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Article

The Influence of Gender on Measuring Mental Health Stigma. A Cross-Sectional Vignette Study With the Attribution Questionnaire 9

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ABSTRACT

Background: The assessment of mental health problems has traditionally been done with male or gender-neutral questionnaires. This study analyzes the effects of the gender of the AQ-9 questionnaire, as well as of the respondent, on stigma towards mental health problems. **Method:** A sample of 2,746 adults from the general Spanish population stratified by gender responded to three different versions of the AQ-9 questionnaire: vignette formulated in the female, male and neutral gender. Analyses of invariance and of differences of means for independent samples (ANOVAS) were carried out for both respondent gender and vignette gender. **Results:** The results show that women tend to be more compassionate and perceive more danger or fear, while men fulfil traditional gender roles by feeling more anger or guilt. Depending on the gender of the vignette, there was a tendency to feel more pity and help towards women, as well as fear, danger, avoidance and coercion towards men. The neutral vignette generated more segregation attributions. **Conclusions:** This study underlines the need to take gender into account when designing assessment instruments. Implications and recommendations from an intersectional perspective are discussed.

La Influencia del Género en la Evaluación del Estigma en Salud Mental. Uso de Viñetas Con el Cuestionario de Atribución 9

Palabras clave:
Estigma
Atribuciones estigmatizantes
Salud mental
Evaluación
Género

RESUMEN

Antecedentes: Tradicionalmente la evaluación de los problemas de salud mental se ha realizado con cuestionarios formulados en masculino o en género neutro. En este estudio se analizan los efectos sobre el estigma hacia los problemas de salud mental tanto del género del cuestionario AQ-9 como del género del encuestado. **Método:** Una muestra de 2.746 adultos de la población general española estratificada por género respondió a tres versiones diferentes del cuestionario AQ-9: viñeta formulada en femenino, en masculino y en neutro. Se realizaron análisis de invarianza y de diferencia de medias para muestras independientes (ANOVAS) tanto para el género del encuestado como para el género de la viñeta. **Resultados:** Las mujeres tienden a mostrar más compasión y percibir más peligro o miedo, mientras que los hombres cumplen los roles tradicionales de género al sentir más ira o culpa. En función del género de la viñeta, hay una tendencia a sentir más compasión y ayuda hacia las mujeres, y más miedo, peligrosidad, evitación y coacción hacia los hombres. La viñeta neutra generó más atribuciones de segregación. **Conclusiones:** Se subraya la necesidad de considerar el género en el diseño de instrumentos de evaluación. Se discuten las implicaciones y recomendaciones desde una perspectiva interseccional.

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Stigma related to mental health problems (MHP) is a dynamic social process that encompasses negative thoughts, feelings, and behaviors directed at individuals with a diagnosis (Ottati et al., 2005), and operates at various levels (structural, personal and social), each interacting with the others (Corrigan & Watson, 2004). From this social perspective, stigma does not occur in isolation from other social phenomena, as the presence of sexism, and it is possible to speak about intersectional stigma.

Intersectionality, a term originating from feminist and anti-racist movement called Combahee River Collective (Nardi & Schneider, 1979), refers to the interaction between factors such as gender and discrimination (Crenshaw, 1989). It involves the overlap or intersection of identities, which amplifies the reasons for discrimination or experiencing stigma depending on the individual's identity. This means that the stigmatization process is complex and multifaceted, with different dimensions of identity intersecting to create unique experiences of marginalization and discrimination for each person.

The study of gender and stigma from an intersectional perspective and considering the effect of gender and MHP is scarce, with mixed results. Zamorano et al. (2023), in their review on social stigma in Spain, point out that the relationship between social stigma and gender presents contradictory results (social stigma sometimes it is higher in men and sometimes in women), finding these mixed results also in international systematic reviews on internalized stigma (Del Rosal et al., 2021; Livingston & Boyd, 2010). A specific systematic review on the effect of gender differences in mental health beliefs, found that in overall, women had less social stigma, and were more willing than men to recommend professional help and evaluate treatment more favorably, as well appear to be less dismissive than male persons with MHP (Holzinger et al., 2012). In the same line, a systematic review on MHP stigma in men, confirms the links between gender, masculinity, and stigma, arguing that hegemonic masculinities that idealize men as strong, self-sufficient, and healthy also subordinate men with mental illness, viewing them as weak, inadequate, and unmanly (McKenzie et al., 2022), according to Vogel et al. (2011) model, which shows the role of conformity to dominant U.S. masculine norms and their interference with professional help-seeking in men. However, other studies have pointed out the presence of a greater stigma towards women who must face a sexist society in which they are more discriminated against (Fredman, 2016; McCall, 2005), which sometimes fails to recognize "typical male" symptomatology in women (for example, psychotic symptomatology) (Roberts & Parry, 2023), and which overlooks aspects of mental health unique to women, such as the stigma surrounding postnatal MHP (McLoughlin, 2013; Roberts & Parry, 2023) or during pregnancy (Thi et al., 2024).

From another approach, Boysen et al. (2014) proposed that mental disorders seem to be linked to specific genders, suggesting that people tend to associate some MHP with male (addictions, paraphilias...) or female (eating disorders, body dysmorphia...) stereotypes, with male disorders being more rejected. Gender differences in mental disorders are often attributed to the varying tendencies of men and women to exhibit externalizing and internalizing symptoms. In general terms, externalizing symptoms involve disturbance in conduct, while internalizing symptoms involves disturbances in feelings. This author defends that externalizing symptoms cause greater stigma than internalizing ones, and the keys to the generation of stigma are warmth and internalizing or externalizing symptomatic behavior, but not the male or female gender (Boysen, 2017). Furthermore, highly stigmatized disorders are more common among men, and less-stigmatized disorders are more common among women. In the same line, Wirth & Bodenhausen (2009) found that when presented with gender-typical MHP cases (substance abuse in men, and depression in women), respondents felt more negative affect, less sympathy, and less inclination to help compared to cases where gender was not typical in the disorder, arguing that these atypical cases were not seen as true MHP.

The existence of an interaction between stigma and gender seems clear, although the effects of this connection show mixed results. This may be due to the fact that traditional measures of stigma assessment are scales or questionnaires with items that inquire about general attitudes towards mental health, for example the Community Attitudes to Mental Illness (CAMI) (Taylor & Dear, 1981) with no-gender items, or instruments that include a vignette with a hypothetical case of a person diagnosed with a MHP, such as the Attribution Questionnaire (Corrigan et al., 2002) or the Social Distance Scale (Link et al., 1987). These vignettes typically feature a male character, overlooking the potential interaction between MHP and gender, and falling to account for the intersectional aspects of stigma, such as how gender may shape the experience of MHP. Moreover, traditionally, gender analyses of questionnaires tend to focus on exploring their factorial structure and variation according to the respondents' gender (Lucas-Molina et al., 2017; Marrero et al., 2020), rather than on modifying the gender of the questionnaire itself and analyzing the effects on the responses.

However, some studies have focused on examining the differences between vignettes starring male and female characters, finding interesting differences. Eiroa-Orosa & Sanchez-Moscona (2025), in a study conducted with vignettes in which gender was manipulated, it was found that verbal aggressiveness was related to gender and affected clinical judgment. In Uganda, Lee et al. (2024), found greater acceptance of women with depression compared to men. As did Kasahara-Kiritani et al. (2018), in Japan, where men with depression were more stigmatized than women. Anderson et al. (2015), who found that the vignette of a man who was not under treatment was associated with a greater desire for social distance than the vignette of a woman. In the same vein, Sowislo et al. (2017) in Switzerland, found greater perceived dangerousness in the vignette of a male with schizophrenia versus a female-gendered vignette. And Barthels, Hanewinkel & Morgenstern (2025), found that stigmatization of gambling disorder were higher in men vignettes compared to female. On the contrary, Gearing et al. (2015), found in Jordan, that adolescent boys were more accepted versus girls, as well as in a vignette with adults the male was more accepted as a future employee, although boys were more likely to be stigmatized if they treated their disorder. And Digwamaje & Tadi (2024), in South Africa found that when a man is diagnosed with schizophrenia the cause is spiritual, while in women it is a medical reason. And on the other hand, other studies where the gender of the vignettes was manipulated, found no significant differences depending on the gender of the character (Ahmad et al., 2022; Krzemieniecki & Gabriel, 2021).

Therefore, the aim of this study was to explore the differences in stigma towards MHP according to the gender of the respondent and the gender of the questionnaire in a sample of the Spanish population. Our research questions were: Do women or men have

higher or lower stigma towards MHP? Will they respond with more stigma if the person with a MHP is a man than if it is a woman or the gender is not specified? To answer these questions, a cross-sectional quantitative study was conducted to assess stigma towards MHP using the Attributional Questionnaire 9, which assessed stigmatizing attributions in three types of vignettes: one male, one female and one neutral. We then conducted analyses of invariance and mean difference as a function of respondent gender and questionnaire gender.

Method

Participants

The sample consisted of $N = 2{,}746$ individuals from the general population aged 18 and older. The sample was stratified by sex, age, and territory, incorporating quotas for both sex and age groups, as well as data from each of the 17 Spanish Autonomous Communities (AC), using simple allocation to ensure a minimum of 100 surveys per AC. Sampling conditions ensure a confidence level of 95.5% with $p = q = 50\%$. The error margin is ± 1.88% for the total sample, ± 10% for communities with 100 cases, ± 8.16% for 150 cases, and ± 5.76% for 300 cases.

The inclusion criteria for participating in the study were residency in Spain, being over 18 years of age, and having internet access to complete the evaluation. Exclusion criteria included minors and individuals without internet access.

Instruments

Ad hoc items on socio-demographic data were collected, including age, gender of participant, education level, marital status, place of residence size, parenthood status.

Three ad hoc questions assessing the level of contact with MHP: *Have you ever consulted a specialist for mental health problems? Do you currently live with, or have you ever lived with a person with a mental disorder? Do you currently know, or have you ever known a person (friend, neighbour, partner, etc.) with a mental health problem?*

Stigmatizing attributions related to MHP were assessed using the Attribution Questionnaire-9 (AQ-9) (Corrigan et al., 2014), a shortened 9-item version of the Attribution Questionnaire-27 (AQ-27) (Corrigan et al., 2003). This questionnaire was chosen to assess stigma because of its vignette format, which allows each case to be adapted according to the researcher's interests. Additionally, the AQ-27 has a Spanish version (Muñoz et al., 2015), and its shortened form has been utilised in multiple studies (González-Domínguez et al., 2019; González-Sanguino et al., 2022; González-Sanguino et al., 2019). Participants are introduced to a fictional character through a vignette, with three different versions in this study:

Male vignette: *"John is a 30-year-old single man with schizophrenia. He sometimes hears voices and gets upset. He lives alone in an apartment and works as a clerk in a large law firm. He has been hospitalised six times because of his illness".*

Female vignette: *"Marta is a 30-year-old single woman with schizophrenia. She sometimes hears voices and gets upset. She lives alone in an apartment and works as a clerk in a large law firm. She has been hospitalised six times because of her illness".*

Neutral vignette: *"Garcia is a 30-year-old single person with schizophrenia. He/She sometimes hears voices and gets upset. He/She lives alone in a flat and works as a clerk in a large law firm. He/She has been hospitalised six times because of his/her illness".*

After reading the vignette they rate nine stigma-related attributions toward individuals with MHP using Likert-type items (1–9). Another reason for choosing this questionnaire is that in addition to its total scores showing higher or lower stigma, each item represents a stigmatizing attribution that can be assessed separately. These attributions include Pity, Dangerousness, Fear, Blame, Segregation, Anger, Help, Avoidance and Coercion. Each dimension is scored from 1 to 9 (total score range 9-81). Higher scores indicate greater levels of stigma. For this sample, Cronbach's alpha was .733.

Procedure

This research is part of a study on stigma related to MHP, intellectual disability and homelessness conducted by the Chair Against Stigma Grupo5-UCM (Zamorano et al., 2022). In this research only instruments and results regarding MHP were used.

The fieldwork was conducted by the company "Grupo análisis e investigación" (Analysis and Research Group) through Computer-Assisted Web Interviews (CAWI), in a panel sample of the Spanish population, randomly selected. Data collection took place between January 19 and February 8, 2022. The CAWI process involved participants answering a series of self-administered questions within an established protocol. Participants were informed about the study beforehand and consented to participate anonymously. The average completion time for the survey was approximately 20 minutes.

To assess gender and its interaction with stigma, three versions of the survey (female, male and neutral gender) were designed and applied randomly to the sample. Gender implied the writing of all the items in these conditions, as well as the design of vignettes where a female case (identifying the person with a female name), a male case (identifying the person with a male name), and a neutral case (identifying the person with a surname) were included.

The study "Stigma in the spanish population. A look at people with mental health problems, homelessness or intellectual disabilities" received approval from the Deontological Commission of the Faculty of Psychology at Complutense University of Madrid (Ref. 2020/21-026) and was registered with Clinical Trials (NCT05174962). All results were processed following the guidelines outlined in Regulation (EU) 2016/679 of the European Parliament and the Council of April 27, 2016, regarding the protection of personal data.

Data Analysis

First, descriptive analyses were carried out for both the sample and the dependent variable scores for the respondent's gender and for the different versions of the questionnaire (female, male, neutral).

When designing, constructing or adapting a new questionnaire, it is important to consider how secure comparisons are to be made between scores obtained from different groups or populations. To ensure that the instrument measures the same results in an equivalent way across different groups or conditions, a factorial invariance analysis was carried out. Without this assessment, comparisons between groups could be invalid, as observed differences in scores could be due to biases in the questionnaire and not to actual differences in the constructs measured. Testing the independence structure between questionnaire items was carried out with a Confirmatory

Factor Analysis (CFA) using the lavaan package (Rosseel, 2012). In the model, as many factors as items are established (factor variances are set to zero) and independence is established between them (covariances equal to zero). As the data are reasonably continuous and normal, the model is estimated by Maximum Likelihood (ML). The usual fit indices root-mean-square error of approximation (RMSEA), comparative fit index (CFI) and Tucker–Lewis index (TLI) are reported. The investigation of possible non-independent item structure is carried out with Exploratory Factor Analysis and the factor recommendation algorithms MAP (Velicer's Minimum Average Partial) and parallel, implemented in the psych package (Revelle, 2025). Finally, the validation of the final factor model and the invariance check for the groups formed by respondent gender and questionnaire type was carried out through CFA with the lavaan package. Results are provided for configural invariance (similar factor structure between groups), metric invariance (similar factor loadings between groups) and scalar invariance (similar intercepts between groups). For each level of invariance, the usual fit indicators and the contrast between models are provided. The estimation method was also ML and invariance was studied for both respondent gender and questionnaire version.

The effect of respondent gender and questionnaire version (female, male, neutral) on AQ-9 measures was tested with an analysis of variance for independent samples (ANOVA). The Tuckey test was used to analyse pairwise differences between the means of the factor levels. Due to the low proportion of people with a gender other than male/female in the sample (only eight subjects) in the respondent's gender, only analyses with the male/female category were carried out and the non-binary people were eliminated from the sample.

Data were analyzed using R, version 4.0.0 (R Core Team, 2020).

Results

Sample

The sample consisted of 2,746 people (54.3% women) aged 18 to 89 (M = 46, SD = 15.7), with a majority of individuals with a university education (47.4%), progressive political views (47.2%), being married or living with a partner (64%), and residing in large cities with more than 100,000 inhabitants (48.9%). Additionally, a large majority (63.9%) knew someone with MHP, and 21% of the sample had personally experienced them. Regarding the surveys conducted, 44.17% of responses were for the female questionnaire, 45.63% for the male questionnaire, and 10.2% for the gender-neutral questionnaire. The sociodemographic characteristics of the sample can be found in Table 1.

Table 1
Socio-demographic Characteristics of the Sample (N = 2746)

Variable	*N*	%
Age		
18 to 24 years old	257	9.4
25 to 44 years old	1052	38.3
45 to 64 years old	1027	37.4
65 and over	410	14.9
Gender of respondent		
Male	1256	45.7
Female	1490	54.3
Questionnaire version		
Male	1253	45.63
Female	1213	44.17
Neutral	280	10.2
Marital status		
Single	736	26.8
Married or living with partner	1758	64
Divorced or separated	195	7.1
Widowed	57	2.1
Children		
No	1223	44.5
Yes	1523	55.5
Level of education		
No education	20	0.7
Elementary / Primary /EGB	161	5.9
Secondary / High School /	1264	46
University	1301	47.4
Residence		
City with more than 500.000 inhabitants	510	18.6
City between 100,000 and 500,000 inhabitants	833	30.3
City with between 20,000 and 100,000 inhabitants	754	27.5
Town with less than 20,000 inhabitants	649	23.6
Contact with mental health problems		
Have consulted with a mental health specialist (Yes)	2170	21
Know or have known a person with a mental disorder (Yes)	1756	63.9
Living with or have lived with a person with a mental disorder (Yes)	597	21.7

Invariance

First, the hypotheses of independence (there are as many independent factors as items) and of a single-factor model (all items have loadings on a single common factor) were tested and both were rejected.

The inspection with the MAP and parallel algorithms, together with the exploratory factor analyses led to the proposal of a structure composed of four factors, the first with loadings on items 2, 3, 5 and 8; the second with loadings on items 4, 6, 5 and 8 and a third and fourth factor that collect the variance of items 1 and 9 respectively. When the exploratory and confirmatory factor analyses were carried out, it was found that item 7 behaved erratically with respect to the other items, making the matrices undefined, so it was eliminated from the invariance analyses.

The fit indices indicate that the models are well fitted to the empirical data, with all RMSA values being less than .05, standardized root-mean-square residual (SRMR) values less than .02 and CFI and TLI values greater than .98. Using these models, factorial invariance was tested. Overall, the data supports a level of configurational invariance for all measures, which can be interpreted as the same factor structure (scores on items of the same factors). A level of metric invariance was found for both respondent gender and the version of the questionnaire presented. No other level of invariance can be clearly established.

Differences Between the Variables Studied

Table 2 presents the results of the analysis of plannified differences between the variables studied. These results are presented in detail below.

Table 2
Differences in the Variables Studied According to the Gender of the Respondent and the Gender Version of the Questionnaire

		Sum of Squares	*Df*	Mean Square	*F*	*p*
Item 1. Pity	Gender	25	1	25.16	5.623	.018
	Version	34	2	17.02	3.804	.022
	Interaction	1	2	0.68	0.152	.859
Item 2. Dangerousness	Gender	87	1	87.42	24.456	< .001
	Version	62	2	31.25	8.741	< .001
	Interaction	6	2	3.05	0.854	.426
Item 3. Fear	Gender	175	1	174.98	42.372	< .001
	Version	84	2	42.06	10.184	< .001
	Interaction	3	2	1.75	0.423	.655
Item 4. Blame	Gender	21	1	21.48	6.828	.009
	Version	17	2	8.27	2.628	.072
	Interaction	3	2	1.28	0.406	.666
Item 5. Segregation	Gender	6	1	6.28	1.372	.242
	Version	70	2	35.04	7.654	< .001
	Interaction	14	2	6.97	1.523	.218
Item 6. Anger	Gender	16	1	16.43	4.617	.032
	Version	13	2	6.37	1.791	.167
	Interaction	7	2	3.55	0.998	.369
Item 7. Help	Gender	12	1	12.06	4.075	.044
	Version	38	2	19.24	6.502	< .001
	Interaction	7	2	3.30	1.114	.328
Item 8. Avoidance	Gender	2	1	1.66	0.385	.535
	Version	74	2	36.90	8.564	< .001
	Interaction	3	2	1.42	0.331	.719
Item 9. Coercion	Gender	21	1	21.16	4.557	.033
	Version	45	2	22.55	4.857	.008
	Interaction	1	2	0.63	0.136	0.873
Total	Gender	664	1	663.60	6.529	.010
	Version	1216	2	608.10	5.983	.003
	Interaction	98	2	49.20	0.484	.616

Differences by Respondent Gender

Regarding the differences by gender of the respondent, we found significant differences both in the total score and in most of the items except for items 5 (Segregation) and 8 (Avoidance). Table 3 shows all scores in detail.

Table 3
Stigmatizing Attributions Towards Mental Health Problems by Gender of the Respondent

AQ-9	Women *M (SD)*	Men *M (SD)*
	***N* = 1490**	***N* = 1256**
Item 1. Pity	5.96 (2.05)	5.77 (2.19)
Item 2. Dangerousness	4.66 (1.87)	4.3 (1.93)
Item 3. Fear	4.62 (2.03)	4.12 (2.05)
Item 4. Blame	2.19 (1.7)	2.37 (1.86)
Item 5. Segregation	3.38 (2.14)	3.47 (2.16)
Item 6. Anger	2.68 (1.88)	2.83 (1.9)
Item 7. Help	6.5 (1.68)	6.37 (1.77)
Item 8. Avoidance	3.95 (2.06)	3.9 (2.11)
Item 9. Coercion	6.53 (2.15)	6.36 (2.17)
Total	40.48 (9.89)	39.49 (10.34)

As can be seen in tables 2 and 3, in general, females have significantly higher scores than males on items 1 (Pity, $F = 5.623$, $p = .018$), 2 (Dangerousness, $F = 24.456$, $p < .001$), 3 (Fear, $F = 42.372$, $p < .001$), 7 (Help, $F = 4.075$, $p = .044$) and 9 (Coercion, $F = 4.557$, $p = .033$). In addition, they also have higher scores compared to men on the total score ($F = 6.529$, $p = .010$). On the other hand, males have higher scores on items 4 (Blame, $F = 6.828$, $p = .009$) and 6 (Anger, $F = 4.617$, $p = .032$).

Differences by Questionnaire Version (Female, Male, Neutral)

Regarding the version of the questionnaire, we found significant differences both in the total score and in most of the items, except for items 4 (Blame) and 6 (Anger). The Tuckey test is used to establish between which pairs of values of the variables studied there are significant differences. All scores can be found in Table 4.

Table 4
Stigmatizing Attributions Towards Mental Health Problems by Version of the Questionnaire

AQ-9	Female version *M (SD)*	Male version *M (SD)*	Neutral version *M (SD)*
	***N* = 1213**	***N* = 1253**	***N* = 280**
Item 1. Pity	5.93 (2.15)	5.9 (2.08)	5.55 (2.15)
Item 2. Dangerousness	4.36 (1.9)	4.66 (1.92)	4.41 (1.83)
Item 3. Fear	4.23 (2.06)	4.57 (2.05)	4.25 (2)
Item 4. Blame	2.18 (1.72)	2.33 (1.81)	2.37 (1.85)
Item 5. Segregation	3.3 (2.1)	3.44 (2.16)	3.86 (2.22)
Item 6. Anger	2.67 (1.89)	2.81 (1.88)	2.82 (1.91)
Item 7. Help	6.57 (1.7)	6.32 (1.76)	6.42 (1.65)
Item 8. Avoidance	3 .77 (2.06)	4.11 (2.08)	3.86 (2.1)
Item 9. Coercion	6.35 (2.19)	6.59 (2.13)	6.28 (2.15)
Total	39.36 (10.03)	40.72 (10.13)	39.81 (10.19)

As can be seen in tables 2 and 4, the female-formulated questionnaire has higher scores compared to the male on item 7 (Help, $F = 6.502$, $p < .001$, p adj Tuckey < .001), and higher scores compared to the neutral on item 1 (Pity, $F = 3.804$, $p = .022$, p adj Tuckey = .019).

The questionnaire formulated in masculine presents higher scores compared to feminine in items 2 (Dangerousness, $F = 8.741$, $p < .001$, p adj Tuckey < .001), 3 (Fear, $F = 10.184$, $p < .001$, p adj Tuckey < .001), 8 (Avoidance, $F = 8.564$, $p < .001$, p adj Tuckey < .001), 9 (Coercion, $F = 4.857$, $p = .008$, p adj Tuckey = .016) and on the AQ-9 total score ($F = 5.983$, $p = .003$, p adj Tuckey = .002). On the other hand, compared to the neutral version, the male questionnaire shows higher scores on items 1 (Pity, $F = 3.804$, $p = .022$, p adj Tuckey = .030) and 3 (Fear, $F = 10.184$, $p < .001$, p adj Tuckey = .042).

As for the questionnaire formulated in neutral, it presents higher scores than the male and female versions in item 5 (Segregation, $F = 7.654$, $p < .001$, p adj Tuckey neutral-male = .009, p adj Tuckey neutral-female < .001).

Differences for the Interaction Between Respondent Gender and Questionnaire Version

No significant differences were found for the interaction in any of the questionnaire items, nor for the total score.

Discussion

This cross-sectional study shows that both vignette and respondent gender significantly shape stigma assessment results, underscoring the need to integrate gender considerations into instrument design. Regarding the gender of respondents, significant differences are found in the total score and in most of the items except *Segregation* and *Avoidance*. Women score significantly higher on the total score and on the perceptions of *Pity, Dangerousness, Fear, Help* and *Coercion*, while men score higher on *Blame* and *Anger*. This seems to reveal cultural differences typical of traditional masculinity and femininity constructs, where women are established as nurturing and more empathetic and fearful, thus responding to the AQ-9 questions, whereas the traditional masculinity construct implies more strength and respect, corresponding to higher attributions of anger and guilt in male respondents.

These results are consistent with some studies that underline the same ideas around male hegemonies in social stigma (McKenzie et al., 2022; Voguel et al., 2011) and with the results of the systematic review by Holzinger et al. (2012) who note that women appear to be more willing to volunteer and become involved in the care of people with MHP. They are also in line with those of Bradbury (2020), who finds that the gender of respondents to an attitude questionnaire influences attitudes towards people with schizophrenia, with women's attitudes being more positive than those of men. However, the systematic review by Holzinger et al. (2012) indicates that, in most of the studies reviewed, the stereotypical dangerousness perceptions of MHP was equally prevalent among male and female respondents. In contrast, women perceive people with MHP as responsible for their illness to a lesser extent. Continuing the results of the review by Holzinger et al. (2012), women expressed more positive reactions, less anger and more fear perceptions towards people with MHP, with no gender differences found in terms of desire for social distance and acceptance of coercion in the treatment of people with MHP.

In addition, most of the studies reviewed by Holzinger et al. (2012) found that women were more willing to seek professional help when presenting with a MHP and rated the outcomes of mental health treatments more favourably. These data are consistent with those shown in the recent meta-analysis by Üzümçeker (2025), in which men were less likely than women to seek professional help for their MHP, with the authors noting that traditional masculinity is one of the factors influencing men to seek less psychological help.

Regarding the gender version of the questionnaire, significant differences were found in total score and in most of the items, except in *Blame* and *Anger*. Female vignettes scored higher on Help and although help can be viewed as either stigmatizing (paternalistic) or non-stigmatizing (treating the person equally), the female vignette elicited more helping attributions, portraying women as more helpless and reinforcing traditional gender stereotypes (Fredman, 2016; McCall, 2005). *Pity* is an emotion that tends to be elicited by people perceived as very warm but not very competent (Cuddy et al., 2008), so it is associated with active helping efforts, and could partly explain the significant differences found in the female vignettes on the *Help* item. On the other hand, male vignettes score significantly higher compared to the female on the *Dangerousness, Fear, Avoidance, Coercion* and total score items. These results are consistent with those found by Sowislo et al. (2017) in Switzerland, noting how the case of a man with schizophrenia generated more fear perceptions than a woman. As well as being in line with the findings of Anderson et al. (2015), where in their vignettes men generated more desire for social distance. In addition, it should be noted that the vignette used in the present study includes the diagnosis of schizophrenia, which is more typically male, so perhaps, as other authors have pointed out, recognising this symptomatology in the case of a man is easier than in women and the mental prototype generated may imply more fear or danger perceptions (Roberts & Parry, 2023), since it is easier to find cultural references (in the media, films, or novels) that show stigmatized prototypes of 'scary' men with schizophrenia. Complementarily, in the systematic review by Holzinger et al. (2012) women with a MHP were considered less dangerous and received less rejection than men with MHP.

This could be partly explained by the Stereotype Content Model (SCM), which states that stereotypes about a social group follow two dimensions of social judgement: warmth and competence (Fiske & Durante, 2016). Taking these two dimensions into account, Allstadt Torras et al. (2023) found that people with more externalising disorders such as schizophrenia are perceived as low in warmth and competence within the SCM. Whereas more internalising disorders such as Specific Phobia are perceived more positively on both dimensions. In the same vein, Boysen (2017) finds that low warmth and stereotypically masculine disorders such as schizophrenia consistently elicit negative emotions and behavioural intentions. Furthermore, this author finds evidence, albeit limited, that men with a MHP, compared to women, elicited more fear perceptions and more intention to commit harm, pointing to clear associations between interpersonal warmth, negative emotions and intention to commit behavioural harm.

However, in the neutral questionnaire the scores are higher for *Segregation* compared to the male and female versions, so it seems that gender in this dimension of stigma is not relevant, in line with the findings of other authors (Ahmad et al., 2022; Krzemieniecki & Gabriel, 2021). In addition, the neutral questionnaire shows lower scores compared to the female on *Pity* and compared to the male on *Pity* and *Fear*. In this regard it should be noted that stigma assessment has traditionally been conducted from a male perspective, with questionnaires designed by men and with a focus on assessing the prevailing male stigma. For example, many questionnaires assess dangerousness towards people with MHP, sometimes exclusively, but overlook stigmatizing aspects related to women such as symptom exaggeration, incompetence or the stigma associated with mental health in pregnancy or postpartum (McLoughlin, 2013; Roberts & Parry, 2023; Thi et al., 2024). Finally, no significant differences were found for the interaction between respondent gender and questionnaire version in any of the questionnaire items, nor for the total score.

This study has interesting practical implications, as it may also impact policies related to stigma. It is essential to include gender in the construction of questionnaires, as well as to take the intersectional paradigm into account. Stigma is a construct closely linked to gender, and clinicians and policymakers should be aware that existing traditional instruments have certain limitations that do not capture these implications. Greater investment should be made in the development of questionnaires that address these biases to ensure appropriate assessment, as well as in training professionals

on gender-related issues. Moreover, considering the gender-based differences in attitudes when designing anti-stigma prevention and intervention campaigns would help make them more effective.

This study has several limitations. Although the sample aimed to represent the Spanish population, some groups (e.g., rural residents, youth, and older adults) may be underrepresented. Territorial representativeness was also limited, preventing analysis by Autonomous Communities. Vignettes only differed in relation to the identification of the person (male or female name or surname); without including prototypical gender traits in the description of the case to avoid bias and orient the responses. The 'neutral' case refers to a person with schizophrenia and psychotic symptomatology, modifications in the symptomatology would probably have accentuated the differences found. Generalization is also constrained by cultural context, as results may not apply beyond Spain. Finally, the vignette specified the individual's diagnosis (schizophrenia), so findings may not extend to other diagnoses.

In conclusion, over time, intersectionality in relation to stigma has been studied in connection with various conditions, with some recent tools developed to assess the intersectional discrimination experienced by people with MHP and its interaction with factors like age, gender, or ethnics (Chen et al., 2022; Forbes et al., 2023; Pederson et al., 2022; Taylor & Richards, 2019). However, gender is not usually represented in traditional questionnaires, which are typically designed from a male perspective focused on assessing the prevailing male stigma. The analysis conducted in this study can help in the construction of better questionnaires and its interpretation can establish the certainty of the results obtained in group comparison studies, clarifying the generally mixed or contradictory results that exist around gender and stigma with important practical implications.

Author Contributions

Clara González-Sanguino: Conceptualization, Methodology, Project administration, Supervision, Visualization, Writing - Original draft, Writing - Review and editing. **Miguel Ángel Castellanos:** Conceptualization, Data curation, Formal analysis, Methodology, Visualization, Writing - Original draft, Writing - Review and editing. **Ana Belén Santos-Olmo:** Conceptualization, Data curation, Methodology, Visualization, Writing - Original draft, Writing - Review and editing. **Sara Zamorano:** Conceptualization, Data curation, Investigation, Methodology, Visualization, Writing - Original draft, Writing - Review and editing. **Berta Ausín:** Conceptualization, Methodology, Visualization, Writing - Original draft, Writing- Review and editing. **Manuel Muñoz:** Conceptualization, Funding acquisition, Investigation, Methodology, Project administration, Supervision, Visualization, Writing - Review and editing.

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Declaration of Interest

The authors declare that there is no conflict of interest.

Data Availability Statement

All data and materials used in this analysis are available from the corresponding author upon reasonable request.

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