

Stigmatizing Beliefs towards People with Mental Illness in Lithuanian and US Psychology Students

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Abstract

Introduction: Professional education of mental health specialists seeks not only to develop knowledge and skills, but also to keep from forming stigmatized attitudes towards their patients. Aim. This study aimed to compare psychology students' stigmatizing beliefs in two countries: Lithuania and the US.

Method: A total of 528 psychology students (110 from the US and 418 from Lithuania) participated in this cross-sectional survey. Students answered questions relating to distancing from people with mental illness, emotional reactions, causal attributions and community attitudes towards mentally ill individuals.

Results: Lithuanian psychology students reported a stronger desire for social distance, expressed more fear, anger and pity, and were less optimistic about the possibilities of personal control of illness than US students. In both countries, social distance decreased, and support to community mental health care increased with education. However, only minor changes were observed in emotional reactions and cognitive beliefs about mental illness. Fear and anger significantly correlated with disagreement of community mental health care ideology and social distance.

Discussion and implications for practice: Results illustrate that culture is important in stigmatizing attitudes despite of professional education. Affective dimensions of stigmatizing beliefs might be a special target planning anti-stigma interventions for mental health professionals.

Keywords: stigma, culture, education, community care, social exclusion

Relevance statement

We present a cross-sectional international study aimed to compare stigmatizing attitudes towards people with mental illness of Lithuanian and US psychology students. Results illustrate that culture significantly impacts stigmatizing attitudes despite of professional education. Additional interventions targeting mental illness stigma and especially illness related emotions are needed for psychology students in Lithuania as stigmatizing attitudes might be latter brought into the health care settings, impact functioning of mental health care teams and influence daily decisions. Although only psychology students participated in this study, it might be expected that similar trend would be observed in education of other mental health professionals.

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Accessible Summary

What is known on the subject?

- Stigmatizing attitudes of health care providers might be a significant barrier for the quality of care of people with mental illness.
- Despite the education and training of mental health care providers, they still hold some stigmatizing attitudes towards people with mental illness.
- There is a great deal of disagreement as to whether standard university education helps to decrease stigmatizing attitudes of future mental health care providers.

What the paper adds to existing knowledge?

- Social distance decreases, and support to community mental health care increases, during university education of future psychologists. However, little change was observed in emotional reactions of fear, pity, and anger, and cognitive beliefs about causes and controllability of mental illness.
- Lithuanian psychology students reported stronger desire for social distance, more expressed fear, anger and pity when interacting with people with mental illness. Also, they perceived mental illness as stable over time and were less optimistic about the possibilities of personal illness control.
- This study fills the gap of mental illness stigma research in Central and Eastern European Countries and illustrates importance of country specific research.

What are the implications for practice?

- Lithuanian universities should include additional curriculum to decrease the stigma of mental illness of psychology students, as cultural context leads to higher levels of stigmatizing attitudes of those entering profession.
- As stigmatizing emotions were found to be related to social distance and community attitudes towards mentally ill, affective dimensions of mental illness stigma should be specially targeted in anti-stigma interventions.

1. Introduction

1.1 Rationale

Stigma of mental illness is a significant barrier for quality of life and adequate treatment of people with mental illness (Anagnostopoulos & Hantzi, 2011; Corrigan, 2004; Norman, Sorrentino, Windell, & Manchanda, 2008). Mental health professionals and students being a part of the general society are not free from stigmatizing beliefs (Brown et al., 2015; Kassam, Glozier, Leese, Henderson, & Thornicroft, 2010; Lammie, Harrison, Macmahon, & Knifton, 2010). Some evidence suggests that levels of stigma of mental illness are much higher in Central and Eastern European countries, that share history of Soviet occupation when compared to other European countries (Winkler et al., 2017). Although there was significant growth in the number of publications on stigma and social exclusion in last decades, a recent review of Evans-Lacko et al (2014) indicates that Central and Eastern European countries have the lowest publication rate per person on stigma related topics in Europe. Lack of country specific research is a significant barrier advocating for the development of new mental health policies or initiatives and grounding proposed actions with evidence based information (Khandelwal et al., 2010).

Central and Eastern European Countries are still facing many challenges in overcoming heritage of soviet mental health care traditions and organization of the health care system. Review of Winkler et al (2017) indicates that development of adequate community services is still pending in many countries and mental health care remains centralized around psychiatric hospitals. Mental health care very often is limited to medical treatment and psychological and social services are underdeveloped. Lithuania is not an exception. Pūras et al (2013) reported a slight decrease in the stigma of mental illness in general population during last two decades.

However, authors still report a significant shortage of political will to promote mental health reforms and lack of professionals' community support to promote greater balance between social and biomedical services. Lithuanian psychologists and social workers are still trying to find their place in mental health care teams, to prove the value and necessity of their services, and to be acknowledged as beneficial in the mental health care system. During such transitional periods, personal beliefs and attitudes of mental health care specialists may have a significant impact on the development of the health care system.

The Global Network for Research in Mental and Neurological Health suggested that one of the research priorities for the Eastern European region should be the evaluation of existing educational practices, as well as training and fostering of specific personality qualities (curiosity, open-mindedness and critical thinking) (Khandelwal et al., 2010).

However, to our knowledge this was never systematically done in Lithuania. Several studies addressing attitudes of other mental health care professionals demonstrated that Lithuanian professionals express stronger stigmatizing beliefs when compared to professionals in other countries (Chambers et al., 2010; Pūras et al., 2013). For example, Chamber et al (2010) found that Lithuanian nurses expressed significantly more negative attitudes towards community integration of people with mental disorders when compared to nurses from Italy, Portugal, Finland and Ireland. In current study, we targeted another group of future mental health professionals - psychology students.

1.2 Aims, objectives and research questions

This study aimed to analyze psychology students' stigmatizing beliefs toward people with mental disorders in two countries -Lithuania and the US - considering possible impact of cultural differences, years in professional education and giving special attention to the complexity of mental illness stigma construct.

First research question is whether Lithuanian psychology students differ in stigmatizing beliefs from their US colleagues. Differences might be expected as Lithuania has a relatively short history of psychology education. Teaching of psychology in Lithuanian universities was forbidden with Soviet occupation in 1944 and the Psychology program at Vilnius University was reestablished only in 1969 under the name of "Work Psychology" (Bagdonas, Pociūtė, Rimkutė, Valickas, 2008). Official specialization in clinical psychology became available only in 1991 when Department of Clinical Psychology at Vilnius University was established. In contrast, the US has long standing traditions of psychologists' education, and could be considered as a leading country in psychology science and education.

The second question is whether university education helps to decrease stigmatizing attitudes towards people with mental disorders. Do students with more educational experience stigmatize less when compared with students who are just beginning their education? To our knowledge, stigmatizing attitudes of psychology student were never systemically investigated in Lithuania. It is acknowledged that educational anti-stigma initiatives are needed to increase awareness and decrease stigmatizing behavior of students and specialists (Feeg, Prager, Moylan, Smith, & Cullinan, 2014; Gyllensten et al., 2011; Kassam et al., 2010; Stuber, Rocha, Christian, & Link, 2014; Wang, Locke, & Chonody, 2013). However, data about the efficacy of attitudes forming education is mixed. Multiple findings suggest that traditional educational approaches like lectures, discussions and presentations are not effective at reducing mental illness stigma (Cates, May, & Woolley, 2009; Gyllensten et al., 2011; Kendra, Cattaneo, & Mohr, 2012; Matteo & You, 2012). Other studies report changes in stigmatizing beliefs after specific stigma-reduction interventions (Aggarwal et al., 2013; Ferrari, 2016; Gable, Muhlstadt, & Celio, 2011; Rubio-Valera et al., 2016).

In the current study, we aimed not only to measure mental illness stigma in general, but also to analyze different aspects of stigmatizing beliefs to get a deeper understanding on what aspects of mental illness stigma are affected (or not affected) by professional training. Stigma of mental illness is a multidimensional construct, covering elements of labeling, stereotyping, separation as well as emotional reactions, false beliefs about the causes of mental illness, controllability of the disease and treatment prognoses (Link, Yang, Phelan, & Collins, 2004). It is likely that not all components of stigma are similarly susceptible to change during educational interventions. University education usually provides rich professional experiences through the course of the studies (e.g. direct contact with people with mental disorders during internship practice, being in a client role during counseling training, abnormal psychology courses with comprehensive theoretical knowledge about biogenetic mechanisms of psychiatric disorders etc.) which has potential both to increase and to reduce stigma of mental illness (Lammie et al., 2010; Morant, 1995). We hope that current analysis will help with more comprehensive understanding of mental illness stigma and its elements and provide us with possible intervention targets to promote changes in students' attitudes.

1.3 Hypothesis

Based on expected cultural differences and changes of stigmatizing beliefs in the professional training process we hypothesize that:

- 1) Lithuanian Psychology students will express more stigmatizing attitudes towards people with mental illness when compared to US students.

- 2) Postgraduate students in both countries will express fewer stigmatizing attitudes towards people with mental illness when compared to undergraduate students.

2 Methods

2.1 Procedure and Participants

For this study, a total of 528 psychology students, including undergraduate and postgraduate students, participated in the cross-sectional survey in Lithuania (N=418) and the US (N=110) on voluntary basis (Table 1). In Lithuania, we aimed to collect data that would be representative to psychology students' population; invitations to participate in the survey were sent to all universities offering Psychology programs in the Lithuania. Firstly, the heads of psychology departments were contacted, asking for the opportunity to directly contact students. Some universities chose to forward survey invitation in their internal mailing system, informing psychology students about the possibility to participate in the online survey. Other universities chose to invite researchers to attend lectures, introduce the survey and provide paper and pencil questionnaires. In the US, similar psychology students' invitation strategy was applied however sampling was limited to one Midwestern state.

Table 1. Demographic characteristics of the sample.

	Lithuania (N=418)	US (N=110)	Statistics
M (SD) or N (%)			
Gender			$X^2(1) = 18.05, p < .001$
<i>Male</i>	52 (12.4%)	32 (29.1%)	
<i>Female</i>	366 (87.6%)	78 (70.9%)	
Age (years)	23.1 (5.3)	22.0 (3.8)	$t(526) = 2.02, p = .044$
Years of studies			$X^2(2) = 18.18, p < .001$
<i>1-2 years of bachelor studies</i>	168 (40.2%)	23 (20.9%)	
<i>3-4 years of bachelor studies</i>	159 (38.0%)	65 (59.1%)	
<i>Master studies or higher</i>	91 (21.8%)	22 (20.0%)	

Due to study design, mixed data gathering procedure and the anonymity of responses we could not calculate the exact response rate. We have no information what percent of electronically sent invitations reached psychology students. It is also likely that students who received electronic invitations through email felt less social pressure to participate in the study than students who were directly approached during their classes. Direct contact with psychology students might have yielded higher response rate and possibly a higher number of participants with stronger stigmatizing beliefs.

2.2 Ethical Approval and Conduct

The study's protocol was approved by the Institutional Review Board for the Protection of Human Subjects at a Nebraska University in the US (IRB Number 003115-1 in June 2015), and no additional approval was needed for the Lithuanian part of the study. Informed consent was obtained from each study participant before starting the survey. Participation was completely voluntary, and participants could discontinue participating in the research survey at any point. No information for identification of participants was gathered. Data was collected from June 2015 to September 2016.

2.3 Measures

To evaluate behavioral, emotional, cognitive and social aspects of mental illness stigma, a questionnaire addressing different aspects of stigmatizing beliefs was developed.

- *Social distance* can be defined as the relative willingness of one person to participate in relationships of varying degree of intimacy with a person who has stigmatized identity (Lauber, Nordt, Falcato, & Rossler, 2004). Social distance from people with mental illness represents behavioral aspect of mental illness stigma and is considered as one of the most negative consequences for those that are affected by it, aside from the loss of social status and credibility

(Lauber et al., 2004). In this study, social distance was measured using nine-item scale created for this study based on Bogardus Social Distance scale (Wark & Galliher, 2007), expanded with specific aspects of social distance relevant for distancing from people with mental illness (Mann & Himelein, 2004). Nine situations of different closeness of contact were provided for the respondents, asking them to evaluate on a 5-point scale, how comfortable they would feel in this sort of contact (e.g. "Having a conversation with a person with mental illness").

Internal consistency coefficients of this scale were sufficient in the US and Lithuanian samples (US Cronbach alpha – .92; LT Cronbach alpha – .85).

- *Emotional reactions to people with mental illness.* Link et al (Link et al., 2004) stresses that measurement of emotional responses to mental illness is critical in understanding stigmatizing beliefs. Three emotional reactions to mental illness (fear, pity and anger) were measured using 13 item scale created for this study, asking participants to evaluate how strongly they would experience a particular feeling when dealing with people with mental illness on 9-point scale, ranging from "not at all" to "very much" (e.g. "How scared of a person with a mental illness would you feel?"). Internal consistency coefficients of three emotional reactions subscales (fear, pity and anger) were sufficient in the US and Lithuanian samples (US Cronbach alpha for fear – .92, for pity – .80, and for anger – .81; LT Cronbach alpha for fear – .90, for pity – .85, and for anger – .79).

- *Cognitive beliefs related to mental illness* are recognized as significant predictors of mental illness related feelings, and through the emotional component, may impact helping behaviors or foster avoidance (Corrigan et al., 2002). Four stigma related cognitive beliefs – personal control, external control, stability of mental illness and internal locus of causality of mental illness – were aimed to be measured in current study. The cognitive beliefs scale was developed for this study based on recommendations, provided by McAuley, Duncan and Russell (1992). However, confirmatory factor analysis with Maximum likelihood estimation performed using R project software (R Core Team, 2013), lavaan package (Rosseel, 2012) revealed that in the US students' sample the scale items do not load on expected factors, correlations between items are weak and model fit is poor ($\chi^2 = 75.35$, $df=11$, $p=.007$; RMSEA = .07, TLI=.84, CFI=0.88, SRMR=0.08) indicating insufficient validity and reliability of chosen cognitive belief instrument. Thus, only four single items, each representing one of four aspects of illness related beliefs (personal control, external control, stability of mental illness and internal locus of causality) on 9-point scale between two opposites (e.g. mental illness is 9 – stable over time/ 1 – variable over time) having highest factor loadings in both countries, were chosen for current analysis.

- *Attitudes towards community integration of people with mental illness* were also included in this study as deinstitutionalization is a significant aim in the care and management of individuals with mental illness (Link et al., 2004). Attitudes towards community integration are also indicating a level of discrimination. In this study, support of community mental health care ideology was evaluated using 10-item Community Mental Health Ideology subscale from the Community Attitudes Towards the Mentally Ill questionnaire (Taylor & Dear, 1981). Students were asked to express their opinion about various situations related to people with mental disorders living in the community in a 5-point scale, ranging from "strongly agree" to "strongly disagree" (e.g. "The best therapy for many adults with mental illness is to be part of a normal community"). Internal consistency coefficients of this scale were sufficient in the US and Lithuanian samples (US Cronbach alpha – .81; LT Cronbach alpha – .86).

- *Balanced Inventory of Desirable Responding (BIDR)* (Paulhus, 1991) was used in order to control the response bias of the participants and included self-deception and impression management subscales. Self-deceptive positivity subscale measures respondents' tendency to give self-reports that are honest, but positively biased. The impression management subscale measures deliberate self-presentation. Respondents were asked to evaluate each statement on 7-point scale from "not true" to "very true". Higher scores of the total scale represent stronger social desirability bias. Internal consistency coefficient of this scale was sufficient (US Cronbach alpha – .71; LT Cronbach alpha – .69).

Questions related to the age, gender and year of studies were also included in the survey.

2.4 Statistical analysis

Results were analyzed using SPSS 20.0 Statistical Package. Cases with missing more than one item on mental illness stigma measures were excluded from further analysis. Random missing items were replaced by group mean. The distribution of all mental illness stigma measures was not normal, however skewedness and kurtosis were distributed between -1 and +1, still indicating that use of parametric statistics might be considered as appropriate. An ANCOVA analysis was used to compare the means of all stigmatizing beliefs between the countries and among three students' subgroups (I-II years of bachelor studies, III-IV years of bachelor studies, Master studies and higher),

controlling for social desirability. Partial correlations were calculated to examine relationships between the variables controlling for year of studies and social desirability.

Results

Cross-country comparison using one-way ANCOVA (controlling for social desirability), revealed that when Lithuanian psychology students were compared to US students, they expressed a significantly stronger desire for social distance from people with mental illness ($F(1, 520) = 72.72; p < .001; \eta_p^2 = .12$) (Figure 1). Across both countries, social distance was significantly lower in postgraduate students ($F(2, 520) = 5.53; p = .004; \eta_p^2 = .02$) when compared to undergraduates. Interaction between country and education was nonsignificant ($F(2, 520) = 0.04; p = .96; \eta_p^2 = .00$) for social distance.

Lithuanian students reported experiencing more fear ($F(1, 520) = 46.61; p < .001; \eta_p^2 = .08$), anger ($F(1, 520) = 4.08; p = .044; \eta_p^2 = .01$) and pity ($F(1, 520) = 16.68; p < .001; \eta_p^2 = 0.03$) when interacting with people with mental illness than US students (Figure 2). Students with more educational experience did not differ from students with less educational experience in levels of fear of people with mental illness ($F(2, 520) = 2.93; p = .055; \eta_p^2 = .01$), pity ($F(2, 520) = .94; p = .393; \eta_p^2 = .00$) and anger ($F(2, 520) = 1.01; p = .364; \eta_p^2 = .00$). No significant differences in stigma related emotion were observed as a function of country-education interaction: for fear ($F(2, 520) = 1.24; p = .291; \eta_p^2 = .01$), pity ($F(2, 520) = 1.63; p = .197; \eta_p^2 = .01$), anger ($F(2, 520) = .67; p = .514; \eta_p^2 = .00$).

US students reported significantly stronger cognitive belief in the possibility of personal control of mental illness than Lithuanian students ($F(1, 520) = 19.16; p < .001; \eta_p^2 = .04$) (Figure 3). In both countries, a belief in the possibility of personal control of mental illness became stronger with education ($F(2, 520) = 6.29; p = .002; \eta_p^2 = .02$). Country – education interaction was non-significant ($F(2, 520) = .46; p = .633; \eta_p^2 = .00$) for beliefs about possibility of personal illness control.

Lithuanian and US students did not significantly differ in beliefs in the possibility of external control of mental illness ($F(1, 520) = .50; p = .481; \eta_p^2 = .00$). No differences as a function of education was found ($F(2, 520) = 1.15; p = .317; \eta_p^2 = .00$). Only a statistical tendency of country-education interaction was observed ($F(2, 520) = 2.73; p = .066; \eta_p^2 = .01$). The results seem to indicate that US students tend to increase their expectations in the possibility of external control of illness through the education, but no changes were observed in Lithuanian students.

Lithuanian and US students did not differ in beliefs about internal/external causes of the mental illness ($F(1, 520) = 2.00; p = .158; \eta_p^2 = .00$), and no differences were observed regarding this belief in relation to education ($F(2, 520) = .20; p = .817; \eta_p^2 = .00$) or country-education interaction ($F(2, 520) = .87; p = 0.419; \eta_p^2 = .00$). However, Lithuanian students were more likely to perceive mental illness as stable over time than US students ($F(1, 520) = 24.26; p < .001; \eta_p^2 = .05$). Year of studies ($F(2, 520) = 1.33; p = .264; \eta_p^2 = .01$) and country-education interaction ($F(2, 520) = 2.00; p = .136; \eta_p^2 = .01$) were not significantly related to beliefs in internal causes of mental illness.

Lithuanian and US psychology students did not significantly differ in attitudes towards community integration of people with mental illness ($F(1, 520) = 1.36; p = .244; \eta_p^2 = .00$) (Figure 4). In both countries, disagreement with community mental health care ideology was lower in students with more educational experience ($F(2, 520) = 8.12; p < .001; \eta_p^2 = .03$). Country-education interaction was non-significant ($F(2, 520) = 1.10; p = .335; \eta_p^2 = .00$) for attitudes towards community integration.

Correlation analysis of stigmatizing beliefs in Lithuania and US psychology students (controlling for social desirability and year of studies) revealed that community mental health ideology, emotional reactions to people with mental illness and social distance were significantly interrelated in both samples (Table 2). Here, stronger desire for social distance was related to stronger disagreement with a community mental health care ideology (US Pearson's $r(105) = .28, p = .003$; LT Pearson's $r(414) = .49, p < .001$), more expressed fear (US Pearson's $r(105) = .33, p < .001$; LT Pearson's $r(414) = .52, p < .001$) and anger (US Pearson's $r(105) = .27, p = .005$; LT Pearson's $r(414) = .38, p < .001$) in US and Lithuanian students, and stronger feelings of pity in Lithuanian students (Pearson's $r(414) = .19, p < .001$).

Table 2. Partial correlations among stigmatizing beliefs in the US and Lithuanian psychology students' samples, controlling for year of the study and social desirability.

	Country	2.	3.	4.	5.	6.	7.	8.	9.
1. Social distance	US	0.33**	0.27*	0.16	-0.01	0.14	0.07	-0.13	0.28**
	LT	0.52**	0.38**	0.19**	-0.15**	0.04	0.01	0.06	0.49**
2. Fear	US	1.00	0.63**	0.31**	-0.10	-0.08	0.09	-0.19	0.37**
	LT	1.00	0.55**	0.32**	-0.13*	0.07	-0.03	0.01	0.54**
3. Anger	US		1.00	0.23*	-0.06	0.06	0.06	-0.13	0.25*
	LT		1.00	0.08	-0.05	-0.01	0.01	0.07	0.33**
4. Pity	US			1.00	-0.14	-0.03	0.11	-0.27*	-0.02
	LT			1.00	-0.05	0.03	0.02	-0.07	0.13**
5. Personal control of mental illness	US				1.00	0.25*	0.12	0.18	-0.04
	LT				1.00	0.29**	0.13*	0.08	-0.13*
6. External control of mental illness	US					1.00	0.08	0.15	0.11
	LT					1.00	0.05	0.01	0.05
7. Variability of mental illness	US						1.00	-0.02	-0.04
	LT						1.00	0.02	-0.02
8. External causes of mental illness	US							1.00	0.10
	LT							1.00	0.12*
9. Disagreement with community mental health ideology	US								1.00
	LT								1.00

* $p < 0.05$, ** $p < 0.01$

Cognitive beliefs about possibilities of control, stability and causes of mental illness were not related to social distance or support to community integration of people with mental disorders in US psychology students. In the Lithuanian sample, a weak but statistically significant correlation was observed between cognitive beliefs, social distance and community mental health ideology. Weaker beliefs in the possibilities of internal illness control was related to stronger desire for social distance (Pearson's $r(414) = -.15$, $p = .002$) and stronger disagreement with community mental health ideology (Pearson's $r(414) = .49$, $p < .001$); and stronger belief in the possibilities of external illness control was related to stronger disagreement with community mental health ideology (Pearson's $r(414) = .12$, $p = .01$).

Discussion

In this cross-sectional study, we aimed to compare stigmatizing attitudes towards people with mental illness of Lithuanian and US psychology students, to investigate dynamics of attitudes through the course of professional education by comparing students with more and less educational experience and to investigate interrelationships between behavioral, cognitive, emotional and social aspects of mental illness stigma. Current results illustrate that culture is important in stigmatizing attitudes despite of professional education. Lithuanian psychology students reported stronger desire for social distance, more expressed emotional reactions of fear, anger and pity when interacting with people with mental illness, perceived mental illness as more stable over time and were less optimistic about possibilities of personal illness control when compared to US students.

To our knowledge, stigmatizing beliefs of psychology students were never investigated in Lithuania before, however studies of other mental health care professionals demonstrated that Lithuanian professionals express stronger stigmatizing beliefs when compared to professionals in other countries (Chambers et al., 2010; Pūras et al., 2013). Our results support findings of Winkler et al (Winkler et al., 2017) and illustrate that significant regional differences might be found regarding the attitudes toward people with mental disorders.

During recent years many initiatives as well as real organizational steps were taken to standardize education of psychologists, to ensure comparable level of professional qualification, and to help with mobility of psychology professionals within US, Canada and Europe (Hall & Lunt, 2014; Silbereisen, Ritchie, & Pandey, 2014).

European Federation of Psychologists' Associations initiated European certificate in Psychology (EuroPsy) as European standard of education, professional training and competence in psychology in European Union. Psychology programs at Lithuanian universities were inspected and revised to meet the EuroPsy criteria. Still, current study illustrates that despite of steps taken; Lithuanian and US students differ in stigmatizing attitudes towards people with mental illness. Thus, not only professional competences and content of the study, but also cultural attitudes should be considered evaluating comparability of education. Besides efforts to standardize professional training of mental health professionals, another direction of country specific individualized training should be recognized.

Since students may be perceived as future mental health care specialists, their remaining stigmatizing attitudes are an alarming signal to the mental health care system of Lithuania as well as other countries due to increasing mobility of psychology professionals. Stigmatizing attitudes will accompany them into the health care settings, mental health care teams and influence their daily decisions. Current findings illustrate that cultural context may create additional challenges and tasks when planning and implementing professional education. It seems that Lithuanian psychology students, in addition to professional education, may benefit from supplementary anti-stigma programs and initiatives during the university education. By analyzing different aspects of mental illness stigma, this study aimed to find the most important interventional targets.

Previous research reported mixed findings about changes of stigmatizing attitudes through the course of professional education (Aggarwal et al., 2013; Cates et al., 2009; Ferrari, 2016; Gable et al., 2011; Gyllensten et al., 2011; Kendra et al., 2012; Matteo & You, 2012; Rubio-Valera et al., 2016). Although cross-sectional, results of our study illustrate positive dynamics of some stigmatizing attitudes with increasing education. In both countries, social distance decreased and support to community mental health care ideology increased with education. However only minor changes were observed in emotional reactions to people with mental illness. Several factors might be behind these results. Firstly, the possibility of the flooring effect could not be excluded. Scores of fear and anger were relatively low in all educational groups. It is possible that psychology students generally do not experience strong negative emotional reactions to people with mental illness because of their professional choice and impact of education. Comparison with the general population is needed to gain more objective evaluation of reaction intensity. On the other hand, previous studies in professional samples indicated that fear significantly decreases with professional experience (Lammie et al., 2010; Mårtensson, Jacobsson, & Engström, 2014). This may allow us to speculate, that university education may lack specific professional experience fostering emotional reaction changes. Fear and anger in our study significantly correlated with disagreement with community mental health care ideology and social distance illustrating their negative potential to impact stigmatizing behavior. Thus, affective dimension of stigmatizing beliefs clearly needs to be targeted while planning and implementing anti-stigma education.

Psychology students with more educational experience in both countries were more optimistic about possibilities of personal illness control. Although this finding might be interpreted as a decrease in stigmatizing attitudes and empowerment of a patient/client, it also carries a potential risk to place too much responsibility on a patient/client for his/her illness control. According to attribution theory, placing too much responsibility on a patient/client may foster disappointment and anger of a psychologist when control fails or a patient/client relapses (Corrigan, Rowan, Qreen, Lundin, River, Uphoff-Wasowski, et al., 2002; Link et al., 2004). Thus, finding an equilibrium between controllability and uncontrollability beliefs, personal and external control, illness stability and possibilities of change might be the aim of psychologist education as professional beliefs are inevitably heterogeneous (Morant, 1995).

According to Maranzan (2016), a “live” social contact experience should be a basic principal of stigma reducing interventions for students, as a most significant effect usually is achieved meeting, communicating and cooperating on common goals with people with mental illness.

Metaanalysis by Knaak, Mogill, & Patten (2014) on key ingredients of anti-stigma interventions for health care providers emphasizes that social contact should employ multiple social contexts, strengthen recovery beliefs, challenge professional myths and use enthusiastic facilitators. Lebowitz and Ahn (2016) found that strengthening personification by highlighting personal traits of people with mental disorders rather than placing emphasis on biological aspects of illness, and emphasizing people’s ability to make independent choices and decisions were efficient strategies to reduce mental illness stigma in clinicians. Finally, providing students and professionals with a learning experience that can reveal their unconscious biases might help to raise awareness and to motivate them to participate in anti-stigma initiatives (Casad, Flores, & Didway, 2013).

Limitations

Several limitations of our study should be acknowledged. First, this is a cross-sectional study and further longitudinal studies are strongly encouraged to understand the trajectory of stigmatizing attitudes during university education. A control group of students from other study programs was not included in this study, limiting our possibilities to evaluate the level of stigmatizing attitudes in a broader context. The samples in each country differed in socio demographic. We also did not investigate content of the studies and teaching methods used in Lithuania and the US. Deeper qualitative analysis of study content might be the next step, and the next study target. The study’s sample included undecided (no major of study declared) psychology students. It is possible, that not all students who participated in current study will choose clinical occupation in the future. It might be that students, who are more orientated towards mental health care related careers might have a more positive beliefs towards mental illness. Thus, further analysis comparing students with different career preferences might provide more insight. Finally, in this study, we targeted only psychology students. Data comparison with stigmatizing attitudes of other mental health care professionals and students, including mental health nurses and psychiatrists, would enrich understanding about stigma levels in Lithuanian mental health care settings, thus further studies on stigmatizing attitudes in Lithuania are strongly encouraged. However reasonable sample size, cross-cultural comparison and social desirability bias control might be considered as main strengths of this study.

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