Electronic Journal of Research in Educational Psychology
ejrep
25 AÑOS 1993 | 2018 UNIVERSIDAD DE ALMERÍA
Ilustre Colegio Oficial de Psicología de Andalucía Oriental

The importance of training and previous contact in university students' opinion about persons with mental disorder

Domingo Barroso-Hurtado[1], **Santiago Mendo-Lázaro**[2]

[1] Department of Pedagogy, University of Granada, Granada
[2] Department of Psychology & Anthropology, University of Extremadura, Cáceres

Spain

Correspondence: Domingo Barroso-Hurtado, Departamento de Pedagogía, Facultad de Ciencias de la Educación, Universidad de Granada. Campus Universitario de la Cartuja s/n, 18071, Granada (Spain).
E-mail: dobarroso@ugr.es

Abstract

Introduction. The present study analyzes differences in university students' opinions towards persons with mental disorder, as a function of whether they have had previous contact with them and whether they have received training about them.

Method. The Opinions about Mental Illness Scale for Spanish population (OMI-S) was applied to a sample of 474 students at the University of Extremadura (Spain). They were also asked whether they had had previous contact with such persons. Within the total sample, 279 students were pursuing a degree in Social Education.

Results. Training received seemed to exert greater influence than previous contact. Moreover, having contact with these persons appeared to produce significant differences in opinion only in students who had received such training.

Discussion and conclusions. Based on the above, it would be beneficial to carry out educational measures that are based on contact, since training would make this contact more positive and meaningful.

Key words: mental disorder, stigmatization, opinion, college students, experience, training, previous contact.

Resumen

Introducción. En la presente investigación, se han analizado las diferencias en la opinión de los estudiantes universitarios hacia las personas con trastorno mental, en función de estos si han mantenido un contacto previo con las mismas y si han recibido formación en relación a ellas.

Método. Se aplicó la Escala de Opiniones sobre la Enfermedad Mental en Población Española (OMI-E) a una muestra de 474 estudiantes de la Universidad de Extremadura (España), a los que se preguntó si habían mantenido dicho contacto y de los cuales 279 cursaban el Grado en Educación Social.

Resultados. La formación recibida parece ejercer una mayor influencia que el contacto previo. Además, dicho contacto parece producir diferencias significativas únicamente en aquellos estudiantes que han recibido esa formación.

Discussion and conclusions. Se desprende la conveniencia de realizar acciones de educación basada en el contacto, ya que pueden favorecer que este último tenga un carácter positivo y significativo.

Palabras Clave: trastorno mental, opinión, estudiantes universitarios, formación, contacto previo.

Introduction

Stigma is understood as marking a particular group with an attribute that is deeply discrediting (Goffman, 2006). In the case of stigma attached to persons with mental disorder, this translates to beliefs, attitudes, and emotional and behavioral responses that may result in adverse consequences for the individuals belonging to this group (Brown, 2012). These consequences include limitations to their participation in society and in their access to services offered therein (Chen, Koller, Krupa & Stuart, 2016); acceleration in processes of mental disorder chronification and exclusion from society (Lolich & Leiderman, 2008); and a greater desire in others for social distance (Boyd, Katz, Link & Phelan, 2010), meaning the intention to avoid contact or keep relationships with such persons at a different level (Fresán et al., 2012).

In studies about reducing stigma, despite the fact that the DSM diagnostic manual includes a total of 216 mental disorders, the term "mental disorder" is used in a generalized way to refer to this category of different disorders (Delgado, 2015). According to this manual, a mental disorder is a syndrome that stems from a dysfunction in processes that sustain mental functioning--whether psychological, biological or developmental. This dysfunction is related to clinically significant alterations in the subject's cognition, behavior or emotional regulation and result in discomfort or disability in important activities in the subject's life (American Psychological Association, 2013).

Notwithstanding, stigmas do not only affect persons who belong to the stigmatized group. Their families, close social circle and professionals who work with them may also be affected (Lolich & Leiderman, 2008); such persons may be both victims and perpetrators of stigmas. Certain research studies indicate that Social Work students wish to keep a degree of social distance from persons with these disorders (Covarrubias & Han, 2011) and that professionals who work in psychosocial rehabilitation present levels of mental disorder stereotyping similar to those present in the general population (Nordt, Rössler & Lauber, 2006). It is therefore of value to ascertain the impact of different strategies that seek to reduce stigma in groups of professionals who work in this area.

Strategies for reducing stigma

Different strategies have been employed in an attempt to reduce the impact of stereotypes, prejudices, and ultimately, the stigmatization of persons with mental disorder. Two

such strategies are (1) *education* that fosters increased knowledge and training about these persons, and (2) *social contact*, focusing on exposure to and interaction with them (Delgado, 2015). There is no consensus, however, on which of these two approaches is more adequate. On one hand, certain authors emphasize the role of social contact and exposure in creating positive attitudes and reducing stigmatization of persons with mental disorder (Álvarez & Pernía, 2007); on the other hand, others assert that there is greater influence from education-based strategies (Smith, 2008), which can promote the construction of more positive images, a preference for less social distancing from these persons (Lolich & Leiderman, 2008), and improved attitudes toward them (Álvarez & Pernía, 2007).

This lack of consensus also applies to the impact of these strategies on university students' opinion and attitudes toward persons with mental disorder. The impact of education-based strategies on stereotypes, attitudes and stigmatizing behaviors toward these persons has been demonstrated in professionals and students from different spheres (Pingani et al., 2016; Sharp, Hargrove, Johnson & Deal, 2006; Smith, 2008). However, other research studies did not find a relationship between training about mental disorders and reduced stigma (Covarrubias & Han 2011), nor did they find a significant impact on university students' opinion and attitudes (Fresán et al., 2012; González, Tinsley & Kreuder, 2002; Zellmann, Madden & Aguiniga, 2014). In this line of thought, for example, education might not be effective if it focuses on explaining mental disorders mainly in terms of their biogenetic causes, since this usually encourages an individual's perception of these persons as dangerous, unpredictable, not responsible for their actions; moreover, it does not usually help reduce the stigmatization they experience (Mannarini & Boffo, 2013).

It would interesting to take into account the motivations that led individuals to receive such training or to pursue a certain degree, such as the case of altruism in students that pursue more humanistic degrees like Education, Medicine and Psychology (Martínez, Castro, Lucena & Zurita, 2015). On the other hand, social contact with persons who have a mental disorder has been shown to influence students from different spheres, including the sphere of mental health (Medina-Ortíz et al., 2010; Smith, 2008). This influence has been demonstrated in cases of indirect contact (Nguyen, Chen & O'Reilly, 2012), as well as in direct, regular, close contact (Brown, 2012). However, other research studies did not find a relationship between

contact and reduced negative attitudes (Fresán et al., 2012), or they even found that negative attitudes increased (Omori et al., 2012).

In *contact-based strategies,* it is useful to consider the type of contact involved, whether direct or indirect, and differing degrees of experience (Senra-Rivera, Arriba–Rossetto & Seoane-Pesqueira, 2008); and the conditions in which this contact takes place. For example, in order to reduce prejudice, inter-group contact could follow the indications of Allport (1958), where the groups enjoy equal status and cooperation. Authors like Pettigrew and Tropp (2006), however, while noting that these indications are good, they are not strictly necessary. Addition, in this between-group contact, affective factors (empathy and reduced anxiety) prevail over cognitive factors (knowledge about the other group) as mediators in reducing prejudice, although both have a positive influence (Pettigrew & Tropp, 2008).

On the other hand, confronting stereotypes about a certain group with information that refutes false beliefs can be one of the most effective channels for modifying stereotypes (Fernández, 2005). With regard to individual cognitive change processes, the so-called bookkeeping, conversion and subtyping models may ensue when such conflicting information is presented (Crocker & Weber, 1983).

Finally, the above strategies can be combined, in *contact-based education,* which may encourage the acquisition of more positive knowledge, attitudes and behavioral intentions towards persons with mental disorder (Chen et al., 2016), and may also be quite effective in reducing stigma (Delgado, 2015). Certain studies indicate that education and contact, taken separately, do not exercise an influence toward positive change in attitudes toward persons with schizophrenia, and they suggest that the two variables need each other in order for this to take place. They affirm that for personal social contact to be effective, prior knowledge is required, and for that knowledge to be associated positively with attitudinal change, it must be accompanied by social contact (Eack & Newhill, 2008; Eack, Watson & Newhill, 2012).

Objectives

Keeping in mind the foregoing, the present study seeks to contribute useful information about strategies for reducing stigma toward persons with mental disorder, by analyzing differences in university students' opinion about persons with mental disorder as a func-

tion of two variables: training they have received about persons with mental disorder, and the existence of prior contact with them.

Method

Participants

Participating in this study were 474 students from the University of Extremadura (Spain), of which 22% were male and 78% were female. The mean age of the sample was 21.23 years (SD = 3.92). Within the total sample, 275 (58%) students had had prior contact with persons with mental disorder, and 279 (59%) were enrolled in the Social Education degree. This degree qualifies students for the profession of social educator in Spain, a recognized profesional category that falls within the vocational area of Social Work, addressing the aspect of Social Pedagogy (Calderón & Gotor, 2013). The remaining 195 students (41%) were pursuing degrees for professions where persons with mental disorder were not among the main target beneficiaries (Spanish Philology, Modern Languages and Literatures, Classical Philology, Law, Business Administration). Within their respective degree programs, 201 (42.41%) students were in their first year, 81 (17.09%) in their second year, 120 (25.32%) in their third year and 70 (14.77%) were fourth-year students.

Students were divided into two groups for the sake of comparisons. On one hand, we have the Social Education students, who we categorized as subjects who have received training about the population of persons with mental disorder, since their curriculum includes material about this population in the first year and onward (and on other topics such as stereotypes, prejudices and rehabilitation). Moreover, they will become professionals who are able to work in the area of psychosocial rehabilitation (University of Extremadura, 2016).

On the other hand, we have students who have not received specific training about this population in their curriculum, given that persons with mental disorder are not among the primary target beneficiaries of their professions. These students have been assigned to the category "other degrees".

Instruments

Opinions about Mental Illness Scale -- Spanish Population (OMI-S). In order to carry out this investigation, we used the Fresán et al. translation (2012) of the Opinions about Men-

tal Illness Scale (Cohen & Struening, 1962). Since the scale was originally applied in a Mexican population, a few words and expressions were exchanged for others that are more commonly used in Spain (e.g. “colonia” became “barrio”, and “hacer amistad” became “entablar amistad”). Similarly, the term mental illness was changed to mental disorder, in order to use terminology that is more accepted by the scientific community, and is reflected in the DSM 5 (American Psychological Association, 2013).

In order to analyze the additional factor of relationship between training received and previous contact with persons with mental disorder, we included a single item, as other studies have done (Serrani, 2012), to ask if subjects had had previous contact with persons with mental disorder, without distinguishing different types of contact.

The OMI-S contains 34 items measured on a Likert scale with five response options, where 1=disagree completely and 5=agree completely. The 34 items are grouped into six factors: (1) *Separatism* (10 items), referring to the social distance one wishes to maintain in order to remain separate from persons with mental disorder, emphasizing perceived differences from them, e.g. “Psychiatric patients should not be treated in the same hospital as other patients”; (2) *Stereotyping* (4 items), referring to whether the responder has stereotypes toward this group, and categorizes them has having a certain behavior pattern and intellectual ability e.g. “Everyone who has a mental disorder behaves strangely”; (3) *Restrictiveness* (4 items), referring to a point of view that would limit the rights of persons with mental disorder, e.g. “People with mental disorder should not have children”; (4) *Benevolence* (8 items), referring to compassion toward this group, e.g. “The best way to help persons with mental disorder to recover is to integrate them into the community so they can have a normal life”; (5) *Pessimistic prediction* (4 items), referring to a lack of expected improvement in persons with mental disorder, and the perception that society is also pessimistic in this regard, e.g. “After treatment, it is hard for persons with mental disorder to return to the community”; (6) *Stigmatization* (4 items), including items that refer to the perception of mental disorder as something to be ashamed of and that one should try to hide, e.g. “I suggest that people who have a mental disorder not tell anyone about their ailment”.

Cronbach’s alpha index shows that the OMI-S presents adequate global reliability (α =.82), and acceptable reliability for the six scale factors [F1 (α = .81) F2 (α = .70); F3 (α = .71); F4 (α = .79); F6 (α = .68); F5 (α = .69)].

Procedure

With a 15-minute duration, the Opinions about Mental Illness Scale (OMI-S) was administered to the students in their classroom setting, after obtaining consent from the students and the responsible professor, and having presented the purpose of the scale and instructions for its completion. Special care was given to assure participants that the data obtained would be anonymous and used only for research purposes, and to ask participants for their verbal consent to make use of the information provided. Participation was voluntary.

Data analyses

Before carrying out statistical analyses, the data were subjected to the following tests: Kolmogorov-Smirnov, for testing the normality assumption; Rachas, for testing the randomization assumption; and Levene, in comparisons of means, thereby confirming the homoscedasticity assumption. In all tests, $p > 0.05$ was found, justifying the use of Student's t parametric tests for independent samples. Statistical work was performed with SPSS v.21.

Results

First, comparisons of means were carried out (Student's t) between the Social Education students and Other Degree Students, and between subjects who have or have not had previous contact with persons with mental disorder, in order to find possible differences in mean OMI-S scores (Table 1).

In comparisons according to the degree being pursued, Social Education students obtained significantly lower scores in the factors of *separatism, stereotypes, restriction, benevolence, stigmatization* and in total OMI-S score, than students from other degrees (Table 1). Similarly, the results also show that the subjects who had had contact with persons with mental disorder obtained significantly lower scores in the factors of *separatism, stereotypes, benevolence* and in total OMI-S score than did those who had not had contact with persons with mental disorder (Table 1).

Table 1. *Descriptive data and comparison of means of the OMI-S scale factors, as a function of the variables* degree *and* previous contact

OMI-S	Degree	M	SD	t	*p*	Contact	*M*	*SD*	*t*	*p*
Separatism	Social Education	21.88	4.56	-7.976	**.000**	Yes	22.78	5.22	-3.199	**.001**
	Others	25.55	5.15			No	24.36	4.94		
Stereotypes	Social Education	9.18	2.89	-3.946	**.000**	Yes	9.08	2.86	-4.828	**.000**
	Others	10.21	2.63			No	10.33	2.66		
Restriction	Social Education	7.20	2.54	-4.914	**.000**	Yes	7.48	2.55	-1.795	.073
	Others	8.32	2.29			No	7.90	2.40		
Benevolence	Social Education	16.76	2.88	-4.688	**.000**	Yes	16.95	2.99	-2.859	.004
	Others	18.02	2.77			No	17.74	2.72		
Pessimistic prediction	Social Education	13.22	3.04	-1.381	.168	Yes	13.44	2.94	.432	.666
	Others	13.60	2.71			No	13.32	2.89		
Stigmatization	Social Education	8.25	2.30	-2.713	**.007**	Yes	8.53	2.39	.388	.698
	Others	8.83	2.17			No	8.45	2.09		
Total	Social Education	76.28	10.84	-7.790	**.000**	Yes	78.19	12.16	-3.517	**.000**
	Others	84.87	11.17			No	82.31	10.80		

In addition, Table 2 presents the results of intra-group comparisons between Social Education and Other degrees as a function of whether or not they had had contact with persons with mental disorder.

Table 2. *Descriptive data and comparison of means of the OMI-S scale factors, as a function of the* previous contact *variable*

	Previous Contact	Social Education				Other degrees			
		M	*SD*	*t*	*p*	*M*	*SD*	*t*	*p*
Separatism	Yes	21.07	4.32	-3.489	**.001**	25.18	5.43	-1.106	.270
	No	23.06	4.67			26.03	4.79		
Stereotypes	Yes	8.54	2.83	-4.574	**.000**	9.90	2.70	-1.919	.057
	No	10.11	2.75			10.63	2.52		
Restriction	Yes	7.03	2.50	-1.362	.174	8.15	2.47	-1.038	.301
	No	7.46	2.57			8.49	2.00		
Benevolence	Yes	16.38	2.91	-2.643	**.009**	17.82	2.91	-1.159	.248
	No	17.32	2.75			18.29	2.58		
Pessimistic Prediction	Yes	13.20	3.06	-.221	.825	13.80	2.71	1.052	.294
	No	13.28	3.01			13.38	2.72		
Stigmatization	Yes	8.28	2.44	.214	.831	8.91	2.26	.494	.622
	No	8.22	2.09			8.75	2.04		
Total	Yes	74.02	10.35	-3.975	.000	84.04	12.1	-1.158	.248
	No	79.56	10.78			86.05	9.69		

The results indicate that Social Education students who had had contact with persons with mental disorder obtain lower scores ($p \leq .05$) on the factors of *separatism, stereotypes, benevolence* and in the total OMI-S score (Table 2). As for students from other degree programs, no differences were found ($p \leq .05$) on any of the variables analyzed (Table 2).

Discussion

The aim of the present study was to analyze whether training received and previous contact with persons with mental disorder were relevant factors in how university students think about such persons.

Regarding *differences in the opinion of university students as a function of whether they have received training* about persons with mental disorder, our results indicate that those who had received such training present better opinions about these persons; furthermore, they are willing to have a greater degree of contact and connection with them, they have a less stereotyped image, favor less limitation of their rights, are more compassionate and do not consider mental disorder something to be hidden or to be ashamed of. These results are similar to those obtained by others. Smith (2008) found that training in mental health had a positive effect --even greater than the effect of contact-- on stigmatized attitudes towards persons with mental disorder, using a sample of 188 participants (belonging to four groups: mental health professionals and students, including the fields of social work and psychology, and three other spheres). Pingani et al. (2016) studied 311 students from the field of healthcare, concluding that training received during college lessened the presence of stereotypes and stigmatizing behaviors. Finally, Sharp et al. (2006), in a sample of 213 Psychology students who received a brief educational intervention, observed a reduction in their perception of persons with mental disorder as dangerous and needing to be monitored, although, in his study, the effects regarding social restriction were not maintained a month later.

In the present study, however, pessimistic prediction is the only subscale where training does not seem to have a significant impact. In this line, Zellmann et al. (2014) found that the opinion of Social Work students did not improve through subsequent years of schooling, and that their prediction about the results of interventions with these persons was even more pessimistic. According to these same authors, these results may possibly be attributed to not

having provided the students with information that would represent a significant change in the baseline attitudes they held prior to the start of their studies.

One example of such baseline attitudes is the belief that a mental disorder is primarily attributable to biogenetic causes. This may lead to a perception of subjects with mental disorder as unpredictable, antisocial and not responsible for their actions, as well as to greater stigmatization toward them (Mannarini & Boffo, 2013). Thus, the fact that the sample is highly influenced by this type of belief about mental disorders may have led them to advocate for greater restriction of their social rights; furthermore, since the presence of the disorder is associated with more static, biogenetic factors, they would not believe in their recovery.

On the other hand, another study objective was to analyze whether *previous contact with persons with mental disorder* produced significant effects on the opinion of university students. In this regard, results show that the subjects who had had such contact held a better opinion about these persons. Similarly, they were willing to establish shorter social distances, they had a less stereotyped image, and were more benevolent toward them. These results reflect the findings of studies by Brown (2012), with 605 students in lower-level Psychology courses, who found less stigmatization among those who had engaged in such contact; and the findings of Nguyen et al. (2012), in a sample of 280 Pharmacy students, where they report a reduction in stigma through direct contact. In this same line, Medina-Ortíz et al. (2010) found a reduction in the fear of this group and a greater desire to work with them, in a sample of 93 students in their final year of Medicine, after they had completed a practicum in a hospital unit.

In the present study, however, results indicate that previous contact with persons with mental disorder was not necessarily related to positive opinions, namely: less need to place restrictions on these persons' rights; better personal expectations for their improvement, and feeling that expectations from society were better; and that these disorders are not a cause of shame, something that should be hidden. This may be the reflection of a relationship between stigmatization and restriction of rights and social participation in persons who are stigmatized (Chen et al., 2016).

The fact that previous contact did not produce significant changes in these scales may in turn be related to the type of contact that occurred. For example, contact may not have been

very close, or the conditions of contact were not of a type that is positively related to reduced prejudice (Allport, 1958) --even if such conditions are not absolutely essential (Pettigrew & Tropp, 2006). This is reflected in research studies such as Fresán et al. (2012) and Omori et al. (2012), where contact took place in a clinical context, with certain notions of verticality in the professional-patient relationship and when subjects might have been in an acute clinical phase.

Additionally, as we have also noted with training, it may be that the contact that took place did not provide sufficient or meaningful information that would have been able to modify beliefs like that of attributing the presence of mental disorder mainly to biogenetic causes. The possible consequences that stem from this belief remain, that is, associating these people with notions of unpredictability and antisociality (Mannarini & Boffo, 2013).

However, by looking a bit deeper into the results, we come to what may be a main contribution from the present study, namely, that the impact produced by previous contact is only significant in the subjects who were studying Social Education, that is, subjects who had also received training in this area. At the same time, the results seem to indicate that previous contact does not produce significant differences in the opinion of students who have not received this kind of training.

These results concur partially with those found by Eack and Newhill (2008), with 118 postgraduate students in Social Work, and by Eack et al. (2012), with 60 undergraduate students from the same discipline. These authors sustain that training and previous contact, taken separately, did not provoke a positive attitudinal change in the Social Work students toward persons with schizophrenia. However, they underscore their complementarity: training may encourage positive, meaningful contact to take place. They also emphasize the importance of having prior knowledge so that close social contact does not lead to a negative interaction. In this regard, one might stress the advisability of developing educational actions that are based on contact (Chen et al., 2016).

On the other hand, these results can be interpreted using theories of individual cognitive change, where change processes occur when a stereotype is refuted by the presence of new information (Crocker & Weber, 1983). The fact that subjects have received previous

training may mean that they possess a greater volume of information, thereby favoring processes associated with accumulation. This consists of gradually modifying the stereotype through the accumulation of discrediting information, where the amount of information is important, as well as a large sample of subjects who contradict it. By contrast, when this volume of previous information is not present, the contact may encourage processes that lead to subtyping: the amount of contact involved is not sufficient to discredit the stereotype, therefore, subcategories within the stereotype are created to classify subjects that do not fulfill it.

In addition, the results seem to indicate that knowledge (cognitive factor) acts as a mediator in reducing prejudice through contact, as asserted by Pettigrew and Tropp (2008), although these authors emphasized the role of empathy and reducing anxiety during the contact. In our case we are not able to establish the importance of each of these aspects, since we do not know how the different interactions occurred; there is a need for further inquiry into the role of empathy and reduced anxiety.

Conclusions

Training seems to produce a greater influence than prior contact in improving university students' opinion about persons with mental disorder. Specifically, the results show that while previous contact is related to significant differences in the scales of separatism, stereotypes, benevolence and in the questionnaire in general, training received seems to be related also to significant improvement in the subscales of restriction and stigmatization, in addition to all the above.

On the other hand, the primary contribution of this research may be that previous contact only seems to provoke a significant change in university students' opinion if it takes place when students have received or are receiving such training, in this case, training in the area of mental health and reducing stigma. Based on this relationship, one infers the importance of providing students with prior information so that when they interact with persons with mental disorder, it can be positive and enriching, part of a process of improving their attitudes and opinions toward them, and ultimately, reducing possible stigmatization.

Notwithstanding, certain precaution is advised when considering the results obtained here. While the results seem to indicate the influence of these two variables (previous contact and training), the differences in opinion may be due to other factors that have not been controlled in the present study. Such unknown factors include different baseline aspects in the sample, for example, their beliefs about the origin of these disorders, whether they are attributable to biogenetic factors (Mannarini & Boffo, 2013), the nature of the training they received or the previous contact they had experienced, their gender, and the motivation that led these students to enroll in a certain degree program. In this line, Martínez et al. (2015) speak of this motivation and indicate that a greater interest in altruism (associated with the individual's affect, feelings and personal values) motivates the choice of degrees that are more humanistic and related to a service mentality toward the community, as in the case of Medicine, Education and Psychology. It is unknown whether this also occurs in degree programs such as Social Education and whether this prior motivation toward helping and service may exercise an influence on these students' opinion toward persons with mental disorder.

The foregoing thus leads us to *limitations* of the present study, to include: not having made a cultural adaptation of the instrument, as proposed by Berra et al. (2009), which would have taken into account, for example, processes for evaluating the items; not considering prior baseline aspects of the sample (Mannarini & Boffo, 2013; Martínez et al., 2015); the lack of gender balance in the sample, with a much higher number of women than men; and finally, not having differentiated between different types of contact ─ such as those suggested by Senra-Rivera et al. (2008) ─ or the conditions in which the contact took place.

Consequently, it would be very interesting to pursue *future research studies* where these limitations were addressed, by improving the cultural adaptation of the questionnaire, controlling for prior baseline aspects (beliefs, attitudes, etc.), using a more balanced sample, including different types of contact that could be defined, and studying the conditions of this contact. Furthermore, a longitudinal study would also be quite interesting, analyzing how the training received over the course of the Social Education degree, from start to completion, produced an impact in the students, as well as including a measurement of their beliefs concerning the causes associated with mental disorders, whether biogenetic or psychosocial.

In light of the above, we consider that the present study has provided useful information, primarily for the purpose of improving the training of professionals in mental health and psychosocial rehabilitation, as in the case of social education workers. These results may also be useful in carrying out campaigns for reducing stigma. For this purpose, we recommend the use of strategies based on education and training, on one hand, and educational actions based on contact, on the other, thus combining training and interaction with persons with mental disorder, given that the two approaches can be effective in the fight against stigmatization. However, we do not recommend campaigns that involve contact with these persons unless there is prior training, since such contact may turn out to be negative, or there may not be sufficient contact to actually change the opinion of the persons involved.

References

Álvarez, L. Y. & Pernía, L. C. (2007). Actitudes hacia el trastorno mental y hacia la búsqueda de ayuda psicológica profesional. Una revisión sistemática de estudios en Europa, Estados Unidos, Latinoamérica y el Caribe. [Actitudes toward mental illness and toward seeking professional psychological help. A systematic review of studies in Europe, the United States, Latin America and the Caribbean.] *MedUNAB, 10,* 50-56.

Allport, G. W. (1958). *The Nature of Prejudice*. [La naturaleza del prejuicio.] New York: Doubleday.

American Psychological Association. (2013). *DSM 5*. Washington: American Psychiatric Publishing.

Berra, S., Bustingorry, V., Henze, C., Díaz, M. P., Rajmil, L. & Butino, M. (2009). Adaptación transcultural del cuestionario KIDSCREEN para medir calidad de vida relacionada con la salud en población argentina de 8 a 18 años. [Cross-cultural adaptation of the KIDSCREEN questionnaire to measure health-related quality of life in an Argentine population between ages 8 and 18.] *Archivos argentinos de pediatría, 107,* 307-314.

Boyd, J. E., Katz, E. P., Link, B. G. & Phelan, J. C. (2010). The relationship of multiple aspects of stigma and personal contact with someone hospitalized for mental illness, in a nationally representative sample. *Social Psychiatry and Psychiatric Epidemiology*, *45*, 1063-1070. https://doi.org/10.1007/s00127-009-0147-9

Brown, S. A. (2012). The Contribution of Previous Contact and Personality Traits to Severe Mental Illness Stigma. *American Journal of Psychiatric Rehabilitation, 15*, 274–289. https://doi.org/10.1080/15487768.2012.703553

Calderón, M., & Gotor, V. (2013). *La profesión de la educación social en Europa. Estudio comparado*. [The profession of social education in Europe: a comparative study.] Barcelona: Consejo General de Colegios de Educadoras y Educadores Sociales.

Chen, S. P., Koller, M., Krupa, T. & Stuart, H. (2016). Contact in the Classroom: Developing a Program Model for Youth Mental Health Contact-Based Anti-stigma Education. *Community Mental Health Journal, 52*, 281–293. https://doi.org/10.1007/s10597-015-9944-7.

Cohen, J. & Struening, E. (1962). Opinions about mental illness in the personnel of two large mental hospitals. *Journal of Abnormal Psychology, 64*, 349-360. https://doi.org/10.1037/h0045526

Covarrubias, I. & Han, M. (2011). Mental Health Stigma about Serious Mental Illness among MSW Students: Social Contact and Attitude. *Social Work, 56*(4), 317-325. https://doi.org/10.1093/sw/56.4.317

Crocker, J. & Weber, R. (1983). Cognitive structure and stereotype change. In R. P. Bagozzi & A. M. Tybout (Eds.). *Advances in Consumer Research* (pp 459-463). Ann Abor: Association for Consumer Research.

Delgado, A. (2015). Estrategias psicosociales para el cambio de actitud hacia personas discriminadas por su discapacidad o trastorno mental. [Psychosocial strategies for a change of attitude toward persons discriminated against because of mental disability or illness.] *Revista Española de Discapacidad, 3*(2), 27-39. https://doi.org/10.5569/2340-5104.03.02.02

Eack, S. M. & Newhill, C. E. (2008). An Investigation of the Relations between Student Knowledge, Personal Contact, and Attitudes toward Individuals with Schizophrenia. *Journal of Social Work Education, 44*(3), 77-95. https://doi.org/10.5175/JSWE.2008.200700009

Eack, S. M., Watson, A. C. & Newhill. C. E. (2012). Effects of severe mental illness education on MSW student attitudes about schizophrenia. *Journal of Social Work Education, 48*(3), 425-438. https://doi.org/10.5175/JSWE.2012.201000042

Fernández, A. (2005). Multiculturality in Educational and Developmental Contexts: Relevance of Psychosocial Variables. *Electronic Journal of Research in Educational Psychology 3*(1), 181-204

Fresán, A., Robles, R., Cota, M., Berlanga, C., Lozano, D. & Tena, A. (2012). Actitudes de mujeres estudiantes de psicología hacia las personas con esquizofrenia: relación con la percepción de agresividad y peligrosidad. [Attitudes of female psychology students toward persons with schizophrenia: its relationship to perceived aggressivity and dangerousness.] *Salud Mental, 35*, 215-223.

Goffman, E. (2006). *Estigma. La identidad deteriorada.* [Stigma: Damaged identity.] Buenos Aires-Madrid: Amorrortu Editores. (First edition: 1963).

González, J. M., Tinsley, H. E. A. & Kreuder, K. R. (2002). Effects of Psychoeducational Interventions on Opinions of Mental Illness, Attitudes Toward Help Seeking, and Expectations About Psychotherapy in College Students. *Journal of College Student Development, 43*(1), 51-63.

Lolich, M. & Leiderman, E. A. (2008). Estigmatización en la esquizofrenia y otros trastornos mentales. [Stigmatization in schizophrenia and other mental disorders.] *VERTEX Revista Argentina de Psiquiatría, 19,* 165–173.

Mannarini, S. & Boffo, M. (2013). Assessing Mental Disorder Causal Beliefs: A Latent Dimension Identification. *Community Mental Health Journal, 49,* 686-693. https://doi.org/10.1007/s10597-012-9581-3

Martínez, A., Castro, M., Lucena, M. & Zurita, F. (2015). Elección de titulación universitaria y expectativas de resultados de los adolescentes de Granada. [Choice of university major and expected results in adolescents from Granada.] *Revista Española de Orientación y Psicopedagogía, 26*(3), 63-77.

Medina-Ortíz, O. et al. (2010). Medical students' attitudes towards mental disorders and their correlation with academic performance. *Médicas UIS. Revista de los estudiantes de medicina de la Universidad Industrial de Santander, 23,* 181-185.

Nguyen, E., Chen, T. F. & O'Reilly, C. L. (2012). Evaluating the impact of direct and indirect contact on the mental health stigma of pharmacy students. *Social Psychiatry and Psychiatric Epidemiology, 47,* 1087–1098. https://doi.org/10.1007/s00127-011-0413-5

Nordt, C., Rössler, W. & Lauber, C. (2006). Attitudes of Mental Health Professionals Toward People With Schizophrenia and Major Depression. *Schizophrenia Bulletin, 32*(4), 709–714. https://doi.org/10.1093/schbul/sbj065

Omori, A. et al. (2012). Influence of contact with schizophrenia on implicit attitudes towards schizophrenia patients held by clinical residents. *BMC Psychiatry, 12*(205), 1-8. https://doi.org/10.1186/1471-244X-12-205

Pettigrew, T. F. & Tropp, L. R. (2006). A Meta-Analytic Test of Intergroup Contact Theory. *Journal of Personality and Social Psychology, 90*(5), 751–783. https://doi.org/10.1037/0022-3514.90.5.751

Pettigrew, T. F. & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology, 38*, 922–934. https://doi.org/10.1002/ejsp.504

Pingani, L., Catellani, S., Del Vecchio, V., Sampogna, G., Ellefson, S. E., Rigatelli, M., … Corrigan, P. W. (2016). Stigma in the context of schools: analysis of the phenomenon of stigma in a population of university students. *BMC Psychiatry*, *16*(29), 1-7. https://doi.org/10.1186/s12888-016-0734-8

Senra-Rivera, C., Arriba-Rossetto, A. & Seoane-Pesqueira, G. (2008). Papel de la experiencia en la aceptación vs. rechazo del paciente con esquizofrenia. [The role of experience in acceptance vs. rejection of the patient with schizophrenia.] *Revista Latinoamericana de Psicología, 40,* 73-83.

Serrani, D. (2012). Construcción y validación de escala para evaluar las actitudes hacia los pacientes con enfermedad de Alzheimer y trastornos relacionados. [Scale construction and validation for assessing attitudes toward patients with Alzheimer's disease and related disorders.] *Revista Española de Geriatría y Gerontología*, *47*(1), 7-14. https://doi.org/10.1016/j.regg.2011.09.005

Sharp, W., Hargrove, D. S., Johnson, L. & Deal, W. P. (2006). Mental Health Education: An evaluation of a Classroom Based Strategy to Modify Help Seeking for Mental Health Problems. *Journal of College Student Development, 47*(4), 419-438. https://doi.org/10.1353/csd.2006.0051

Smith, A. L. (2008). *An Investigation of Attitudes Towards Adults with Mental Illness Among Mental Health Professionals In-training, Non Mental Health Professionals In-training, Mental Health Professionals, and Non Mental Health Professionals.* (Doctoral dissertation). University of North Carolina. Greensboro.

Universidad de Extremadura (2016). Grado en Educación Social. [Undergraduate degree in Social Education.] Retrieved from: http://www.unex.es/conoce-la-uex/centros/profesorado/titulaciones/info/salidas profesionales?id=0715

Zellmann, K. T., Madden, E. E. & Aguiniga, D. M. (2014). Bachelor of Social Work Students and Mental Health Stigma: Understanding Student Attitudes. *Journal of Social Work Education, 50*, 660-677. https://doi.org/10.1080/10437797.2014.947900