Study of depressive symptoms according to Zung's self-rating scale on men deprived of freedom in a city of Colombia

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ABSTRACT

Objective: To assess depressive symptoms in men deprived from freedom in a prison in a Colombian intermediate city. Material and Method: A cross sectional study was performed on a sample of three hundred and three patients in the Medium Security penitentiary and Prison Facility of the city of Manizales between April and May 2014. The information was collected through the Zung self-rating depression scale (SDS), subsequently there were established the positive results for depression screening according to the final score of the scale. Results: 303 men deprived from freedom were evaluated, mean age of 32.96 years +/- 10.8 years, 43.5% were living in cohabitation, 38% were single and 10.2% married; 33.7% had a primary education, 58% had secondary or incomplete secondary education, 5.6% reported higher studies; 38.6% (95% CI: 35.8; 41.4) reported symptoms of depression, predominating in ages between 18 to 44 years, no statistically significant differences p> 0.05 between the variables analyzed were found. Conclusions: The results of this study give rise to clinical evaluation, by specialized staff in the area of psychiatry and his intervention, given the characteristics of self-reported depression for this population.

Keywords: Prisons; Mental Disorders; Depression; Screening; Prevalence; Colombia; Cross-Sectional Studies; Therapeutic uses

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INTRODUCTION

25% of people have presented some type of mental disorder and according to the World Health Organization (WHO), the prevalence of mental disorders will be 15% by 2020 worldwide[1]. According to US Bureau of Justice statistics, the more common mental problems among the imprisoned population are mostly related to major depressive disorder and mania symptoms. For other disorders such as suicidal ideation, the estimated prevalence is between 6% and 50%, psychotic symptoms such as hallucinations and delirium are estimated to be between 5% and 15% among prison and jail inmates with mental disorders. A recent prevalence study carried out in 5 prisons in Northeastern United States[2], concluded a prevalence of moderate to severe mental disorder of 14.5% among male inmates and 31% among female inmates. In 2001 only 33% of inmates with mental health issues were reported to get treatment after their imprisonment[2]. Furthermore, the study by Birmingham et al[3] states that only one of every four patients with severe mental disorders was successfully identified upon imprisonment. On the other hand,

patients who suffer from mental disorders have difficulty dealing with local stressors such as confinement and isolation[4]. Some behaviors can be associated to mental disorders yet they are not identified as such since professionals, mostly custodial, are poorly trained and lack the resources to manage these disorders individually[4]. Finally, it is not unusual that in view of a lack of appropriate treatment inmates persist in inappropriate behaviors, untreated psychological issues increase, symptoms become more persistent and disciplinary issues arise[5].

In Colombia, mental health has been traditionally relegated and only now has its impact in society been acknowledged. It has been estimated that eight of every twenty people have presented or will present some type of mental disorder at some point throughout their lives[6] only 14% of whom will be treated. This is mainly due to the over 20-year delay in matter of Mental Health policies. Colombia now counts upon a new law on mental health (1616 as of January 2013) where full exercise of the right to mental health is ensured by eliminating access barriers and where special reference (Article 4) is made to the implementation of Mental Health Care programs in custody centers. The primary objective of this study is to assess the presence or absence of depressive symptoms among males deprived of their freedom in a city of Colombia by means of Zung self-rating depression scale.

MATERIAL AND METHODS

Design: Cross-sectional descriptive study

Sample: 303 inmates who prior informed consent agreed to take part out of 1128 inmates imprisoned between May and July 2014.

Inclusion criteria: Males over 18 who after attending a lecture on depression voluntarily agreed to fulfill the self-rating scale and to take part in the study.

Tools: Zung self-rating depression scale was used (1965)[7], which is a short self-administered survey

Table 1: Depression symptoms among inmates.

Feature	A little of the time		Some of the time		Good part of the time		Most of the time		No answer	
	N	%	N	%	N	%	N	%	N	%
1. I feel down-hearted or blue	90	30	78	25,7	47	15,5	88	29		
2. Morning is when I feel the best.	95	31,4	69	22.8	48	15,8	85	28,1	6	2,0
3. I have crying spells or feel like it.	146	48,2	59	19,5	38	12,5	48	15,8	12	4,0
4. I have trouble sleeping at night.	98	32,3	44	14,5	44	14,5	115	38	2,	0,7
5. I eat as much as I used to.	106	35	54	17,8	32	10,6	98	32.3	13	4.3
6. I still enjoy sex.	85	28,1	31	10,2	24	7,9	158	52,1	5	1,7
7. I notice that I am losing weight.	133	43,9	43	14,2	43	14,2	77	25,4	7	2,3
8. I have trouble with constipation.	173	57,1	44	14,5	33	10,9	43	14,2	10	3,3
9. My heart beats faster than usual.	144	47,5	72	23,8	39	12,9	42	13,9	6	2
10. I get tired for no reason.	127	41,9	56	18,5	43	14,2	69	22,8	8	2,6
11. My mind is as clear as it used to be.	88	29	65	21,5	56	18,5	87	28,7	7	2,3
12. I find it easy to do the things I used to.	100	33	64	21,1	40	13,2	96	31,7	3	1,0
13. I am restless and can't keep still.	95	31,4	60	19,8	37	12,2	106	35	5	1,7
14. I feel hopeful about the future.	52	17,2	36	11,9	39	12,9	172	56,8	4	1,3
15. I am more irritable than usual.	123	40,6	68	22,4	42	13,9	61	20,1	9	3
16. I find it easy to make decisions.	58	19,1	74	24,4	50	16,5	116	38,3	5	1,7
17. I feel that I am useful and needed.	40	13,2	38	12,5	50	16,5	171	56,1	4	1,3
18. My life is pretty full.	76	25,1	59	19,5	50	16,5	108	36	9	3
19. I feel that others would be better off if I were dead.	189	62,4	36	11,9	22	7,3	44	14,5	12	4
20. I still enjoy the things I used to.	139	45.9	57	18,8	23	7,6	82	27.1	2	0,7

Source: prepared by the authors.

which includes 20 items exploring symptoms related to depressive episodes (two items for affective symptoms, eight for cognitive and somatic symptoms and two for psychomotor symptoms); there are ten positively worded and ten negatively worded questions. Each question uses a four-level Likert scale with four options ranging from 1 (seldom, very little time, rarely. 2 sometimes, occasionally. 3 most of the time, a lot, frequently) to 4 (almost always). Scores on the test range from 20 to 80 and the scores fall into four ranges which identify the severity of depression: <50 normal range (no depression), 50-59 for mildly depressed individuals, 60-69 for moderately depressed individuals and >70 for severely depressed patients.

In Zung depression scale, the period of time is not specifically determined neither are the frequency of symptoms or their current presence. Therefore the test allows for the identification of depression symptoms but not of their severity. And so is proven by some studies which assess the degree of depression symptoms experienced by people at a given point[8-9].

Statistics: Data was processed by SPSS-15.0 software initial statistic analysis was aimed with a descriptive approach. The 95% confidence interval of the estimated prevalence was calculated. Bivariate analysis according to the nature of the variables under study was further carried out.

RESULTS

303 male inmates underwent self-assessment, with an average age of 33 (SD +/- 10.8, ranged 18-65 years old). 43.5% were in union, 38% were single, 10.2% married, 6.9% divorced and 1.4% reported being widowed. As for education, 33.7% had completed primary education, 58% secondary education (complete or not) and 5.6% higher education. With regard to the place of residence, 47.5% lived in the city where the study was carried out and the rest in other cities in Colombia. 74.3% of the participants were covered by health promoting entities for correctional facilities in Colombia.

38.6% (95%CI: 35.8-41.4) presented depression symptoms: 2.6% of whom presented symptoms of severe depression, 8.6% of moderate depression and 27.4% of mild depression. Table 1 depicts the identified symptoms of depression. With regard to negative symptoms, 44.5% reported being down-hearted or blue; 52.2% having trouble sleeping at night and 47.2% being restless or anxious. It was also found that there were symptoms such as feeling useful and needed in over 72% of participants. Table 2 shows how the greatest percentage of depression was found among participants aged 18-44. There were no statistically significant difference between the appearance of depression symptoms and other variables under study.

Table 2: Age *vs.* Depression.

AGE	Classification		Total
	Depression	No depression	
18-44 years	99	157	256
	38,7%	61,3%	100%
45 and over	18	29	47
	38,3%	61,7%	100%
Total	117	186	303
	38,6%	61,4%	100,0%

Source: prepared by the authors.

DISCUSSION

There is a lack of studies on the prevalence of depression among people deprived of their freedom in Colombia. That carried out by Uribe Rodriguez et al[10] included a 112 inmate sample averagely aged 33 which underwent the State-Trait Depression Inventory (STDI) and found that the reports of depression manifestations revealed that 16.7% were included under the state classification and 43.68% under the trait classification[10].

We have found a high prevalence in our study, more specifically a prevalence of 38.6% yet this is similar to that reported by Mojica, who concluded moderate to severe depression in 39.1% of cases[11]. Our result is also higher than that concluded by the National study on Mental Health, which reports a prevalence of major depressive disorder in 12.1% of the population under study[12], than that of Western countries, where a prevalence of 10% was concluded for the imprisoned population and than that estimated by Kessler et al[14] for the general population (16% throughout life and 6.6% in the last 12 months of life).

The study carried out by Leal Maleos and Solis Salazar in Alajuela, Costa Rica, by means of Yesavage Geriatric Depression Scale (GDS) revealed a prevalence of 20.2%[15]. In our study we have used Zung self-rating scale which does not ensure the diagnosis of depression on its own and therefore must be correlated with clinical assessment. It is a symptom quantification test and it only allows for the identification of depression symptoms. Zung created it to assess the degree of depression among patients

already diagnosed of depression as to identify the severity of the disorder. Later this scale was used as a screening tool, with proven usefulness. There is evidence for this worldwide with significant studies carried out in Japan[16], Peru[17] and Greece[18]. In Colombia this scale has been used in a number of studies[19,-21] and has been validated in university population[22] and among the general population in Bucaramanga[23], even with adolescents[24-25]. Nevertheless the scale has a series of limitations which must be taken into account such as including a strong somatic component with eight items, which entails screening difficulties in people with physical pathology, a consideration highlighted by Seitz and Franco[26-27]. In the same vein, we must remember that depression is a syndrome with a wide range of symptoms and signs diversely presented and whose appearance further depends on multiple factors: genetic, environmental, endocrine, inflammatory, etc. Moreover, in line with Arroyo's considerations[28], psychiatric disorders in the correctional environment, depression included, are as far as four times more common than in the general population. In fact, confinement can be the cause or the trigger for depression symptoms, as Metzer et al[14] have presented. In line with this, Singleton, referenced by Shaw and Humber, found that one of every seven inmates also presented psychotic disorder[29].

We need to acknowledge that the imprisoned population is subject not only to mental disorders and substance abuse problems, but also to housing issues, to the lack of resources that their families have faced and still face and to relational and daily skills related difficulties[30], all of which bias self-rating of the items included in Zung's scale.

According to the report on imprisoned population drafted by the National Penitentiary and Prison Institute (INPEC) in 2011, the suicide rate for imprisoned population is of 30 inmates per every 100,000: equivalent to 11% of all casualties in the last 10 years with an average of 16 suicides every year[31]. Shaw and Humber also reported higher rates of self-harm among inmates and a suicide rate which is 12 times higher than that of the general population[29]. All in all it is necessary to underline the relevance of depression as a risk factor for suicide. A screening of 38.6% for depression in our study can be considered a predictive factor for other aggressive behaviors against themselves or other people. That same paper found that 19.6% of those imprisoned reported having had suicidal thoughts since they had been imprisoned[5], something which is comparable to 13.7% reporting that they felt that "others would be better off if I were dead". This kind of studies is relevant since it allows for a rapid assessment on the issue of depression among imprisoned population and it offers a series of tools useful in decision making to avoid fearful results.

Several studies report that age can be considered a stressor among the imprisoned population[32-34]. Among participants, a higher percentage of depression was found among those aged between 18 and 44, perhaps in relation with it being a period of greater needs (familiar, working, social, etc) and major vulnerability.

Last, we must consider that the present study has a series of limitations. First, the sample decided voluntarily to participate and therefore it is not clear whether it is representative of the whole imprisoned population, since no probabilistic techniques were used to select the sample. Yet we must consider that the basic premise is self-assessment of symptoms. On the other hand it is not a multi-centre study, which can limit the reliability of the results.

To conclude, 36.5% if inmates reported depression symptoms, a result which entails a very high prevalence, higher than that found in the general population by other publications, both national and international. These data justify the need for further research on imprisoned population and the need for screening tests which will minimize costs and human resources.

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