



Symptoms and Underlying Factors of Psychological Distress among Inmates in Bonga Town Correctional Center, Kaffa Zone, SNNPR, Ethiopia

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Abstract

Mental disorders occur frequently in the context of incarceration. Imprisonment may lead to the development of mental illness, especially psychological distress. The main purposes of this study were to investigate symptoms and underlying factors of psychological distress among inmates of Bonga Town correctional center. Institution based cross-sectional study design was employed and 327 inmates from February to March 2017 were considered for this study. Systematic sampling technique was used to select the study participants. Data was collected by using a standardized self-reported questionnaire. Analysis was done by SPSS version 20. Multiple regression was conducted to identify associated factors. Mann-Whitney U test was used to determine gender difference on symptoms of psychological distress. The finding of this study revealed symptoms of psychological distress (being tired, being nervous, being hopeless, being restless, and feel depressed) prevail among inmates of Bonga Town correctional center. The level of psychological distress according to Kessler scale ranges from mild to severe and fell under moderate level of distress (36.69%). There was significant gender difference on the symptoms of psychological distress. Hence, female inmates were more distressed than male inmates. Bonga correctional center communities should work cooperatively with Bonga G/Tsadik Shawa hospital to help inmates who were at risk.

Keywords: Symptom; Psychological Distress; Correctional Center And Inmates

1. Introduction

Inmates are suffering from different mental disorders and this disorder may cause a poor ability to function in life. Among this psychological distress, depression and anxiety are mentioned as an example and this is happened due to incarceration or imprisonment. Hence, in relation to this (Jordan, 1996, pp.513-519) stated mental disorders occur frequently in the context of incarceration and the fact that imprisonment may lead to the development of mental illness, especially psychological distress. Hence, Psychological distress is a state of emotional suffering characterized by symptoms of depression (e.g., lost interest; sadness; hopelessness) and anxiety (e.g., restlessness; feeling tense) (Mirowsky &

Ross,2002,pp-1281-1298). These symptoms may be tied in with somatic symptoms (e.g., insomnia; headaches; lack of energy) that are likely to vary across cultures (Mezzich, Kirmayer, Kleinman, Parron, Good & Manson, 1999, pp.457-464).

There are 450 million people worldwide who suffer from mental morbidity (World Health Organization, 2010). Although mental health problems affect society as a whole, studies have shown that mental illness is more common among the correctional center population than the general population (Brinded, Simpson, Laidlaw, Fairley & Malcolm, 2001,pp.166-173.). This can be due to overcrowding, various forms of violence, lack of privacy, lack of meaningful activity, isolation from social networks, insecurity about future prospects (work, relationships, etc.), and inadequate health services, especially mental health services, in prisons (Billargeon, Binswanger, Williams, & Murray,2009,pp.103-109).

The prison environment neutralizes the formation and development of basic human values, contributes to stigmatization, alters the convict's conduct and leads to temporary or even irreversible psychic outcome (Muakad,1998). In spite of the symptoms, feelings of inadequacy, important feelings in imprisoned people are anticipated suffering in life outside of incarceration, fear of family abandonment, sadness, pessimism, past failure, guilt for being absent from raising and educating their children, losing their right to the social importance of work, identity loss, social discrimination that impairs prospects for working outside of the criminal context and social recognition (Fernandes & Hirdes, 2006,pp. 418-424.).

There is the difference between male and female in relation to the effects of imprisonment. According to (Ulzen, Psych & Hamilton, 1998,pp.57-63), Gender differences exist with respect to effects of incarceration on both male and female inmates. Mental health problems have been observed to be higher among incarcerated inmates compared to the general population and are a significant source of morbidity among inmates (Fatoye, Oyebanji, & Ogunro, 2006, pp.545).

Psychological distress is the most severe problems that occur all over the world and this disorder leads to other problems and affects an individual's life. An individual may be affected by this problem in his /her lifetime in the population; particularly in the correctional center.

In relation to this, southern nation nationalities and peoples of Ethiopia region; Bonga town correctional center was institution / correctional center in which a lot of people are incarcerated for short period sentenced to death and life sentence due to the criminal offense they made. However, not all inmates in Bonga town correctional center are offenders. In spite, the correctional center is an ancient institution, where diverse types of people, who had run afoul of the law, some of them possibly innocent, live (Jordan, Schlenger, Fairbank, & Caddell, 1996, pp.513-519). In another word, there are inmates who were imprisoned before they are sentenced by the court and wait until they are sentenced whether they are guilty or not. Therefore, this the above condition may or may not pose these inmates to have a mental disorder such as psychological distress, depression, anxiety etc.

Psychological distress occur frequently in the context of incarceration and related to this, is the fact that imprisonment may lead to the development of mental illness, especially psychological distress (Teplin, Abram, McClelland, 1996, pp.505-512).

Some educators say substance use is the main causal factors of psychological distress, and other educators say age is the main causal factors of psychological distress, while others say being divorced or separated is the causal factor. These inconsistencies of findings aroused the present researcher's interest and raised questions for which yet there are no answers. Further, the previous researchers only focused on socio-demographic factors as underlying factors of psychological distress among inmates in the correctional center, but they overlooked environmental, psychological and social factors.

Therefore, conducting a study on the symptoms and underlying factors of psychological distress among inmates in Bonga Town correctional center may help us to further understand the issue. Hence, this study, attempted to answer the following research questions:

- Ψ What symptoms of psychological distress prevail among inmates in Bonga town correctional center?
- Ψ What were the levels of psychological distress among the inmates in Bonga town correctional center?
- Ψ What was the association between inmates' years of incarceration and psychological distress in Bonga town correctional center?
- Ψ Was there gender difference in the level of psychological distress?

2. Methodology

Institution based cross-sectional study design was used. Hence, the study employed a quantitative research method. And hence, the target population of the study were inmates of Kaffa zone, Bonga town correctional center. The study was carried out at Bonga town correctional center in Kaffa Zone. Hence, Bonga is located southwestern Ethiopia at 7.28°66' N and 36.23°48' E and an altitude of 1529 meter above sea level. Bonga town is located 460 km Southwest of Addis Ababa and 105 km from Jimma town. Though, Kaffa zone incorporates only one correctional center. Hence, that correctional center is found in Bonga town.

Therefore, The current statistics of Bonga town correctional center showed that there are 2,190 (106 Female and 2084 Male) inmates at the time of conducting this research. The study sample was determined according to the fine population correction (FPC) principle, postulated by Araoye (2003), if there is no reasonable estimate, a projected population of 0.5 is recommended for calculating the required sample size. However, in this study, the population was 2,190 (less than 10,000), the required sample size will be therefore calculated using the Finite Population Correction for Proportions formula:

$$n = \frac{n_o}{1 + \frac{(n_o - 1)}{N}}$$

Where, n = the desired sample size when population < 10,000.

n_o = the desired sample size when population is > 10,000.

N = the estimated study population 2,900 in this study.

$$n = \frac{384}{1 + \frac{(384 - 1)}{2190}}$$

This gave a sample size of 327.

A systematic random sampling was done to select male inmates using the correctional center registry; because of its simplicity, easiness to apply and extends the sample to all population. It allows the researcher to add a degree of system or process into the random selection of subjects (Kothari, 2004) and using the sampling interval size calculated with the sampling fraction (K): i.e. $K = N/n$

Where N is the total Population (2,190), n is sample size (327), while k is sampling interval size.

$$2190/327 = 6.68 \approx 7$$

Therefore every seventh (7th) inmate on the registry in both male and female sections of the correctional centers was selected. While all female inmates were included in the sampling.

In order to collect information concerning psychological distress the researcher used standardized scale (i.e. Kessler Psychological Distress Scale (K10) in the form of questionnaire that has been utilized to detect symptoms of Psychological Distress among inmates. Related to this, following the selection of the site of the study, a general supportive letter was written by Jimma university post-graduate office to the Kaffa zone police commission and Bonga town correction administration for permission and was obtained to conduct the research on condition that it would not affect the institution's hierarchical organization. At the inception of data collection, the consent of participants was asked. Consequently, the purpose of the study was explained to participants and they were given orientation on how to respond to the questionnaire, and before distributing the instrument.

After the data was collected, data entry and analysis was done using Statistical Package for Social Sciences (SPSS) version 20. The demographic characteristics of participants was computed by using simple descriptive statistics (percentage and frequencies). Pearson correlation was done to determine the association between year of incarceration and psychological distress as well as incarceration. Nonparametric test particularly Mann Whitney U test was conducted to determine the difference between male and female on having the symptoms of psychological distress.

Ethical clearance was obtained from research ethics committees of Jimma University College of Education and Behavioral Science. Hence, the letter of permission for this study was obtained from the Kaffa zone police commission office and Bonga town Correctional center administration. The purpose and importance of the study were clearly explained by the investigator to the participants. A written informed consent was obtained from each participant. Participant's participation was based on voluntary and they can withdraw from the study at any time. Participants were assured of confidentiality and were also informed that the interview could in no way assist them with their court proceeding, parole / the temporary or permanent release of an inmates before the expiry of a sentence, on the promise of good behavior, sentencing or appeal.

3. Result

Socio- demographic Characteristics of Respondents in Bonga correctional center.

The total numbers of the distributed questionnaires were 327 and all questionnaire were filled completely and consistently with a response rate of 100%. Among the total respondents who filled the questionnaire 221(67.58%) were males and the rest 106 (32.41%) were females. The majority of respondents' age was on the intervals of 26-33. This age is considered as middle adult-hood where individuals are going to be ready to occupation, social responsibility as well as marriage. As observed from below table majority of respondents were from Kaffa (42%) and Menja (20.48 %) while the rest were from Amhara, Oromo, Sheka and others. The reason why the number of Kaffa and Menja was that, this research was conducted in Kaffa zone. Regarding with their years of incarceration majority of inmates are sentenced with the intervals of 2 year and half- 5 year (35.16%) while the rest were sentenced with the rest intervals. Furthermore, majority of respondents in Bonga correctional center were at primary school (43.1%) and the rest were illiterate, secondary school and university and college graduates. At last majority of respondents were divorced (33.63) and the rest were single 29.07%.

Table 1. Symptoms of psychological distress according to Kessler psychological distress scale during 4 weeks.

Symptoms	Frequency	Percent %
Feeling tired	201	61.46%
Nervous	296	90.51%
Too much nervous	236	72.17%
Hopeless	240	73.39%
Restless	237	72.47%
Too much restless	206	62.99%
Depressed	258	78.89%
Feeling everything was an effort	107	32.72%
Sad	280	85.62%
Worthless	228	69.72%

The above table revealed that the symptoms of psychological distress that prevail among inmates of Bonga town correctional center with their score and percentage according to Kessler psychological distress scale during four weeks. In relation to this feeling tired, 201(61.46%), feeling of nervous 296 (90.51%), too much nervous 236 (72.17%), feeling of hopeless 240 (73.39%), feel restless 237 (72.47%), too much restless 206 (62.99%), feeling of depressed 258(78.89%), feeling that everything was an effort 107(32.72%), feeling of sad 280(85.62%) and feeling of worthless 28(69.72%). Therefore, as it is seen from the above table there are symptoms of psychological distress among inmates of Bonga correctional center. However, the major symptoms according to their count were feeling of so sad, feeling of nervous, feeling depressed, feeling restless, feeling of worthless and feeling of hapless.

Table 2. The level of psychological distress among inmates of Bonga town correctional center. N=327

Kessler's Score	Frequency	Percentage
0-20 (well)	48	14.81
21-24 (Mild)	116	35.47
25-29 (Moderate)	120	36.69
30-50 (Severe)	43	13.14
Total	327	100

According to the above table 4, level of psychological distress is expressed depending on the cut-off point. Therefore, according to the Kessler psychological distress scale, 0-20 score is well, 21-24 were categorized under mild psychological distress level, 25-29 were categorized under a moderate level of psychological distress and final score of 30-50 were categorized under severe psychological distress. Therefore, based on this majority of inmates in Bonga correctional center falls between mild (21-24) to severe (30-50). Therefore, in Bonga correctional center mild level 116(35.47%), moderate 120 (36.69%) and severe 43(13.14%). Depending on this, majority of inmates were under moderate level of depression.

Table.3. Association of inmates' years of incarceration and psychological distress

Correlations	Depressed	
YI	R	.124*
	<i>p-value</i>	.025
	N	327

* Correlation is significant at the 0.05 level (2-tailed) YI- Year of Incarceration, N-Number of sample

In the above table the relationship between year of incarceration and symptoms of being depressed (as measured by Kessler psychological distress scale) was investigated by using Pearson product-moment correlation coefficient. Therefore, the relationship between year of incarceration and feeling depressed was statistically significant with $r = .124$, $n = 327$, $P = .025$. Generally, regarding the association of inmate's years of incarceration and psychological distress, all symptoms of psychological distress were correlated to see whether there is a relationship between years of incarceration and psychological distress. However, all symptoms except feeling of depressed have an insignificant relationship.

Table 4. Mann Whitney U test for the difference between male and female on symptoms of psychological distress

Symptoms of psychological distress	Frequency		Z	p-value
	Male	Female		
Tired	158	43	-.703	.482
Nervous	198	98	-1.698	.090
Too much nervous	139	97	-2.644	.008*
Hopeless	201	39	-1.691	.091
Restless	218	19	-.521	.602
Too much restless	148	58	-.815	.415
Depressed	187	32	-1.765	.078
Everything was an effort	88	19	-1.197	.231
Sad	219	61	-1.526	.127
Worthless	137	91	-2.154	.031*

*Significant at $p < .05$.

As revealed from the above table, Mann Whitney U test analysis was conducted to determine the gender difference. Hence, there was difference between male and female regarding to the symptoms of psychological distress. In relation to this feeling too much nervous ($Z = -2.644$, $p = .008$) and feeling worthless ($Z = -2.154$, $p = .031$) reveals statistically significant difference between male and female. Hence, based on this result female inmates were more nervous and worthless than male inmates in Bonga town correctional center. However, regarding to the rest symptoms of psychological distress there is no statistically significant difference among male and female inmates of Bonga town correctional center.

Discussion

The number of total participant in this research were 327 out of which 221 were male and 106 were female inmates. In relation to the symptoms of psychological distress, this study had revealed symptoms of psychological distress with high frequency. These are feel nervous, feel depressed, and feel sad. This may be due to different reasons such as unfair treatments of prison administrators, torture/maltreatment, low satisfaction with the delivery of service within correctional centers of Bonga town. Hence, this finding was consistent with the previous study that was conducted in Indian among inmates by (Chalfant, Heller, Roberts, Briones, Aguirre & Farr, 1990, p.14).

The symptoms of psychological distress that prevail among inmates are unhappiness, nervousness, tired and problematic interpersonal relationships, feeling of hopelessness, feeling of depressed etc.. Research finding by (Dachew, Fekadu, Kisi, Yigzaw & Bisetegn, 2015, pp. 117-128) shows low to no satisfaction with prison services to become factors that perpetuate the prevalence of symptoms of psychological distress.

Majority of the sampled inmates in this study had mild to severe mental distress on the Kessler classification scale in the four weeks preceding the interviews. But majority of inmates in Bonga correctional center fall on moderate level (36.69%) of psychological distress. The finding of this study is similar to the results reported in studies of mental disorders among incarcerated populations in other countries including the U.S (Steadman, Osher, Robins Brian & Samuels, 2009, p.1-2), South Africa, (Naidoo, Mkize, 2012, pp.30-35) and Nigeria (Armiya, Obembe, Audu, Ofalaranmi, 2013, pp.10-11).

In relation with association between years of incarceration and psychological distress this study revealed the existence of little relationship. Hence, to determine this, Pearson correlation was calculated across the symptoms of psychological distress and the result shows only one symptom out of ten was significantly correlated with years of incarceration and the association is positive and weak. That is feeling of depressed ($r = .124$, $n = 327$, $p = .025$). The rest symptoms have insignificant association. Research conducted among inmates of Taiwan revealed that psychological distress and years of incarceration were not significantly correlated (Lyu, Chi, Farabee, Tsai, Lee, Lo, & Morisky, 2015, p.9).

Mann Whitney U test revealed that female inmates were more psychologically distressed than male inmates. In relation to this in Bonga correctional center female inmates feel nervous and worthless than male inmates. This is because of the correctional situation is not conducive to female inmates and exposure to stressful situation in prison such as service delivery, maltreatment and work load given to women etc. Related to this (National Institute of Mental Health, 2011, pp.12-14) revealed Women are 60 percent more likely to be nervous/ anxious than men throughout correctional center in the world. In other way research finding shows that men and women differ in perceptions of distress (Day & Livingstone, 2003, pp.210-212). That is, women have been socialized to be emotionally expressive and interdependent, whereas men have been socialized to be independent (Stokes & Wilson, 1984, p.13). Contrary to this, research done among inmates of Gondar shows males are more distressed than female inmates (Dachew et al. 2015, pp.117-128).

Conclusion

The purpose of this study is to investigate the symptoms and underlying factors of psychological distress among inmates in Bonga town correctional center. Hence, in relation to this symptoms of psychological distress that prevail among inmates of Bonga town correctional center were feeling tired out for no good reason, feeling so restless, feeling of worthless, feeling of nervous, feeling of depressed, feeling so sad. The level of psychological distress among inmates of Bonga town correctional center according to Kessler psychological distress scale ranges from mild to severe level of distress. But majority of and particularly relies at moderate level 36.69%. Among the symptoms of psychological distress only feeling of depressed is significantly associated with inmates years of incarceration.

Recommendations

Based on these main findings of this study, the researcher forwarded the following suggestions:

- Ψ Psychological distress is the most serious problem for inmates in Bonga town correctional center; therefore, Health professionals who were working in Bonga G/Tsadik Shawo hospital should give training on awareness development to communities of Bonga correctional center including police officers, police commanders and correctional administrators to understand and help inmates who have symptoms of psychological distress.
- Ψ In order to deal with these serious problems the office of social workers such as counselor, sociologists always should be open and they should have to invite inmates to communicate with them when the symptoms frequently occur on them.

- Ψ Bonga correctional center community should help inmates to develop social life and to communicate freely on problems that they face in Bonga correctional center.
- Ψ As being divorced is main factor, Bonga correctional center administrators should invite and work with marriage counselor.
- Ψ Strengthening the linkage between Bonga correctional center and Bonga G/Tsadik Shawo hospital is recommended to solve these serious problems easily.
- Ψ Further study should be done by covering wide range of samples from different correctional centers in different geographical locations and by including variables that were not included in this study like religion, residence, economic status etc.

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Competing interest

The authors have declared that no competing interests.

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