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Mental health and victimization: an exploratory study in prisons of Cape Verde

Abstract

Background: There is insufficient information available regarding the psychopathological characteristics of the inmate population in low-middle-income countries as Cape Verde.

Objective: This study aimed to determine the prevalence of mental disorders in a sample of Cape Verdean inmates and explore its' relation with victimization in the prison context

Participants and methods: This cross-sectional study was carried out in 5 prisons of Cape Verde. 402 subjects were included in stratified convenience sample and assessed with Brief Symptom Inventory (BSI) and a sociodemographic questionnaire. Data was analyzed using SPSS 25 software applying descriptive and inferential statistical measures.

Results: Inmate´s mean age was 31, 16 years, mainly men (96%), single (87,6%) from Cape Verde (90,8%) with a basic level of education. 62.9% reported substance use problems. According to the psychopathological dimensions included in BSI, paranoid ideation, obsessive-compulsive and depressive symptoms stand out either in the sample or in the 2 sub-samples. Symptomatology was significantly higher among victims namely in interpersonal sensitivity), anxiety and hostility. The increasing reoccurrence of victimization in the past 12 months is associated with an increase in the severity of symptoms.

Conclusion: Victimization and mental health problems should be identified as early as possible to enable joint and combined intervention, given the negative impact of psychopathological manifestations on the reintegration of prisoners in society affecting the reintegration of prisoners into society.

Keywords: prevalence, psychopathology, victimization, inmate population, Brief Symptom Inventory, mental health

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Abbreviations: BSI, brief symptom inventory; LMIC, low-middle-income countries; M, mean; MA, missing answers; SD, standard deviation; T, test value

Introduction

In 2004, the World Health Organization concerned with the scarce prevalence of studies on psychopathologic characteristics of the prison population in different cultural and socioeconomic contexts that could reveal the impact of individual, familiar, social, economic, and environmental factors on mental health highlighted the need to develop research on the topic in low-middle-income countries.[1,2]

Mental health in the prison environment

Worldwide, the prison population has increased in numbers, reaching around 11 million people, however the number with serious mental disorders (psychosis, major depression, and antisocial personality disorder) is unknown.[1,3] In Cape Verde, the total prison population is 1549 (according to the national prison administration, via U.S. State Department human rights report - September 2018) and represents an occupancy level of 109,4%.[4]

According to Burneo-Garcés & Pérez-García,[1] mental health in the prison environment requires special attention, given to the fact that mental illness is significantly higher when compared with the general population,[5] turning into a major public health problem.[6] This becomes particularly relevant in low-middle-income countries (LMICs), where the prevalence of severe mental illness clearly increases.[1,5] Additionally, the prison context foresees a number of characteristics such as: confines physical space, restricted movement, constant surveillance, forced coexistence, and lack of privacy which may promote or potentiate mental.[1,6] For Burneo-Garcés & Pérez-García,[1] special attention needs to be drawn to violence in the prison context, often a result of situational factors such as coercion and victimization. The insufficient information available regarding psychopathological characteristics of Cape Verde´s prison population compromises additional considerations on the subject.

From Gemeda´s perspective, "crime, incarceration and mental disorders are directly related. That is, crime fallouts to incarceration, while incarceration induces behavioral disorders".[7] As an example, the author mentions South Africa, where more than 70% of the inmates are in prison due to violent crimes with psychosocial problems as consequence.

Victimization in the prison environment

The prison setting is conducive to victimization due to the characteristics of the prison population and the oppressive nature of prisons.[8,9] Research on prison victimization, despite the variability of prevalence rates resulting from data collection procedures and instruments used,[9,10] indicate high values that may reach 80%.[9,11] According to Blitz et al.[8] the rate of victimization in prison settings is three times higher than in violent contexts in the community, and seclusion increases the risk of being victimized seven times.

In addition, investigation also indicates a pattern of multiple victimization in the prison environment, indicating that one is rarely the victim of a single type of victimization and / or one perpetrator. Once victimized, the likelihood of suffering further victimization increases[9] and most inmates are subject to different types of violence.[12, 13]

The worrying values of victimization in this context have been pointed out by several studies conducted in different countries, both in North America,[9] South America,[14] Europe[13] and Africa.[15]

A study of 7,000 prisoners from various prisons in the United Study reveals rates of 68% of victimization by other prisoners and of 74% by staff members.[9] In turn, a study conducted by Steiner and Mead in 2016,[16] in several US prisons, indicates that more than half of prisons reported over 2.5 episodes of violence per 100 prisoners in the previous year and about 30% of prisons reported 5 violent episodes. In Europe, a Spanish study of 2018 indicates values of more than 50%[13] and, in Portugal; another recent study suggests values of 25%.[17] Regarding South America, as well as African countries, the studies focus on descriptions of poor prison conditions, violations of prisoners' human rights and in violence rates. Biondi's description of the violent episodes and massacres that occurred in Brazilian prisons[14] and Sarkin's work on African prisons[15] stand out, noting that, despite very violent contexts for prisoners, the rates of violence are inferior to the one´s of prisons in South America. Overall the literature and research on prison victimization is consensual about the victimizing and violent nature of the prison environment.[9]

Mental health and prison victimization

Literature presents prison victimization as having negative consequences on prisioners´ mental health and having consequences both in prison and in their reintegration in society.[12, 1] Victimized inmates have higher levels of anxiety, depression, anger, isolation and hostility during seclusion.[9,19] In addition, victimization during reclusion has been linked to antisocial behavior and aggression, increasing the risk of criminal recidivism.[20] Boxer, Middlemass and Delorenzo[18] indicate that inmates who suffered prison victimization or who witnessed violent victimization presented worse adjustment when returned to freedom, namely with the adoption of violent and antisocial behaviors. Also, Zweig and colleagues[21] report that prisoners who are physically assaulted or threatened develop hostility and depression, increasing the likelihood of resorting to violent criminal behavior and substance use after release. Specifically, prison victimization leads to hostility and, when restored to freedom, this hostility partly leads to criminal behavior, including the most violent.[21] Victimization in prison also leads to depression and, when restored to freedom, depression facilitates involvement in substance use.[21] On the other hand, the literature suggests that those inmates who present previous mental health problems as being at greater risk of suffering victimization. It is the prisoners with mental health problems who are most victimized when compared to those who report no mental problems[9,22] and victimization magnifies and exacerbates mental health problems.[9,18]

Study purpose and significance

A review of the literature signalizes mental health problems as prevalent in the prison population.[1,5] Victimization is also a recurring phenomenon in the prison environment,[8,11] and prisoners with mental health problems have an increased risk of being victimized.[9,22] Being the victim of some form of violence in prison has negative consequences for adjustment. And in the case of inmates already with mental health problems, victimization increases their severity.[9,18] As far as Cape Verde is concerned, little is known about inmates mental health and the phenomenon of victimization, and even less about the effects of victimization on their mental health. Thus, it is necessary to establish clear indicators of mental health problems for the Cape Verdean inmate population and to analyse whether victimized inmates differ from non-victimized ones, in order to develop intervention strategies that consider their specificity.

Objectives of the study

The aim of this study was to analyse the current prevalence of psychiatric symptoms that are clinically significant among 402 inmates in five Cape Verde prisons using the psychopathological dimensions and indexes of the Portuguese adaptation of the BSI.[23] In this study, an attempt has been made to explore whether psychopathological symptoms were significantly different in a subsample of participants who reported being victims.

Material and methods

Measures

In this study, two self-report questionnaires were applied:

(i) A questionnaire created and designed by the authors on socio-demographic, criminal and prison characterization and

(ii)The Brief Symptom Inventory (BSI) developed by Derogatis, translated and adapted for the Portuguese population by Canavarro.[23]

The first instrument assessed three distinct types of information: socio-demographic and criminal data (first and second section), and the occurrence of victimization in prison (third section) using the answers to dichotomic questions. Socio-demographic data regarded sex, age, profession, literacy; the criminal section addressed typology of crime and sentence, number of detentions and recidivism. The section on victimization, focused on its occurrence throughout imprisonment, and specifically in the last 12 months. It also inquired about: the number of experiences over these two periods (using a Likert-type scale-none, once, twice, three or more times), the perpetrator (inmates, staff, both) and victimization´s type (sexual, physical, verbal and threat).

To obtain indicators of psychopathology, BSI[23] was used in order to evaluates psychopathological symptoms, assessing nine dimensions of symptomatology (somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism) and outline level of emotional disturbance, using two indicators: general index of symptoms and index of positive symptoms (as described in Table 1). The instrument consists of 53 items, with a response on a likert scale, ranging from never to many times.

It should be noted that this tool has a strong international reference as being used across different countries and cultures. In the absence of validated instruments in this area for Cape Verde´s population and considering that both countries are culturally closer, the authors opted for the use of version adapted to the Portuguese population and the respective reference values.

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Table 1 Dimensions/indexes of the brief symptom inventory

Dimension/Indexes	Interpretation of high scores
Somatization	Focus on physical health-related issues
Obsession-compulsion	Experience of cognitions, impulses and behaviors that are persistent, unwanted and irresistible to the subject
Interpersonal sensitivity	Symptoms and behaviors related to interpersonal inadequacy, discomfort and inferiority compared to others
Depression	Experience of depression across different response modalities
Anxiety	Nervousness, tension, generalized anxiety and panic attacks
Hostility	Thoughts, emotions, and behaviors of the negative affective state of anger.
Phobic anxiety	Persistent irrational and unreasonable fear, leading to avoidance that causes disruption in the individual´s daily life
Paranoid ideation	Disturbed cognitive functioning - projective thinking, hostility, suspicion, fear of loss of autonomy and delusions.
Psychoticism	Isolation, schizoid features, primary symptoms of schizophrenia (hallucinations and thought control), psychosis.
General index of symptoms	Weighting of the intensity of the discomfort experienced with the number of symptoms reported
Index of positive symptoms	Mean intensity of all symptoms that were reported

Source BSI.[23]

Participants

The sample studied represents approximately 25% of the prison population of Cape Verde (1567 inmates). It's a stratified convenience sample that includes 402 inmates and meets the following criteria:

(i) Prisons in the country - Prison of City of Praia, Prison of Mindelo, Prison of Santo Antão, Prison of Island of Sal and the Prison of Island of Fogo.

(ii) Typology of crime (property crime *versus* crime against people).

In the sample studied, 96% of the participants are males with a mean age of 31.16 (SD=8,568) and Cape Verdean nationals (90.8%) and mostly single (87.6%). In terms of education, 59.5% reported a basic level of education and about 15.4% have no education at all. 62.9% have a history of substance use problems, being 33.8% poly-consumer.

This sample is composed by two distinct groups that constitute different subsamples - victimized inmates (those who reported having been victims of some violence in prison) and non-victimized inmates (those who reported never having been victims of any violence in prison).

The subsample of the victims consists of 149 inmates, 142 men (95.3%) and 7 women (4.7%). Of these 91.3% are of Cape Verdean nationality, most are under 30 years old (58.4%), single (85.2%) and have children (56%). About 57.7% reported a basic level of education, 15.4% have no instruction and cannot read or write. 71.8% have a history of substance use problems, particularly poly-consumption (38.9%).

The subsample of the non-victimized includes 250 inmates, 241 men (96.4%) and 9 women (3.6%). 90.8% are of Cape Verdean nationality, most are over 30 years old (55.6%), single (91.9%) and have children (50.3%). About 60% have a basic level of education, 15.6% have no education and cannot read or write. 58% have a history of substance use problems as well as polydrug use (30.8%) (Table 2).

Table 2 Socio-demographic characteristics

Variables		Sample (N = 402)	Victims subsample (N=149)	Non victims subsample (N=250)[1]
		n(%)	*n*(%)	*n*(%)
Sex	Men	386 (96)	142 (95.3)	241 (96.4)
	Women	16 (4)	7 (4.7)	9 (3.6)
Marital status	Single	352 (87.6)	137 (91.9)	213 (85.2)
	In a nonmarital relationship	26 (6.5)	1 (0.7)	13 (5.2)
	Married	15 (3.7)	8 (5.4)	18 (7.2)
	Divorced	3 (0.7)	1 (0.7)	2 (0.8)
	Missing Answers (MA)	6 (1.5)	2 (1.3)	4 (1.6)

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Table continued

Variables		Sample (N = 402) *n*(%)	Victims subsample (N=149) *n*(%)	Non victims subsample (N=250)[1] *n*(%)
With Children	Yes	217 (54)	75 (50.3)	140 (56.0)
	No	182 (45.3)	72 (48.3)	109 (43.6)
Level of education	MA	3 (0.7)	2 (1.3)	1 (0.4)
	None	62 (15.4)	23 (15.4)	39 (15.6)
	Basic/Literacy	239 (59.5)	86 (57.7)	150 (60.0)
	High School	32 (8.0)	15 (10.1)	17 (6.8)
	Higher Education	13 (3.2)	2 (1.3)	11 (4.4)
	MA	56 (13.9)	23 (15.49	33 (13.2)
Nationality	Cape Verdean	365 (90.8)	136 (91.3)	227 (90.8)
	Nigerian	4 (1.0)	0 (0.0)	4 (1.6)
	Guinean	3 (0.7)	0 (0.0)	3 (1.2)
	Dutch	3 (0.7)	0 (0.0)	2 (0.8)
	Brazilian	2 (0.5)	0 (0.0)	2 (0.8)
	Angolan	1 (0.2)	1 (0.7)	0 (0.0)
	Italian	1 (0.2)	1 (0.7)	0 (0.0)
	MA	23 (5.7)	10 (6.7)	12 (4.8)
Age groups	16 - 21 years	36 (9.0)	25 (16.8)	11 (4.4)
	22 - 24 years	52 !12.9)	20 (13.4)	31 (12.4)
	25 - 29 years	107 (26.6)	42 (28.2)	62 (26.0)
	30 - 34 years	92 (22.9)	34 (22.8)	57 (22.8)
	35 - 39 years	53 (13.3)	13 (8.7)	40 (16.0)
	40 - 49 years	42 (10.4)	12 (8.1)	30 (12.0)
	50 - 59 years	11 (2.7)	1 (0.7)	9 (3.6)
	60 and more years	3 (0.7)	0 (0.0)	3 (1.2)
	MA	6 (1.5)	2 (1.3)	4 (1.6)
Substance problems	Yes	253 (62.9)	107 (71.8)	145 (58.0)
	No	144 (35,8)	40 (26.8)	102 (40.8)
Type of substance	Cannabis	26 (6.5)	13 (8.7)	13 (5.2)
	Various	136 (33.8)	58 (38.9)	77 (30.8)
	Cocaine	43 (10.7)	22 (14.8)	21 (8.4)
	Tobacco	6 (1.5)	2 (1.3)	4 (1.6)
	Alcohol	22 (5.5)	4 (2.7)	18 (7.2)
	Other Drugs	9 (2.2)	4 (2.7)	5 (2.0)

[1]Three men did not answer the question whether or not they suffered victimization in prison.

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Data collection

The present study was requested by the General Direction of Prisons and Social Reintegration of Cape Verde, aiming to establish a diagnosis of intervention needs of the inmate population. Therefore, researchers contacted all Cape Verde Prison Offices to schedule data collection. The instruments were administrated in September 2018, in a group setting monitored by the researchers. Participation was voluntary and informed consent was made available to participants in order to clarify the aim of the study and ensure their anonymity (any data that could identify the participant would be concealed).

Data analysis

Using descriptive statistics, demographics and criminal characteristics of the inmates were analyzed. The occurrence of victimization and the existence of psychopathology in Cape Verde's inmates was also examined applying descriptive and inferential measures (T-Test, Levene´s Test, Spearman's correlation coefficient).

Results

This study addressed two major questions: (i) the prevalence of psychopathological disorders using BSI as screening measure in a national sample of Cape Verde´s inmates and (ii) to what extent victimization interferes on reported psychiatric symptoms.

Prevalence of psychopathological symptoms

Regarding sample´s psychopathological symptoms, all scales and indexes are above average for the general population, showing values of emotional disturbance. However, considering victimized and non-victimized inmates, clinical values increase for the former and slightly decrease for the latter. Although both have values of emotional disturbance, considering the value of the index of positive symptoms that, according to Canavarro[23], when equal to or greater than 1.7 represents emotionally disturbed individuals, the victimized inmate are the most emotionally disturbed (M=2.04: SD=0.55) (Table 3).

Table 3 Values of BSI psychopathological dimensions and indexes and reference values for the Portuguese population (general population & population diagnosed with emotional disorders)

	Sample (N=399)		Victims Subsample (N=149)		Non victims subsample (N=250)		General Population		Population diagnosed with emotional disorders	
	M	SD	M	SD	M	SD	M	SD	M	SD
Somatization	5.49	5.15	6.06	5.15	5.15	5.14	0.573	0.916	1.355	1.004
Obsession-compulsion	6.51	4.67	7.18	4.69	6.09	4.63	1.29	0.878	1.924	0.925
Interpersonal sensitivity	3.99	3.09	4.52	3.29	3.65	2.91	0.958	0.727	1.597	1.033
Depression	6.36	4.51	6.55	4.49	6.25	4.53	0.893	0.722	1.828	1.051
Anxiety	4.73	4.5	5.82	5.2	4.09	3.93	0.942	0.766	1.753	0.94
Hostility	4.18	4.01	5.47	4.33	3.41	3.6	0.894	0.784	1.411	0.904
Phobic anxiety	2.81	3.31	3.09	2.93	2.65	3.51	0.418	0.663	1.02	0.929
Paranoid ideation	6.74	4.22	7.91	4.2	6.03	4.09	1.063	0.789	1.532	0.85
Psychoticism	5.6	4.04	6.05	4.24	5.3	3.89	0.668	0.614	1.403	0.825
General Index of Symptoms	0.98	0.62	1.11	0.65	0.91	0.59	0.835	0.48	1.43	0.705
Index of positives symptoms	1.99	0.57	2.04	0.55	1.97	0.59	1.561	0.385	2.111	0.595

Table 4 BSI psychopathological dimensions with statistically significant differences between subsamples

BSI psychopathological dimensions	Non-Victims Subsample		Victims Subsample		
	M	SD	M	SD	T
Interpersonal sensitivity	3.653	2.906	4.523	3.291	-2.590*
Anxiety	4,086	3,927	5,822	5,197	-3.285**
Hostility	3,408	3,599	5,473	4,335	-4.600***

Note: *p < .05; **p < .01; ***p < .001

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Considering that the psychopathological dimensions included in BDI may be seen as expression of specific symptomatology, in this sample, paranoid ideation, obsessive-compulsive and depressive symptoms are noteworthy. The same pattern applies if one considers the two subsamples.

Victimization interference on reported psychiatric symptoms

Participants who reported being victims had significantly higher symptomatology than those who didn´t report in following dimensions: interpersonal sensitivity (t (352)=-2,590, p=.010), anxiety (t (213,747)=-3,285, p=.001) and hostility (t (234,136)=-4,600, p = .000).

Participants who reported being victims had mean values for all dimensions of the BSI scale significantly higher than the cut-off points for the general population and for the population diagnosed with emotional disorders. Only in the paranoid ideation dimension, there is no significant difference between the mean value of this sample and the mean value of the population diagnosed with emotional disorders. For values above the cut-off point for the population with emotional disturbances, the dimension with the highest frequency was paranoid ideation (n=72), followed by psychoticism (n=43) and the lowest the depression (n=17).

The inmates who reported being victims at least once in the last 12 months had a profile similar to that described above, with significant differences for the same mean cut- off values of the BSI scale dimensions. The exception is the psychoticism dimension, where such differences no longer occur. Paranoid ideation (n=49) and psychoticism (n = 30) were also reported as the dimensions with the most participants quoting above the cut-off points for the emotionally disturbed population. Depression was, once again, the dimension with the least responses above the cut-off point (n=12).

Except for the anxiety dimension (F (2.46)=5,388, p=.008), where those who reported being a victim 3 times or more scored significantly higher than those who reported being a victim only, the other dimensions of the BSI scale did not vary significantly with the frequency of victimization.

Using the Spearman correlation coefficient between the number of victimizations suffered in the last 12 months and the BSI scales and indexes, there were statistically significant positive correlations between somatization (rsp=.296, p=.033) , phobic anxiety (rsp=.335, p=.015), paranoid ideation (rsp=.289, p=.036) and psychoticism (rsp =.271, p=.047), meaning that as the number of episodes of victimization increases the severity of psychopathological symptomatology increases also.

Discussion

In the present study, the prison population, globally considered, presents indicators of mental health problems, presenting higher values than the normative population. These data corroborate the literature indicating that psychopathology seems to be prevalent in the prison context.[1,5] On the other hand, about 142 inmates (37%) reported having been victimized, which is in line with prevalence studies that identify this phenomenon as recurrent and with problematic proportions.[8–11]

Regarding the differences in symptomatology between the victimized and non-victimized inmates, the former the reported considerably higher indicators of interpersonal sensitivity, anxiety and hostility, relating to difficulties in interpersonal relationships, nervousness and tension and feelings of anger, can promote antisocial and violent behavior. Indeed, some authors report that prison victimization has an impact on criminal behavior and violence,[24,25] pointing out that aggressive and violent behavior in prison may be a coping strategy used by prisoners to deal with victimization and its effects on prison.[26,27]

On the other hand, victimized prisoners presented mean values for all dimensions of the BSI scale significantly higher than the cutoff points for the general population and for the population diagnosed with emotional disorders, with paranoid ideation and psychoticism having the highest values and depression the lowest one. Being victimized and having depressive symptoms resulting from victimization in prison is considered as a sign of weakness, so many victims may resort to violent expressions or present a disorganized pattern of functioning to respond or deal with victimization and the inherent psychological distress.[25,27]

It was also found that the number of episodes of victimization suffered in the last 12 months is positively correlated with higher scores of somatization, phobic anxiety, paranoid ideation and psychoticism, indicating the two phenomenon present a similar pattern in their evolution. Although there are no studies on the impact of multiple and repeated victimization in the prison, this data corroborates the literature on multiple victimization in different populations stating that as the total number of victimization experiences increases, the greater the impact on psychopathological symptomatology. following the pattern dose-effect.[28,29]

Finally, it should be noted that, similarly to what occurs in other types and contexts of victimization, there are no specific psychopathological syndrome or frameworks for prison victimization, but they may have some indicators of emotional distress and other negative emotional reactions (anger, hostility, frustration).[24,25] Literature in this area conclude that coexistence in a hostile environment and victimization can compromise psychosocial adaptation resulting in aggressive behaviors, anger, anxiety, and depression.[1]

Conclusion

Higher expression of the dimensions interpersonal sensitivity, anxiety and hostility among victims with statistical significance when compared to non-victims probably explained by the psychological impact of a traumatic event such as victimization. As noted, specific clinical disorder has not yet been identified, however different negative emotional manifestations and mental health problems may arise that interfere with the ability to reintegrate properly into society. In fact, it is consensual in the literature that prisoners who are victims in prison have greater difficulties in adapting to prison and reintegration into society[30] and are more likely to recur to violence[24]. It is therefore urgent to create preventive and remedial strategies in view of the phenomenon and its potential effects on mental health.

Mental disorder also increased risks of physical victimization. Men in prison with any mental disorder were 1.6 times (prisoner-on-prisoner) and 1.2 times (staff-on-prisoner) higher than men with no mental disorder to be physically victimized.[31] Thus, victimization and mental health issues should be addressed together as both problems increase the risk of victimization and the potential adverse effects of victimization on mental health. Undoubtedly, an integral and

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comprehensive analysis of inmates' mental and physical health and its risk and protective factors would contribute to establish effective strategies involving promotion, prevention and intervention in this environment. This would result in an optimization of the resources available for the assessment and treatment of inmates in Cape Verde prisons.

For the first time BSI data are provided for a sample of inmates of Cape Verdean prison population. Strength of this study is related to its methodological approach:

a. All prisons were involved.

b. A rigorous research protocol was applied.

c. psychologists outside of the forensic settings conducted the fieldwork, which reduces the risk of response bias.

Regarding limitation, in the present study, there is minimal representation of females in the studied samples. Moreover, it is reasonable to raise some concerns regarding the impossibility to use an instrument to assess mental health previously validated for the Cape Verdean population. In any case, it is convenient to emphasize the need to have instruments that are sensitive to the cultural factors of each population.[1] It should also mention the tendency of self-report questionnaires to overestimate the prevalence rates.

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Conflicts of interest

The authors declare that there is no conflict of interest.

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