropriate kinds or amounts of psychotropic medication that further impair their ability to function (Fellner, 2007).

Research evidence shows that people who commit crimes often think differently than people who abide by the law. More specifically, their thinking style or orientation reinforces their criminal behavior. If incarcerated people with mental illnesses also have criminal thinking, then for treatment to be effective in reducing recidivism, it must address the co-occurrence of mental illness and criminality (Morgan, Fisher and Wolff, 2010). Therefore, it is not straightforward to move from a positive correlation between depression and crime to a statement about causality in these studies due to a multitude of omitted factors, such as financial stress and poor parenting. While these factors are likely to have an independent effect on criminal behavior, they may also influence crime through affecting mental health. In addition, the direction of causality may go from crime to depression. For example, mental health problems may be a consequence of incarceration (Marcotte and Markowitz, 2011). Accordingly, many individuals engaging in criminal acts and/or suffering from mental health problems go unnoticed and are left untreated (e.g., Hjalmarsson and Lindquist, 2011; Wilbur et al., 2007). To this regard, specifically suicide, which can be caused as a result of criminal thinking and depression, was the third leading cause of death in 15-24 year olds (Aronson, Wilson, & Akert, 2010). Besides, there is no single cause for depression; rather it's a combination of stress and a person's vulnerability to developing depression. Some educators suggested that the predisposition to developing depression can be inherited and others approved that other biological causes for depression can include physical illness, the process of ageing and gender. Also there are theories which emphasized as stress can trigger depression as stated by (Black Dog Institute, 2012). These are the reasons why the researchers focused on to prison population (i.e. Jimma Zone Correctional Center) in order to assess prisoners' criminal thinking and perception of prison environment as correlated with depression.

In Jimma to see mentally ill individuals wondering violence acts and with criminal thinking behavior in the streets of Jimma town and prison houses is becoming habitual for everyone who carefully observes. Some educators (especially of residents of Jimma town) say insufficient and inadequate rehabilitation services and prison environment of JZCC is greatly resulting mental disorder/depression due to lack of effective psychotherapeutic and mental illnesses' medical services in the prison. They also think many offenders are committing crime because of mental illnesses, and other factors. In addition, some inmates of JZCC prisoners have also informed us the quality of their life in the prison has an impact in some prisoners' mental health. Still others associate depression level of prisoners with other different factors.

Therefore, these issues lead the researchers to conduct this specific research area. So, in general this research would interestingly focus to see the rehabilitation services provided in JZCC, correlation of prison environment and depression among prisoners, at Jimma Zone Correctional Center (JZCC).Accordingly, the research was designed to answer the following basic research questions:

- Have JZCC prisoners being developed criminal thinking?
- What are JZCC prisoners' perceptions of their quality of life in prison?
- Are JZCC prisoners suffer from depression?
- What associations exist between prisoners' criminal thinking and perceptions of quality of prison life and depression?

Eventually the findings of this study may contribute for understanding the influence of criminal thinking and prison environment as correlated with depression and as a result to reduce recidivism and improve counseling and mental illness services provided in prison houses. Also it serves as a base of information for any organization and government body who initiated to improve qualities of rehabilitation services and mental problems of prisoners. Furthermore, it might be used as a basement for further researches that could be conducted on related issues.

Methods and Design

This research was aimed to assess Jimma Zone Correctional Center prisoners' criminal thinking, depression and perceptions of quality of their life in prison. To this regard ,a cross sectional study design was utilized. The study population was prisoners without depression available during the data collection period in Jimma Zone Correctional Center, south-west of Ethiopia and the data was collected from March 1, to April 1, 2014. The subjects investigated in this study encompass a total of 757 prisoners. Among the prisoners 16 were prisoners with depression. As their number was very small they were excluded from the probability of being in the sample. As a result the study population of this study was focused and relied on 741 prisoners who were without depression. From this population the sample size was determined by the sample size estimation formula and a total of 253 prisoners were selected. This sample size indicated that 34% of the population (34% of 741) was used as a sample by the present study.

Therefore, it was convenient to select any other suitable sample selection method as the sample size is large, 34% which was more than 20 %. In order to select 253 informants from 741 prisoners, the total prison population was stratified in to two groups by the time they spent in the prison as being prisoners by adopting and basing as per the work of Woods (2010). Consequently, there were 163 short term prisoners and 578 long term prisoners. Using proportional sampling method 56 short term prisoners and 197 long term prisoners were selected. Finally, lottery method was used to select the first two informants from each 163 short term prisoners and 578 long term prisoners' lists. Accordingly, from the short terms' list the first prisoner at serial number 3 was selected by the lottery method, while from the long terms the first prisoner found at serial number 23 was selected. Then by applying N/n for both strata yields an interval of 2. This number was an interval to select respondents from the already accessed lists of prisoners. Accordingly, using systematic sampling method and as per Woods (2010) the rest 55 short term prisoners (those who spent less than six months in the prison) out of 162 and 196 long term prisoners (those who spent more than six months in the prison) out of the 577 prisoners were selected from the written lists. Hence, the subjects for this research selected based on the numbers from the short terms were 3, 5, 7, 9… and while from the long terms prisoners the researchers were taken individuals with numbering listed at 23, 25,27 and etc.

In view of that to get the appropriate information about JZCC prisoners' list was the first source of data used to assess demographic data, time spent in prison and legal status of the prisoners. These data were applied to classify the prisoners in to different types of categories according to the time they spent in the prison and their legal status. The correlation of prisoners' criminal thinking and perceptions about the quality of prison life and depression levels were measured using various instruments. For such data, Criminal Thinking Scale (CTS) was measured using a latest scale of 2011 and Measuring Quality of Prison Life (MQPL) was assessed by adopted scales used by (Shaw et al.,2010 and Liebling and Arnold ,2002).While the Beck Depression Inventory (BDI) was used to measure the depression levels of JZCC prisoners. In addition, secondary data (documents) about depressed prisoners who had got services were accessed from JZCC's clinical record. This was simply to identify prisoners with depression and without depression.

In addition, to ensure the reliability and validity of the instruments before practically used, a pilot test was conducted on 25 prisoners who were out of JZCC, but they were in jail in Jimma Zone Seka Chekorsa Woreda. The pilot study revealed that the Criminal Thinking Scale (CTS) was measured by six dimensions which have many items under each scale. The scales were personal irritability, criminal rationalization, cold heartedness, power orientation, justification and entitlement. As a result, the CTS's 36 items showed A Cranach's Alpha of r=.89 which indicates that CTS's strong power to measure prisoners criminal thinking. Besides, MQPL is a scale containing 19 dimensions with 108 questions/items. And the researchers have conducted the pilot for the scale properly based on the rules and regulations of the instrument. Eventually, the correlations among the MQPL dimensions

were computed in the pilot test. Accordingly, the correlation of the items in the "Relationship" and "Respect" is 0.91 and significant at 0.01 levels. The correlations of "Relationship" with "Frustration", "Dignity" and "Faire" were .612, .919 and .710 respectively. The items of "Respect" and "Dignity had a correlation of .875 , of the "Frustration" and "Care and Security" was .632, while of the "Overall Distress" and "Frustration" is 0.93 with significance of 0.01 levels. Hence, all these dimensions revealed that there were strong positive relationships between those dimensions mentioned above. Generally, the 108 items of MQPL revealed that a Cronbach Alpha of r=.916 realizing that the MQPL has high strength to measure prisoners' perceptions of their quality of life in prison. Further, as per the rules and regulations of the scale developed by Aaron Beck, who creates the BDI, prisoners who score between 0 and 13 (0.62) were fall in the minimal or no depression range, 14 (0.67) to 19 (0.90) in the mild depression range, 20 (0.95) to 28 (1.33) in the moderate depression range and 29 (1.38) to 63 (3.00) in the severe depression range. Using this instrument, the depression level of respondents was measured for reliability in the pilot test and the scale revealed a Cronbach Alpha value of r=.92, which implied that BDI had high strength to measure depression.

Moreover, before beginning of data collection obtaining of permission and discussion of ethical issues was accomplished with concerned bodies. Then recruiting of data collectors, who had at least first degree either in psychology or counseling psychology selected properly. After the selection process had completed orientation on the methods to collect, and awareness on the meanings of the items was provided to the data collectors. On the other hand, the records of the background history of the prisoners (especially the age, educational level, the time they spent in prison and their legal status) were collected from the office of JZCC. Data collection papers prepared with rows based on the categorical classification of the time spent in prison indicating the scores of CTS, MQPL and BDI of JZCC prisoners.

Consequently, the issues of measuring the criminal thinking style and the prisoners' perception of quality of prison life were conducted after gathering of the back ground characteristics of respondents. Following this, the depression scale of prisoners was collected and assessed. Also in accordance with each informant, measures of all the intended instruments of CTS, MQPL and BDI scales had been taken respectively. In connection to this, data from recordings (document) about mental health services accessed by prisoners from JZCC clinical or office had been included in the study. Finally, the data were entered in to SPSS version 16 then analyzed and interpreted. Hence, mainly quantitative data analysis method was used in this study. Therefore, both descriptive and inferential statistics were applied as per the nature of data permits for various analyses. To this regard, the measures of CTS, MQPL and BDI scores including time spent in prison and age were described statistically, and finally summarized, interpreted and reported properly. Primarily the demographic data, data about time spent in prison and convict and remand (legal status) of JZCC prisoners was taken from JZCC prisoners' document; so that the prisoners were categorized according to the type of time they spent in prison and legal status; the data is put in percentage and mean values.

Descriptive statistics by respondents' background, CTS, MQPL and BDI scores were presented and interpreted before all other statistical computations carried out. Subsequently, in connection to the study variables and as per the nature of the data permitted for analysis, the researchers mainly utilized and used correlation of the mean values of criminal thinking and quality of prison life with the depression mean score were computed by Pearson product moment correlation. Besides, independent t-tests were used to compare mean differences on BDI scores between categories of CTS (respondents with high and low criminal thinking), MQPL (respondents negatively and positively rated the MQPL), gender (men and women) and time spent in prison (short-term and long-term prisoners) were computed. Finally, regression analysis for age, time spent in prison, CTS, MQPL and BDI scores was calculated to know and predict the correlations strength found and the most influential factor on depression among these variables. All correlations and significant mean differences existed within the studied factors were computed depending on the total mean scores of all the variables and levels, and then interpreted accordingly.

RESULTS

The below table 1 shows that out of the 253 prisoners, 4 (1.58 %) are delinquent juveniles (aged between 13 and 17 years), 210 (83 %) are youths and young-adults (18-35 years of age) and 39 (15.42%) are adults above 35 years old. It indicates that, almost majority of the respondents age lie at youth and young-adult age. Although this majority of respondents are at youth and young-adult age, during committing crime and entry in to custody most of them were at their very young age. As indicated in table 1 below, regarding time spent in prison, it is indicated that 56 (22.13%) of the prisoners spent less than 6 months (short-termed) while 197 (77.87%) of them were imprisoned for more than 6 months (long-termed) at the time of data collection.

As shown in Table 2, out of 253 respondents 56 (22.13%) were short-term prisoners (M=25.19, SD=17.24) and they were more influenced by depression than the 197 (77.87%) long-term prisoners (M=19.63, SD= 13.22).Out of prisoners who show severe depression 58, 20 (34.48%) were short-termed who score a mean of BDI 45.00 (SD=10.73) and 38 (65.52%) were long-termed prisoners who score a mean of BDI 44.08 (SD= 7.79). Hence, a great percentage of long-termed with a lesser depression mean are revealed in the data. This implies that short-termed prisoners were more depressed than the long-termed prisoners. Moreover, this can be strengthened by the frequencies of short termed prisoners fall in the moderate, mild and minimal ranges. There were 11 (47.83%) short-termed with BDI mean of 23.91(SD= 2.47) and 12 (52.17%) long-termed with BDI mean of 24.17 (SD=2.29) in the moderate depression range , 7 (6.36%) short-termed with BDI mean of 14.14 (SD=0.38) and 103 (93.64%) long-termed with BDI mean of 14.89 (SD=1.45) in the mild depression range, and 18 (29.03%) short-termed with BDI mean of 8.28 (SD= 3.72) and 44 (22.13%) long-termed with BDI mean of 8.4 (SD=4.51).

These data indicate that the frequency of having depression symptom for the short-term prisoners is higher in the severe range but lower in the moderate, mild and minimal depression ranges than those who are long-termed prisoners Independent t-test analysis as shown in table 3 indicates there was a significant influence for the length of time spent in prison, t (251) =2.59, p=.001, with short-term prisoners receiving higher scores (M=25.19, SD=17.24) than long-term prisoners (M=19.63, SD=13.22). In other word this result indicates that the time spent level was significant for the depression, because the p value =0.001 is less than that of 5% level of significance. As shown in table 4, delinquent juveniles had the greatest mean value of BDI 54.00 with no standard deviation in the severe depression category and a mean value of BDI 22.00 with no standard deviation in the moderate depression category.

Table 1.Descriptive statistics of respondents by demographic characteristics and Frequency of depression levels

Prisoners' Characteristics		Frequency				
		n	SD	MD	MLD	ND
Age	13-17 Years	4	1	1	2	-
	18-35 Years	210	35	21	99	55
	≥36 Years 39	22	1	9	7	18
Time Spent	Short-term	56	20	11	7	18
	Long-term	197	38	12	103	44

Source (JZCC Prisoners' File, 2014).

Table 2. Descriptive statistics of respondents' legal status and length of time spent in prison by depression levels

Characteristics	Depression Level									
	SD		MD		MLD		ND		Total	
	M	SD	M	SD	M	SD	M	SD	M	SD
Short-terms	45.00	10.73	23.91	2.47	14.14	0.38	8.28	3.72	25.19	17.24
Long-terms	44.08	7.79	24.17	2.29	14.89	1.45	8.36	4.51	19.63	13.22

Table 3. Independent samples t- test for length of time spent by scores on beck depression inventory

Variable Mean Difference	df	t	F	Sig.	95% CI
Time Spent5.56699	251	2.589	10.664	0.001*	(1.332, 9.802)

Table 4. Summary of descriptive statistics by age and depression levels

Age	Depression Level										
	SD		MD		MLD		ND		Total	
	M	SD	M	SD	M	SD	M	SD	M	SD
Del. Juveniles	54.00	-	22.00	-	16.50	0.71	-	-	27.25	18.03
Youths/young	45.37	7.99	24.19	2.38	14.79	1.39	8.29	4.24	19.13	13.19
Adults	42.41	9.91	23.00	-	15.00	1.73	8.71	4.79	29.54	16.89

Table 5. Summary of ANOVA on age and depression

Variable	Groups	Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	3730.19	2	1865.09	9.67	0.000*
	Within Groups	48227.97	250	192.91		
	Total	51958.16	252			

Table 6. Post Hoc analysis of age by depression score

Variables		Mean Difference	Std. Error	Sig.	95% CI
Delinquents	Youth	8.12	7.01	.479	(-8.41, 24.65)
	Adults	-2.29	7.29	.947	(-19.48, 14.90)
Youths	Delinquents	-8.12	7.01	.479	(-24.65, 8.41)
	Adults	-10.41	2.24	.000*	(-16.12, -4.69)
Adults	Delinquents	2.29	7.29	.947	(-14.9, 19.48)
	Youths	10.41	2.42	.000*	(4.69, 16.12)

Table 7. Descriptive statistics of respondents' CTS scores across depression levels

Levels of CTS	SD		MD			MLD			ND		
	n	M	SD	n	MD	SD	n	M	SD	n	M	SD
High	55	34.45	3.98	9	26.39	0.75	5	39.28	1.58	5	40.30	1.44
Average	-	-	-	-	2	25.00	0.00	-	-	-	-	-	-
Low	3	21.77	3.18	12	24.13	0.46	105	14.56	4.21	57	10.43	0.24
Total	58	33.79	4.84	23	25.09	1.22	110	15.68	6.62	62	12.84	8.21

Table 8. Independent samples t- test for respondents' high and low criminal thinking levels by scores on beck depression inventory

Variable	Mean Difference	df	t	F	Sig.	95% CI
Criminal thinking	25.05	249	20.607	74.85	0.000*	(22.65, 27.44)

*Significant at 0.05 level

Table 9. Association between respondents' CTS and BDI scores

		Criminal Thinking	BDI
Criminal Thinking	Pearson Correlation	1	.825*
	Sig.(2-tailed)		.000
	N	253	

**Significant at 0.01 level.

In addition, there was no respondent fall in the minimal depression category. All these results revealed because of the presence of only a few delinquent juveniles in the prison. Youths and young adults had the highest depression value (M=45.37, SD=7.99) as the adults had the highest BDI score (M=42.41, SD=9.91) at the severe depression level. As indicated in table 5, the delinquent juvenile participants in beck depression inventory had an average score of depression 27.25 (SD=18.03), the youths and young adults had BDI average score 19.13 (SD=13.19) and those adults had an average BDI score of 29.54 (SD= 16.89). The influence of age on BDI score, therefore, was significant, F (2, 250) =9.67, p=0.00 at 0.05 significance level. Tukey HSD test in table 6 indicated that the mean score for the adults (M= 29.54, SD=16.89) was significantly different than the youths (M=19.13, SD=13.19).

level beyond 0.05.As table 7, from those who showed severe depression symptom/score, 55 (94.83%) of them had high criminal thinking score (M=34.45, SD=3.98) while only 3 (5.17%) of them had low criminal thinking score (M=21.77, SD=3.18). Out of 23 respondents who were in the moderate depression range, 9 (39.13%) had high CTS score (M=26.39, SD=0.75) and 12(52.17%) had low CTS score (M=24.13, SD=0.46) and 2(8.70%) had average CTS score (M=25.00, SD=0.00). Of the 110 respondents who showed symptoms of mild depression, except 5(4.55%) of them (M=39.28, SD=1.58), 105 (95.45%) were fall in the low criminal thinking range (M=14.56, SD=4.21). Within the respondents fall in the minimal depression range, there were respondents 57 (91.94%) with low CTS score (M= 10.43, SD=0.24) and 5 (8.06%) with high criminal thinking score (M=40.30, SD=1.44).

Table 10. Descriptive statistics of respondents' MQPL scores across depression levels

| | SD | | | MD | | | MLD | | | ND | | |
	n	M	SD	n	M	SD	n	M	SD	n	M	SD
MQPL	58	1.34	0.31	23	1.85	0.10	110	2.70	0.41	62	3.46	0.53

Table 11. Independent samples t- test for negatively and positively ranged MQPL scales by scores on beck depression inventory

Variable	Mean Difference	df	t	F	Sig.	95% CI
MQPL	0.9684	250	15.49	121.64	0.000*	(0.85, 1.09)

Table 12. Association between respondents' MQPL and BDI scores

		MQPL	BDI
MQPL	Pearson Correlation	1	-.857**
	Sig. (2-tailed)		000
	N	253	

**Significant at 0.01 level.

Table 13. Summary on the association of the major variables influencing depression

R	R Square	Adjusted R Square	Std. Error of the Estimate
.891	.793	.790	.31318

Table 14. Regression on the predictors and depression

	Sum of Squares	df	Mean Square	F	Sig.
Regression	41259.953	4	10314.988	239.116	.000*
Residual	10698.205	248	43.138		
Total	51958.158	252			

a. Predictors: (Constant), age, criminal thinking of prisoners, time spent in prison, MQPL
b. Dependent Variable: BDI

However the mean scores between all the rest groups of age were not significantly different. Significant mean difference revealed only between adults and youths as p=0.000 while the mean differences between all other groups had significant

Generally, these data indicated that prisoners who had shown symptoms of severe depression had high criminal thinking. On the other side, most prisoners with moderate depression had low criminal thinking. In addition, most of the prisoners with mild and minimal depressions had low criminal thinking.

Table 15. Coefficients indicating comparisons of magnitudes of the independent variables

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	1.477	.178		8.305	.000*
Time spent in prison	-.005	.005	-.028	-.841	.401
Criminal thinking	.255	.031	.387	8.125	.000
Quality of Prison life	-.422	.038	-.538	-11.24	.000*
Ages of prisoners	.003	.003	.027	.826	.409

a.   *Dependent Variable: BDI*

Moreover, the two categories were compared by their depression mean scores in Table 9. As the independent t-test analysis in table 8 shows, respondents with high criminal thinking had higher depression scores (M = 38.50, SD = 13.26) than those with low criminal thinking (M = 13.45, SD = 6.01), t (249) =20.61, p = .000. In other word, the result implied that there was a significant mean difference on BDI scores between respondents with high criminal thinking and low criminal thinking at .05 levels; criminal thinking had influence on the depression level of respondents. As shown in table 9, Pearson's Product Moment resulted that the correlation of criminal thinking and depression inventory of the prisoners was.825.

It indicated that they had strong positive correlation and this relationship was significant at 0.01 levels. As criminal thinking increases the depression level also increase. Table 10 indicates that respondents who had severe depression symptoms score the smallest of all MQPL mean values (M=1.34, SD=0.31) while respondents who had no depression symptoms score the highest MQPL mean value of the four depression levels (M=3.46, SD=0.53). The table also indicated that respondents' MQPL score increased across the depression levels from the severe one to the minimal or no depression level. The independent t-test analysis in table 11 revealed that the respondents who negatively perceive the quality of their life in the prison had more depression scores (M=1.56, SD=0.66) than those who ranged the MQPL positively (M=0.59, SD=0.32), t(250)=15.49, p=0.000 at 0.05 significance level.

The correlation of MQPL and BDI scores of prisoners was -.857 and was significant at 0.01 levels which indicated the existence of a strong negative correlation. As respondents' negative perceptions of their life in prison increased or their MQPL score decreased, reversely their depression score increased. Most prisoners performed the MQPL items negatively and fall in the severe and moderate depression ranges while some prisoners performed the MQPL items positively as they fall in the mild and minimal depression ranges. A standard multiple regression analysis was conducted to evaluate how well age, time spent in prison, criminal thinking and MQPL scores predicted BDI. The combination of criminal thinking, quality of prison life, ages of respondents and the time they spent in prison was significantly related to depression score of respondents, F (4,248) = 239.116, p= 0.000. The multiple correlation was 0.891, indicating that approximately 79.3% of the variance of

the depression can be accounted for by the combinations of the scores of criminal thinking, MQPL, age value and length of time spent in prison while 20.07% of the effect is accounted for by another factor. The tables revealed that among these factors the most influential factor next to quality of prison life was criminal thinking of prisoners. There was strong and significant correlation between the factors at 0.05 levels.

DISCUSSION

One of the main findings of this study suggested that the influence of time spent in prison on the depression levels of prisoners was significant. There was a significant influence for the length of time spent in prison, t (251) =2.59, p=.001, with short-term prisoners receiving higher scores (M=25.19, SD=17.24) than long-term prisoners (M=19.63, SD=13.22). Hence shot-term prisoners were more affected by depression than long-term prisoners. This finding is consistent with the research findings of (Adam et al, 1994, Zambel, 1992, and Mackenzie and Goldstein, 1985). They had actually found that long-term prisoners have reduced feelings of hopelessness and absence of deterioration over time in terms of depression in long-term prisoners. It is also consistent with the findings of Dhami et al., (2007). This finding stated that as time spent in prison had a direct effect on prisoners' participation in programs, their thoughts of needing control over their lives, their feelings of hopelessness, and their disciplinary infractions in prison (Dhami et al., 2007).

Besides, this research finding supported that, at the "Justification or Mollification" dimension, prisoners were asked for the justification of the crimes they had committed and respond that " It is not a new thing to commit a crime; We do it as everyone else do and we will continue in a such a way ". They simplified every criminal act and breaking the law. Moreover, 38% of the men and 20% of the women respondents externalize and blame others for what they commit. Further, in relation to the Entitlement scale, a measure of "ownership, privilege, and uniqueness" was endorsed by 26% of the men and 17% of the women, indicating a belief that others (e.g., society) "owe them," and that their uniqueness affords them the right to take what they want. This finding also goes in line with the current research finding on the "Entitlement" dimension. There are about six items rated by the prisoners. Based on these items it is identified that prisoners highly feel themselves above the law and society owes them a better life.

They averagely also believe as committing crime is okay in order to live the life they deserve and to pay for the things they need. 29% of the men and 18% of the women rated/agreed very strongly all the "Entitlement" items.   Moreover, the research findings of (Dhami et.al. 2007) are consistence with the current findings. The only differences are the instruments and the quantity of items used in the two researches. In the current research the instrument used to measure such statements is MQPL while they used a four-part survey titled Life in Prison and A Future Outside. Even though items used in the current research are more than that of Dhami's, the items discussed by them are found within the current research findings. In the current study prisoners stated that they thought about they receive little support from staff in their prison when they need it and the staff that help them seldom to maintain contact with their families. They also thought they had less contact with the prison staff and some good contact with other prisoners. Some prisoners thought that the prison effort may not help them to stop offenders committing offences on release from custody. They said also that they couldn't fully able to maintain meaningful contact with their family. Most prisoners stated that they have little hope for the future, their life in the prison involves a great deal of suffering and there is nothing they can do to retrieve the distress they feel in that prison.

On the other hand, using the MQPL survey, the current research results revealed that the most positively rated area of prison life is race relationship, whereas according to the research findings conducted by (Shaw et al., 2010) the two most positively rated areas of prison life were race relationships and physical safety, which ranked amongst the top three dimensions across all five establishments. On the other hand, the least positively rated area of prison performance was entry into custody. This finding is consistence with the current finding that state the list positively which implies and resembles negatively rated area of prison performance is entry into custody. Besides, between men and women the research finding (Shaw et al., 2010) also indicated that a cross 15 of the 19 MQPL dimensions, mean ratings for men and women did not significantly differ from each other. In three areas, namely offending behavior, personal development and entry support, mean ratings were significantly higher amongst women. In the area of clarity, ratings were significantly lower amongst women. Some of these findings go in line with the current study findings while the others are inconsistent.

The current research found that in the areas, namely relationships, respect, offending behavior, personal development, drug control, race relationships, assistance for vulnerable, entry into custody and entry support, women rated prison performance significantly higher than men did. In the rest areas, however, women's ratings were significantly lower than men's. On the other hand, in the finding of (Shaw et al., 2010) across all but one of the MQPL dimensions, mean ratings for remand and convicted prisoners did not significantly differ from each other. The area entry into custody was rated significantly more positively by convicted prisoners. Some of the results don't fit the current study results. The current study results shown that for all but two dimensions, namely offending behavior and race relationships,

mean ratings for convicted and remand prisoners did not significantly differ from each other. Among both convicted and remand prisoners alike, there resulted lowest rating in the area of entry into custody. In addition, significant differences were found in three areas, namely individual care, entry into custody and overall distress. In all three of these areas prisoners with no MI rated prison performance the most positively. The current study Considered and related the no MI (no mental illness) as no or minimal depression category and revealed as prisoners with no depression rated positively most of the 19 items.

Meanwhile, the current study result is consistence with the three areas mentioned (individual care, entry into custody and overall distress) and some other areas, prisoners with no MI (i.e. including prisoners with no depression) rated prison performance the most positively (positively ranged the MQPL scale). In addition, the findings of the current study strengthen these statements by revealing the decreasing mean values of MQPL by ascending order in accordance with the severity of depression magnitude.   Accordingly, prisoners who score MQPL mean 1.45 fell in the severe depression range. This MQPL value is the least of all. Then, it is shown that the MQPL value of prisoners with moderate depression is 1.99 and those with mild and minimal depression is 2.9 and 3.74. Theses MQPL values at each depression level reveal that the value of MQPL gets decrease from the severe depression category to the last minimal or no depression category. Hence , prisoners who perceive their quality of prison life in the negative range show severe depression and as their perception changed from the negative range to the positive range their depression level also changed down to the moderate, mild and then minimal or no depression level. This was statistically tasted and was significant.

In the current research findings indicate that there are not as such significant differences in all areas except in the areas of namely clarity and frustration by which the long-termed prisoners rated higher and in the areas by which personal development and assistance for the vulnerable rated lower than the short-termed one. Among both long-termed and short-termed prisoners, prisoners scored exactly their equal rating in the area of entry support. However nothing was investigated toward such cases by (Shaw et al., 2010). Somewhat differently, as Woods (2010) stated in his study on depression, self-efficacy and identity, explored the relationships that exist between self-efficacy, depression and the criminal identity. The study used a sample of 68 male inmates from the Washington State. Four of the participants had served less than six months in prison while the remaining 64 had been incarcerated for more than six months. There was no significant difference between novice and experienced. The Beck Depression Inventory was used. Independent samples t-test were used to determine and revealed that there were no any significant differences in levels of depression (p > .05) between novice inmates (less than six months imprisoned) and experienced inmates (greater than six months imprisoned). In this regard, the finding is inconsistent with the current research findings regarding decreasing of the depression symptoms and magnitude towards time spent in prison. The current research findings illustrates that out of the total sample, there are 56 (22.13%) short-term prisoners and 197 (77.89%) long-term

prisoners. From the prisoners who show severe depression 58, 20 (34.48%) are short-termed who score a mean of BDI 45.00 and 38 (65.52%) are long-termed prisoners who score a mean of BDI 44.08. Hence, a great percentage of long-termed with a lesser depression mean are revealed in the data. This implies that short-termed prisoners are more likely to be depressed than the long-termed prisoners. In sum, findings in the current study indicated that the frequency of having depression symptom for the short-term prisoners is higher in the severe range but lower in the moderate, mild and minimal depression ranges than those who are long-termed prisoners. Hence, there is a significant difference in BDI level between the novice (short-term prisoners) and experienced (long-term prisoners) which indicate the more the time they spent in prison, the more they adapt and experience the prison environment and the lesser the BDI level they score.

Conclusions and Recommendations

Conclusions

Based on the major results of this study, the researchers reach to have been drawn the following conclusions.

- As many research findings indicated that one of the most notable characteristics of criminal offenders is distorted cognition self-justificatory thinking, misinterpretation of social cues, displacement of blame, deficient moral reasoning, schemas of dominance and entitlement, and the like (Beck, 1999; Dodge, 1993; Walters & White, 1989; Yochelson & Samenow, 1976). Similarly, in this study criminal offenders with such distorted thinking may misperceive benign situations as threats (e.g., be predisposed to perceive harmless remarks as disrespectful or deliberately provocative), demand instant gratification, and confuse wants with needs.

- This study also reveals that most prisoners in JZCC experienced criminal thinking. Criminal thinking is often tied to a "victim stance" with offenders viewing themselves as unfairly blamed, if not hated, and cast out from society ("everyone is against me," or "society doesn't give me a chance") while failing to see how their antisocial behavior may have contributed to their problems. These thinking patterns may also be supported by offenders' entrenchment in an antisocial subculture (e.g., street or prison codes) where otherwise dysfunctional assumptions about how one should behave may in fact be adaptive.

- The findings of this research also indicated that the prisoners of JZCC are suffering from depression. In order to solve this problem we must situate people with depression at the center of the treatment system. Efforts to improve the system must be clued-up by research and evidence. But the research and evidence in isolation are not enough. This knowledge needs to be reflected in policy and in practice: for service providers, for employers and co-workers, for centers of education including those teach health care professionals and for decision-makers at all levels.

- The researchers believe that above all else, services for people living with depression must be improved. It is essential we come to a better understanding of depression and the multiple factors associated with it. If we do not, we

will not be able to prevent, diagnose or properly treat this illness. We need to approach people with depression as people first. We need to respect individuality, experience, culture and spirituality. We must honor their treatment preferences and involve them in their own care. Providers of care must work together with people with depression, with a clear understanding of their respective roles and responsibilities.

- In sum, Greater consideration should be given to understanding the wider environmental and organizational factors that contribute to poor mental health in prisons. This information can be used to inform prison policy makers and managers, and the primary care trusts who are beginning to work in partnership with prisons to improve the mental health of prisoners.

Recommendations

On the basis of the results obtained the researchers would like to provide the following some specific practical implications and recommendations.

- This study highlights the correlation of criminal thinking, quality of prison life and depression level of prisoners. In addition, it identifies the influence of demographic characteristics, the length of time spent in prison and legal status of prisoners. The findings support that there should be treatment program for those who show severe, moderate and mild depression symptoms. Furthermore the prisoners shall receive psychological and medical therapies in order to relief from their criminal thinking. The prison environment also need improvements in advancing its regime, treatment ways , relationship with prisoners, services at times of entry into custody and in all aspects of quality of the prison life.

- Findings of the study revealed that prisoners had experienced criminal thinking which influence their depression level. Hence it had better to prepare trainings and teaching them using cognitive therapy. Cognitive-behavior therapy is based on the assumption that cognitive deficits and distortions characteristic of offenders are learned rather than inherent. Programs for offenders, therefore, emphasize individual accountability and attempt to teach offenders to understand the thinking processes and choices that immediately preceded their criminal behavior. Learning to self-monitor thinking is typically the first step, after which the therapeutic techniques seek to help offenders identify and correct biased, risky, or deficient thinking patterns. In addition the reasoning and rehabilitation program is important for JZCC prisoners as most of them have problems of criminal thinking. The Reasoning and Rehabilitation program is organized around exercises (e.g., Critical Thinking, Social Perspective-Taking) that focus on "modifying the impulsive, egocentric, illogical and rigid thinking of the offenders and teaching them to stop and think before acting, to consider the consequences of their behavior, to conceptualize alternative ways of responding to interpersonal problems and to consider the impact of their behavior on other people, particularly their victims.

- The findings of this study also indicate that most prisoners perceive the quality of their life in prison negatively and

they had shown depression symptoms. As their MQPL negatively ranged and BDI scores indicate the correlation exist between them was strong and significant. So that improving the prison environment will reduce this problem. JZCC has poor medical and psychotherapeutic intervention center as most prisoners respond to the item in MQPL asks them about the services and interventions they had received. The first health reception screening tool in prisons should be updated to improve the triaging of prisoners to appropriate health care pathways. Staff administering health reception screens should be given training to identify those prisoners that are likely to need extra support during early custody, including women, those with a history of mental illness and prisoners likely to be on remand for extended periods of time.

- Finally, the researchers would like to address that a future prevalence survey should include measures of individual service needs. Besides, further longitudinal studies should be conducted to determine the effects of imprisonment over longer periods of time and on the vulnerable groups. Researches on uncovered factors by this study, affecting depression of prisoners, such as other mental illnesses shall be conducted on both prisoners with and without depression and other mental illnesses. Moreover, researches shall emphasize on the pre-prison and post-prison adjustment, conditions on historical criminal thinking.

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