RESEARCH ARTICLE

Stigma and Discrimination Among Professionals in Portuguese Integrated Continuing Care Units: Stigma and Discrimination in ICCUs

Patrícia Castro ROCHA [ID] [1], Sara de SOUSA [ID] [1] ✉ , António MARQUES [ID] [1], Raquel SIMÕES de ALMEIDA [ID] [1] , Maria João TRIGUEIRO [ID] [1] , Filipa CAMPOS [ID] [1] , and Paula PORTUGAL [ID] [1]

Affiliations
[1] LabRP-CIR, ESS, Polytechnic of Porto, Portugal

✉ **Correspondence**
Sara de Sousa
LabRP-CIR, ESS, Polytechnic of Porto, Portugal
Rua Dr. António Bernardino de Almeida 400
4200-072 Porto Portugal
Email: SCS@ess.ipp.pt

Introduction: Stigma surrounding mental illness (MI) poses a significant obstacle to treatment access, hinders recovery, and may lead to suboptimal care. Breaking the chains of prejudice and embracing tolerance are essential steps in fostering understanding and compassion for those living with MI.
Aims: This study aims to describe the levels of stigma and discrimination against individuals suffering from MI among professionals in Portuguese Integrated Continuing Care Units (ICCUs).
Methods: A quantitative, observational, cross-sectional study involving 163 participants utilized a sociodemographic questionnaire, alongside two assessment instruments – the Attribution Questionnaire (AQ-27) and Community Attitudes Toward Mental Illness (CAMI).
Results: Results revealed significant differences in stigma levels based on education ($p_{prejudice}$ = .001; $p_{tolerance}$ = .007) and occupation ($p_{prejudice}$ = .025), higher stigma being associated with lower education levels and specific healthcare occupations (medical assistant). Additionally, a positive correlation was found between age and stigma perception (r = -236, $p_{prejudice}$ = .002; r = -167, $p_{tolerance}$ = .033).
Conclusions: The findings underscore the urgent necessity for targeted anti-stigma interventions within Portuguese integrated continuing care units, focusing on mitigating education-based disparities, and addressing specific healthcare occupations that exhibit heightened stigma. Effectively combating stigma among professionals is crucial for fostering a more inclusive and compassionate environment in these care settings.

Keywords: mental illness, stigma, health services, professionals, Integrated Continuing Care Units

Introduction

People will often stigmatize those with mental disorders, discriminating against them, and denying them essential rights and care. In addition, such is followed by social isolation, negatively influencing and limiting education and employment (Corrigan et al., 2000; WHO, 2022). Thus, the stigma associated with mental illness (MI) stands as a major barrier to access treatment and can bear a significant impact on the potential for recovery (Knaak et al., 2017). The concept of stigma was proposed by Erving Goffman in 1961 as a complex social process of labeling, devaluation, and discrimination involving an interconnection of cognitive, emotional, and behavioral components (Goffman, 1963; Knaak et al., 2017; Lyon & Mortimer-Jones, 2020; Moreira et al., 2021). According to

Corrigan & Penn (1999), stigma can have even more of an impact on a person's life than the symptoms of MI itself, and can operate at an individual, interpersonal, and social level (Gagné et al., 2023). Therefore, Corrigan and Bink (as cited in Kolb et al., 2023) differentiate "public stigma" from "self-stigma", noting that stereotypes about mental illnesses generate discriminatory behaviors in individuals without an illness, while in a person with mental illness, experiences of prejudice and discrimination are internalized.

In healthcare settings, stigmatizing attitudes, the use of stereotypes and the attribution of characteristics to the patient before assessing their state of health can have an impact, particularly on the professional's involvement in responding to the health episode or condition, poor prognosis, longer waiting times and verbal abuse (Ghuloum et al., 2022; Gras et al., 2015; Lien et al., 2019). In this way, compromising the adequacy of care can contribute to the worsening of the individual's condition. Thus, the stigma related to mental illness in healthcare systems is identified as a barrier to treatment and recovery, as well as poorer quality care for individuals suffering from mental illnesses (Del Olmo-Romero et al., 2019; Lien et al., 2019; Rivera-Segarra et al., 2019). In addition, in many healthcare settings, stigmatization can cause more harm than the disease itself, and can significantly contribute to a decrease in the healthcare service users' quality of life (Carrara et al., 2019).

Research shows that health professionals are just as likely to have stigmatizing beliefs and behaviors towards people with MI as the general population – since they share stigmatizing attitudes, regarding people with MI as incompetent, violent, and dangerous (Rivera-Segarra et al., 2019). In addition, qualitative studies show that users of general and mental health services complain about stigmatizing and discriminatory attitudes on the part of professionals (Del Olmo-Romero et al., 2019). It is therefore important for healthcare professionals to be aware of the adverse effect that stigmatizing attitudes and discriminatory behavior can produce on healthcare consumers (Carrara et al., 2021).

Schizophrenia and depression are the most common mental disorders to be stigmatized (Jauch et al., 2023; Rivera-Segarra et al., 2019). It should be noted: recent studies have found that professionals stigmatize people with schizophrenia more than those with depression. In addition, they often perceive people with personality disorders as manipulative and thus less deserving of care, and demonstrate a similar attitude towards people with suicidal ideation and substance abuse (Rivera-Segarra et al., 2019).

According to the study by Rivera-Segarra et al. (2019), the attitudes and beliefs health professionals carry can generate a direct influence on their interventions. One example from the same study reveals that the narratives given by professionals show they actively ignore mental illness patients' complaints and only refer them to a mental health professional, even though their main complaint is physical (Rivera-Segarra et al., 2019).

MI related stigma in health services is an area that has been analyzed and identified as a cause for concern. Therefore, a strong impetus exists to carry out research into this issue (Jauch et al., 2023). Interventions through anti-stigma education have been carried out all over the world as a way of combating this problem (Ghuloum et al., 2022; Lien et al., 2019; Raj, 2022). In Portugal, a recent study showed that healthcare professionals exhibit better attitudes and behaviors towards people with MI compared to other professionals in the education and social fields, and that these results are justified due to a greater training and daily contact with people having MI in their jobs (Simões de Almeida et al., 2023). However, there is no evidence available in Portugal in other specific settings, such as Integrative Continuing Care Units (ICCUs).

ICCUs in Portugal are a set of services that aim to provide a response to people in dependency situations and in need of specialized care. They were created in 2005 by Decree-Law no. 101/2006, of 6th June, and became the Portuguese National Network for Integrated Continuing Care (NNICC) (Armindo & Dourado, 2022; Monteiro et al., 2013). Their objectives are to provide health care and social support in a continuous and integrated manner to people who, regardless of age, live in a dependency situation as a result of illness or in need to prevent the worsening of a chronic illness (Armindo & Dourado, 2022; Monteiro et al., 2013; Unidade de Gestão e Acompanhamento da Rede Nacional de Cuidados Continuados Integrados, 2022). The NNICC is made up more specifically of areas such as medicine, nursing, physiotherapy, occupational therapy, speech therapy, psychology, and social work. In Portugal, as of March 2023, there are a total of 672 institutions (Serviço Nacional de Saúde, 2023; Unidade de Gestão e Acompanhamento da Rede Nacional de Cuidados Continuados Integrados, 2022).

Since no research has ever been published in Portugal evaluating stigma and discrimination among NNICC professionals, the aim of this present study is to describe the levels of stigma and discrimination towards people with MI among professionals working in general ICCUs.

Methods

A quantitative, cross-sectional study was conducted from May to July 2023 using an online questionnaire available to the participants in the Google® Forms platform. Participants needed to meet the following criteria for inclusion in the study: to work in ICCUs and to be able to read and understand Portuguese.

Participants and Data Collection

The sample numbered 163 participants, with a mean age of 34.36 (SD = 8.80) years, 146 (89.6%) females, 83 (50.9%) married or in a de facto relationship, and 94 (57.7%) living in the North of Portugal. Most of the participants were therapists – physical, occupational, speech and language therapists (n = 58; 35.6%) or medical doctors and nurses (n = 49; 30.1%), had a bachelor's degree (n = 105; 64.4%), and working in ICCUs for less than five years previously (n = 88; 54.0%) (Table 1).

No official information is available regarding the total number of professionals working in the general ICCUs; therefore, the authors do not know to what degree the sample represents the population.

Table 1. Sociodemographic Characterization of the Sample

	Variables	n (%)
Gender	Male	17 (10.4)
	Female	146 (89.6)
Occupation	Medical doctor/nurse	49 (30.1)
	Therapist (OT, PT, SLT)	58 (35.6)
	Others social and healthcare professionals	31 (19.0)
	Medical assistant	25 (15.3)
Education	High School	27 (16.6)
	Bachelor's degree	105 (64.4)
	Master's degree	31 (19.0)
Marital status	Single/ Divorced/ Widowed	80 (49.1)
	Married/De facto relationship	83 (50.9)
Country regions	North	94 (57.7)
	Center	44 (27.0)
	South	25 (15.3)
Working in ICCUs (years)	0 – 5	88 (54.0)
	5 – 10	40 (24.5)
	> 10	35 (21.5)
Variable		
Age (years)		34.36 (SD = 8.80)

Notes. M – Mean; SD – Standard Deviation; OT – Occupational Therapist; PT – Physical Therapist;
SLP – Speech and Language Therapist; ICCU - Integrative Continuing Care Unit.

The sampling method consisted of a non-probabilistic snowball sampling (Marôco, 2018).

Data was then collected via sharing an online questionnaire with professionals from various ICCUs – e-mails were sent to the units. In order to take part in the study, participants had to complete a declaration of informed consent, in accordance with the Declaration of Helsinki (WMA, 2001). Ethical approval was sought from the ESS, Polytechnic University of Porto Ethics Committee (CE0049D).

Measures

To carry out this study, a sociodemographic questionnaire and two assessment instruments were used: the Attribution Questionnaire (AQ-27) and the Community Attitudes Toward Mental Illness (CAMI).

In order to characterize the sample, the research team developed a sociodemographic questionnaire that consisted of questions such as age, gender, marital status, educational level, occupation, and length of time working in an ICCU.

The Attribution Questionnaire (AQ-27)

The Attribution Questionnaire (AQ-27) is an assessment tool that involves nine dimensions of stigma: Blame, Pity, Irritation, Dangerousness, Fear, Help, Coercion, Segregation, and Avoidance (Sousa et al., 2008). The AQ-27 is made up of different items with variations in the characteristics of the MI being assessed, especially the condition's severity. The AQ-27 comprises a report of an individual with schizophrenia, followed by 27 statements that must be scored using a 9-point Likert-type scale, where 1 means "not at all" and 9 means "very much". The results are calculated using the average scores obtained for the items that make up each dimension. The Avoidance questions are scored inversely. Higher scores correspond to greater stigma towards people with MI and each of the dimensions of the AQ-27 varies between 3 and 27 points (Pinto et al., 2020; Sousa et al., 2012). The preliminary version of the AQ-27 in Portuguese has a Cronbach's α of .88, close to that reported in other studies carried out in Portugal, namely .76 and .83 (Ferrari et al., 2020; Sousa et al., 2012). In this study, AQ-27 has a Cronbach's α = .82 (subscales Cronbach's α: Coercion - .33; Segregation - .76; Avoidance - .69; Fear - .87; Dangerousness - .83; Help - .76; Pity - .68; Anger - .63; Blame - .54).

The Community Attitudes towards Mental Illness (CAMI)

The Community Attitudes towards Mental Illness (CAMI) is an instrument validated for the Portuguese population and developed by Taylor & Dear in 1981 to assess the general public's attitudes towards people with MI (Lopes, 2020; Taylor & Dear, 1981). Initially, this questionnaire consisted of 40 questions, but later adjustments were made to employ a scale with 27 questions and a shorter one with 12 questions. This study used the 27-question scale, which has been validated for the Portuguese population. The scale is divided into two factors, specifically prejudice and exclusion, corresponding to questions 1–3, 11–18, 25 and 26, as well as tolerance and support in the community, corresponding to questions 4–10, 19–24, and 27. The classification is made according to a Likert-type scale from 1 "strongly agree" to 5 "strongly disagree" in questions 1–3, 11–18, 25 and 26, while in questions 4–10, 19–24, and 27 it is made inversely, with 5 being "strongly agree" and 1 being "strongly disagree". The higher the score, the less stigmatizing the attitudes. Cronbach's α for prejudice and social exclusion was .70 and for tolerance and support in the community, .63 (Lopes, 2020). This study has a Cronbach's α of .71 for prejudice and exclusion and .67 for tolerance and support.

Statistical Analysis

After collecting the data, a statistical analysis was carried out using the Statistical Package for the Social Science (SPSS) 28.0 for Windows software with a significance level of .05 and a 95% confidence interval for all the statistical tests applied (Marôco, 2018; Pestana Maria, 2014). The sample's characteristics were analyzed using descriptive statistics. Normality was checked for all variables using skewness (between -0.05 and 1.79) and kurtosis (between 0.12 and 5.16), aiming for values of skewness less than |2.0| and kurtosis less than |9.0| (Gignac, 2019; Cain et al., 2017). Comparisons between the assessment instruments (total score and subscales) and the variables were made using independent Student's t-tests and one-way ANOVA. Pearson's and Spearman's correlation coefficients were used to assess the association between the instrument values and age and years of experience in ICCUs (Marôco, 2018). Multiple Linear Regressions models using a stepwise method were implemented to predict the value of dependent variables (total CAMI, subscales prejudice and tolerance, and total AQ) starting from the knowledge of several independent variables (age, education and occupation). Using stepwise methods for variable selection in multiple regression can save time and effort, particularly with many potential predictors. Categorical variables (education and occupation) were added to the model as ordinal variables. The assumptions for the analysis (linear relationship between the independent and dependent variables, using scatter plot; absence of multicollinearity, using values of tolerance Variance Inflation Factor (VIF); independence of the residuals, using Durbin-Watson's test; constant variance, using a graph of "standardized residuals" against the "standardized

predicted value" – and normal distribution of residuals — using a quantile-quantile (Q-Q) plot; and presence of outliers, using Cook's distance values less than 1) were tested and verified (Marôco, 2018).

Results

Table 2 shows the values of perceived stigma, measured by CAMI - 115.60 (SD = 9.82) and AQ - 100.93 (SD = 20.78) for the total sample. Analyzing these values according to sociodemographic variables, also in Table 2, it is visible that, statistically significant differences exist between occupation [CAMI: $F(3)$ = 3.83, p = .011; AQ: $F(3)$ = 3.58, p = .015] and educational level [CAMI: $F(2)$ = 8.14, p < .001; AQ: $F(2)$ = 3.62, p = .029], in both instruments. Post-hoc tests (Bonferroni) show differences in total CAMI between those with high school education [109.41 (9.42)] and those with bachelor's [(116.17 (9.69); p = .003] and master's degrees [119.06 (8.34); p < .001], as well as between medical doctors and nurses [116.51 (9.39)], and medical assistants [109.68 (9.38); p = .025], and lastly with therapists [117.05 (10.16)]; p = .009]. In the total AQ, there were differences between those possessing high school education [109.78 (27.11)] and those having master's degree [95.65 (19.41); p = .029], and between therapists [98.10 (19.68)] and medical assistants [112.56 (26.99); p = .020], and lastly with other professionals (p = .024). A negative association between the age of participants and CAMI was also present (Spearman's Rho = -.22; p = .004), with the older participants showing more stigma.

Table 2. Stigma Measures According to Sociodemographic Variables and Total Sample

Variables	CAMI total			AQ total		
	M (SD)	p	Effect size	M (SD)	p	Effect size
Total sample	115.60 (9.82)			100.93 (20.78)		
Gender [a] Male Female	112.88 (9.84) 115.92 (9.80)	.229	-.31	102.65 (29.26) 100.73 (19.69)	.796	.09
Occupation [b] Medical doctor/nurse Therapist (OT, PT, SLT) Others social and healthcare professionals Medical assistant	116.51 (9.39) 117.05 (10.16) 116.23 (8.82) 109.68 (9.38)	.011	.07	101.08 (18.09) 98.10 (19.68) 96.61 (18.51) 112.56 (26.99)	.015	.06
Education [b] High School Bachelor's degree Master's degree	109.41 (9.42) 116.17 (9.69) 119.06 (8.34)	< .001	.09	109.78 (27.11) 100.22 (18.74) 95.65 (19.41)	.029	.04
Marital status [a] Single/ Divorced/ Widower Married/De facto relationship	115.79 (10.10) 115.42 (9.59)	.813	.04	102.96 (23.02) 98.98 (18.30)	.222	.19
Country regions [b] North Center South	115.68 (10.04) 115.89 (9.96) 115.20 (9.02)	.961	.00	101.22 (20.19) 103.75 (22.16) 94.88 (20.05)	.230	70 (.70)
Working in ICCUs (years) [b] 0–5 5–10 >10	116.85 (9.35) 115.88 (8.06) 112.14 (12.02)	.054	.04	100.56 (20.71) 100.63 (18.63) 102.23 (23.68)	.918	<.01
	Rho [c]	p		Rho [c]	p	
Age (years)	-.22	.004		.04	.597	

Notes. M – Mean; SD – Standard Deviation; OT – Occupational Therapist; PT – Physical Therapist; SLP – Speech and Language Therapist; ICCU - Integrative Continuing Care Unit. Effect size - eta-squared, Cohen's d; [a] – Independent samples t-test with Cohen's d as effect size. [b] – One-Way ANOVA with eta-squared as effect size; [c] – Spearman's correlation

Tables 3 and 4 demonstrate the values of CAMI and AQ subscales according to education and occupation. Both CAMI subscales (Table 3) show statistically significant differences among the participants' various levels of education, with bachelor's and master's degree holders having a lower level of stigma than those with high school education [$F(2)_{prejudice}$ = 7.07, p = .001; $F(2)_{tolerance}$ = 5.10, p = .025]. Post-hoc tests show differences in the subscale "Prejudice" between those possessing high school education [54.67 (6.46)] and those having earned bachelor's [58.24 (5.21); p = .005] and master's degrees [59.60 (3.87); p = .001].

Regarding occupation, differences occurred between occupations [$F(3)_{prejudice}$ = 3.21, p = .025]. Post-hoc tests show differences between medical doctors/ nurses [58.56 (4.46)] and medical assistants [54.88 (6.60); p = .034] and, also, between the latter and therapists [58.43 (5.64); p = .035].

In the subscale "Tolerance", there were differences between high school education [54.74 (4.72)] and bachelor's [57.93 (5.97); p = .033] and master's degrees [59.45 (5.80); p = .007] (post-hoc data not shown but available upon request).

The association between age and CAMI subscales indicates that stigma increases with age: the older the participant, the higher his/her perception of stigma (Spearman's Rho prejudice = -.24 and $p_{prejudice}$ = .002; Spearman's Rho tolerance = -.17 and $p_{tolerance}$ = .033).

Table 3. CAMI Subscales Measures According to Occupation and Education

Variables	CAMI subscales					
	Prejudice			Tolerance		
	M (SD)	p	Effect size	M (SD)	p	Effect size

Occupation [a]
  Medical doctors & nurses
  Therapist (OT, PT, SLT)
  Others social/healthcare professional
  Medical assistant
	58.56 (4.46)
	58.43 (5.64)
	58.39 (4.70)
	54.88 (6.60)
		.025	.06	57.98 (6.12)
				58.62 (6.36)
				57.84 (5.16)
				54.80 (4.34)
					.054	.05

Education [a]
  High School
  Bachelor's degree
  Master's degree
	54.67 (6.46)
	58.24 (5.21)
	59.60 (3.87)
		.001	.08	54.74 (4.72)
				57.93 (5.97)
				59.45 (5.80)
					.007	.06

	Rho [b]	p		Rho [c]	p	
Age (years)	-.24	.002		-.17	.033	

Notes. M – Mean; SD – Standard Deviation; r – Spearman's correlation; OT – Occupational Therapist; PT – Physical Therapist; SLP – Speech and Language Therapist; [a] – One-Way ANOVA with eta-squared as effect size; [b] – Spearman's correlation

The subscales of AQ (Table 4), in most part, did not exhibit significant differences, either in levels of education or in types of occupation, except for the subscales "Coercion" and "Segregation". Regarding education levels, the subscale "Segregation" shows lower levels of segregation by the participants with bachelor and master levels in relation to people with mental conditions [$F(2)_{segregation}$ = 131.89, p < .001]. In the comparisons between types of occupation, both the subscales "Coercion" and "Segregation" show lower stigma in therapists and other health and social professionals [$F(3)_{coercion}$ = 44.53, p = .042; $F(3)_{segregation}$ = 108.04, p < .001]. Post-hoc tests indicate differences, in the subscale "Segregation" between those with high school education and those with bachelor's (p = .008) and master's degrees (p = .001), as well as between medical doctors, nurses and medical assistants (p = .001), medical assistants and therapists (p < .001), and between other health and social professionals and medical assistants (p = .003). In the subscale "Coercion", differences emerged between other health and social professionals and medical assistants (p = .035) (post-hoc data not shown but available by request).

The association between age and AQ subscales also demonstrates that stigma increases with age, but only in the subscale "Blame": the older the participant, the higher his/her perception that people with mental problems were to blame for their condition (Spearman's Rho = .19 and p = .010).

Table 4. AQ Subscales Measures According to Occupation and Education

	AQ1		AQ2		AQ3		AQ4		AQ5		AQ6		AQ7		AQ8		AQ9	
	M(SD)	p	M(SD)	p	M(SD)	p	M(SD)	p	M(SD)	p	M(SD)	p	M(SD)	p	M(SD)	p	M(SD)	p
Occupation [a]																		
Medical doctor & nurse	7.26 (2.93)		16.39 (3.06)		6.59 (3.06)		7.53 (3.12)		6.67 (3.00)		23.90 (3.04)		14.78 (3.98)		6.67 (4.16)		11.29 (5.25)	
Therapist (OT, PT, SLT)	7.76 (4.60)	.630	15.05 (5.46)	.304	6.22 (3.18)	.333	7.05 (3.79)	.287	6.80 (3.65)	.149	23.31 (3.69)	.114	14.57 (4.24)	.042	6.57 (3.39)	<.001	10.76 (4.71)	.348
Others social/healthcare professional	7.16 (2.78)		14.87 (5.60)		6.10 (3.33)		7.10 (3.43)		6.61 (3.40)		24.23 (3.60)		13.81 (3.27)		6.58 (3.45)		10.16 (5.18)	
Medical assistant	8.28 (4.18)		16.96 (5.73)		7.72 (5.80)		8.88 (6.62)		8.76 (6.77)		22.00 (4.82)		16.80 (4.20)		10.21 (6.17)		12.64 (6.95)	
Education [a]																		
High School	8.15 (4.01)		17.04 (5.49)		7.19 (5.74)		8.26 (6.50)		8.19 (6.69)		22.33 (4.72)		16.44 (4.25)		9.78 (6.25)		12.41 (6.92)	
Bachelor's degree	7.46 (3.91)	.695	15.66 (5.23)	.276	6.52 (3.26)	.498	7.63 (3.48)	.170	6.92 (3.38)	.219	23.51 (3.62)	.141	14.44 (3.88)	.071	7.03 (3.80)	<.001	11.05 (4.84)	.260
Master's degree	7.52 (3.05)		14.74 (6.10)		6.03 (2.79)		6.32 (3.32)		6.35 (3.29)		24.26 (2.90)		14.74 (4.26)		5.58 (3.17)		10.10 (5.43)	
	Rho	p	Rho	p	Rho	p	Rho	p	Rho	p	Rho	p	Rho	p	Rho	p	Rho	p
Age (years)[b]	.189	.015	-.099	.209	-.055	.490	-.075	.344	-.115	.145	-.007	.927	.153	.051	.098	.214	.055	.485

Notes. M – Mean; SD – Standard Deviation; Rho – Pearson's correlation; OT – Occupational Therapist; PT – Physical Therapist; SLP – Speech and Language Therapist. [a] - One Way ANOVA. [b] – Spearman's correlation

Multivariate linear regression (Table 5) revealed statistically significant models for the total CAMI [$F(2,160)$ = 10.43; $p < .001$; $R^2 = .10$] and for both the prejudice sub-scale [$F(3,159) = 6.44$; $p < .001$; $R^2 = .11$] and the tolerance sub-scale [$F(2,160) = 9.61$; $p < .001$; $R^2 = .07$] of CAMI. Education level ($B = .20$; $t = 3.36$; $p < .001$) and age ($B = 4.18$; $t = -2.40$; $p = .017$) were found to be predictors of stigma in the total CAMI, as were education level ($B = 1.93$; $t = 2.47$; $p = .015$) and age ($B = -.12$; $t = -2.43$; $p = .016$) predictors of the existence of prejudice, and age ($B = -.09$; $t = -2.52$; $p = .013$) and education level ($B = 2.08$; $t = 3.04$; $p = .003$) predictors of tolerance. In the multivariate regression [$F(1,161) = 6.71$; $p = .010$; $R^2 = .03$], stigma as measured by AQ-27 was shown to be predicted only by education level ($B = -6.96$; $t = -2.59$; $p = .010$). This model explains a very low variance.

Table 5. Multiple Regression Models to Analyze CAMI Total and Subscales and ASQ With Sociodemographic Variables

	total CAMI	tolerance subscale CAMI	prejudice subscale CAMI	total AQ
Constant	114.12 (4.25)	56.39 (2.61)	58.38 (2.81)	115.01 (5.67)
Education level	-0.20** (0.08)	2.08** (0.77)	1.93* (0.79)	-6.96 ** (2.68)
Age	4.18 * (1.24)	-0.09* (0.05)	-0.12* (0.05)	
Occupation			-0.20 (0.46)	
R-squared	.10	.07	.11	.03

Notes. Standard errors are reported in parentheses.
*, ** indicate significance at the 95%, and 99% level, respectively.

Discussion

This study aims to analyze stigma and discrimination towards people with MI by professionals working in general ICCUs. Our sample shows low levels of stigma and discrimination against people with MI, in comparison with the medium values of the scales used. This could be a positive factor in raising awareness and the acceptance of MI and, consequently, promoting a greater recovery for people with MI (Avdibegović & Hasanović, 2017; Pinto et al., 2020).

Concerning occupation, medical assistants stand out, showing greater stigma towards people having MI. When a person suffering from MI is approached in healthcare, the knowledge that the person has a diagnosis of MI could increase the desire for social distancing, as well as the discomfort in assessing and treating the person in a medical emergency context (Henderson et al., 2014). In addition, people with MI tend to be particularly rejected and are often considered difficult, manipulative, and less deserving of care (Knaak et al., 2017; Minas et al., 2011). Professionals reveal negative attitudes when caring for people with MI, displaying attitudes of futility and reporting that it is difficult to build a relationship with people having MI (Tyerman et al., 2020). The lower stigma observed among therapists, nurses and medical doctors, and other social/ healthcare professionals compared to medical assistants may be attributed to differences in education, training, and professional exposure. Those in higher education professions often undergo extensive education and training in mental health, which may contribute to increased knowledge, empathy, and reduced stigma. In contrast, medical assistants may have less specialized training in mental health and fewer years of education, leading to a comparatively higher level of stigma (Aflakseir et al., 2019; Marangu et al., 2021).

Literacy and education levels play pivotal roles in shaping individuals' attitudes and perceptions, particularly concerning sensitive topics such as mental health stigma. Higher literacy and education levels are often associated with increased awareness, open-mindedness, and a more nuanced understanding of mental health issues. Individuals with higher educational attainment are likely to have been exposed to diverse perspectives, mental health education, and anti-stigma campaigns, thus fostering a more empathetic and informed outlook. On the contrary, lower literacy levels and limited access to education can contribute to misconceptions, stereotyping, and heightened stigma surrounding mental health conditions. Efforts to combat stigma should thus prioritize educa-

tional initiatives, aiming to enhance literacy and promote awareness to create a more inclusive and understanding society (De Silva et al., 2020; Sweileh, 2021).

As for the association between age and increased stigma perception, several factors could contribute. Older individuals may have been exposed to historical societal attitudes that stigmatize mental health conditions, leading to ingrained beliefs. Additionally, older individuals may have had limited exposure to contemporary mental health education and awareness initiatives, potentially influencing their perceptions. Socialization and cultural influences over time may also contribute to generational differences in stigma levels as well as older people having more beliefs and more inflexibility. It is important to note that these are potential explanations, and the complex interplay of various factors influencing stigma requires further investigation (Farrer et al., 2008; Chesser et al., 2016). In fact, while the variables education level, age, and occupation are significant in our study, they only explain 10% of the stigma, which leads to the need for a broader understanding of this phenomenon and further research. The effects of stigma on people with mental illness are known to differ depending on social and demographic categories; a recent narrative review (Ahad et al., 2023) highlights the significance of cultural nuances in contributing to stigma and emphasizes the need to develop cultural sensitivity to combat stigma and raise the awareness of mental health issues worldwide.

Moreover, although this study revealed low levels of stigma and discrimination, its presence is inevitable. It is known that researchers identify lack of awareness as the main factor for the presence of stigma in MI in some social groups. At the same time, interpersonal factors such as social skills, physical appearance, positive and negative symptoms of mental illness, personal experiences, peer relationships and the image that the media displays of people with MI also contribute to the presence of stigma (Ansari et al., 2008; Edwards & Kotera, 2021). A study of medical students in Portugal suggests that theoretical training and contact with people suffering from MI constitute factors that contribute to changes in attitudes and stigma. Students who had already studied or interned in psychiatric wards showed fewer attitudes and greater willingness to include people with MI in the community (Pinto et al., 2020). Thus, practices such as social contact, including testimonies from people with lived experience of MI and educational approaches are fundamental strategies for reducing stigma in healthcare (Carrara et al., 2019; Knaak et al., 2017).

Strengths and Limitations

Possible limitations of this study include a restricted and non-representative sample, as participants were solely recruited online, raising concerns about the generalizability of findings to broader populations or different contexts. The potential for selection bias cannot be ignored, given that participants were volunteers, introducing the possibility that they may differ in characteristics from the general population of healthcare professionals working in ICCUs. Additionally, there is a risk of social desirability bias in responses, particularly when addressing sensitive issues such as attitudes towards patients with mental illnesses. Self-reported data collection introduces social desirability and subjectivity, affecting the reliability of these results. Careful consideration of these limitations remains crucial for interpreting and applying the study's results accurately.

In this sample, differences were found in the perception of stigma according to education levels and occupations. These differences were more visible with the CAMI scale than with the AQ-27, which may be due to the specificities of each one – the CAMI scale divides stigma into two constructs (prejudice and tolerance) while the AQ-27 divides it into nine dimensions, which represent different discriminatory attitudes. We can hypothesize that these attitudes do not contribute the same weight to the stigma construct, and this may be the reason why not only the total values are lower, but also why some of its subscales do not present significant results when analyzed in the present sample.

On the other side, strengths of this study lie prominently in its pioneering nature as the first investigation targeting this specific population – professionals working in ICCUs. Through encompassing diverse professional roles, the research is positioned to uncover nuanced insights into the similarities and differences in attitudes across various healthcare domains. Furthermore, the study's nature promotes a comparative analysis of attitudes among different healthcare professionals, enabling the identification of profession-specific factors that may influence perceptions. This multi-professional assessment not only contributes to the current understanding of mental health attitudes but also serves as a catalyst for future research endeavors seeking to address mental health challenges across a spectrum of healthcare occupations.

Conclusions, Implications and Future Directions

This study aims to describe the levels of stigma and discrimination against people with mental illness (MI) among professionals working in general Integrated Continuing Care Units (ICCUs).

The study reveals that the level of stigma towards individuals with MI among professionals in general ICCUs is low. This may be attributed to a greater willingness to accept MI and an increase in initiatives supporting mental health following the COVID-19 pandemic. Another contributing factor involves the indirect contact these professionals have with the MI population in their professional context. Results indicate that stigma levels vary according to occupation and education, with higher levels of stigma associated with certain healthcare fields (e.g., medical assistants) and lower educational levels. Additionally, a positive correlation was found between age and stigmatizing attitudes, suggesting that stigma increases with age. Cultural and contextual value systems, which differ over time and between contexts, also influence stigma (Subu et al., 2021). Specifically, more stigmatizing attitudes were observed among medical assistants, likely due to insufficient education or training on mental health issues. This lack of understanding can contribute to stereotypes and misconceptions about mental illness.

In summary, stigma levels varied significantly based on education and occupation, with higher levels of stigma observed among those having lower education levels and in certain healthcare professions. This highlights the need for targeted anti-stigma interventions within Portuguese ICCUs to address these disparities and promote a more inclusive environment. Emphasizing the importance of mental health literacy initiatives, such as psychoeducation, can increase the involvement and integration of individuals with MI in the community, leading to better approaches by healthcare professionals in the ICCUs.

Therefore, more awareness-raising activities should be incorporated into the training curriculum for these professionals. Creating initiatives such as educational or literacy programs focused on mental health appreciation, alongside promoting direct contact with individuals having MI, is crucial to reducing stigma and discrimination. These initiatives allow professionals to gain a better understanding of MI symptoms and consequently improve their approach to individuals with MI in the ICCUs. Reducing stigma towards people with MI brings significant benefits, thus contributing to their successful recovery.

Author contribution
Patrícia Castro ROCHA: methodology, investigation, data management, writing original draft.
Sara de SOUSA: conceptualization, design, methodology, project administration, data management, writing original draft.
António MARQUES: conceptualization, funding acquisition, supervision, writing review and editing.
Raquel SIMÕES de ALMEIDA: conceptualization, design, project administration, data management, interpretation, writing original draft.
Maria João TRIGUEIRO: formal analysis, interpretation, writing review and editing.
Filipa CAMPOS: conceptualization, design, writing review and editing.
Paula PORTUGAL: conceptualization, design, writing review and editing.

Declaration of interest statement
The authors have no conflicts of interest to disclose.

Ethical statement
This manuscript is the authors' original work.
All participants engaged in the research voluntarily and anonymously.
Their data are stored in coded materials and databases without personal data.
The studies involving human participants were reviewed and approved by the ESS, Polytechnic University of

Porto Ethics Committee, with the research authorisation number CE0049D.

ORCID
Patrícia Castro ROCHA https://orcid.org/0009-0006-9704-5177
Sara de SOUSA https://orcid.org/0000-0002-3639-8634
António MARQUES https://orcid.org/0000-0002-8656-5023
Raquel SIMÕES de ALMEIDA https://orcid.org/0000-0003-4703-1712
Maria João TRIGUEIRO https://orcid.org/0000-0003-4439-7196
Filipa CAMPOS https://orcid.org/0000-0001-6550-7660
Paula PORTUGAL https://orcid.org/0000-0001-9689-4050

References

Aflakseir, A., Esini, M. R., Goodarzi, M., & Molazadeh, J. (2019). Individuals with mental illness and stigma reduction: A cross-sectional study in a group of college students. *Iranian Journal of Psychiatry, 14*(4), 297–301. https://doi.org/10.18502/ijps.v14i4.1980

Ahad, A. A., Sanchez-Gonzalez, M., & Junquera, P. (2023). Understanding and addressing mental health stigma across cultures for improving psychiatric care: A narrative review. *Cureus, 15*(5), Article e39549. https://doi.org/10.7759/cureus.39549

Ansari, M. A., Raza-Ur-Rahman, Siddiqui, A. A., Jabeen, R., Qureshi, N. R., & Sheikh, A. A. (2008). Socio-demographic correlates of stigma attached to mental illness. *Journal of the Liaquat University of Medical and Health Sciences, 7*(3), 199–203. https://doi.org/10.22442/JLUMHS.08730176

Armindo, R. M., & Dourado, M. (2022). Sinais e sintomas em Unidades de Cuidados Continuados Integrados: Um estudo em duas unidades de média duração e reabilitação [Signs and symptoms in Integrated Continuing Care Units: A study in two medium-term and rehablititation units]. *Revista Portuguesa de Medicina Geral e Familiar, 38*(2), 158–170. https://doi.org/10.32385/RPMGF.V38I2.13235

Avdibegović, E., & Hasanović, M. (2017). The stigma of mental ilness and recovery. *Psychiatria Danubina, 29*(Supplement 5), 900–905.

Cain, M. K., Zhang, Z., & Yuan, K.-H. (2017). Univariate and multivariate skewness and kurtosis for measuring non-normality: Prevalence, influence and estimation. *Behavior Research Methods, 49*, 1716–1735. https://doi.org/10.3758/S13428-016-0814-1

Carrara, B. S., Fernandes, R. H. H., Bobbili, S. J., & Ventura, C. A. A. (2021). Health care providers and people with mental illness: An integrative review on anti-stigma interventions. *The International Journal of Social Psychiatry, 67*(7), 840–853. https://doi.org/10.1177/0020764020985891

Carrara, B. S., Ventura, C. A. A., Bobbili, S. J., Jacobina, O. M. P., Khenti, A., & Mendes, I. A. C. (2019). Stigma in health professionals towards people with mental illness: An integrative review. *Archives of Psychiatric Nursing, 33*(4), 311–318. https://doi.org/10.1016/J.APNU.2019.01.006

Chesser, A. K., Keene Woods, N., Smothers, K., & Rogers, N. (2016). Health literacy and older adults: A systematic review. *Gerontology and Geriatric Medicine, 16*(2), Article 2333721416630492. https://doi.org/10.1177/2333721416630492

Corrigan, P. W., & Penn, D. L. (1999). Lessons from social psychology on discrediting psychiatric stigma. *American Psychologist, 54*(9), 765–776. https://doi.org/10.1037/0003-066X.54.9.765

Corrigan, P. W., River, L. P., Lundin, R. K., Uphoff Wasowski, K., Campion, J., Mathisen, J., Goldstein, H., Bergman, M., Gagnon, C., & Kubiak, M. A. (2000). Stigmatizing attributions about mental illness. *Journal of Community Psychology, 28*(1), 91–102. https://doi.org/10.1002/(SICI)1520-6629(200001)28:1<91::AID-JCOP9>3.0.CO;2-M

Del Olmo-Romero, F., González-Blanco, M., Sarró, S., Grácio, J., Martín-Carrasco, M., Martinez-Cabezón, A. C., Perna, G., Pomarol-Clotet, E., Varandas, P., Ballesteros-Rodríguez, J., Rebolleda-Gil, C., Vanni, G., González-Fraile, E., & The INTER NOS group (2019). Mental health professionals' attitudes towards mental illness: Professional and cultural factors in the INTER NOS study. *European Archives of Psychiatry and Clinical Neuroscience, 269*, 325–339. https://doi.org/10.1007/S00406-018-0867-5

De Silva, L. E. D., Ponting, C., Ramos, G., Guevara, M. V. C., & Chavira, D. A. (2020). Urban Latinx parents' attitudes towards mental health: Mental health literacy and service use. *Children and Youth Services Review, 109*, Article 104719.

Edwards, A. M., & Kotera, Y. (2021). Mental health in the UK police force: A qualitative investigation into the stigma with mental illness. *International Journal of Mental Health and Addiction, 19*, 1116–1134. https://doi.org/10.1007/s11469-019-00214-x

Farrer, L., Leach, L., Griffiths, K. M., Christensen, H., & Jorm, A. F. (2008). Age differences in mental health literacy. *BMC Public Health, 8*, Article 125. https://doi.org/10.1186/1471-2458-8-125

Ferrari, S., Bressi, C., Busnelli, E., Mattei, G., Pozzoli, S., Oliva, A., Galeazzi, G. M., & Pingani, L. (2020). Stigma on mental health among high school students: Validation of the Italian

version of the Attribution Questionnaire-27 (AQ-27-I) in a high school student population. *International Journal of Environmental Research and Public Health, 17*(14), Article 5207. https://doi.org/10.3390/IJERPH17145207

Gagné, T., Henderson, C., & McMunn, A. (2023). Is the self-reporting of mental health problems sensitive to public stigma towards mental illness? A comparison of time trends across English regions (2009–19). *Social Psychiatry and Psychiatric Epidemiology, 58*, 671–680. https://doi.org/10.1007/s00127-022-02388-7

Ghuloum, S., Mahfoud, Z. R., Al-Amin, H., Marji, T., & Kehyayan, V. (2022). Healthcare professionals' attitudes toward patients with mental illness: A cross-sectional study in Qatar. *Frontiers in Psychiatry, 13*, Article 884947. https://doi.org/10.3389/FPSYT.2022.884947

Gignac, G. E. (2019). *How2statsbook* (Online Edition 1). http://www.how2statsbook.com/

Goffman, E. (1963). *Stigma: Notes on the Management of spoiled identity*. Pelican Books.

Gras, L. M., Swart, M., Slooff, C. J., van Weeghel, J., Knegtering, H., & Castelein, S. (2015). Differential stigmatizing attitudes of healthcare professionals towards psychiatry and patients with mental health problems: Something to worry about? A pilot study. *Social Psychiatry and Psychiatric Epidemiology, 50*, 299–306. https://doi.org/10.1007/S00127-014-0931-Z

Henderson, C., Noblett, J., Parke, H., Clement, S., Caffrey, A., Gale-Grant, O., Schulze, B., Druss, B., & Thornicroft, G. (2014). Mental health-related stigma in health care and mental health-care settings. *The Lancet. Psychiatry, 1*(6), 467–482. https://doi.org/10.1016/S2215-0366(14)00023-6

Jauch, M., Occhipinti, S., & O'Donovan, A. (2023). The stigmatization of mental illness by mental health professionals: Scoping review and bibliometric analysis. *PLOS ONE, 18*(1), Article e0280739. https://doi.org/10.1371/JOURNAL.PONE.0280739

Knaak, S., Mantler, E., & Szeto, A. (2017). Mental illness-related stigma in healthcare: Barriers to access and care and evidence-based solutions. *Healthcare Management Forum, 30*(2), 111–116. https://doi.org/10.1177/0840470416679413

Kolb, K., Liu, J., & Jackman, K. (2023). Stigma towards patients with mental illness: An online survey of United States nurses. *International Journal of Mental Health Nursing, 32*(1), 323–336. https://doi.org/10.1111/inm.13084

Lien, Y.-Y., Lin, H.-S., Tsai, C.-H., Lien, Y.-J., & Wu, T.-T. (2019). Changes in attitudes toward mental illness in healthcare professionals and students. *International Journal of Environmental Research and Public Health, 16*(23), Article 4655. https://doi.org/10.3390/IJERPH16234655

Lopes, I. C. P. (2020). *Validation of the Portuguese version of community attitudes towards people with mental ilness (CAMI) [Master´s dissertation, Escola Superior de Saúde do Politécnico do Porto]*. Escola Superior de Saúde do Politécnico do Porto.

Lyon, A. S., & Mortimer-Jones, S. M. (2020). The relationship between terminology preferences, empowerment and internalised stigma in mental health. *Issues in Mental Health Nursing, 42*(2), 183–195. https://doi.org/10.1080/01612840.2020.1756013

Marangu, E., Mansouri, F., Sands, N., Ndetei, D., Muriithi, P., Wynter, K., & Rawson, H. (2021). Assessing mental health literacy of primary health care workers in Kenya: A cross-sectional survey. *International Journal of Mental Health Systems, 15*, Article 55. https://doi.org/10.1186/s13033-021-00481-z

Marôco, J. (2018). *Análise Estatística com o SPSS Statistics [Statistical Analysis with SPSS Statistics]*. (7th ed.). ReportNumber.

Minas, H., Zamzam, R., Midin, M., & Cohen, A. (2011). Attitudes of Malaysian general hospital staff towards patients with mental illness and diabetes. *BMC Public Health, 11*, Article 317. https://doi.org/10.1186/1471-2458-11-317

Monteiro, M. C., Santos, O., & Céu Costa, M. (2013). Continuous Care Units: A response to aging and dependency in Portugal. *Biomedical and Biopharmaceutical Research, 10*(2), 163–178. https://doi.org/10.19277/bbr.10.2.61

Moreira, A.-R., Oura, M.-J., & Santos, P. (2021). Stigma about mental disease in Portuguese medical students: A cross-sectional study. *BMC Medical Education, 21*, Article 265. https://doi.org/10.1186/S12909-021-02714-8

Pestana Maria, G. J. (2014). *Análise de Dados para Ciências Sociais- A complementaridade do SPSS [Data Analysis for Social Sciences - The complementarity of SPSS]*. (6th ed.). Sílabo.

Pinto, I. C., Bernardo, M., Sousa, S., & Curral, R. (2020). Evaluation of mental health stigma on medical education: An observational study with Portuguese medical students. *Porto Biomedical Journal, 5*(4), Article e074. https://doi.org/10.1097/J.PBJ.0000000000000074

Raj, C. T. (2022). The effectiveness of mental health disorder stigma-reducing interventions in the healthcare setting: An integrative review. *Archives of Psychiatric Nursing, 39*, 73–83. https://doi.org/10.1016/J.APNU.2022.03.005

Rivera-Segarra, E., Varas-Díaz, N., & Santos-Figueroa, A. (2019). "That's all Fake": Health professionals stigma and physical healthcare of people living with Serious Mental Illness. *PLOS ONE, 14*(12), Article e0226401. https://doi.org/10.1371/JOURNAL.PONE.0226401

Serviço Nacional de Saúde. (2023). *Administração Central do Serviço de Saúde [Central Administration of the Health System, IP]*. https://www.sns.gov.pt/entidades-de-saude/administracao-central-do-sistema-de-saude/

Sweileh, W. M. (2021). Global research activity on mental health literacy. *Middle East Current Psychiatry, 28*, Article 43. https://doi.org/10.1186/s43045-021-00125-5

Simões de Almeida, R., Trigueiro, M. J., Portugal, P., de Sousa, S., Simões-Silva, V., Campos, F., Silva, M., & Marques, A. (2023). Mental health literacy and stigma in a municipality in the north of Portugal: A cross-sectional study. *International Journal of Environmental Research and Public Health, 20*(4), Article 3318. https://doi.org/10.3390/IJERPH20043318

Sousa, S., Marques, A., Curral, R., & Queirós, C. (2012). Stigmatizing attitudes in relatives of people with schizophrenia: A study using the Attribution Questionnaire AQ-27. *Trends in Psychiatry and Psychotherapy, 34*(4), 186–197. https://doi.org/10.1590/s2237-60892012000400004

Sousa, S., Queirós, C., Marques, A., Rocha, N., & Fernandes, A. (2008). *Versão preliminar portuguesa do Attribution Questionnaire (AQ-27) [Preliminary Portuguese version of the Attribution Questionnaire (AQ-27)]*. Faculdade de Psicologia e Ciências de Educação da Universidade do Porto.

Subu, M. A., Wati, D. F., Netrida, N., Priscilla, V., Dias, J. M., Abraham, M. S., Slewa-Younan, S., & Al-Yateem, N. (2021). Types of stigma experienced by patients with mental illness and mental health nurses in Indonesia: A qualitative content analysis. *International Journal of Mental Health Systems, 15*, Article 77.
https://doi.org/10.1186/S13033-021-00502-X

Taylor, S. M., & Dear, M. J. (1981). Scaling community attitudes toward the mentally ill. *Schizophrenia Bulletin, 7*(2), 225–240.
https://doi.org/10.1093/SCHBUL/7.2.225

Tyerman, J., Patovirta, A. L., & Celestini, A. (2020). How stigma and discrimination influences nursing care of persons diagnosed with mental illness: A systematic review. *Issues in Mental Health Nursing, 42*(2), 153–163.
https://doi.org/10.1080/01612840.2020.1789788

Unidade de Gestão e Acompanhamento da Rede Nacional de Cuidados Continuados Integrados. (2022). *Guia Prático – Rede Nacional de Cuidados Continuados Integrados [Practical Guide – National Integrated Continuing Care Network]*. Instituto Da Segurança Social, I.P.

WMA. (2001). World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. *Bulletin of World Health Organization, 79*(4), 373–374.
https://iris.who.int/bitstream/handle/10665/268312/PMC2566407.pdf

World Health Organization. (2022). *WHO European framework for action on mental health 2021–2025*. WHO Regional Office for Europe.
https://www.who.int/europe/publications/i/item/9789289057813