Stigma toward individuals with intellectual disabilities and severe mental disorders: analysis of postgraduate university students' perceptions

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Abstract

Purpose – *The purpose of this study is to delve into societal stigma surrounding severe mental disorders and intellectual disabilities, emphasizing gender differences and students' proximity influence.*

Design/methodology/approach – *Involving 572 Spanish master's students, this nonexperimental study categorizes participants based on contact frequency, using Goratu and CAEE questionnaires to measure stigma.*

Findings – *Gender-based stigma differences are absent; however, increased contact correlates with lower stigma levels. Notably, greater closeness is associated with more positive attitudes toward intellectual disability, resulting in diminished stigma toward severe mental disorders.*

Practical implications – *This research sheds light on the pervasive stigma faced by individuals with intellectual disabilities and severe mental disorders among postgraduate university students. Notably, the recognition of widespread stigma among individuals with higher education highlights a more significant societal problem. The findings underscore the urgent need for targeted interventions, especially in higher education contexts, to enhance understanding and reduce societal bias.*

Social implications – *By identifying factors influencing stigma and emphasizing the importance of contact in fostering empathy, the study lays the groundwork for informed socioeducational strategies. These strategies have the potential to promote inclusivity, challenge stereotypes and contribute to the well-being and social integration of those affected by intellectual disabilities and severe mental disorders.*

Originality/value – *The findings highlight the efficacy of direct contact in reducing stigma and underscore the necessity for nuanced understanding. The study suggests fostering positive attitudes through increased contact can combat prejudice and promote social inclusion. Nevertheless, further research is crucial to explore factors influencing stigma reduction and design comprehensive socioeducational interventions addressing diverse cultural proficiencies. This study contributes valuable insights for mitigating stigma, fostering inclusivity and informing future interventions.*

Keywords *Stigma, Intellectual disability, Severe mental disorder, Gender, Psychological well-being*

Paper type *Research paper*

Clinical impact statement

Our research sheds light on the pervasive stigma faced by individuals with intellectual disabilities and severe mental disorders among postgraduate university students. Notably, the recognition of widespread stigma among individuals with higher education highlights a more significant societal problem. Our findings underscore the urgent need for targeted interventions, especially in higher education contexts, to enhance understanding and reduce societal bias. By identifying factors influencing stigma and emphasizing the importance of contact in fostering empathy, our study lays the groundwork for informed

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socioeducational strategies. These strategies have the potential to promote inclusivity, challenge stereotypes and contribute to the well-being and social integration of those affected by intellectual disabilities and severe mental disorders.

1. Introduction

Stigma refers to negative reactions, actions or certain beliefs toward a particular group (Corrigan *et al.*, 2009; Corrigan *et al.*, 2010). Stigma manifests through three sociocognitive processes: stereotypes, prejudices and discrimination. Stereotypes refer to the categorization of information about different social groups, prejudices are the result of cognitive and affective responses to stereotypes and discrimination is exhibited through the development of negative behaviors toward individuals or groups due to their group membership (Catalano *et al.*, 2021; Corrigan, 2002, 2004).

The phenomenon of stigma is not a new reality; cultural norms that forbid attributes or traits considered shameful have existed throughout history, with documented evidence of shame and prejudice toward differences dating back to ancient societies (Scambler, 2009).

Regarding the effects of stigma, three specific factors impacting daily life are noteworthy. First, there are profound effects on psychological well-being, wherein negative perceptions pose a threat to one's self-concept and self-esteem, often erroneously associating the affected group with a propensity for violence or danger. Second, the effects on well-being, stemming from threats to personal identity in stigma, highlight the link between negative perceptions and their impact. Stigmatization may lead to rejection, affecting mental and emotional well-being. Finally, the impact extends to interpersonal relationships, specifically to caregivers and family members (Lowell and Wetherell, 2019), as heightened levels of stress and anxiety arise from reactions received from others (Quiles del Castillo, 2019; Link *et al.*, 1999; Thompson *et al.*, 2002). This generates what is known as courtesy stigma or stigma by association, defined as the stigma experienced by individuals due to their close association with a person who has a stigmatizing characteristic (Abojabel and Werner, 2019; Lowell and Wetherell, 2019; Werner *et al.*, 2020).

These negative effects, hindering proper rehabilitation, can persist beyond the subsiding of psychiatric symptoms or difficulties in leading a normalized life (Link *et al.*, 1987). Reluctance to seek specialized help (Corrigan *et al.*, 2010), limited social interactions, difficulties in performing daily activities or even active job seeking (Kranke *et al.*, 2010; Naslund *et al.*, 2016) are some of the most significant consequences.

In addition, linked to stigma, the phenomenon of self-stigma must be highlighted, intimately related to the person's perception of themselves, implying the acceptance of negative stereotypes and public attitudes (Corrigan and Shapiro, 2010; Livingston and Boyd, 2010; Lucksted and Drapalski, 2015). Similarly, another type of stigma, known as institutional, is linked to the policies of institutions, both public and private (Mascayano-Tapia *et al.*, 2015).

In the context of social exclusion, individuals with intellectual disability (ID) and those affected by severe mental disorder (SMD) face persistent disparities in health, housing and employment, becoming victim of social stigma and structural stigma. For instance, in the healthcare domain, they have less access to health information, encounter lower quality professional care and face poorer service accessibility due to discriminatory internal policies (Bolster-Foucault *et al.*, 2021; Ditchman *et al.*, 2013; Livingston, 2020; Mason-Whitehead and Mason, 2007; Min and Wong, 2017). As stated by Plena Inclusión (2023), ID is not an illness, although it may sometimes result from one. While ID implies difficulties in intellectual functioning, SMD encompasses mood, personality and behavioral disorders. Despite their distinctions, this study explores both groups, often perceived similarly (Platt *et al.*, 2019). The style guide on mental health and media (Fábregas *et al.*, 2018) emphasizes that mental illness does not imply lower intellectual capacity and can manifest

throughout life. The general understanding of these conditions and societal responses could significantly influence their real prognosis (Littlewood, 2006).

For the groups addressed in this research, it is crucial to note that SMD and ID, although distinct, may intersect. This underscores the differences in stigmatization processes and emphasizes the need for greater knowledge of the population so as not to equate both realities. In the case of SMD, there is a higher prevalence of ideas related to danger, violence, the impossibility of recovery, or difficulties in leading an independent life. In contrast, in the case of ID, attitudes are usually more linked to paternalism, condescension, low intelligence or the need for assistance though feelings of pity, the development of abusive behaviors or even the idea that this group should study, work and live in segregated contexts are also present (Cangas and Galván, 2020; Fresán *et al.*, 2010; Moraleda *et al.*, 2023b; Jansen-Van Vuuren and Aldersey, 2020; Moreno *et al.*, 2022; Pace *et al.*, 2010), significantly impacting their quality of life (Ali *et al.*, 2012). However, in both cases, these prejudices and ideas ingrained in social imagination hinder normalization and social participation for these groups.

Studies conducted within university settings have highlighted the efficacy of training programs or interactive interventions in diminishing stigma and enhancing awareness about these groups. For instance, the study conducted by Marino and Bilge (2023) showed enhanced perceptions of individuals with ID through focus groups. Similarly, Harrison *et al.* (2019) and Jansen-Van Vuuren and Aldersey (2020) showed the significance of active university participation in initiatives aimed at combating prejudices and dispelling misconceptions about ID, emphasizing the pivotal role of direct engagement. In a different approach, Gillespie-Lynch *et al.* (2015) used online training to enhance understanding of individuals with ID, facilitating the maintenance of meaningful social interactions.

In relation to individuals with SMD, authors such as Gervás *et al.* (2022) referred to communication campaigns aimed at combating the stigma of psychiatric disorders and encouraging students to consult psychologists and psychiatrists, as well as maintaining contact with individuals with SMD in faculties, improving both knowledge about the group and self-care regarding mental health. Likewise, Moraleda *et al.* (2023a) and Cerully *et al.* (2018), through educational documentaries and direct contact, demonstrated how these interventions increased students' comfort in asking about mental illnesses and temporarily reduced stigmatizing attitudes. On the other hand, initiatives such as the Inclúyete program, where students from the University of Almería engage in sports and cultural activities with individuals with SMD, allow for the reduction of prejudices or the serious game "Stigma Stop" (Cangas *et al.*, 2017a; 2017b), which, virtually, provides students with the opportunity to maintain contact with individuals with mental health issues, allowing for the eradication of misconceptions about severe mental disorders such as schizophrenia.

Therefore, the active fight against stigma toward individuals with SMD and ID requires multiple measures (López *et al.*, 2008), where understanding the attitudes of the population and their assessment, especially in higher education contexts (Wada *et al.*, 2019; Zabaleta González *et al.*, 2023), is one of the fundamental steps to subsequently design and implement socioeducational interventions, as previously mentioned, with the aim of increasing knowledge about the potential of these groups (Babik and Gardner, 2021; Casañas and Lalucat, 2018; Mampaso *et al.*, 2024; Wang *et al.*, 2021). This reality will help reduce social distancing (Blundell *et al.*, 2016; Macmillan *et al.*, 2014; Ouellette-Kuntz *et al.*, 2010) and counteract the lack of information and ignorance leading to pessimism about the capacities and possibilities of inclusion (Ceballos and Casanovas, 2017).

2. Method

The purpose of this study focuses on two distinct objectives. First, it seeks to identify possible potential differences in stigma toward individuals with ID and SMD concerning

gender. This is prompted by numerous studies that have identified variations in these variables (Li *et al.*, 2012; Zabaleta González *et al.*, 2023; Muñoz López, 2022; Vera Noriega *et al.*, 2022) among participants with a higher educational level, specifically postgraduate students. Second, the aim is to analyze potential disparities in this stigma toward people with ID and SMD, considering the proximity of students to individuals with ID and SMD. This proximity is classified into three different levels: no contact, occasional contact and frequent contact.

2.1 Design

This study adopts a cross-sectional research design with an ex post facto nature. This approach enables us to examine the relationships between variables at a single point in time while also exploring the causes and awareness of a phenomenon that cannot occur because it has already happened (Campbell and Stanley, 1963; Fox, 1981; Kerlinger, 1987; Mateo, 1997).

2.2 Sample

A sample of 572 postgraduate students has been used through nonprobabilistic convenience sampling, all belonging to a Spanish university in 2023. The choice of postgraduate students was based on the expectation that this group would represent a higher educational level, which allowed us to explore the impact of stigma even among individuals with a high level of education. Descriptive statistical analyses indicated an average age (M) of 35.12 and a standard deviation (SD) of 8.35, with a range between 22 and 59 years. The sample has been dichotomized by gender, with men accounting for 48.25% (M = 35.12; SD = 8.35; $n = 276$) and women 51.75% (M = 33.31; SD = 7.36; $n = 296$).

2.3 Instrument

We inquired with the students about their age, gender, educational background and profession. Additionally, we explored their contact with individuals with ID and SMD, giving them the option to specify the frequency as never, occasionally or frequently. Moreover, two instruments were used:

1. The Goratu questionnaire “Percepciones sobre las personas con discapacidad intelectual” (Cabezas *et al.*, 2022), with a Cronbach’s α reliability of 0.719 and validated through an exploratory factor analysis applying the principal component method for factor extraction and subsequent factorial analysis to determine the optimal number of factors. This questionnaire, using a Likert scale ranging from 1 to 4 (strongly agree, somewhat agree, disagree and strongly disagree), shows the highest stigma level as the score decreases. It consists of 15 items, distributed across 5 factors, which also reflects an overall score:

   - Factor 1: Ideas related to infantile status, lack of personal competencies (hereafter, infantilization).
   - Factor 2: Ideas related to emotional status, well-being with oneself (hereafter, emotional well-being).
   - Factor 3: Ideas related to social status, interest in participating in inclusive vs segregated spaces (hereafter, inclusion).
   - Factor 4: Ideas related to interpersonal relationships (hereafter, interpersonal relationships).
   - Factor 5: Ideas related to self-determination capacity (hereafter, self-determination).

2. The “Actitudes de los Estudiantes hacia la Esquizofrenia” questionnaire (CAEE). This is the adaptation into Spanish of the Questionnaire on Students’ Attitudes toward Schizophrenia (Schulze *et al.*, 2003), whose psychometric properties in Spanish samples denote a reliability as internal consistency Cronbach’s α of 0.95 and a bifactorial structure with a total explained variance of 59.94%, like the results of the original instrument (Navarro *et al.*, 2017). This questionnaire, utilizing a Likert scale (with options: I agree, I disagree and I am not sure), shows the highest stigma level as the score increases. Regarding its structure, it consists of 19 items, divided into two subscales, also with a total score:
   - Subscale fear/danger toward people with schizophrenia (hereafter, danger).
   - Subscale stereotypes toward people with schizophrenia (hereafter, stereotypes).

This inclusion is consistent with the study’s emphasis on addressing mental health issues, as schizophrenia is chosen as an illustrative example due to its widespread recognition and prevalence in the collective consciousness of both the scientific community and the general public.

2.4 Procedure

It is noteworthy that data collection, carried out via the online platform Google Forms in 2023, was conducted on the principle of nonintervention, through which complete independence of the population to be analyzed was sought, giving total freedom to respond to the survey and resulting in the voluntary participation of participants, with no financial compensation for being part of the study and respecting the anonymous and confidential nature of the participants. Invitations were extended to 702 postgraduate students from a Spanish university, resulting in an 81.48% participation rate.

Furthermore, this study used a cross-sectional design using an online survey methodology, which allowed for the efficient collection of data from a large sample of postgraduate students. This approach enabled us to explore the attitudes and perceptions of individuals with different educational backgrounds toward individuals with intellectual disabilities and severe mental disorders.

Additionally, it was ensured with the informed consent for data processing solely for research purposes, seeking to respect the ethical principles regarding scientific research, as stated in the Declaration of Helsinki. The Research Ethics Committee of the University Camilo Jose Cela considers the ethical, methodological, and legal aspects of the study correct and appropriate, with code: 06_23_ISESDI.

2.5 Data analysis

Before exploring the data, the normality assumption was confirmed using Kolmogorov-Smirnov ($p_{K\text{-}S} > 0.05$). According to the results, for gender-related data analysis, parametric statistics were used, specifically the *t*-test with Cohen’s *d* as the effect size estimator. For the analyses on contact with individuals with ID and SMD, the ANOVA test was performed with the estimated effect size eta squared (η^2), with post hoc contrasts using *t*-test with Cohen’s *d*; using version 26.0 of the Statistical Package for Social Sciences (SPSS) statistical analysis software.

3. Results

The analysis focused on exploring stigma toward individuals with ID and SMD within the sample, distinguishing the results by gender. Subsequently, to address the primary research objective, a thorough examination was conducted to explore potential statistically significant differences in stigma toward individuals with ID and SMD based on gender, as presented in Table 1.

Table 1 Descriptive statistics and hypothesis testing for independent samples of stigma toward individuals with ID and SMD differentiated by gender

	Males			Females			*t-test for independent samples*			
Stigma measures	*N*	*M*	*SD*	*N*	*M*	*SD*	T	*df*	p	*d*
ID infantilization	276	14.58	2.64	296	15.02	2.59	−2.017	570	0.044	−0.168
ID emotional well-being	276	10.20	1.50	296	10.14	1.43	0.494	570	0.622	0.041
ID inclusion	276	5.38	1.17	296	5.47	1.04	−0.965	570	0.335	−0.080
ID interpersonal relationships	276	10.07	1.28	296	10.20	1.37	−1.111	570	0.267	−0.093
ID self-determination	276	6.93	1.08	296	6.97	1.03	−0.432	570	0.666	−0.036
ID total	276	47.17	4.94	296	47.80	5.10	−1.500	570	0.134	−0.125
SMD danger	276	3.95	2.25	296	3.74	2.31	1.081	570	0.280	0.090
SMD stereotypes	276	3.94	3.27	296	3.64	2.88	1.193	570	0.233	0.099
SMD total	276	7.89	4.90	296	7.38	4.52	1.303	570	0.193	0.109

Source: Table by author

The table provides detailed descriptive statistics and the outcomes of hypothesis testing for independent samples, illustrating the dimensions and total scores analyzed for each gender group. Following hypothesis testing, no statistically significant differences were found in any of the dimensions and total scores analyzed based on gender ($p > 0.05$).

On the other hand, to address the second research objective, descriptive analyses of stigma toward individuals with ID and SMD in the sample, differentiated by the degree of contact with individuals with ID and SMD (G1: never; G2: occasionally; G3: frequently), resulted in the data presented in Table 2. Table 2 provides a comprehensive overview of stigma levels, allowing us to discern patterns based on the participants' varying degrees of contact with individuals with ID and SMD.

Thus, possible statistically significant differences in stigma toward people with ID and SMD, differentiated by contact with individuals with ID and SMD, were analyzed, as depicted in Table 3. It is noteworthy that only those post hoc contrasts showing statistically significant differences are presented in Table 4.

As indicated by the preceding tests, statistically significant differences were observed in a large considerable portion of the assessed factors, consistently showing positive values in students with greater contact with individuals with ID or SMD, with a small to moderate effect size, following the interpretation of López-Martín and Ardura-Martínez (2022), ranging from small ($d > 0.200$) to large ($d > 0.800$).

Table 2 Descriptive statistics of stigma toward ID and SMI differentiated by contact with individuals with ID and SMD

Stigma measures		*Contact with individuals with ID* *N*	*M*	*SD*	*Contact with individuals with SMD* *N*	*M*	*SD*
ID infantilization	G1	32	13.44	0.47	72	14.33	2.188
	G2	458	14.80	0.11	316	14.72	2.540
	G3	82	15.37	0.30	184	15.14	2.865
ID emotional well-being	G1	32	10.19	0.17	72	10.25	1.412
	G2	458	10.12	0.06	316	10.15	1.504
	G3	82	10.41	0.17	184	10.15	1.418
ID inclusion	G1	32	5.13	0.16	72	5.47	0.964
	G2	458	5.45	0.05	316	5.35	1.098
	G3	82	5.64	0.11	184	5.55	1.149
ID interpersonal relationships	G1	32	10.19	0.22	72	10.11	1.205
	G2	458	10.07	0.06	316	10.09	1.386
	G3	82	10.49	0.12	184	10.23	1.273
ID self-determination	G1	32	6.50	0.19	72	6.78	1.091
	G2	458	6.96	0.04	316	6.91	1.062
	G3	82	7.12	0.11	184	7.11	1.018
ID total	G1	32	45.40	0.95	72	46.94	4.097
	G2	458	47.44	0.22	316	47.22	5.037
	G3	82	48.83	0.57	184	48.18	5.291
SMD danger	G1	32	4.88	0.43	72	4.75	2.019
	G2	458	3.82	0.10	316	3.91	2.374
	G3	82	3.56	0.25	184	3.38	2.090
SMD stereotypes	G1	32	3.90	0.55	72	4.86	3.585
	G2	458	3.63	0.14	316	3.89	3.203
	G3	82	3.22	0.27	184	3.18	2.456
SMD total	G1	32	8.50	0.84	72	9.61	5.076
	G2	458	7.72	0.22	316	7.79	4.929
	G3	82	6.78	0.46	184	6.57	3.828

Notes: Degree of contact with individuals with ID and SMD (G1 = never; G2 = occasionally; G3 = frequently)
Source: Table by author

Table 3 Hypothesis testing for independent samples of stigma toward individuals with ID and SMD differentiated by contact with ID and SMD

Stigma measures	df_1	df_2	*F*	p	η^2	*Decision*	*F*	p	η^2	*Decision*
			Contact with individuals with ID				*Contact with individuals with SMD*			
ID infantilization	2	569	6.37	0.002**	0.031	G3 > G1*** ^ G3 > G2*	2.866	0.058	0.009	
ID emotional well-being	2	569	1.44	0.239	0.009		0.141	0.869	0.008	
ID inclusion	2	569	3.81	0.034*	0.031	G3 > G1*	2.109	0.122	0.003	
ID interpersonal relationships	2	569	3.50	0.031*	0.039	G3 > G2*	0.657	0.519	0.001	
ID self-determination	2	569	4.04	0.018*	0.012	G3 > G1*	2.743	0.066	0.011	
ID total	2	569	5.74	0.003**	0.029	G3 > G1** ^ G3 > G2*	2.666	0.070	0.003	
SMD danger	2	569	3.97	0.019*	0.024	G3 > G1**	9.915	<0.001***	0.032	G3 > G1*** ^ G3 > G2*
SMD stereotypes	2	569	3.01	0.041*	0.000	G3 > G1*	8.288	<0.001***	0.023	G3 > G1*** ^ G3 > G2*
SMD total	2	569	2.96	0.046*	0.007	G3 > G1*	11.682	<0.001***	0.035	G3 > G1*** ^ G3 > G2*

Notes: $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < .001$. Degree of contact with individuals with ID and SMD (G1 = never; G2 = occasionally; G3 = frequently)
Source: Table by author

Table 4 Post hoc tests for stigma toward ID and SMI differentiated by contact with individuals with ID and SMD (only significant values)

Stigma measures		t	*df*	*p*	*d*	t	*df*	*p*	*d*
		G1				*G2*			
Contact with individuals with ID									
ID infantilization	G3	3.57	569	0.001***	0.595	2.88	569	0.011*	0.354
ID inclusion	G3	2.57	569	0.034*	0.397				
ID interpersonal relationships	G3					2.64	569	0.023*	0.492
ID self-determination	G3	2.84	569	0.013*	0.315				
ID total	G3	3.26	569	0.003**	0.812	2.39	569	0.045*	0.335
SMD danger	G3	−2.78	569	0.015*	0.652				
SMD stereotypes	G3	−2.64	569	0.038*	0.318				
SMD total	G3	−2.77	569	0.030*	0.347				
Contact with individuals with SMD									
SMD danger	G3	−4.39	569	<0.001***	0.651	−2.52	569	0.032*	0.355
SMD stereotypes	G3	−3.97	569	<0.001***	0.589	−2.49	569	0.035*	0.316
SMD total	G3	−4.74	569	<0.001***	0.724	−2.86	569	0.012*	0.263

Notes: $^{*}p < 0.05$, $^{**}p < 0.01$; $n = 572$; Degree of contact with individuals with ID and SMD (G1 = never; G2 = occasionally; G3 = frequently)
Source: Table by author

Regarding differences between groups based on contact with individuals with SMD, students with more contact had lower levels in variables related to stigma toward people with SMD. Specifically, participants with frequent contact statistically outperformed those who had never contact in SMD danger ($t = 4.39$, $p < 0.001$, $d = 0.651$), SMD stereotypes ($t = 3.97$, $p < 0.001$, $d = 0.589$) and SMD total ($t = 4.74$, $p < 0.001$, $d = 0.724$). The same trend occurred with those who had occasional contact in SMD danger ($t = 2.52$, $p < 0.050$, $d = 0.355$), SMD stereotypes ($t = 2.49$, $p < 0.050$, $d = 0.316$) and SMD total ($t = 2.86$, $p < 0.050$, $d = 0.263$). Conversely, no differences were found in variables on the stigma scale toward people with ID based on contact groups with individuals with SMD.

Finally, regarding differences in groups based on proximity to individuals with ID, students with closer relationships had statistically less stigma toward people with ID than those with less interaction. In detail, students with frequent contact showed lower levels of stigma than those with occasional contact in ID infantilization ($t = 2.88$, $p < 0.050$, $d = 0.354$), ID interpersonal relationships ($t = 2.64$, $p < 0.050$, $d = 0.492$) and ID total ($t = 2.39$, $p < 0.050$, $d = 0.335$); and then those with no contact in ID infantilization ($t = 3.57$, $p < 0.001$, $d =$

0.595), ID inclusion ($t = 2.57$, $p < 0.050$, $d = 0.397$), ID self-determination ($t = 2.84$, $p < 0.050$, $d = 0.315$) and ID total ($t = 3.26$, $p < 0.010$, $d = 0.812$). Additionally, it is noteworthy that students with more contact with individuals with ID also had less stigma toward people with SMD than participants with no contact with individuals with ID, specifically in SMD danger ($t = 2.78$, $p < 0.050$, $d = 0.652$), SMD stereotypes ($t = 2.64$, $p < 0.050$, $d = 0.318$) and SMD total ($t = 2.77$, $p < 0.050$, $d = 0.347$).

4. Discussion

Traditionally, scientific literature has highlighted gender differences among postgraduate students regarding stigma toward individuals with ID, suggesting that women tend to display more positive attitudes, less stigmatizing behaviors and greater openness when addressing issues related to ID (Zabaleta González *et al.*, 2023; Galán Casado *et al.*, 2020; Li *et al.*, 2012; Muñoz López, 2022; Vera Noriega *et al.*, 2022; Wilson and Scior, 2014).

However, our results reveal the absence of significant differences between men and women, specifically concerning gender. This finding is perceived as a positive aspect, suggesting recent changes regarding the visibility and awareness of ID, SMD and other realities, as stated in the report prepared by the Confederación Salud Mental España, & Fundación Mutua Madrileña (2023). This situation significantly contributes to the reduction in prejudices and misconceptions (Hernández-Beltrán *et al.*, 2023; Moraleda *et al.*, 2023a).

On the other hand, the results obtained showed that students with greater contact with individuals with SMD and individuals with ID had a lower level of stigma and therefore expressed less social distancing. Many studies focus on direct contact as a tool to reduce prejudices associated with these groups (Cangas *et al.*, 2022; Gaebel *et al.*, 2002; González Sanguino, 2021). For example, from a more classical perspective, Kolodziej and Johnson (1996) established that contact-based interventions developed in mental health-related contexts were effective in promoting attitude changes toward people with SMD. Similarly, Angermeyer and Matschinger (2004), Henderson *et al.* (2014), Ahuja *et al.* (2017) or Martínez-Martínez *et al.* (2019) ruled that students more familiar with SMD were less likely to classify individuals, a weaker desire for social distancing and more positive attitudes toward the rights of this group. Moreover, using schizophrenia as a reference provides a common starting point for discussing mental health issues, given its extensive study and widespread coverage in various media. Familiarity with the term facilitates understanding and dialogue about the importance of addressing mental health problems in society.

Regarding ID, studies like that of Blundell *et al.* (2016) or Macmillan *et al.* (2014) establish that the frequency of contact, proximity and relationship are essential to explaining variation in social distancing along with statistically significant association between contact with individuals with ID and more positive attitudes toward this reality. In line with the above, Scior and Werner (2015) emphasized that contact with individuals with ID plays an important role in attitude change and prejudice reduction, promoting full and active inclusive processes.

Despite appreciating various scientific studies showing the importance of contact to reduce stigma both with individuals with SMD and individuals with ID, the results obtained, after contrasting both variables, show that students with closer relationships and contact with individuals with ID exhibit less stigma toward this specific group and toward individuals with SMD. However, this phenomenon does not occur in reverse, as students with more contact with individuals with SMD reduce stigma toward this group but do not show less stigma toward individuals with ID. The cause of this phenomenon may be a lack of knowledge about the reality with which they have no contact. In this

sense, Muñoz López *et al.* (2009) established that, globally, the level of knowledge is very good regarding treatment and causes of mental illness, whereas it is notably lower on issues related to the differentiation of other realities (specifically ID), which can generate a greater number of associated prejudices. Likewise, Wang *et al.* (2021) or Babik and Gardner (2021) emphasized the importance of having prior knowledge of ID to improve attitudes toward this population, where simply being in contact with other vulnerable groups may not positively influence the reduction of stigma toward other groups such as individuals with ID.

5. Conclusion

The current study highlights a knowledge gap among students with a higher educational level regarding two very specific groups such as people with ID and people with SMD. This underscores that education alone does not necessarily lead to a reduction in prejudicial and erroneous conceptions. Consequently, there is a pressing need for inclusive education accompanied by extensive campaigns and awareness programs to promote equal opportunities and objective knowledge of all groups, regardless of their characteristics. Furthermore, advocating for an increased number of studies is essential to enhance the quality of life for individuals with ID and SMD by addressing existing prejudices. Additionally, emphasis is placed on the importance of individuals with ID and SMD actively participating in decision-making processes and policy creation that directly impacts them (Moraleda *et al.*, 2023a; 2023b).

Considering the persistence of stigma among individuals with higher education, our findings suggest that addressing stigma in this seemingly educated and cultured population poses a more significant societal challenge. Despite their educational background, individuals with higher education still exhibit levels of stigma, raising concerns about the effectiveness of current educational approaches in fostering more positive attitudes toward individuals with ID and SMD. This observation emphasizes the need for tailored interventions specifically targeting individuals in higher education to ensure a comprehensive reduction in societal bias.

5.1 Limitations

The main limitations of the study focus on a restricted sample, specifically, postgraduate students. This group may not be representative of a broader cultural and social stratum, indicating a discreet selection process, limited understanding of the sample in terms of sociodemographic, academic and professional variables. Other limitations are associated with restricted control of extraneous variables, the use of self-perception elements, limited control of the variables used, the absence of a control group type that does not allow us to make experimental designs, and the lack of follow-up of the study participants, which would have led to making inferences of a higher order.

It is worth noting that using schizophrenia as an illustrative example for mental health discussions stems from its widespread recognition, serving as a relatable starting point. While this choice simplifies dialogue and underscores the importance of addressing mental health, it does not undermine the complexities of other mental health conditions, each warranting specific attention and understanding.

Similarly, in future research, it would be interesting to increase the sample size, transition toward data collection based on capacity tests rather than relying solely on self-perception. This shift implies a move toward more objective methods, potentially reducing biases associated with subjective interpretations and providing more precise measurements. Additionally, conducting interventions with pretest-posttest designs with the presence of a control group, would offer insights into the effect of these on stigma toward individuals with ID or with SMD.

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Positionality statement: Fully cognizant that our identities can exert influence on our scientific approach (Roberts *et al.*, 2020), the authors aspire to furnish the reader with detailed information regarding our backgrounds. Concerning gender, during the manuscript’s composition, both authors self-identified as middle-aged males. Regarding race, both authors identify as individuals of Caucasian Spanish descent.

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