

RESEARCH ARTICLE

Mental Health Literacy Regarding Depression and Suicide

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Introduction: Mental health literacy enables individuals to recognize the symptoms associated with mental illness, and thus adjust their behavior to manage and seek help and treatment for mental illness.

Aims: The present research aims to study determinants of mental health literacy and whether an association exists between mental health literacy and the understanding of content related to depression and suicide.

Methods: In each group, the participants read one leaflet about depression or suicide and answered a questionnaire to assess their understanding. All the participants also filled out a mental health literacy self-report.

Results: The results showed higher mental health literacy for women and individuals with a higher education. Mental health literacy predicted the understanding of suicide content, but the same did not apply for depression.

Conclusions: Mental health literacy stands as an important factor to be considered in developing campaigns and promotional actions. However, its effect remains contingent on the contents and context. It is crucial to consider this interaction in maximizing the campaigns' impact on the population.

Keywords: mental health literacy, depression, risk of suicide, stigma, content understanding

Introduction

Mental Health Literacy

Jorm and his collaborators (1997) introduced the concept of mental health literacy. They defined it as the knowledge and beliefs about mental disorders that help recognise, manage, and prevent them. The concept of mental health literacy consists of the following attributes: knowledge of how to prevent mental disorders; recognition of the disease's onset; knowledge of the help options and treatments available; knowledge regarding self-help strategies for less serious problems; the skills to provide first aid to other people in crisis or developing a mental disorder (Jorm, 2012; WHO, 1998, 2001). The low level of mental health literacy is directly related to the absence of help-seeking behaviors, the difficulty in communicating with health professionals, and treatment adherence (Berkman et al., 2001; Kickbusch, 2001; Kickbusch et al., 2006; Kickbusch & Maag, 2008; Kutcher et al., 2016).

The concept of mental health literacy is evolving and based on the broader concept of health literacy. It has been evolving from a cognitive definition into integrating the individual's social and personal characteristics.

Mental health literacy is defined as the beliefs and knowledge about mental disorders and mental problems that will allow their recognition, management, and prevention (Kondilis et al., 2006; Lee et al., 2020).

Mental health literacy is not limited only to the individual. It extends to the community and not only focuses on knowledge, but also considers attitudes and behaviors towards mental health issues (Kawachi & Berkman, 2000; Wahl, 2002).

Promoting mental health literacy remains essential to promote mental health, prevention, treatment, and to fight the stigma associated with mental disorders (Corrigan & Watson, 2007; Freebody & Luke, 1990). Stigma is particularly important and relates to negative beliefs held by a significant part of the general population. Furthermore, it is associated with intractability or disability conditions (Corrigan, 2004; Corrigan & Bink, 2016). Importantly, mental health literacy is related to stigma, which decreases with increased mental health literacy (Corbière et al., 2012; Naylor et al., 2009). So, promoting mental health literacy remains essential for mental disorders to be recognised early, in order to offer adequate intervention (Scott & Chur-Hansen, 2008).

Mental health literacy regarding depression can facilitate the search for professional help when the first symptoms appear, avoiding prolonged suffering, and suicide risk (Jorm & Wright, 2007; Zuckerbrot & Jensen, 2006). A study of the Australian population concludes that only 39% of the participants could recognise the symptoms associated with depression (Jorm et al., 1997). A study done in the UK using two identical case vignettes, both describing depression, concludes that the level of mental health literacy on depression varied according to the participant's gender (Swami, 2012). Another study investigating Portuguese adolescents to assess mental health literacy on depression, using a vignette describing a case of depression in a 16-year-old girl, also concluded that the percentage of participants who recognised the vignette as depression stood lower than their expectations (Loureiro et al., 2013).

These studies on mental health literacy demonstrate that the percentage of participants who recognise the symptoms associated with mental illness remains below expectations and that significant gender differences exist.

The World Health Organization dedicates every April 7 to celebrate World Health Day. In 2017, they chose depression as the theme, a disorder that can affect people of any age at any stage of life. The date marked the beginning of a campaign on depression. Under the motto "Let's talk", the initiative reinforces that there are ways to prevent depression and encourages to treat it, considering that it can lead to serious consequences. Talking openly about depression constitutes the first step in understanding it better and reducing its stigma (WHO, 2017).

The Present Study

Mental health literacy is directly related to preventing mental illness and promoting mental health as well as reducing stigma. The present study aims to evaluate the relationship between mental health literacy and socio-demographic characteristics, and to evaluate the association between mental health literacy and a questionnaire to understand the contents of a public health campaign for depression and suicide. To meet this broad goal, the authors formulated the following hypotheses:

1. The level of mental health literacy and the degree of understanding a written content about depression or suicide varies according to gender, education level, and proximity to mental health problems (being a relative or friend).
2. The level of mental health literacy is associated with the degree of understanding written contents about depression or suicide.

Method

Participants

The total sample of this study consists of 462 individuals, aged between 18 and 72 years, with a mean age of 30.27 years ($SD = 12.14$). However, the sample is divided into two groups. Group 1 contains the group of participants who answered the questionnaire on understanding the content on depression, and Group 2 involves the group of participants who answered the suicide content questionnaire. Group 1 (Depression) consists of 256 participants, aged between 18 and 72 years ($M = 32.03$, $SD = 12.70$), 81% female and 19% male. Group 2 (Suicide) consists of 206 participants, aged between 18 and 62 years ($M = 28.09$, $SD = 11.06$), 87% female and 13% male.

The predominant education level of the participants from both groups ranges from the academic level bachelor's degree to higher levels; Group 1 (68%) and Group 2 (59%), followed by secondary school level; Group 1 (25%) and Group 2 (37%).

Regarding the participants' location, we can see that in both groups, Lisbon is the residence district having the most participants, followed by Porto and Setúbal.

Instruments and Materials

The Portuguese version of the Mental Health Literacy Scale (MHLS) is a self-report instrument that assesses the level of mental health literacy, consisting of 35 items and six attributes: (a) recognition of disturbances; (b) knowledge in seeking information related to mental health; (c) knowledge about risk factors and their causes; (d) knowledge about treatments; (e) knowledge about available professional help and (f) attitudes that promote recognition in seeking help (Dias Neto et al., 2021), a socio-demographic questionnaire.

Two leaflets from the World Health Organization's "Let's talk" campaign, on depression and suicide, were used. The campaign's scope encompassed the prevention of depression and its treatment. The campaign aims to end mental health stigma by encouraging people to talk about depression. For people with depression, talking about their feelings with someone they can trust should be the first step toward recovery. The WHO adjusted the campaign for each region of the globe (WHO, 2017).

The WHO granted authorization to use and translate the leaflets. Special concern was given to their translation from English (Oliveira et al., 2015). Two translators whose mother language was English were asked to translate the leaflets, and two other translators were subsequently asked to retranslate these same leaflets, and the two versions were compared. In the preparation for leaflet translation, the following rules were respected: using simple and short sentences, avoiding metaphors and complex verbal forms, vague words, among others (Beaton et al., 2000; Ercikan, 1998).

After translating the leaflets and using the Newest Vital Sign (Martins & Andrade, 2014; Shealy & Threatt, 2016), as a reference, several questions were created to assess their contents. The questions were elaborated following a gradual increase in difficulty criteria. These criteria focused on the knowledge and attitudes or prejudices of the participants according to the questionnaire (depression or suicide).

Two questionnaires were prepared, each with six questions. After reading the leaflets (i.e., they would have access to the leaflets and their contents according to the group) the participants were asked to answer True or False. Each correct answer is scored with 1 and incorrect answers are scored with 0. A pre-test was performed on both questionnaires to validate the contents of the questionnaires (Oliveira et al., 2015).

Procedure

Two survey forms were created in *Google Forms*, which had the following order.

Form 1 started with the informed consent, and then the information leaflet on depression was presented. After that, the participants answered the questionnaire with the content about depression, followed by the Mental Health Literacy Scale, and ending with the socio-demographic questionnaire.

Form 2 started with the informed consent, and then the information leaflet with the content of the risk was presented. After that, the participants answered the questionnaire with the content about the suicide, followed by the Mental Health Literacy Scale, and ending with the sociodemographic questionnaire.

Two forms were submitted to a pre-test where the participants validated that they were functioning correctly online. Two ads were placed on the social network Facebook to get a greater number of responses.

Results

An average of 132.38 ($SD = 11.99$) was found for the mental health literacy scale. It stood higher than the average obtained in the study describing the adaptation and validation for the Portuguese version of the scale ($M = 127.38$, $SD = 12.63$).

In the questionnaire on the degree of understanding, the mean registered at 4.61 for depression and 5.00 for suicide.

Effects of Gender and Education Level

To check whether mental health literacy levels vary depending on gender, a T-test was applied to study the differences in mental health literacy, the degree of understanding depression, and suicide leaflets. Table 2 shows the results. Concerning gender, the female gender had a higher average score on the mental health literacy scale. Regarding the degree of understanding the leaflets, no statistically significant differences appeared in the degree of understanding depression.

Table 1. Describes average value of the scale and content knowledge questionnaires as a function of education

	9th grade	Secondary School	Graduated or Higher	ANOVA
Mental health literacy	<i>M</i> = 119.21	<i>M</i> = 130.19	<i>M</i> = 134.46	$F(2, 46) = 22.55$ $p < .001$
	<i>SD</i> = 14.80	<i>SD</i> = 11.82	<i>SD</i> = 11.02	
Depression knowledge	<i>M</i> = 4.63	<i>M</i> = 4.70	<i>M</i> = 4.57	$F(2, 25) = 0.42$ $p = .655$
	<i>SD</i> = 0.80	<i>SD</i> = 1.05	<i>SD</i> = 0.96	
Suicide Risk Knowledge	<i>M</i> = 4.14	<i>M</i> = 5.22	<i>M</i> = 5.32	$F(2, 20) = 7.47$ $p < .001$
	<i>SD</i> = 1.34	<i>SD</i> = 0.79	<i>SD</i> = 0.74	

Table 2. Association between mental health literacy and understanding as well as clinical and demographic variables

	Mental health literacy	Understanding depression	Understanding suicide
Mental health literacy	Fem: <i>M</i> = 134.30, <i>SD</i> = 10.98	Fem: <i>M</i> = 4.60, <i>SD</i> = 1.00	Fem: <i>M</i> = 5.31, <i>SD</i> = 0.78
	Mal: <i>M</i> = 122.49, <i>SD</i> = 12.18	Mal: <i>M</i> = 4.67, <i>SD</i> = 0.86	Mal: <i>M</i> = 4.74, <i>SD</i> = 0.81
	$t(460) = 8.4; p = .001$	$t(254) = -0.4; p = .675$	$t(204) = 3.5; p = .001$
Education Level	9th: <i>M</i> = 119.21, <i>SD</i> = 14.80	9th: <i>M</i> = 4.63, <i>SD</i> = 0.80	9th: <i>M</i> = 4.14, <i>SD</i> = 1.34
	Sec.: <i>M</i> = 130.19, <i>SD</i> = 11.82	Sec.: <i>M</i> = 4.70, <i>SD</i> = 1.05	Sec.: <i>M</i> = 5.22, <i>SD</i> = 0.79
	Grd.: <i>M</i> = 134.46, <i>SD</i> = 11.02	Grd.: <i>M</i> = 4.57, <i>SD</i> = 0.96	Grd.: <i>M</i> = 5.30, <i>SD</i> = 0.74
	$F(2, 46) = 22.55; p < .001$	$F(2, 25) = 0.42; p = .655$	$F(2, 20) = 7.47; p = .001$
Personal experience	Yes: <i>M</i> = 136.16, <i>SD</i> = 10.21	Yes: <i>M</i> = 4.50, <i>SD</i> = 1.05	Yes: <i>M</i> = 5.30, <i>SD</i> = 0.82
	No: <i>M</i> = 129.35, <i>SD</i> = 12.46	No: <i>M</i> = 4.70, <i>SD</i> = 0.91	No: <i>M</i> = 5.18, <i>SD</i> = 0.80
	$t(460) = 6.3; p < .001$	$t(254) = -1.6; p = .107$	$t(206) = 1.1; p = .291$
Mental illness in a close person	Yes: <i>M</i> = 133.99, <i>SD</i> = 11.55	Yes: <i>M</i> = 4.62, <i>SD</i> = 0.97	Yes: <i>M</i> = 5.24, <i>SD</i> = 0.81
	No: <i>M</i> = 129.38, <i>SD</i> = 12.24	No: <i>M</i> = 4.61, <i>SD</i> = 0.99	No: <i>M</i> = 5.24, <i>SD</i> = 0.83
	$t(460) = 4.0; p = .001$	$t(254) = 0.1; p = .938$	$t(204) = 0.0; p = .982$

The ANOVA one-way test was conducted to study the impact of the education level on mental health literacy and the degree of knowledge about depression and suicide. Education level was recoded into three groups (i.e., 9th grade, secondary school, and graduated or higher, because we only had one answer with the 4th grade). The results, presented in Table 1, show a significant difference. Participants with higher education levels have higher mental health literacy scores. For understanding the leaflets, different results were found. No significant differences manifested for depression. For the suicide leaflet, higher education levels indicated a greater understanding of the suicide leaflet.

A three-way ANOVA was conducted to compare the main effects of gender, education, and group (depression vs suicide) as well as their interaction effects on the accuracy of depression and suicide risk. The results show that regarding gender ($F(1, 25) = 1.41, p = .235$) and education level knowledge ($F(2, 20) = 4.00, p = .019$) no statistically significant differences in the accuracy of depression or suicide risk knowledge appeared.

The interaction effect was not significant ($F(2, 22) = 0.92, p = .407$), indicating that no combined effect existed for gender, education level and group on the accuracy of depression and suicide risk knowledge (Table 2).

Another three-way ANOVA was conducted to compare the main effects of gender, education, and group (depression vs suicide) as well as their interaction effects on the Mental Health Literacy Scale; the interaction effect was significant ($F(2, 25) = 4.66, p < 0.001$), indicating that a combined effect existed for gender, education level and group on the level of Mental Health Literacy (Table 2).

Proximity to Having or Having Had a Mental Health Problem

To study possible variations in the level of mental health literacy depending on whether a mental health problem has been diagnosed or not, the mental health literacy scale results were compared according to the diagnosis. We applied the T-test for the two content knowledge questionnaires (See the results in Table 2). Statistically significant differences exist in mental health literacy depending on the presence or absence of a mental health diagnosis. Those who have already been diagnosed with a mental health problem possess an average higher score on the

mental health literacy scale than those who have not been diagnosed with any mental health problem.

No statistically significant differences were found regarding the possible influence of a mental health diagnosis on the depression and suicide questionnaires. The average scores obtained by the participants who have already been diagnosed with a mental health problem remain very similar to those who have not.

The authors used T-test to assess whether mental health literacy and the understanding of the depression and suicide leaflets vary depending on having or not having family members or friends with a mental illness. The results show a statistically significant difference in mental health literacy in terms of having family or friends suffering from a mental illness. Thus, participants having family members or friends suffering from a mental illness obtained, on average, a higher score than those who have no family members or friends with mental illness. Regarding depression, participants with family members or friends having a mental disorder score similar to those who do not have family members or friends with a mental illness. Concerning the understanding of suicide contents, it varies depending on whether the participant has family members or friends suffering from a mental illness or not. Participants who have family members or friends with a mental illness have equal scores on the questionnaire of knowledge about the risk of suicide compared to those who do not have family members or friends with a mental illness.

Mental Health Literacy and Understanding Depression and Suicide Related Content

Through linear regression, we verified that there is no association between the values obtained in the mental health literacy scale and the questionnaire that assesses the degree of content knowledge about depression with $\beta = -.02$, $t(254) = .05$, $p = .648$, which indicates that the values obtained in the questionnaire on the degree of content knowledge about depression are not related to the values obtained in the mental health literacy scale, as also confirmed by the ANOVA, with $R^2 = .00$, $F(2, 20) = 0.97$, $p = .648$.

On the other hand, linear regression verifies that there is a correlation between the values obtained in the mental health literacy scale and in the questionnaire that assesses the degree of content knowledge about the risk of suicide with $\beta = .257$, $t(204) = 3.8$, $p < .000$, confirmed by the ANOVA results with $R^2 = .06$, $F(2, 14) = 0.79$, $p < .001$. These results confirm that the regression model statistically predicts the result variable, and it allows us to conclude that when the mental health literacy scale score increases, it also increases the degree of suicide content knowledge.

Discussion

The present study sought to assess the determinants and the relationship between mental health literacy and the understanding of mental health-related content. The results suggest differences in mental health literacy according to gender and level of education. The female participants (Lee et al., 2020) and participants with a higher level of education have a higher level of mental health literacy (Pedro & Amaral, 2016).

The statistical analysis of the questionnaires' results that assessed the degree of content knowledge about depression shows no difference depending on gender, education level, and proximity to the mental illness. However, different results were obtained in similar studies, such as those conducted in the United Kingdom and Sweden. Researchers found that female participants had a higher level of mental health literacy about depression (Furnham et al., 2011; Melas et al., 2013).

Regarding education level, the results were as expected for suicide and partly for mental health literacy, but not for depression, which could be related to the study's context. Alternatively, the content used in the questionnaire's elaboration contributed to this result.

The statistical analysis also showed that the degree of knowledge concerning the content about suicide stands higher than that of depression. The effects of socio-demographic variables (gender and education) on the results obtained in the content knowledge questionnaires were divergent. There are statistical differences in the understanding of suicide content regarding demographic variables. In depression, these differences do not exist. Stigma may contribute to these results, as it remains very present and renders it difficult to identify classic symptoms of depression (such as lack of energy, difficulty in lifting, among others); stigma even hinders acceptance by those suffering from depression and needing help themselves. It should be noted that the proximity to mental illness did not generate any variation in the mean values of both content knowledge questionnaires.

Strengths and Limitations

The present study has some limitations. The sample was non-probabilistic, and some features suggest its lack of representativeness. Most of the participants were female, were younger than 35, and had higher education levels. The questionnaires that assess the degree of understanding depression and suicide risk contents were constructed for the present study.

The leaflets' contents and the way they are arranged may have affected the participants' understanding.

Conclusion, Implications and Future Directions

The present study raises several implications. The results support the need to create programs more suited to each target population they are intended for. Considering these contextual aspects remains crucial in promoting mental health literacy about these highly prevalent disorders. Such fine-grained design can involve using a language and content more adjusted to a particular group, to promote an earlier recognition of mental illness, and thus increase access to health services and empowerment in the populations.

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Author contributions

David D. NETO: conceptualization, design, methodology, investigation, project administration, data management, formal analysis, interpretation, supervision, writing original draft, writing review and editing.

Pramod L. MAUGI: conceptualization, design, methodology, investigation, data management, formal analysis, interpretation, writing original draft, writing review and editing.

All authors gave their final approval of the version to be published and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Declaration of interest statement

The authors have no conflicts of interest to disclose.

Ethical statement

This manuscript is the authors' original work.

The study was reviewed and approved by the Clinical Department Ethical Board, license number: 10181.

All participants engaged in the research voluntarily and anonymously, providing their written informed consent to participate in this study.

Data are stored in coded materials and databases without personal data, and the authors have policies in place to manage and keep data secure.

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