THE ATTITUDES OF MEDICAL DOCTORS, NURSES AND LAY PEOPLE TOWARDS SCHIZOPHRENIA, DEPRESSION AND PTSD

Arbanas, Goran; Bagarić, Štefica

Source / Izvornik: **Psychiatria Danubina, 2019, 31, 84 - 91**

Journal article, Published version
Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

Permanent link / Trajna poveznica: https://urn.nsk.hr/urn:nbn:hr:184:579883

Psychiatria Danubina, 2019; Vol. 31, Suppl. 1, pp S84-S91
Medicina Academica Mostariensia, 2018; Vol. 6, No. 1-2, pp 84-91 *Original paper*

THE ATTITUDES OF MEDICAL DOCTORS, NURSES AND LAY PEOPLE TOWARDS SCHIZOPHRENIA, DEPRESSION AND PTSD

Goran Arbanas[1], Josipa Rožman[2] & Štefica Bagarić[1]
[1]University Psychiatric Hospital Vrapče, Zagreb, Croatia
[2]General Hospital Karlovac, Karlovac, Croatia

received: 4.5.2017; accepted: 4.7.2018

SUMMARY

Background: *The stigma attached to mental illness has negative effects on individuals who experience the condition, and, while it is present in the attitudes of both lay people and mental health professionals, it is reduced in people who have had previous contact with those with mental illness. The present study focused on the influence of medical professionals' contact with individuals with three mental disorders, namely, schizophrenia, depression and posttraumatic stress disorder (PTSD), in order to determine whether it is contact in general or specific contact with a certain disorder that reduces stigma.*

Subjects and methods: *A total of 270 nurses, 30 medical doctors and 87 lay people (>75% women) assessed 15 items for each of the mental disorders on a Likert-type scale.*

Results: *The stigma attached to PTSD was of a lower level than the stigma attached to schizophrenia, but higher than that attached to depression. Medical doctors attached the lowest level of stigma to mental illness, and lay people attached the highest. No correlation was found between stigma and age or gender. Those who knew a person with a particular mental illness attached less of a stigma to that condition, but not to the other two disorders.*

Conclusion: *Contact with people with mental illness reduces the stigma associated with people with that same illness, but not that which is attached to other mental disorders.*

Key words: *mental illness stigma - medical professionals' attitudes – contact - posttraumatic stress disorder*

* * * * *

INTRODUCTION

The occurrence of mental disorders are unfortunate events in a person's life, not only because of the symptoms, but also because they are some of the most stigmatised illnesses, particularly schizophrenia (Bolton 2003). Stigma marks not just the patients, but also their families, treatment institutions and the drugs used to treat mental disorders, as well as mental health workers (Novak & Svab 2009, Sercu et al. 2015).

Stigma can be defined as a sign of disgrace or discredit that sets a person apart from others, or as a sign or mark that designates the bearer as defective, thereby meriting less value than 'normal' people (Serafini et al. 2001). Stigma has knowledge (ignorance), attitudinal (prejudice) and behavioural aspects (discrimination), and people with mental health problems are usually viewed as blameworthy, dangerous and unpredictable (Gouthro 2009).

The explanations that the majority of previous studies have provided for the stigma attached to mental disorders are fear of the potential threat of patients and difficulty in understanding and empathising with patients when an illness affects fundamental personal attributes (Pescosolido et al. 1999, Mukherjee et al. 2002).

Stigma has numerous negative impacts: it discourages people from seeking help (through fear of being labelled and embarrassed, or of the mental disorder being perceived as a sign of weakness or failure) and it reduces self-esteem, leading to premature termination of treatment and social isolation (Schomerus et al. 2009). It can also adversely affect family relationships, working life and social acceptance (Stuart 2006). Individuals with mental illnesses are underemployed and have a lower income (Couture & Penn 2003).

Unfortunately, not only lay people have negative attitudes towards mental disorders; the same applies to mental health professionals and even the patients themselves (Ertrugl & Ulug 2004). The latter is referred to as self-stigmatisation, and occurs when people with mental disorders adopt the stereotypes that prevail in society (Blais & Renshaw 2013).

Several previous studies have found that prior contact with people with mental disorders is associated with more positive attitudes towards these individuals, both behaviourally, in terms of less desire for social distance, and emotionally, in terms of less blame and anger directed at them (Link & Cullen 1986, Boyd et al. 2010).

With regard to stigma and attitudes, the most-studied mental disorders are schizophrenia and depression (Serafini et al. 2001, Filipčić et al. 2003, Hess et al. 2004, Mittal et al. 2014). However, few studies have investigated the stigma attached to posttraumatic stress disorder (PTSD; Arbanas 2008). Furthermore, many studies have focused on a mental illness as a general, broad category, losing the specificity of different mental disorders (Mojtabai 2010).

PTSD develops after a traumatic event (American Psychiatric Association 2013). For example, the war in Croatia from 1991–1995 meant that many soldiers, and also civilians, experienced traumatic events, such as the death of a person, seeing dead people, rescuing wounded people, exposure to firing or bombing, being wounded themselves, etc. Unfortunately, there was a negative depiction of war veterans in the printed media after the war (Frančišković et al. 2011), whereby these individuals were described as violent, unpredictable and dangerous (Pejović-Milovančević et al. 2009, Vukušić Rukavina et al. 2010).

The purpose of the present study was to evaluate the attitudes of nurses, medical doctors and lay people towards PTSD, and to compare these attitudes with those towards schizophrenia and depression. A second aim was to determine whether contact with a person with a mental disorder influenced the stigma attached to mental disorders in general, or towards that particular disorder alone.

SUBJECTS AND METHODS

Participants

The participants were recruited from three locations; nurses and medical doctors were recruited from a general hospital and a psychiatric hospital, and lay people were recruited from a one-day hygiene course (further details are provided below). All of the medical doctors and nurses were asked to fill in a questionnaire, which was distributed to all the wards in the two hospitals. All the staff members who agreed to participate put the questionnaire in a closed envelope following completion, thus ensuring anonymity.

In Croatia, a one-day lecture on hygiene is obligatory for everyone working in food production, restaurants, the catering industry, bakeries, and any other type of work requiring contact with food. All the people who participated in this course on a particular day were asked to complete the questionnaire. This type of sample was chosen because people working in the food industry and catering are primarily women who have had secondary education, which is the same demographic as that of nurses. Prior to administration of the questionnaire, the research was approved by the Ethical Committee of the general hospital.

The final population sample consisted of 270 nurses, 30 medical doctors and 87 lay people, and the corresponding response rates were 45.2%, 14.2% and 91.6%, respectively. The lay people were younger than the other two groups (the nurses' age was 41.4±1.0, the doctors' age was 42.1±8.4, and the lay people's age was 37.9±10.6; $p=0.036$ for the difference between nurses and lay people, and $p=0.013$ for the difference between doctors and lay people, via Student's t-test). The age range was 19-64 years in all groups. Women were predominant in each group, with similar ratios (79.1%, 73.3% and 72.6% of the participants were women in the nurses, doctors and lay people groups, respectively). We believe that the high response rate among lay people was due to the fact that they had had to listen to a 1-day lecture and found filling in the questionnaire to be an interesting diversion from their everyday work (food production, catering, working in restaurants etc.). In contrast, nurses and doctors are used to filling in questionnaires, and many may have considered that completion of the one administered in the present study would have taken up too much of their time.

Questionnaires

The attitudes towards three different mental disorders (schizophrenia, depression and PTSD) were measured using a questionnaire that is described in greater detail elsewhere (Arbanas 2008). It includes 15 items to be rated on a five-point Likert scale from 1 (strongly agree) to 5 (strongly disagree). These 15 items are listed in Table 1. Each of the items was repeated three times, for each of the mental disorders. The order of the items was random.

Table 1. Questionnaire items

1. I would never marry a person with schizophrenia/depression/PTSD.*
2. Schizophrenia/depression/PTSD is curable.
3. I think people with schizophrenia/depression/PTSD are not capable of working properly.*
4. Schizophrenia/depression/PTSD is an illness like any other (e.g. diabetes mellitus, hypertension).
5. A person with schizophrenia/depression/PTSD is dangerous and unpredictable.*
6. People with schizophrenia/depression/PTSD should be placed in a hospital or an institution.*
7. A person with schizophrenia/depression/PTSD has only himself/herself to blame for having the disorder.*
8. If I had a flat to rent, I probably wouldn't rent it to a person with schizophrenia/depression/PTSD.*
9. Anyone can have schizophrenia/depression/PTSD.
10. I would feel ashamed if I had a family member with schizophrenia/depression/PTSD.*
11. I would feel uneasy in the company of a person with schizophrenia/depression/PTSD.*
12. If I had schizophrenia/depression/PTSD, I would contact a psychiatrist.
13. I would be afraid to speak to a person with schizophrenia/depression/PTSD.*
14. I would be distressed if I found out my doctor had schizophrenia/depression/PTSD.*
15. Drugs used in the treatment of schizophrenia/depression/PTSD result in addiction.*

* score-reversed items

The stigma attached to each of the disorders was calculated by adding the individual scores for each item (all but four of the items were score-reversed because agreement with these items meant greater stigma – the items that were score-reversed are marked with an * in Table 1). The internal consistency of the subscales for schizophrenia, depression and PTSD were moderate, with Cronbach's alpha values of 0.742 for the schizophrenia subscale, 0.768 for depression and 0.761 for PTSD.

This instrument originated in the Croatian language, and it was applied in Croatian.

Other data collected were age, gender, job, highest level of education achieved, whether a participant had ever worked with psychiatric patients, whether a participant knew someone who had schizophrenia/depression/ PTSD. As nurses and medical doctors have many patients with mental disorders, this last item was directed towards a very personal level of contact, so the following question was formulated: 'Do you have a family member or a friend who suffers from PTSD/ depression/ schizophrenia?

Statistical Analysis

Data were analysed using Statistical Package for the Social Sciences (SPSS), version 20. Analysis of variance (ANOVA) was used to compare the three groups across the three disorders. For the within-group differences (e.g. nurses working on a psychiatric and a non-psychiatric unit; those who knew a person with schizophrenia and those who did not), independent samples t tests (two-tailed) were conducted. Correlations were computed using Pearson's r values, and statistical significance was set at the 0.05 level.

RESULTS

Stigma attached to schizophrenia, depression and PTSD

The stigma attached to schizophrenia, depression and PTSD by nurses, medical doctors and lay people is shown in Figure 1. The ANOVA showed that nurses attached a greater stigma to schizophrenia than PTSD, and PTSD than depression ($F=220.236$, $p>0.001$), while lay people and medical doctors attached a greater stigma to schizophrenia than to PTSD and depression, but there was no difference in the degree of stigma they attached to PTSD and depression ($F=10.483$ and $p<0.001$ for medical doctors; $F=13.218$ and $p<0.001$ for lay people).

A comparison of the three groups showed that doctors attached significantly less stigma to all three mental disorders than lay people ($p<0.001$), and less than nurses to schizophrenia ($p=0.006$) and PTSD ($p=0.005$), but not to depression ($p=0.057$). The nurses attached less stigma to depression and PTSD than lay people ($p<0.001$), but not to schizophrenia ($p=0.129$). The ANOVA for all three groups showed F values of 5.372; 12.281 and 11.582 for schizophrenia, depression and PTSD, respectively.

There was a high correlation of attitudes towards schizophrenia, depression and PTSD in each group, with r values of >0.7 (Pearson's correlation). No differences in stigmatising attitudes between nurses working on psychiatric units and those working in other units were observed (t test: $t=-1.145$ and $p=0.253$ for schizophrenia, $t=-0.555$ and $p=0.579$ for depression and $t=-0.507$ and $p=0.612$ for PTSD). There was also no correlation with age, or differences between genders.

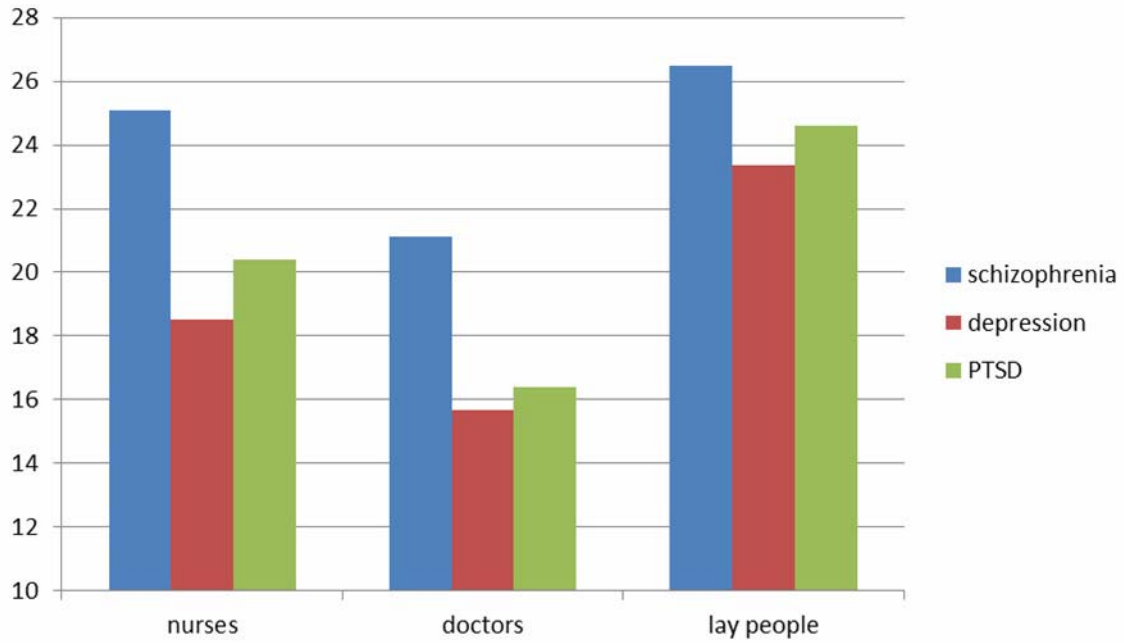

Figure 1. The stigma attached to schizophrenia, depression and PTSD in nurses, medical doctors and lay people

However, when comparing attitudes in those who knew a person suffering from schizophrenia, depression or PTSD, we found a difference in attitude towards depression in those who knew someone with depression (t test, t=-2.049, p=0.042), but not in attitudes towards PTSD and schizophrenia. The same applied to those who knew someone with schizophrenia (there was a difference in attitude towards schizophrenia, t test, t=-1.994, p=0.048, but not depression or PTSD). For PTSD, this difference was at the level of p=0.067 for PTSD (t test, t=-1.245), and there was no difference with regard to the other disorders.

The items associated with the least and most stigma

Individual items were compared with regard to lay people, nurses and doctors for each of the three disorders, and Tables 2-4 show the items associated with the least and the most stigma.

The item 'A person with schizophrenia should be placed in a hospital or an institution' was assessed by medical doctors as having the least stigma attached, with a median score of 0.07, which was much lower than for any other item in any of the groups.

Table 2. The items least and most associated with stigma in schizophrenia

	The most stigmatizing items	The least stigmatizing items
Lay people	I would never merry a person with schizophrenia. (2.45) A person with schizophrenia is dangerous and unpredictable. (2.15) Schizophrenia is an illness like any other. (2.03)	A person with schizophrenia has only himself/herself to blame for having the disorder. (0.91) If I had schizophrenia I would contact a psychiatrist. (1.28) Anyone can have schizophrenia. (1.74)
Nurses	I would never merry a person with schizophrenia. (2.89) Schizophrenia is curable. (2.70) Schizophrenia is an illness like any other. (2.12)	A person with schizophrenia has only himself/herself to blame for having the disorder. (0.46) If I had schizophrenia I would contact a psychiatrist. (0.81) I would be afraid to speak to a person with schizophrenia. (0.95)
Doctors	I would never merry a person with schizophrenia. (2.57) Schizophrenia is curable. (2.37) I would be distressed if I found out my doctor had schizophrenia. (2.03)	A person with schizophrenia has only himself/herself to blame for having the disorder. (0.07) If I had schizophrenia I would contact a psychiatrist. (0.69) I would be afraid to speak to a person with schizophrenia. (0.89)

Values in brackets show the mean level of stigma for the particular item

Table 3. The most and the least stigmatizing items toward depression

	The most stigmatizing items	The least stigmatizing items
Lay people	Drugs used in the treatment of depression result in addiction. (2.17) Depression is an illness like any other. (2.05) I would never merry a person with depression. (2.03)	A person with depression has only himself/herself to blame for having the disorder. (1.05) I would be afraid to speak to a person with depression. (1.19) I would feel ashamed if I had a family member with depression. (1.21)
Nurses	I would never merry a person with depression. (2.18) Drugs used in the treatment of depression result in addiction. (1.78) Depression is an illness like any other. (1.65)	A person with depression has only himself/herself to blame for having the disorder. (0.61) I would feel ashamed if I had a family member with depression. (0.65) I would feel uneasy in the company of a person with depression. (0.76)
Doctors	I would never merry a person with depression. (1.87) If I had a flat to rent, I probably wouldn't rent it to a person with depression. (1.48) Depression is curable. (1.41)	A person with depression has only himself/herself to blame for having the disorder. (0.27) I would feel ashamed if I had a family member with depression. (0.62) Anyone can have depression. (0.66)

Values in brackets show the mean level of stigma for the particular item

Table 4. The most and the least stigmatizing items toward PTSD

	The most stigmatizing items	The least stigmatizing items
Lay people	Drugs used in the treatment of PTSD result in addiction. (2.23) I would never merry a person with PTSD. (2.03) PTSD is an illness like any other. (2.00)	I would feel ashamed if I had a family member with PTSD. (1.06) A person with PTSD has only himself/herself to blame for having the disorder. (1.21) If I had PTSD I would contact a psychiatrist. (1.26)
Nurses	PTSD is an illness like any other. (2.03) PTSD is curable. (2.00) I would never merry a person with PTSD. (1.94)	A person with PTSD has only himself/herself to blame for having the disorder. (0.58) I would feel ashamed if I had a family member with PTSD. (0.62) I would be afraid to speak to a person with PTSD. (0.87)
Doctors	Drugs used in the treatment of PTSD result in addiction. (1.76) I would never merry a person with PTSD. (1.57) If I had a flat to rent, I probably wouldn't rent it to a person with PTSD. (1.50)	People with PTSD should be placed in a hospital or an institution. (0.43) I would feel ashamed if I had a family member with PTSD. (0.47) A person with PTSD has only himself/herself to blame for having the disorder. (0.55)

Values in brackets show the mean level of stigma for the particular item

DISCUSSION

In this study, we compared the attitudes of lay people, nurses and medical doctors towards three mental disorders: schizophrenia, depression and PTSD. A higher degree of stigma was attached to schizophrenia than to depression in all three groups. This was expected, because the same had been found in the majority of previous studies, although some studies have shown that the same level of stigma is attached to these two disorders. Nevertheless, the majority of previous investigations have shown that people perceive schizophrenia to be associated with greater danger and at a greater social distance, compared to depression and anxiety (Mannarini & Boffo 2014). In our study, there were no vignettes, only the terms schizophrenia and depression were used. It is possible that many lay people were not aware of the true symptoms of schizophrenia, and that they have their, lay, view of depressive symptoms, which may be less deviant or less difficult to experience themselves. In addition, depression is far more prevalent than schizophrenia.

The novel aspect of the present study was the inclusion of PTSD, as we could not find any previous study that had compared or measured the stigma attached to this disorder. Nurses attached less stigma to PTSD than schizophrenia, but more than to depression. Since PTSD is depicted in a negative manner in much Croatian media coverage, we had expected that an even higher level of stigma would have been attached to this condition (comparable to that attached to schizophrenia), as the media has been identified as the primary source of information about mental illness (Abdulbari & Ghuloum 2011). In medical doctors and lay people the level of stigma attached to PTSD and depression was comparable, and much lower than that attached to schizophrenia. It is possible that, since the majority of people who have PTSD in Croatia developed this disorder after the war, people consider it to be a condition that has a clear aetiology, and that a person with PTSD did not influence its development in any way. In that respect, the stigmatising attitudes were reduced, since prejudicial attitudes are the highest with regard to diseases that are believed to involve intentionality (e.g. alcohol and drug addiction) (Mannarini & Boffo 2014).

Medical doctors attached less stigma to all of the disorders, compared to nurses and lay people, and nurses attached less stigma than lay people (but not for all of the disorders). The difference between doctors and nurses on the one hand, and lay people on the other, can be viewed as the result of contact with mentally ill people, since both doctors and nurses come into contact with a variety of patients (on whatever ward they work), including those with mental disorders. However, the difference between doctors and nurses suggests that it is not contact, but knowledge of mental disorders that reduces stigma. This finding is in accordance with a study showing that, in high school students, improved knowledge of specific psychiatric problems is more influential in reducing stigma than general knowledge alone (Arbanas 2008). In addition, it is in accordance with studies showing that medical doctors have a lower level of stigma than medical students (Fernando et al. 2010). If we apply the same logic here, we can conclude that the difference in stigma between these three groups of people was the consequence of theoretical knowledge of psychiatry, and not the contact with the people with mental illnesses, since nurses have far more close contact with patients during their work than doctors, as the former come into contact with the same patient several times a day and need to talk and interact with

their patients more frequently. However, we must also consider the fact that higher education is related to a lower level of stigma, and medical doctors are more highly educated than nurses (Barke et al. 2011). It is known that higher education is associated with psychosocial stress and biomedical models of mental illnesses, and therefore with a more favourable perception of patients. This is probably even more pronounced in medical doctors, since their medical education teaches them about biomedical models of illnesses, thus reducing the conception of personal intention and guilt being involved in the acquisition of a disease (Mulatu 1999).

We expected to find a difference in attitudes towards mental disorders in nurses working in psychiatric wards, compared to those working in other (non psychiatric) wards. However, such a difference was not observed. Therefore, it again appears (as previously described) that it is not the close contact that nurses have with patients that reduces stigma, but rather the knowledge: nurses in all hospital wards in Croatia have the same theoretical knowledge of psychiatry; since there are no nurse specialisations, they must all finish the same course and the same internship, they can freely change jobs, and are permitted to work on any ward).

There was a high correlation between the stigmas attached to all three mental disorders in the three groups. Therefore, it appears that there is some kind of general attitude towards mental disorders in general, with specific differences with regard to different conditions. Many previous studies did not measure the stigma attached to any specific mental disorder, but towards the general notion of mental illness (Barke et al. 2011). We believe that this is reasonable with regard to the studies that were conducted in lay people, since lay people do not have the specific knowledge that enables them to differentiate between different mental disorders. However, for medical professionals there could be huge differences in attitudes towards different mental disorders, because anxiety disorders differ greatly from psychotic disorders in terms of symptoms, treatment and behaviour.

We did not find any difference between the genders or between age groups. Some previous studies found that younger people and women have less stigmatising attitudes (Mojtabai 2010). However, our participants were all aged between 19 and 64 years, and were all working at the time of questioning, so we did not have a great variety in age differences. Furthermore, since there is only a small proportion of men among nurses, it is possible that men who decide to work in this profession differ from the general male population.

In our opinion, the most important result of our study is the finding that close contact with a person with one of the three mental disorders we examined (having a close friend or a family member with the disorder) reduces stigma towards that disorder alone, and not to mental disorders in general. Unfortunately, because of the small number of people who knew other people with different disorders, we were not able to run an analysis for the groups, with the exception of the nurses. However, it again appears that in medical professionals (e.g. nurses), there are specific differences in attitudes s different mental disorders.

Regarding the items to which the most and least stigma was attached, there were some similarities and some differences between the groups. In all three groups, and with regard to all three disorders, no group would marry a person with one of these conditions; a previous study did not find such a high level of stigma attached to this particular item (Barke et al. 2011), so this is of great importance for medical professionals and for the Croatian people. However, none of the groups blamed people for having a mental disorder. Lay people and nurses were similar in that they did not believe that schizophrenia, depression and PTSD are illnesses like all others (e.g. diabetes). They also believed that drugs used for the treatment of these disorders produce dependence. It was shown that the doctors considered neither schizophrenia nor depression to be curable. Although people in all three groups would contact a psychiatrist if they believed they had schizophrenia, the lay people believed that individuals with this disorder are dangerous, while the nurses and doctors did not hold this belief. Finally, none of the groups would feel ashamed if a family member had depression or PTSD.

Limitations

One of the limitations of our study was the low response rate associated with medical doctors. Therefore, we do not know whether all medical doctors share the same lower level of stigmatising attitudes towards mental disorders, or whether it was just those who have such attitudes who agreed to participate in the study.

Secondly, we do not know if the participants who knew a person with one of these disorders attached the same, reduced level of stigma to the disorder before that person had been diagnosed with the condition. This is important since the direction could be bi-directional: it is possible that having a friend or a family member reduces stigma, but it is also possible that people who are less stigmatising encourage their friends or family members to contact a psychiatrist, and these individuals are thus then diagnosed with a mental disorder (Mannarini & Boffo 2014).

Perhaps the most important limitation is that we did not ask the participants about their own experience of mental disorder. Since the prevalence of such conditions in the general population is high, a significant portion of the participants had probably experienced one of the illnesses under study (schizophrenia, depression and PTSD). This may have been a confounding factor.

Finally, our sample was not sufficiently large to enable a separate comparison between those who knew someone with one of the disorders and those who did not, for all of the groups. The varying number of participants in each group meant that we could only carry out such an analysis for the group of nurses.

Recommendations for future research

As we found that close contact with a person with schizophrenia, depression or PTSD reduces the stigma attached to that same disorder, a longitudinal study comparing attitudes before and after a friend/family member is diagnosed with a mental disorder could answer the question concerning the direction of this correlation. Furthermore, a larger sample of doctors and lay people could answer the question of whether what we found in nurses also applies to these groups.

CONCLUSION

The stigma attached to PTSD is lower than the stigma attached to schizophrenia and higher than the stigma attached to depression in medical professionals and in lay people, despite the negative depiction of people with PTSD in the Croatian media. Intimate relationships with people with mental disorders (i.e. having a friend or a family member with such a condition) was correlated with a lower level of stigma, but only for that particular mental disorder, and this positive effect was not widened to apply to the entire spectrum of mental disorders. This implies that measures aimed at reducing the stigma attached to mental disorders should focus on specific disorders, and not mental illness in general. Considering both of these findings, we recommend that campaigns focused on reducing stigma should contain information on a the symptoms of a specific mental disorder (e.g. schizophrenia or PTSD), its proposed aetiology, risk factors etc., so as to increase the knowledge of the general population with regard to specific mental disorders, as well as personal accounts of people with the same disorder, in which case the receiver of the information would obtain a type of personal contact with a real person.

Acknowledgements: None.

Conflict of interest: None to declare.

Contribution of individual authors:

Goran Arbanas - study design, data collection, statistical analysis, first manuscript draft, manuscript revisions, approval of the final version.

Josipa Rožman - study design, data collection, manuscript revisions, approval of the final version.

Štefica Bagarić - data collection, manuscript revisions, approval of the final version.

References

1. *Abdulbari B & Ghuloum S: Ethnic differences in the knowledge, attitude and beliefs towards mental illnessin a traditional fast developing country. Psych Danub 2011; 23:157-64*
2. *American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013*
3. *Arbanas G: Adolescents' attitudes toward schizophrenia, depression, and PTSD. J Psychosoc Nurs 2008;46: 45-51*
4. *Barke A, Nyarko S & Klecha D: The stigma of mental illness in Southern Ghana: attitudes of the urban population and patients' views. Soc Psychiatry Psychiatr Epidemiol 2011; 46:1191-202*
5. *Blais RK & Renshaw KD. Stigma and demographic correlates of help-seeking intentions in returning service members. J Trauma Stress 2013; 26:77-85*
6. *Bolton J: How can we reduce the stigma of mental illness? BMJ 2003; 326:S57*
7. *Boyd JE, Katz EP, Link BG & Phelan JC: The relationship of multiple aspects of stigma and personal contact with someone hospitalized for mental illness, in a nationally representative sample. Soc Psychiatry Psychiatr Epidemiol 2010; 45:1063-70*
8. *Corrigan PW, Edwards AB, Green A, Diwan SL & Penn DL: Prejudice, social distance, and familiarity with mental illness. Schizophr Bull 2001; 27:219-25*
9. *Couture SM & Penn DL; Interpersonal contact and the stigma of mental illness: a review of the literature. J Mental Health 2003; 3:291-305*
10. *Ertrugl A & Ulug B: Perception of stigma among patients with schizophrenia. Soc Psychiatry Psychiatr Epidemiol 2004; 39:73-7*
11. *Fernando SM, Deane FP & McLeod HJ: Sri Lankan doctors' and medical undergraduates' attitudes towards mental illness. Soc Psychiatry Psychiatr Epidemiol 2010; 45:733-9*
12. *Filipcic I, Pavicic D, Filipcic A, Hotujac L, Begic D, Grubisin J et al.: Attitudes of medical staff towards the psychiatric label schizophrenic patient tested by an anti-stigma questionnaire. Coll Antropol 2003; 27:301-307*
13. *Franciskovic T, Stevanovic A, Blazic D, Petric D, Sukovic Z, Tovilovic Z et al.: Croatian war veterans in print media in 1996 and in 2006. Psychiatr Danub 2011; 23:171-7*
14. *Girardi P: Stigmatization of schizophrenia as perceived by nurses, medical doctors, medical students and patients. J Psychiatr Ment Health Nurs 2011; 18:576-85*
15. *Gouthro J: Recognizing and addressing the stigma associated with mental health nursing: a critical perspective. Issues Mental Health Nurs 2009; 30:669-76*
16. *Hess SG, Cox TS, Gonzales LC, Kastelic EA, Mink SP, Rose LE et al.: A survey of adolescents' knowledge about depression. Arch Psychiatr Nurs 2004; 6:228-34*
17. *Link BG & Cullen FT: Contact with the mentally ill and perceptions of how dangerous they are. J Health Soc Behav 1986; 27:289-302*
18. *Mannarini S & Boffo M: Anxiety, bulimia, drug and alcohol addiction, depression, and schizophrenia: what do you think about their aetiology, dangerousness, social distance, and treatment? A latent class analysis approach. Soc Psychiatry Psychiatr Epidemiol 2014; 50:27-37*

19. *Mittal D, Corrigan P, Sherman MD, Chekuri L, Han X, Reaves C et al.: Healthcare providers' attitudes toward persons with schizophrenia. Psychiatr Rehabil J 2014; 37:297-303*
20. *Mojtabai R: Mental illness stigma and willingness to seek mental health care in the European Union. Soc Psychiatry Psychiatr Epidemiol 2010; 45:705-12*
21. *Mukherjee R, Fialho A, Wijetunge K, Checinski K & Surgenor T: The stigmatisation of psychiatric illness: the attitudes of medical students and doctors in a London teaching hospital. Psychiatr Bull 2002; 26:178-81*
22. *Mulatu MS: Perceptions of mental and physical illnesses in nort-western Ethiopia: causes, treatments, and attitudes. J Health Psychol 1999; 4:531-49*
23. *Novak L & Švab V: Antipsychotics side effects' influence on stigma of mental illness: focus group study results. Psychiatr Danub 2009; 21:99-102*
24. *Pejović-Milovančević M, Lečić-Toševski D, Tenjović L, Popović-Deušić S & Draganić-Gajić S: Changing attitudes of high school students towards peers with mental health problems. Psychiatr Danub 2009; 21:213-19*
25. *Pescosolido BA, Monahan J, Link BG, Stueve A & Kikuzawa S: The public's view of the competence, dangerousness, and need for legal coercion of persons with mental health problems. Am J Public Health 1999; 89:1339-45*
26. *Pescosolido BA, Martin JK, Long JS et al: „A disease like any other?" A decade of change in public reactions to schizophrenia, depression, and alcohol dependence. Am J Psychiatry 2010; 167:1321-30*
27. *Schomerus G, Matschinger H & Angermeyer MC: The stigma of psychiatric treatment and help-seeking intentions for depression. Eur Arch Psychiatry Clin Neurosci 2009; 259:298-306*
28. *Serafini G, Pompili M, Haghighat R, Pucci D, Pastina M, Lester D et al.: Mental health nurses' beliefs about likely outcomes for people with schizophrenia or depression: a comparison with the public and other healthcare professionals. Aust N Z J Ment Health Nurs 2001; 10:42-54*
29. *Sercu C, Ayala RA & Bracke P: How does stigma influence mental health nursing identities? An ethnographic study of the meaning of stigma for nursing role identities in two Belgian psychiatric hospitals. Int J Nurs Stud 2015; 52:307-16*
30. *Stuart H: Mental illness and employment discrimination. Curr Opin Psychiatry 2006; 19:522-6*
31. *Vukušić Rukavina T, Rojnić Kuzman M, Brborović O & Jovanović N: Prikaz duševnih smetnji u tiskanim medijima u Hrvatskoj. Soc Psih 2010; 38:14-21*

Correspondence:
Goran Arbanas, MD, PhD
University Psychiatric Hospital Vrapče
Bolnička cesta 32, 10090 Zagreb, Croatia
E-mail: goran.arbanas@ka.t-com.hr