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Validation of the Portuguese Version of Community Attitudes towards People with Mental Illness (CAMI)

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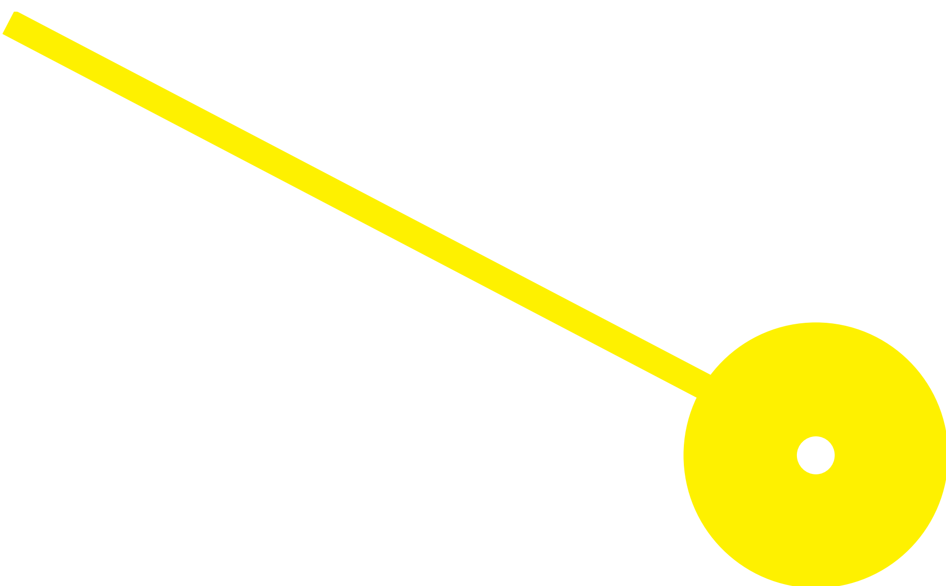

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Validation of the Portuguese Version of Community Attitudes towards People with Mental Illness (CAMI)

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Abstract

Stigma remains a feature that influences the lifestyle of people with mental illness. Negative attitudes, stereotypes and discrimination are still prevalent in these people´s life. Stigma is considered a public health problem that occurs unconsciously in society, categorizing people. Portugal is the seventh worst country in relation to stigma in Mental Health. There have been few improvements in the reduction of stigma over time and there is a great need to create investigations and validate instruments that measure stigma in the population. **Aim:** This study aims to contribute to adress the gaps in the level of studies and normative instruments that measure the stigma of the Portuguese population in the face of mental illness. It therefore aims to adapt and validate CAMI culturally and examine its psychometric properties. **Method:** The 27 item version of CAMI was translated and retroversion, which was analyzed and evaluated by a panel of experts. A socio-demographic survey and the CAMI participated online, in which 427 adults representing the Portuguese population in general participated. Finally, the reliability and validity of the instrument were analyzed. **Results:** There are high levels of stigma in the Portuguese population that vary according to sociodemographic characteristics such as gender, age and contact with mentally ill people. CAMI has positive values of reliability and validity. **Conclusions:** This study contributed to the achievement and validation of new measures to assess the stigma of the general population related to people with Mental Illness. We must continue to analyze this theme and understand over time the existing levels of stigma, its predominance in society and the possible creation and implementation of new measures that support mental disease literacy and anti-stigma.

Keywords: Stigma; Mental Illness; Community Attitudes towards People with Mental Illness (CAMI)

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1. Introduction

Stigma remains a feature that influences the lifestyle of people with mental illness. Negative attitudes, stereotypes and discrimination are still prevalent in these people´s life. There is even scientific evidence that public attitudes have not change in the last two decades. Stigma affects people with mental illness in various ways: reducing their self-esteem, reducing quality of life, negatively affecting housing, work and financial situation conditions and create barriers in the search for treatment because of shame and embarassment of mentally ill person (1). This way, it is known that the person with mental illness faces the symptoms of the desease and the associated limitations, as well, as the stigma and social injustice that comes from it (2).

According to Erving Goffman (1963), stigma occurs when a person is distinguished as discredited (3) in social contexts, relates to negative attributes and a distinction of the normal pattern (gender, race, religion). It is considered a public health problema (4) that occurs unconsciously in society, categorizing people. This categorization includes the placement of labels, association of negative differences and attributes, separation of the terms "us" from "them", loss of status and discrimination (5). One example is the assumption that most people with mental illness are dangerous (3). Stigma is a comprehensive term that includes problems at three levels: cognitive (ignorance or lack of information), attitudinal (prejudice) and bahavioral (discrimination) (6). The public stigma reflects the prejudice present in the general population, in relation to people with mental illness and which leads to their discrimination (7). Self-stigma emerges in people with mental illness as a result of the internalization of public stigma, impairing their selfesteem and self-efficacy (8).

According to the World Health Organization (WHO, 2001), its estimated that one in four people will suffer some mental disorder during their lifetime (9). The figures report that around 450 million people are diagnosed with mental illness (10). In the World Health Organization European Region, an estimated 110 million people with mental disorders were estimated in 2015 (11). The 2008-2009 National Epidemiological Study of Mental Health reveals that the prevalence of mental illness in Portugal reaches 22,9% of the population most frequently in an age range between 18 and 34 years (12). Research also shows that Portugal is the seventh country in the worst position in relation to stigma, particularly the opinion of the community, where it is assumed to be difficult to talk to people with serious mental illness, and this problem is one of the biggest challenges for health (13), with a great social injustice to people suffering from problems of this nature (14). And although there are treatments available, only a small percentage of these people search for professional help due to the stigma that leads to rejection and discrimination (9), being a worldwide problem. These statistical data estimate that only 15 to 25% of people suffering from mental disorders receive any type of treatment (1). People with mental illness are mostly seen in society as incompetent or dangerous (15), facing fundamental barriers in their social inclusion (16) and participation in society (3). Research states that stigmatization can negatively impact conditions and life expectancy among individuals and social groups (17), being one of the biggest obstacles to the recovery of people with serious mental illnesses, to the extent affecting the self-esteem of an individual (18), increases dysfunction and poses problems for patients regarding opportunities for residence, employment (19), in obtaining insurance and social networks (20), (1). Compared

to other disorders, mental illness are typically more stigmatized (6).

Scientific progress has helped to destroy some prejudices that feed the stigma of people living with mental health problems (12). This has been a research topic widely studied in various disciplines, observing in the last decade an exponential growth, directed mainly to the study of stigma at the individual level (21). In last years there has also been a growing need to talk about public attitudes towards mental illness to reduce levels of stigma and discrimination towards mental illness (22). Several research has been evaluating community attitudes, investigating what people would do or what they think most people would do, for example, when confronted with a neighbor or a coworker with mental illness (6), (23). Research has also compiled the impact of stigma, assessing its consequences in various aspects (18), considering intercultural factors and the type of society (24). Some studies say that developing countries have greater stigma associated with mental illness unlike developed countries (25). Others note than in western countries, women tend to be more positive and show less social distance to people with mental illness compared to men (3). There is research suggesting that stigmatizing attitudes have increased in recent decades (7) and others that report that with increased information there has been a decrease in stigma, since interpersonal contact with people with disease can develop comprehensive attitudes and change beliefs (26). In the global landscape, regarding public attitude, the data suggest that there have been few improvements in the decrease in stigma over time (1). Some authors argue that the effects of stigma can cause more damage to the individual with mental illness than the experience of mental suffering (27). The proliferation of research on stigma in mental illness in the literature has been accompanied by a growing creation of stigma measures, about 400 new measures developed since 2004. However, many instruments have several shortcomings, justified by the lack of consistency in the definition of stigma mechanisms. To understand the stigma

it is necessary to know, how to observe and measure it (21). As mentioned above, there are currently several assessment tools that analyzes the levels of stigma in the population, however, they are not validated and accepted for European cultures (9) and, particularly, for the Portuguese population (28), so there is a great need to create investigations and validate scales that measure stigma in the population (9).

The study, called Validation of the Portuguese Version of Community Attitudes towards People with Mental Illness (CAMI), contributes to bridge, to some extent, the existing gaps in the level of normative studies and instruments that measures the stigma of the Portuguese population in the face of mental illness. It therefore aims to adapt and culturally validate the CAMI and examine its psychometric properties.

2. Methodology

The present study is descriptive and observational. The Portuguese population was studied and their characteristics and results. The realiability of the measuring instrument in question – CAMI was evaluated. A non-random sample was used for convenience (29) that included 427 individuals of Portuguese nationality or residents in Portugal with good mastery of the portuguese language, of male or femmale gender, aged 18 years or older.

2.1. Ethical Considerations

This study met the standards of ethics in research with human beings. It was analyzed and approved by the Ethics Committee of the Polytechnic Institute of Porto. All study participants, before completing the online questionnaire, were informed about the objective of the investigation and the nature of data

collection. To participate they agreed and marked the Free and Informed Consent Form (30), (31), (32).

2.2. Instrument

The Community Arttitudes towards People with Mental Illness (CAMI) is an instrument for assessing stigma, originally developed by Taylor & Dear 1981, in order to measure the attitudes of the general public towards people with mental illness (22). CAMI´s greatest strength is the exploitation of the public in relation to community treatment centers for people with mental illnesses. Since deinstitutionalization is still a novelty in the care of people with mental illnesses, it is important to evaluate the attitudes of the general public (21). The original scale consists of 40 items of attitudes about mental illness (22). There are currently less extensive versions of CAMI. In this study we used the version of 27 items that analyzes three dimensions: knowledge, attitudes and behaviour of the general public (33). The items refer to attitudes about social exclusion, feelings of benevolence, tolerance and support for care in community mental health (34). It is a questionnaire, composed of 27 statements, with answers of agreement, arranged according to the Likert scale from 1 (strongly agree) to 5 (strongly desagree) that translate into a total score and four subtotals. The higher total, the lower is the stigmatizing attitudes of the community (33).

2.3. Cultural Validation

For the cultural validation of CAMI, permission was request on the website – *Indigo Network* containing the instrument as well the rules for the translation. Linguistic validation was subsequently carried out according to the parameters desired by

CAMI (35). The English language was translated into the Portuguese with linguistic adaptation; The translation was revised by a specific group of experts in the field who analyzed and adapted the text according to Portuguese culture, namely specific expressions and words; Retroversion was performed by an individual Portuguese with good mastery of the English language, who did not know the instrument and the original text of the same, in order to avoid any influence on the translation of words and/or expressions. Subsequently, the group of experts in the area analyzed the latest version and compared it with the original (30), (31), (36). A questionnaire containing sociodemographic questions such as age, gender, marital status, educational qualifications, employment status, family member with mental illness, degree of kinship, frequency of contact with that person, known as mental illness, type of relationship, frequency with which he contacts that person and the CAMI questionnaire were applied in online format. CAMI´s fidelity was studied by studying its internal consistency. The total scale was analyzed by calculating Cronbach´s alpha to verify its validation and application in scientific research (30), (37).

2.4. Data Processing

The data collected through the questionnaire apllied and the statistical study of the data was carried out through two databases, the Statistical Package for The Social Sciences (SPSS) version 26.0 for Windows (38) and the AMOS Software – Structural Equation Modeling version 24.0 for Windows. Statistical analysis involved descriptive statistical measures (absolute and relative frequencies, means and their standard deviations) and inferential statistics. The significance level to reject the null hypothesis was set at $(\alpha) \leq 0.05$. Cronbach´s alfa internal consistency coeficiente was used to verify the validation and application of CAMI fidelity in scientific

research, Confirmatory Factor Analysis (CFA), Student´s t-test for a sample, Student´s t-test for independent samples and ANOVA One-Way. The normality of distribution was accepted in samples with a dimension greater than 30, according to the Central Limit Theorem. The homogeneity of variances was analyzed with the Levene´s Test.

3. Results

In the total sample, the mean age was 38.2 years (SD = 12.3 years), ranging from a minimum of 18 to a maximum of 73 years and among which 350 (82%) were female and 77 (18%) male. Most participants were single (39.3%), graduated (51,5%), and were employed (78.2%). Only 39.8% assume that they have a family member with mental illness, among whom the majority reported being another (23.2%) and the minority the spouse (0.7%), contact this person daily (15.2&). Most participants reported that they know someone with mwntal illness (78.5%), pointing more to known persons 43.8%) and less to classmates (1.9%) and contact this person occasionaly (36.8%). Table 1 shows the results and percentages of each of the sociodemographic questions applied to the 427 study participants.

A percentage of 39.8% of respondents say that they have family members with mental illness. More than half are unidentified family members, 20% are parents and 11.2% are siblings. For 15.2% the frequency of contact with these family members is daily. A percentage of 78.5% of respondents say they know someone with mental illness. Acquaintances (55.8%), friends (24.8%) and neighbors (7.5%) are the most mencioned. About 37% contact these acquaintances occasionally and 18.5% do so daily. An analysis of the structure of the bi-factorial model of CAMI was performed, similar to the study conducted by Rusch, Nicolas et al. (2011). This was performed through a Confirmatory Factor Analysis (CFA) (34). The values obtained, $x2/df = 3.296$; Comparative Fit Index (CFI) = 0.601; Goodness of Fit Index (GFI) = 0.817; Root Mean Square Error of Approximation (RMSEA) = 0.073, indicate a good quality adjustement. The adjustement of the model implied the correlation of errors 6 and 7, 15 and 19, 19 and 23. The values are relatively like those obtained by the authors Rusch, Nicolas et al. (2011), namely $X2/df = 2.242$ and RMSEA = 0.059. Figure 1 shows the data obtained through the Confirmatory Factor Analysis carried out.

The internal consistency, evaluated with Cronbach´s alpha coefficient, of the Prejudices and Social Exclusion factor was 0.699 and that of the Tolerance and Support in the Community factor was 0.634 (Table 2). The discriptive statistics of the variables used in the present study can be evaluated in Table 3. Spearman´s coefficient obtained a negative correlation, like Rusch´s et al. (2011) (34), but slightly lower ($\rho = -0.343$). The value obtained in the Prejudices and Exclusion factor is significantly higher than the midpoint of the scale, $t(427) = 69.345$, $p = 0.001$, while the value obtained in the Tolerance and Support in the Community factor is significantly lower than the midpoint of the scale, $t(427) = -67.798$, $p = 0.001$, which means that we are in the presence of high values of Prejudice and Exclusion and low values of Tolerance and Support in the Community for mental illness.

Women have significantly higher values of Prejudices and Exclusion stemming from Mental Illness (4.43 vs. 4.16), $t(427) = 5.397$, $p = 0.001$. The difference in Tolerance and Support is not statistically significant. The difference in the values obtained in the CAMI between subjects with relatives with mental illness and subjects who do not have relatives with mental illness is not statiscally significant. Subjects who know someone with mental illness have significantly higher values of Prejudices and Exclusion stemming from Mental Illness (4.40 vs. 4.28), $t(427) = 2.450$, $p = 0{,}001$. Subjects who know someone with mental illness have significantly lower values of Tolerance and Support in the Community for Mental Illness (1.91 vs. 2.01), $t(427) = 2.661$, $p = 0.001$. Subjects over 45 years of age have significantly lower values of Prejudices and Exclusion stemming from Mental Ilness, $F(427) = 14.497$, $p = 0.001$. The differences in the Tolerance and Support in the Community factor according to age are not statistically significant.

4. Discussion

The present study, based on a representative survey of the Portuguese adult population, provides evidence about stigmatizing attitudes towards people with mental illness, through the application of the stigma assessment instrument, CAMI. Since its development, CAMI has been considered internationaly as a standard instrument for assessing the stigma of the population vis-à-vis people with mental illness. Its great qualities are the fact that it does not use vignettes, which allows a good margin of representation of the scale and the fact that it is quite intuitive, reflecting exactly the concept of stigma in its dimensions (33). It is also considered a measure with positive psychometric information regarding its reliability, validity and dimensonality (21). This scale is validated in several languages such as Finnish, Lithuanian, Italian, Swedish, Portuguese, Greek and Thai. In general, existing studies shows a positive consistency in which Cronbach´s alpha ranges from 0.6 to 0.9 (21), (33), (39). For these reasons, it has served as an engine for carrying out several anti-stigma campaigns (22), (33). The original version of the instrument was considered extensive and, therefore, over time, smaller and more intuitive version of CAMI were created (39). Instrument validations have been made for several countries and populations, however, for the Portuguese population there are few stigma assessments instruments, namely the CAMI (28). Given the above, it became important to realize whether by adapting the CAMI version 27 items to the Portuguese language, its psychometric properties remained.

The translation, cultural and linguistic adaptation into Portuguese followed the guidelines established internationally and by *Indigo Network* from which the instrument was removed, in order to ensure the quality of the translation. This study allowed consolidating the cultural adaptation of CAMI carried out by Rusch et al. (2011) (34), since there were no significant changes during the process.

A convenience simple was used, namely adults with Portuguese nationality or good mastery of the language. According to the research carried out so far, this was the first sample created in Portugal, specifically to study the psychometric properties of CAMI for the general population (28).

Cronbach´s alpha value, which verifies the internal consistency of the two CAMI factors, reveals that factor 1 corresponding to Social Exclusion is more consistent, however, both factors have an alpha above 0.6, that is, the analysis of the results allows us to affirm that the Portuguese version of the CAMI presents a positive but not optimal internal consistency (40). When comparing this results with the results of the pilot study, it was found that they are mostly within the reference values. In Portugal, whithin the sample studied, there where high values of Prejudice and Exclusion and low values of Tolerance and Support in the Community. Compared to the study by Rusch et al. (2011) (34), these values are contraditory. These results confirm that some attitudes towards people with mental illness are associated with sociodemographic characteristics such as age, gender and contact with mentally ill people as in other studies (22), (41).

The younger people have higher levels of Exclusion and Tolerace, although the latter value is statistically insignificant. These values are in line with some studies which state that the older, the greater positive attitudes towards mental illnes (22), (28). In the same way that the incidence of the female gender was higher, women also showed higher levels of Prejudice and Exlusion than of Tolerance, unlike studies which refer to being gender with more positive attitudes towards mental illness (22), (28). As for contact with family members with mental illness, since the results were statistically insignificant, it is not possible to make any elations. However, in contact with acquaintances with Mental Illness, there were high levels of Prejudice and low levels of Tolerance. Some studies shows that people who contact the mentally ill show higher levels of stigma

whether known or family members, resulting in negative consequences for these people (28),(41).

The Confirmatory Factor Analisys provided values that indicate a good quality of the adjustement, which means that the factorial structure used – division of two factors, is adapted to the data obtained (42),(43). The criterion validity, analyzed using Spearman´s correlation coefficient, suggests that the obtained value is slightly small. In the study by Rusch et al. (34) the correlation was also negative, but with a more significant value. However, both instruments correlate negatively, conferring some rigor to the study (44).

The main limitations of this study were the cross-sectional approach and the bias in the sample selection, because the sample number was reduced and the characteristics of the participants are not known exactly, since the surveys were applied through an online form, at a distance. This decision was taken due to the situation by COVID-19. The second major limitation was the fact that the present study was based on the article presented on the internet site *Indigo Network* from which the CAMI, was removed, which may have condicioned some results, namely the value of internal consistency, since the methodology was completely oriented.

5. Concluions

The results of this study reveals that the 27 item version of CAMI in Portuguese has positive levels of reliability and validity, having maintained most of the psychometric characteristics of the pilot study. Thus, it can be affirmed that this study contributed to the obtaining and validation of new measures to assess the stigma of the general population vis-à-vis people with Mental Illness. However, as this work is not a final product, but a starting point for others, it will be beneficial for the community, the continuation of the analysis of this theme – validation of CAMI, in order to understand over time the levels of stigma existing, its predominance in society and the possible creation and implementation of new measures that support mental illness literacy and anti-stigma.

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Table 1: Sociodemographic Characterization of sample N=427

	N	%
Gender		
Female	350	82,0
Male	77	18,0
Age (M; SD)	38,2	12,3
Marital Status		
Married	158	37,0
Divorced	32	7,5
Single	168	39,3
Union	62	14,5
Widower	7	1,6
Level of Education		
12ºYear	62	14,5
4ªClass	6	1,4
6ªClass	15	3,5
9ºYear	29	6,8
Degree	220	51,5
Other	95	22,2
Employment Situation		
Medical Low	8	1,9
Unemployed	34	8,0
Employed	334	78,2
Student	40	9,4
Social Pension	6	1,4
Reform	5	1,2

N=Number of participants; M=Mean; SD=Standard Deviation; %=Percentage

Table 2:Internal Consistency by Cronbach's Alfa coefficient

	Cronbach Alfa	Number of Items
Prejudices and Exclusion	0.699	13
Tolerance and Support in the Community	0.634	14

Table 3: Descriptive Statistics of the two factos: Prejudices and Social Exclusion and Tolerance and Support in the Community

	Minimum	Máximum	Mean	Standard Deviation
Prejudices and Exclusion	2,62	5,00	4,38	0,41
Tolerance and Support in the Community	1,07	2,86	1,93	0,32

Figure 1: CAMI's Confirmatory Factor Analysis