REDUCING STIGMA TOWARDS MENTAL DISORDER IN SOCIAL EDUCATION STUDENTS THROUGH CASE STUDIES AND PROBLEM-BASED LEARNING

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Abstract

Mental disorders are one of the most stigmatized conditions in our society, which is a barrier to recovery for these individuals. However, stigmatizing attitudes can change, and education and personal experience with people who have a mental disorder can reduce stigmatizing attitudes. The present study assessed 111 social education students' stigma toward people with mental disorders and knowledge about mental disorders before and after an educational intervention involving active case studies and problem-based learning methodologies. Self-reports were used to measure attitudes toward mental disorder and knowledge about mental health. Negative attitudes towards mental disorders were reduced and knowledge increased after the intervention ($p < .05$). These results demonstrate the effectiveness of this type of active educational interventions in reducing stigma towards people with mental disorders. However, it is important to continue conducting studies of this type to increase the scientific evidence.
KEY WORDS: *stigma, attitudes, mental disorder/illness, educational intervention, case study, problem-based learning.*

Resumen

Los trastornos mentales son una de las condiciones más estigmatizadas en nuestra sociedad, lo que supone un obstáculo para la recuperación de estas personas. Sin embargo, las actitudes estigmatizantes pueden cambiar, y la educación y la experiencia personal con personas que tienen un trastorno mental pueden reducir las actitudes estigmatizantes. El presente estudio evaluó el estigma de 111 estudiantes de educación social hacia las personas con trastornos mentales y los conocimientos sobre los trastornos mentales antes y después de una intervención educativa que incluía estudios de casos activos y metodologías de aprendizaje basado en problemas. Se utilizaron autoinformes para medir las actitudes hacia el trastorno mental y conocimientos sobre salud mental. Las actitudes negativas hacia los trastornos mentales se redujeron y los conocimientos aumentaron tras la intervención ($p < 0,05$). Estos resultados demuestran la eficacia de este tipo de intervenciones educativas activas en la reducción del estigma hacia las personas con trastornos mentales. Sin embargo, es importante seguir realizando estudios de este tipo para aumentar las pruebas científicas.

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PALABRAS CLAVE: *estigma, actitudes, trastorno/enfermedad mental, intervención educacional, estudio de casos, aprendizaje basado en problemas*.

Introduction

Stigma is a phenomenon that occurs in many contexts, and particularly in the field of mental health, where it is a major barrier to the social integration of people affected by mental disorder (López, 2012). Stigma is the result of a social dynamic and while its manifestations vary from culture to culture (Cheon & Chiao, 2012), it is generally referred to as the process of labelling, loss of status, and discrimination in which a person is assessed negatively for having a different attribute than their community (Angermeyer & Matschinger, 2005). Several studies have shown that mental disorder is one of the most stigmatized conditions in our society, regardless of the diagnosis (Corrigan & Lundin, 2001; Corrigan & Shapiro, 2010; Loinaz et al., 2011).

The negative effects of stigma towards people with mental disorder can influence all areas of life, such as learning, working and socializing, making it a barrier for people with mental disorder to achieve their goals (Brouwers, 2020; Corrigan, 2003). Stigma is one of the main obstacles to recovery for people suffering from mental disorder (Grandón Fernández et al., 2016). For instance, individuals with mental disorder are often considered to be dangerous or responsible for their disabilities as they relate to non-adherence and disruption of drug treatment (Sirey, 2001). Fear of discrimination can further reduce the number of people with mental health problems in need of help from actually seeking help (Navarro, 2021; Nearchou et al., 2018; Sirey, 2001).

It is vital that social education and social work students and faculty do not contribute to mental disorder stigma with their own biases. These professionals may therefore benefit from educational interventions designed to prevent or reduce stigmatizing attitudes towards individuals with mental disorder (Morgan et al., 2018; Watson et al., 2017; Zellmann et al., 2014).

There is evidence that knowledge about mental health and/or mental disorder can have a significant impact on attitudinal and behavioral changes in relation to stigma (Wolff et al., 1996; Petkari et al., 2018). Specifically, research shows that improving knowledge about the mental health of the population can have a positive impact on stigma, facilitate the search for help, and contribute to a higher proportion of people with mental disorder receiving necessary treatment (Evans-Lacko et al., 2010). The use of pre-assessments and interventions can further help to identify certain knowledge gaps and to evaluate the effectiveness of the intervention in changing knowledge, attitude and behavior in the general population with respect to stigma (Moreno et al., 2014; Thornicroft et al., 2016). Research projects with adolescents have successfully shown to reduce participants' stigmatizing attitudes by presenting accurate information about mental disorder,

symptoms and treatment, and including people with mental problems to educate students (Lanfredi et al., 2019; Spagnolo et al., 2008; Vila-Badia et al., 2016).

Previous research with medical students has demonstrated that attitudes of university students towards mental disorder is relevant to their future practice and personal health (Hernàndez-Èvole et al., 2019). The subject of medical psychology, in which different mental disorders are worked on, can generate positive attitudes of respect, compassion and empathy, and further reduce the stigma towards mental disorders.

Educational programs, in which participants have personal contact with people with mental disorder, have demonstrated promising results on reducing stigmatizing attitudes towards mental disorder (Spagnolo et al., 2008; Thornicroft et al., 2016). Preventive measures against stigma should be therefore executed to educate the next generation of professionals who care for mental health populations (Hernàndez-Èvole et al., 2019). At this point, no studies have been conducted on mental health-related stigma of students in the field of Social Education. However, this group is one of the most responsible groups for evaluation, follow-up, and treatment of people with mental disorder; a high percentage of these graduates work with patients with mental problems (Kourgiantakis et al., 2019).

Case studies and problem-based learning are both methodologies that are useful to deepen the construction of students' learning and facilitate skill development (Guisasola Aranzabal & Garmendia Mujika, 2014). Case studies have proven to be a very positive teaching methodology used in universities, such as Harvard (Giné et al., 2011; Guisasola & Garmendia, 2014). Problem-based learning methodology was first developed at the University's School of Medicine in Canada during the 1960's and has been used successfully (Branda, 2009, 2011). These methodologies have evolved and adapted to the needs of different areas to improve the quality of education and enable future professionals to deal with complex approaches and to analyze contextualized situations. With these methodologies, a real or realistic problem, situation, or case related to the professional context in which the student will perform in the future is presented (Morales & Landa, 2004). During self-directed learning, students work together collaboratively, discuss, review, and debate. In this way, learning is a process of building on previous knowledge. Moreover, it causes constructive cognitive conflicts, without which the student will hardly ask relevant questions and look for practical answers to cause significant changes through critical thinking and redefinition of values (Giné et al., 2011; Morales & Landa, 2004; Perkins et al., 1990). In other words, these learning methodologies help students to develop the ability value diversity of thought, develop motivation and persistence, ethical and civic conduct, creativity and the ability to work with other people, favoring the social dimension to function in the community (Giné et al., 2011).

Social educators work in many areas, with different vulnerable populations, including those suffering from mental disorder. It is therefore important to assess the level of knowledge about mental disorder of Social Education students and design educational models that adequately train students working with this

population. Given the negative attitudes and stereotypes often held as a result of ignorance and lack of contact with people suffering from mental disorder, it is also important to understand Social Education students' attitudes towards mental health populations. Education is one of the basic tools for future social educators to become familiar with this population and further improve their knowledge and attitudes towards individuals with mental disorder.

The first aim of the present exploratory study was to evaluate the stigmatizing attitudes of social education students toward people with mental disorder, as well as students' knowledge about mental disorder. Following an educational intervention that presented information to participants on mental disorder and incorporated active case studies and problem-based learning methodologies, changes in participants' stigma towards and knowledge about mental disorder were assessed to determine the effectiveness of the intervention.

As other studies have shown, social education students are expected to have positive attitudes towards mental disorder prior to intervention. It is also expected that through active Cases Studies and Problem-based Learning methodologies, improvements in both knowledge and stigma towards people with mental disorder will be achieved.

Method

Participants

The sample was comprised of 111 third-year students from the Social Education Program at Public University of the Basque Country that volunteered to participate in the study. Approximately 11.7% of the sample consisted of men, while 88.3% were women, with an average age of 21.39 years (*SD*= 2.42).

Instruments

a) *Community Attitudes toward the Mentally Ill* (CAMI; Taylor & Dear, 1981). Based on the Scale of Opinions on Mental Illness (Cohen & Struening, 1962), the CAMI scale has been used to assess the attitudes of the general population towards individuals with a mental disorder across four dimensions: authoritarianism, benevolence, social restraint and mental health ideology (Grandón Fernández et al., 2016). Each subscale has 10 items, including five positive statements and five negative statements that are rated on a Likert scale scored: 1= Strongly agree, 2= Agree, 3= Neither agree nor disagree, 4= Disagree, 5= Strongly disagree. Scores are from 10 to 50 per dimension, with higher scores meaning more positive attitudes. The CAMI scale has been used for many years across diverse populations (Cotton, 2004; Wahl, 1993) and cultures (Corrigan et al., 2010), allowing for comparisons to be made between different contexts. The Spanish version of the CAMI had a good intraclass correlation coefficient (ICC) ranged from .775 to .339 in the item by item

analysis, and the subscales "authoritarianism" (ICC= .814), "benevolence" (ICC= .853), "social restrictiveness" (ICC= .816) and "mental health ideology in the community" (ICC= .88); demonstrated strong reliability with Chronbach alpha coefficient (α= .909) (Ochoa et al., 2016). The reliability with Chronbach alpha coefficient of the sample of this study is very strong (α= .904).

b) *Attitudes toward Mental Illness* (AMI; Weller & Grunes,1988), Spanish validated version by Gilaberte et al. (2012). The AMI is a 20-item questionnaire that focuses on attitudes toward diagnosis, treatment, and etiology of mental disorder among psychiatric patients. The items are measured on a 5-point Likert scale scored: 1= Strongly agree, 2= Agree, 3= Neither agree nor disagree, 4= Disagree, 5= Strongly disagree. Scores on some items (5, 6, 10, 13, 19) are reversed to avoid response bias (Singh et al., 1998). A neutral score is considered at the cut-off point of 60. The internal consistency for this questionnaire was adequate in other studies (α= .684) (Economou et al., 2017) and in this study (α= .610). Below this score, respondents are considered to have a negative attitude toward those with mental disorder. Above 60, attitude is considered positive in the research with medical student (Gilaberte et al., 2012), however, we are not considered this cut point for our sample.

c) *Mental Health Knowledge Schedule* (MAKS; Evans-Lacko et al., 2010). The MAKS is a scale that assesses six areas of knowledge on mental health related to stigma. The MAKS consists of six items that ask about knowledge of mental health for each of the following areas: seeking help, recognition, support, employment, treatment and recovery, Each item is rated on a 5-point Likert scale, where 5 reflects a strong agreement and 1 reflects a strong disagreement. The maximum score, 30 points, indicates greater knowledge related to stigma toward mental health. The MAKS has a test-retest reliability of 0.71, being a pioneer in its use in Spanish (Villanueva et al., 2015). The reliability of this test in our sample is 0.647.

d) *Reported and Intended Behaviour Scale* (RIBS; Evans-Lacko et al., 2011). The RIBS is a measure that evaluates intentional and consummate behavior, based on The Star Social Distance Scale, which is designed to assess the general population (Evans-Lacko et al., 2010). The RIBS consists of 8 items, wherein the first four items are rated on a 3-point Likert scale ("Yes", "No" and "Don't know"), and the last four items (5-8) follow the same 5-point Likert scale as the MAKS to indicate the level of agreement or disagreement. The maximum score, 20 points, indicates less stigmatizing behavioral intent. The RIBS can be used in conjunction with measures of knowledge and attitudes about stigma in mental health. The internal consistency of the Spanish version of RIBS is good (α= .880) in other studies (Rubio-Varela et al., 2016) and in the present study (α= .826).

e) Additional questions. In addition to the validated scales for measuring different aspects of stigma, ad hoc questions were asked about the degree of familiarity with a person with a mental disorder as well as the subjective perception of the degree of knowledge about mental disorder.

Procedures

The project was carried out at the Public University of the Basque Country, specifically with students from the Social Education degree program. This study was approved by the Ethics Committee for Research with Human Beings CEISH-UPV/EHO, BOPV 32,17/02/2014, with code M10_2019_240, respecting the Declaration of Helsinki of the World Medical Association.

On the first day of class, students were informed about the study, and people who decided to participate voluntarily signed the study's informed consent form and completed pre-tests using the Google forms platform. The questionnaires completed by the students were anonymous and included a code to identify the relationship between the questionnaires conducted before and after the educational intervention.

As the intervention, case study methods and problem-based learning were applied to approach mental disorder and its stigmatization. Students worked in small groups following the methodological procedure and having the teacher as a guide. At the beginning of the course, students defined several cases and problems that could be experienced by different people with mental disorder in order to sequence a possible solution throughout the course. In defining these cases and problems, students used cases and problems that they had experienced during their practicum or work experience. The teacher continuously supervised these cases and problems to see if they were adequate to work on. Furthermore, from the beginning of the four-month period, experts in the field, as psychiatrists, social educators and psychologists, and patients, visited the classroom to share their experiences. Students additionally acquired new learning through watching videos (*A Marvelous Mind*, *1% Schizophrenia*, *Girl Interrupted*), reading reports and academic articles (Cornella, 2005; Escribano, 2005; Fabra et al., 2005; Masiques, 2005, Moreno et al., 2014; Navarro & Triguero 2019) visiting centers, and having debates and other activities that facilitated research in the didactic process. These activities were carried out for four months, once a week. At the end of the term, each group of students had to publicly defend their work in a critical and informed manner, explaining the methodological process and reasoning behind their decision-making based on the educational content. After the training, students completed the questionnaire again to assess the level of change in attitudes toward mental disorder and knowledge about mental disorder.

Students were recruited during the months of January and February 2019. Information was provided to all participants on the research procedure of the present study. Informed consent was obtained for all participants. Students' attitudes and knowledge on mental disorder were measured both before and after the intervention. All participants received the intervention between the months of February and May 2019.

Data analysis

Data from participants was collected through an online Google form. The statistical program, IBM SPSS v. 25, was used to screen the data and perform a data analysis. Descriptive analyses of the socio-demographic data were conducted using descriptive and frequencies, and normality of the variables was analyzed to determine the use of parametric or non-parametric tests. Subsequently, comparisons of means were made using no parametric test (Mann-Whitney U test when the independent variable was dichotomous or Kruskal-Wallis when the variable was more than two conditions)). Finally, mean comparisons were performed for samples related (non-parametric Wilcoxon test) to the intention of knowing the effect of the intervention on the sample of social education students.

Results

A high percentage of the participants (56.8%) indicated that they knew someone with a mental disorder in their environment, while 30.6% indicated that they knew someone with a mental disorder who was not in their environment. A small percentage of participants (12.6%) did not know anyone with a mental disorder.

When comparing the stigma according to sex of the Social Education students, the high percentage of women in the sample compared to men must be taken into account, with the number of men being insignificant at 11.7%. A non-parametric test was conducted, which further indicated no significant differences between the two groups (Table 1).

As seen in Table 2, there are significant differences between the attitude towards people with mental disorder and the form of relationship, with higher scores for people who know someone (whether from the environment or outside it) compared to those who do not. There were significant differences between the groups in all scales of CAMI test. In the authoritarianism scale people who know someone from their environment (YFE) had significant higher scores than people who did not know someone (N) (Mann-Whitney U test=221.5; p=0.004); however, the people who know someone but outside of their environment (YNE) did not have significant differences than people who did not know anyone (Mann-Whitney U test= 159; *p*= .071). In the other of scales of CAMI there were significant differences between the people who know someone with mental disease (YFE or YNE) and the people who did now (Table 2). The effect size of the differences between YFE and N were higher (0.825 and 1.482) than between YNE and N (0.608 and 1.135).

Table 1
Attitude towards people with mental disorder and sex (*N*= 111)

Stigma scales	Sex	*M* (*SD*)	U	Sig.
CAMI				
Authoritarianism	Men (*n*= 13)	35.23 (4.11)	464	.111
	Women (*n*= 98)	36.52 (4.17)		
Benevolence	Men	43.77 (4.53)	625	.912
	Women	43.91 (4.55)		
Social restriction	Men	41.62 (5.08)	512	.250
	Women	42.84 (4.77)		
Ideology about mental illness	Men	39.62 (5.03)	616	.847
	Women	39.03 (4.74)		
Total score	Men	160.23 (17.56)	563.5	.500
	Women	162.30 (16.00)		
RIBS Total score	Men	15.85 (3.60)	483	.148
	Women	17.32 (3.04)		
MAKS Total score	Men	20.31 (3.35)	584	.625
	Women	20.82 (3.35)		
AMI Total score	Men	69.69 (8.39)	604.5	.765
	Women	69.62 (5.07)		

Note: CAMI= Community Attitudes toward the Mentally Ill; RIBS= Reported and Intended Behaviour Scale; MAKS= Mental Health Knowledge Schedule; AMI= Attitudes toward Mental Illness.

The behavior of the people measured with RIBS test showed significant differences between the groups, $\chi^2(2)$= 18.736; *p*≤ .001. Mann-Whitney U test determined that means differed in Yes From my Environment (YFE) (Z= --4.040; *p*≤ .001; *d*= 1.17) and Yes but Not From my Environment (YNE) (*Z*= -3.933; *p*≤ .001; *d*= 1.19) comparing with No (N) group. There found higher scores in MAKS test between YFE and N (*Z*= -2.040; *p*= .041; *d*= 0.587) but there not find significant differences between YNE and N (Z=-1.782; *p*= .075). There were significant differences in the attitude scale of AMI between the groups, YFE (*d*= -3.122; *p*= .002) and YNE (*Z*= -2.965; *p*= .003) comparing with N group.

Following the educational intervention on mental disorder through active methodologies, a comparative analysis was conducted between pre- and post-intervention means. As can be seen in Table 3, the analysis indicated a significant improvement all of the scales of the different stigma tests. The effect size of attitudes of mental health was low, however, the knowledge and behavior regarding the people who suffer mental disease were high.

Table 2
Attitude towards people with mental disorder and type of relationship

Stigma scales	Type of relationship	*M (SD)*	χ^2	Sig.
CAMI				
Authoritarianism	YFE	37.08 (4.39)	9.021	.011
	YNE	36.18 (3.41)		
	N	33.64 (3.84)		
Benevolence	YFE	44.44 (4.86)	13.076	.001
	YNE	44.29 (3.63)		
	N	40.43 (3.52)		
Social Restriction	YFE	43.22 (4.88)	17.635	< .001
	YNE	43.59 (4.00)		
	N	38.14 (3.84)		
Ideology about mental illness	YFE	39.84 (4.84)	12.747	.002
	YNE	39.26 (4.45)		
	N	35.36 (3.39)		
Total score	YFE	164.59 (17.05)	17.412	< .001
	YNE	163.32 (12.51)		
	N	147.57 (12.36)		
RIBS Total score	YFE	17.59 (3.29)	18.736	< .001
	YFE	17.65 (2.19)		
	N	13.93 (2.53)		
MAKS Total score	YFE	21.03 (3.23)	4.354	.113
	YNE	20.94 (3.37)		
	N	19.07 (3.52)		
AMI Total score	YFE	70.79 (5.98)	11.396	.003
	YNE	69.29 (4.25)		
	N	65.21 (3.51)		

Note: CAMI= Community Attitudes toward the Mentally Ill; RIBS= Reported and Intended Behaviour Scale; MAKS= Mental Health Knowledge Schedule; AMI= Attitudes toward Mental Illness; YFE= Yes from my environment (*n*= 63); YNE= Yes but not from my environment (*n*= 34); N= No (*n*= 14).

Table 3

Scores on the scales before and after the interventions through active methodologies

Stigma scales	Pretest M (SD)	Post-test M (SD)	Cohen d	Z	Sig.
CAMI					
Authoritarianism	36.37(4.16)	38.14(3.70)	0.408	-4.325	< .001
Benevolence	43.89(4.53)	45.15(3.76)	0.295	-3.143	.002
Social restriction	42.69(4.80)	43.95(4.17)	0.29	-3.265	.001
Ideology about mental illness	39.10(4.75)	40.69(4.16)	0.382	-4.103	< .001
Total score	162.05(16.12)	167.94(13.50)	0.421	-4.838	< .001
RIBS Total score	13.08(3.28)	17.14 (3.13)	0.979	-7.357	< .001
MAKS Total score	15.26(5.13)	20.76(3.34)	0.955	-7.401	< .001
AMI Total score	69.63(5.51)	71.04(5.17)	0.295	-3.035	.002

Note: CAMI= Community Attitudes toward the Mentally Ill; RIBS= Reported   and   Intended   Behaviour Scale; MAKS= Mental Health Knowledge Schedule; AMI= Attitudes toward Mental Illness.

Discussion

The findings of the present exploratory study demonstrate that effectiveness in using active case study and problem-based learning methodologies in an educational intervention to reduce stigma towards mental disorder in a sample of Social Education students. Results demonstrated a significant increase in participants' knowledge of mental disorder and significant reduction in negative attitudes towards people with mental disorder. This suggests that the greater knowledge and awareness that individuals have about mental disorder, the more accepting and less stigmatizing they are towards individuals affected by mental disorder as previous studies have shown (Evans-Lacko et al., 2010). This finding is very important because people with mental disorder, in addition to suffering from the disorder itself, may not seek help because of the stigma they suffer (López, 2012). Likewise, getting people to reduce stigma can improve the emotional and social situation of people with mental disorder.

Other interventions with general population, school students, university students, armed forces, health-care professionals and mental health service users have demonstrated the short-term benefits for positive attitude change and some lesser evidence for knowledge improvement (Thornicroft et al., 2016). Research studies with university students have been limited to experiences with medical, nursing, social work, special education and law school (Yamaguchi et al., 2013). To date, no studies have been conducted with university students from Social Education programs. Furthermore, the interventions from previous studies with university students have not been well-defined, and have often measured only the short-term benefits of interventions. Thus, as Brouwers (2020) indicates, it is necessary for methodologically strong research to be conducted that can provide robust evidence of the interventions to reduce stigma.

Regarding interventions, some studies involved either mental health education, or education combined with direct contact or video-based contact with someone who has a mental health problem. Education interventions incorporated videos that presented information on mental health problems and the lives of people with mental disorder, discussion sessions with specialist or family members about mental health problems, educational literature, famous films of people with mental health difficulties, or education roleplay. In this intervention, in addition to all these resources, case study and problem-based learning active methodologies were used. This is due to the fact that this type of active methodologies facilitates autonomous and cooperative learning. In this way, students acquire the necessary knowledge and develop skills, such as teamwork or critical thinking. Moreover, in this process, students' empowerment is promoted and research is worked on as a didactic method (Guisasola Aranzabal & Garmendia Mujika, 2014; Ibarluzea et al., 2015; Uskola Ibarluzea et al., 2017). Therefore, it could be said that the methodology used in the present study has been very comprehensive, combining different resources for a better understanding of mental disorder and stigma towards it.

As has been the case for years within Social Education, the sample in the present study was composed of a greater proportion of women than men. This is largely due to the fact that more women than men attend the university, and more women seek degrees in education than men (Márquez-Domínguez et al., 2018). The high percentage of participants who have a person with a mental disorder in their environment (5.8%) is striking. This may be due on the one hand to the fact that the prevalence of young people with mental disorder is increasing (Twenge et al., 2019), which has accelerated during the pandemic (authors, 2020) and that Social Education students are interested and sensitive to this group as a likely reason they chose the degree of Social Education. In addition, about 50% of the sample of students indicated to living, working with someone with mental disorder, 36% had a neighbor or 55% had a friend with a psychological disorder, and more than 75% of them would be willing to have this type of relationship with people with mental disorder. This indicates the high prevalence of mental disorder in society, and in turn reinforces the need for awareness and reduction of stigma towards them.

The average scores of these students' attitudes about stigma in the CAMI questionnaire are higher than in other studies conducted with general population or police officers (Cotton, 2004; Taylor & Dear, 1981). Therefore, social education students show acceptance of people with mental disorder, perceiving them as equals, do not see them as a danger to society and advocate for their inclusion in society (Ochoa et al., 2016). In addition, this scale has also shown significant improvements in attitudes after the educational intervention.

In the AMI questionnaire, which measures attitudes towards the causes, treatment and consequences of mental disorder and its impact on individuals and society (Singh et al., 1998), participants have demonstrated positive attitudes before the intervention, because their scores are more than 60 points (specifically, 69.63). However, this score is lower compared to that of nurses from a previous study (Martin et al., 2020). This may be due to the fact that Social Education students have

a high sensitivity towards people with mental disorder, and consequently a low stigmatization. Furthermore, the results show that attitudes towards the diagnosis, treatment and etiology of mental disorder among psychiatric patients have improved significantly following the intervention. These findings are positive, since social educators are people who are in the front line of work with people with mental disorder and their positive attitude will prevent patients' own self-stigmatization (Kalisova et al., 2018).

According to the MASKS questionnaire, there has been a significant improvement in terms of knowledge about mental disorder after the educational intervention. Therefore, students have indicated an increased knowledge related to mental health stigma thanks to the methodologies applied in this intervention. This result is welcome as it is essential for social educators to acquire knowledge about mental disorder, as they play a key role in a multiplicity of devices described as socio-health spaces (Alber, 2013).

The Reports and Intended Behaviour Scale (RIBS) scores (Evans-Lacko et al., 2011) have also indicated low-stigmatizing behaviors in social educators even before the intervention. Following the intervention, scores have also improved significantly. This improvement in stigmatizing behaviors once again reinforces the effectiveness of the educational intervention applied in this study. It is interesting to note that in the present study, no gender differences were evident in the stigma towards people with mental disorder, yet other studies have shown women to be less prejudiced against people with mental disorder than men (Savrun et al., 2007; Williams & Pow, 2007)

Several studies have shown that meeting people with a mental disorder directly reduces the possibility of stigma (Spagnolo et al., 2008). This statement is corroborated in the present study where there are significant differences between the attitude towards people with mental disorder and the way of relating, in which scores were more positive for people who know someone versus those who do not. Therefore, directly knowing people who have a mental disorder can also help reduce stigma as several studies of de-stigmatization programs have shown (Alexander & Link, 2003; Crisp et al., 2005; Gu et al., 2021). Therefore, direct contact experiences with people with mental disorder should be included in educational interventions to reduce stigma.

Therefore, this study has shown that methodologies based on case study and problem-based learning combined with other activities such as meeting professionals and patients, observing videos, reading reports and academic articles, visiting centres, having debates, among other activities, are effective for the de-stigmatisation of people with mental disorder. In addition, emphasis should continue to be placed on interventions that actively involve people with mental disorder, as close contact with people with mental disorder is directly related to less stigmatizing backgrounds.

This work is an important contribution to the knowledge of university educational methodologies to improve stigma among social educators. It is the first work carried out in Spain on stigma among social educators and a program for the

improvement of this stigma. Further research should be carried out on de-stigmatization among social work education students in Spain and other countries. One of the limitations of the present study could be the size of the sample. Hence, more studies should be carried out in more universities in order to continue studying which are the most effective methods for improving stigma among social educators. Another limitation of the study is that the post-intervention measurement does not allow us to know whether the observed change is due to the immediacy effect or whether it is sustained over time. Therefore, future studies will be conducted at 6 months and 1 year.

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