



Mental Health First Aid Knowledge among Students in Lithuania

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Keywords

Young adult; students; mental health; health literacy; depression; schizophrenia

Abstract

Aim: Mental health disorders are prevalent worldwide among young people, posing a significant burden on individuals and societies. Despite this, mental health care services remain insufficiently resourced and underutilised, with many individuals not receiving appropriate care. Mental Health First Aid (MHFA) training aims to improve mental health literacy and support for individuals experiencing mental health problems. Our study aimed to investigate MHFA knowledge of young adults studying in Lithuania, focusing on their ability to provide first aid to individuals with mental health issues. **Subjects and Methods:** A cross-sectional study was conducted online among 18-29-year-old students from universities, colleges, and vocational schools in the three biggest Lithuanian cities. The questionnaire assessed the ability to recognise mental disorders described in the vignettes, personal experience, and knowledge about the ways to assist someone with mental health problems. 1469 respondents were included in the final analysis. **Results:**

The average MHFA score (referred to as the mnemonic ALGEE later in the text) was poor – 1.74 out of 5 points. Encouraging professional help-seeking and providing emotional support were the most common actions suggested by participants. Correct identification of the disorder and personal experience correlated with higher scores. **Conclusion:** The study underscores the need to address MHFA competencies among young people in Lithuania, proposing the integration of MHFA courses into educational programmes to enhance mental health literacy and support. Further research is recommended to evaluate the effectiveness of these programmes in the population.

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Introduction

Numerous studies have shown that approximately one in five persons experienced a common mental disorder within 12 months, and almost one in three throughout their lifetime [1]. Moreover, the World Health Organisation (WHO) stated that mental health conditions are widespread worldwide but yet misunderstood and

undertreated, and services to address them are insufficiently resourced [2]. Vigo and associates estimated that the global burden of mental illness accounts for 32.4 % of years lived with disability (YLDs) and 13 % of disability-adjusted life-years (DALYs), e.g. depressive and anxiety disorders have been among the top ten leading causes of all YLDs worldwide [3]. In addition, mental health conditions have shown a significant economic burden on society because of the direct treatment costs and indirect expenses associated with reduced economic productivity, higher rates of unemployment, and other economic impacts [2].

Globally, 71 % of people with psychosis have not received appropriate mental health care. Coverage of mental health care for major depressive disorder in 84 countries ranged from 33 % in high-income locations to 8 % in low and lower-middle-income countries [4]. Approximately 28 % of patients with anxiety disorder received no treatment [5] but a worldwide evaluation is lacking. We estimated, among individuals with a 12-month DSM-IV (where DSM is Diagnostic Statistical Manual). Longer duration of untreated illness was associated with lower functionality or disability, higher symptom severity, and occurrence of new symptoms; in psychotic patients, it was a predictor of lower life quality [6-8]. Due to the high prevalence of mental disorders, every member of society has likely encountered someone with a mental health problem [9]. Therefore, it is crucially important to educate people on ways to recognise when a person needs mental health support.

Mental Health First Aid (MHFA) is a course that teaches individuals to recognise the symptoms and signs of mental health disorders. Through this programme, participants acquire practical skills essential for providing support to someone experiencing a mental health problem, enduring a worsening of an existing mental health problem, or suffering a mental health crisis until appropriate professional help is received or the crisis is resolved [9]. A systematic review and meta-analysis of 18 MHFA program trials supports the effectiveness of the training. Results show improved mental health literacy lasting up to 6 months after training [10].

According to the large-scale epidemiological meta-analysis, the onset of the first mental disorder occurred before age 14 in one-third of individuals, before age 18 in almost half, and before age 25 in almost two-thirds, with a peak age of 14.5 and median age 18 across all mental disorders globally [11]. Overall, 1 in 5 college or university students suffered from mental health disorders [12,13]. Moreover, onsets, that took place before enrolling the college, were associated with reduced odds of college admission as well as with a higher likelihood of college dropout [12]. Prevention and early intervention could improve personal, familial, societal, clinical,

and economic outcomes of mental disorders [14,15]. Lynch and associates in a scoping review stated that family and friends are central agents for young people to provide needed mental health support or even prohibit access to it [16].

There is no previous research available on MHFA knowledge in Lithuania. This study is relevant due to the high prevalence of mental health disorders among young people, as well as the importance of early intervention, especially when mental health problems become even more common as a result of the COVID-19 pandemic, armed conflicts or climate crisis [17-19].

Subjects and Methods

A cross-sectional study was performed from mid-January to mid-May 2019. Study subjects were 18-29-year-old students from fifteen universities, colleges, and vocational schools based in the three largest Lithuanian cities (Vilnius, Kaunas, Klaipėda). Invitations to participate in the study (together with a link to the research website) were distributed via educational institutions' internal channels and their social media. Electronic permissions to participate in the research were received from every institution. Inclusion criteria comprised individuals aged 18 - 29 who were students at one of the participating educational institutions. Exclusion criteria involved doctoral students or resident doctors, as well as responses that were incomplete or false.

With the author's permission, we translated and adapted the Australian national survey on MHFA responses of the public [20]. Due to a wide geographic spread and due to economic considerations, we conducted an online survey. Each respondent randomly received one of eight different versions of the questionnaire. The constant part of every questionnaire contained sociodemographic questions. The randomised part included one of eight case vignettes about either a female (Rasa) or a male (Jonas) character with mental health issues (depression, depression with suicidal thoughts, early schizophrenia, and chronic schizophrenia). Moreover, the questionnaire assessed the ability to recognise the correct mental disorder in the vignette. Finally, it included an open-ended question: "Imagine Jonas (Rasa) is someone you have known for a long time and care about. You want to help him (her). What would you do?"

In close-ended questions, we asked respondents to choose one answer. Multiple responses were appropriate when identifying the correct mental disorder described in a vignette (see Table1). Responses to the open-ended question about possible support were coded according to the categories described in similar research: 1) Assess a problem/assess the risk of harm, 2) Listen to/talk to/support a person and/or a family, 3) Give or seek information, 4) Encourage professional help-seeking, 5) Encourage self-help [20-23]. ALGEE is the mnemonic formed from the first letters of MHFA actions. Qualitative data was coded by two collaborating researchers. Drawing significantly on the methodology of the Australian national survey, responses

Table 1. Answer options to the question “What would you say, if anything, is wrong with Jonas?”

Options	
A.	Depression*
B.	Nervous exhaustion
C.	Schizophrenia/paranoid schizophrenia**
D.	Mental disorder
E.	Psychological/mental/emotional problems
F.	Stress
G.	Cancer***
H.	Nothing***
I.	I don't want to answer***

*Response was considered correct if A (with or without any abstract answers as B, D, E, F) was chosen for vignettes depicting depression. It was counted as incorrect if C was also mentioned.

**The response was considered correct if C (with or without any abstract answers as B, D, E, F) was chosen for vignettes depicting schizophrenia. It was counted as incorrect if A was also mentioned.

***Any response containing H, I, or G was counted as incorrect.

in each ALGEE category were assigned a binary classification of ‘yes’ or ‘no’, mirroring the approach utilised in this research [20]. We assigned a ‘no’ classification for the vast majority of superficial answers or instances where the ALGEE category was not mentioned, and a ‘yes’ classification for detailed responses. Other studies used a 10-12-point system – authors assigned 1 point for superficial responses and 2 points for those offering specific details [21-25]. We combined the previously mentioned coding methods and gave 1 point for ‘yes’ and 0 for ‘no’; therefore, the 5-point system was used for the evaluation of ALGEE actions in our study.

The validity of our questionnaire was assessed using Pearson’s product-moment correlation method. All question items demonstrated significant correlations with the total score ($p < 0.001$). Moreover, all rxy count values exceeded the r-table product-moment threshold (0.085), indicating their validity. Reliability testing was conducted using the coefficient alpha reliability method, yielding a Cronbach’s alpha value of 0.737. Based on the results of these validity and reliability tests, it can be concluded that the questionnaire utilised in this research is both valid and reliable.

The study aimed to investigate the ability of young studying adults in Lithuania to provide first aid to a person with a mental health problem. In this study, we sought to answer the following questions: 1. What MHFA actions would students employ to help a friend, acquaintance, or family member with a mental illness? 2. What factors are associated with higher MHFA performance? 3. Would students provide similar assistance to different people with the same mental disorder?

All statistical tests were undertaken using SPSS 22.0 for Windows (SPSS, Inc., Chicago, Illinois). The percent frequencies of responses were calculated after pooling across male and female versions of each vignette. According to the central limit theorem, all quantitative variables followed a normal distribution. Measures of central tendency were presented as frequencies or

percentages for categorical variables, as means $\pm$ SD for continuous variables. Significance level $\alpha = 0.05$ was chosen for statistical analysis. All tests were two-tailed. T-tests and analysis of variance were applied for the comparison of means between different groups. Pearson’s correlation coefficient was used to measure the statistical relationship between continuous variables. Multiple logistic regression models were constructed for the prediction of participant response regarding ALGEE actions for people described in vignettes. The following predictor variables were included: type of vignette, respondents and patients’ gender, whether respondent correctly identified the problem portrayed in a vignette, whether respondent studied at university or other institution, carer, and professional status. Hosmer-Lemeshow goodness of fit test was applied. Odds ratios and p-values were calculated for each predictor of the model.

The study was approved by the Vilnius Regional Biomedical Research Ethics Committee (registration No. 158200-18/9-1059-560).

Results

Based on the data provided by the Lithuanian National Education Agency Education Management Information System, during the academic year of 2018-2019, 50860 students were studying in the participating educational institutions [26]. We received 1617 completed questionnaires, 3.18 % of all students we attempted to reach. Only 1469 students met the inclusion criteria. The mean age was 21.1 ± 2.3 years, 72.9 % ($n = 1071$) of the participants were female, 27 % ($n = 396$) were male, and 0.1 % ($n = 2$) identified themselves as ‘other’. Table 2 shows the distribution of sociodemographic characteristics among the study participants.

Table 2. Socio-demographic characteristics of participants

Socio-demographic characteristics	Frequency	Percentage (%)
City		
Vilnius	1005	68.4
Kaunas	223	15.2
Klaipėda	241	16.4
Educational institution		
University	781	53.2
College	544	37.0
Vocational school	144	9.8
Experience with mental disorders		
Carer	665	45.3
Professional	109	7.4
None	697	47.3

ALGEE score and frequency of actions

The mean value of the ALGEE score was 1.74 ± 0.87 points. Most respondents scored 1 or 2 out of a maximum of 5 ALGEE points (38.6 % and 39.9 % respectively). The majority of respondents would choose to help a person with a mental health illness by encouraging professional help-seeking and listening to/talking to/supporting a person (Table 3). Respondents who received a vignette describing a depressed person with suicidal thoughts more often recommended assessing a problem/ the risk of harm.

ALGEE score and specific characteristics of a person described in the vignette

68.7 % of the participants correctly named the disorder described in the vignette. The ALGEE score among these participants was significantly higher than among

respondents who could not name the correct disorder (1.82 ± 0.86 vs. 1.59 ± 1.85 points, $p < 0.001$). The type of illness described in vignettes (affective or psychotic spectrum disorder), had no association with the ALGEE score. Furthermore, there was no significant correlation between the ALGEE score and the gender of the person depicted in the vignette.

Earlier experience, sociodemographic characteristics, and ALGEE score

A high proportion of respondents (45.3 %) reported having a family member or friend with mental health problems, referred to as ‘carers’ (Table 2). Carers received a significantly higher ALGEE score (1.93 ± 0.90 vs. 1.62 ± 1.79 , $p < 0.001$) (Table 4). 7.4 % of respondents stated that they had working experience with people who have mental health problems (referred to as ‘professionals’). Their ALGEE score was significantly higher than that of non-professionals (1.94 ± 0.94 vs. 1.74 ± 1.86 , $p = 0.018$). We found no correlation between respondents ‘age and the ALGEE score.

Table 5 shows the difference in ALGEE scores between respondents who study at different institutions in Lithuania ($p < 0.001$). Further analysis revealed that the ALGEE scores of respondents studying at colleges were significantly higher than those of respondents enrolled at universities or vocational schools.

Table 6 shows predictors and odds ratios for ALGEE responses. ‘Encourage professional help-seeking’ was more likely to be chosen by participants who received an early schizophrenia vignette, named a correct diagnosis, or were carers. ‘Listen to/talk to/support a person and/or a family’ was less likely to be chosen by university students and in response to the early schizophrenia vignette. In addition, ‘listen to/talk to/support a person and/or a family’ was chosen less frequently if a participant received a male vignette. Respondents who

Table 3. Percentage of respondents who mentioned a certain ALGEE action

Response (%)	Disorder		Depression with suicidal thoughts	Early schizophrenia	Chronic schizophrenia	All vignettes (average)
	Depression					
Encourage professional help-seeking	64.1		73.7	72.6	72.1	69.8
Listen to/talk to/support a person	73.6		70.2	60.3	62.8	67.0
Listen to/talk to/support a family	4.7		5.0	3.4	3.2	4.1
Listen to/talk to/support a person and/or a family	74.3		70.5	61.8	63.9	67.9
Assess a problem/assess the risk of harm	12.9		15.4	14.2	14.4	14.0
Give or seek information	5.1		7.5	4.6	7.6	6.1
Encourage self-help	19.1		16.9	14.5	15.0	16.5

Table 4. ALGEE score differences in sociodemographic groups

Groups	Mean ALGEE score $\pm$ SD	p-value
Sociodemographic characteristics		
Male	1.80 $\pm$ 0.90	0.270
Female	1.74 $\pm$ 0.85	
Experience with mental disorders		
Carer	1.93 $\pm$ 0.90	0.001
Non-carer	1.62 $\pm$ 1.79	
Professional	1.94 $\pm$ 0.94	0.018
Non-professional	1.74 $\pm$ 1.86	
Gender in a vignette		
Male	1.75 $\pm$ 0.87	0.840
Female	1.76 $\pm$ 0.86	

received the chronic schizophrenia vignette and those who had work experience with people with mental illness were more likely to assess a problem/assess the risk of harm. However, this answer was chosen significantly less frequently by respondents who received a male vignette. No significant predictors were found for the options 'give or seek information' and 'encourage self-help'.

Discussion

The mean ALGEE score in this study was lower than half of the maximum value, 1.74 out of 5 points. This illustrates the insufficiency of the Lithuanian students' knowledge on the topic of mental health. Alternative studies demonstrated a similar trend – 2.89 out of 12 points at British universities, while undergraduates in Sri Lanka scored 2.13 out of 12 points [22,24]. Finally, an analysis of Australian youth showed the range of the mean ALGEE score before training, from 2.26 (in the case of schizophrenia) to 3.13 (in the case of depression) out of a possible total score of 10 [23].

Our findings indicate that students in Lithuania would similarly attempt to assist a distressed person by encouraging professional help-seeking (69.8 %), as well as by listening to/talking to/supporting a person and/or a family (67.9 %). In Sri Lanka, the percentage of those who would suggest support (64.9 %) or would attempt to listen or talk to a person with mental health problems (52.1 %) was rather similar. However, less than a third of respondents suggested professional help [24]. In the Australian youth survey rates were higher in both categories - 91.9 % of participants referred to listening to a problem, and 72.7 % referred to professional help [23]. The most endorsed actions among British students were providing support and information (63.5 %), followed by encouraging professional help (58.6 %) [22].

Our results show that respondents who identified the correct diagnosis (except those who received depression with suicidal thoughts vignette), received a higher ALGEE score. Similar findings were demonstrated by Amarasuriya and associates [24]. Having a family member or a friend with mental health problems was a predictor for higher ALGEE scores in our study. Correspondingly, the same predictor for a higher ALGEE score and

Table 5. ALGEE score differences between respondents studying at a different higher educational institution

Educational institution	University	College	Vocational school
ALGEE Mean $\pm$ SD	p-value		
University	1.67 $\pm$ 0.83	< 0.001	
College	1.89 $\pm$ 0.90		0.011
Vocational school	1.66 $\pm$ 0.85	0.987	

Table 6. Odds ratios (and p-values) from multiple logistic regression analysis predicting ALGEE responses

Predictor	ALGEE	Encourage professional help-seeking	Listen to/talk to/support a person	Listen to/talk to/support a family	Listen to/talk to/support a person and/or a family	Assess a problem/ assess the risk of harm	Give or seek information	Encourage self-help
Depression		1.00 ¹	1.00 ¹	1.00 ¹	1.00 ¹	1.00 ¹	1.00 ¹	1.00 ¹
Depression with suicidal thoughts		1.36 (0.150)	0.88 (0.566)	0.90 (0.790)	0.91 (0.681)	1.63 (0.080)	1.72 (0.152)	1.08 (0.748)
Early schizophrenia		1.65 (0.022)	0.50 (0.001)	0.40 (0.067)	0.54 (0.004)	1.33 (0.309)	0.99 (0.975)	0.67 (0.140)
Chronic schizophrenia		1.52 (0.052)	0.70 (0.104)	0.49 (0.151)	0.75 (0.188)	1.73 (0.047)	1.55 (0.252)	0.74 (0.247)
Male gender in a vignette		1.12 (0.482)	0.99 (0.947)	0.32 (0.002)	0.99 (0.941)	0.63 (0.021)	0.60 (0.068)	0.83 (0.314)
The male gender of the respondent		0.84 (0.364)	0.86 (0.406)	0.49 (0.151)	0.83 (0.314)	1.09 (0.712)	1.61 (0.115)	0.98 (0.909)
Correct recognition of a disorder		1.53 (0.011)	1.19 (0.307)	1.28 (0.510)	1.15 (0.409)	1.18 (0.471)	1.91 (0.060)	0.81 (0.300)
University student		1.40 (0.053)	0.46 (< 0.001)	0.78 (0.490)	0.46 (< 0.001)	0.78 (0.245)	0.76 (0.355)	0.74 (0.149)
Carer		2.00 (< 0.001)	1.18 (0.280)	1.05 (0.898)	1.18 (0.303)	1.25 (0.278)	1.65 (0.097)	1.21 (0.330)
Professional		1.43 (0.240)	1.43 (0.220)	0.80 (0.720)	1.38 (0.273)	2.03 (0.017)	1.65 (0.222)	1.06 (0.866)
¹ Reference category								

better mental health literacy was revealed in further studies [22,27]. We found that work-related experience was associated with better ALGEE score. A similar tendency was found in articles, where better mental health literacy was reported by students who had clinically related courses [22,27]. Interestingly, older student age, earlier study years, and female gender were also associated with higher ALGEE scores [22,24,27,28]. On the other hand, our findings did not show any association between age and the ALGEE score.

‘Encourage professional help-seeking’ was more likely to be chosen by participants who mentioned a correct diagnosis. Comparable results were revealed by Osman and associates in their study involving young Swiss adults [29]. In addition, this answer was more often mentioned by participants who had a family member or a friend with mental problems. Respondents with professional mental health experience were prone to mentioning the option ‘assess a problem/assess the risk of harm’. Other studies linked personal experience of psychological disorders, based on personal, family, or peer history, as well as coursework related to clinical psychology, with better mental health knowledge [27]. Furthermore, reduced personal stigma was a predictor for encouraging professional help [20]. In our study, university students were less likely to suggest the ‘listen to/talk to/support a person and/or a family’ action. Further investigators reported certain differences between faculties and study programs as well [22,24,26].

According to our findings, the type of vignette (affective or psychotic disorder) had no association with the ALGEE score. The previously mentioned study of Australian youth reported a lower mean total ALGEE score if a respondent received a vignette with schizophrenia. The percentage of personal disagreement with a stigmatising attitude about schizophrenia was lower than depression [23]. In another study respondents demonstrated limited positive emotional reactions, negative attitudes, and increased desire for social distance when asked about people suffering from schizophrenia. In addition to this, fear of mentally ill individuals predicted a greater risk of selecting drug therapy instead of psychotherapy and relaxation [30]. Higher stigmatisation found in other studies could explain why our respondents were more likely to offer professional help and were less likely to interact with persons who suffer from an early psychotic disorder. Similarly, respondents were more likely to assess the risk of harm in people with chronic psychotic disorder.

Finally, there was no significant interaction between the gender of a person with mental health issues and the ALGEE score. Similar results were shown by Davies and associates in their study [22]. However, in our study, it was less likely that a respondent would listen to/talk

to a family of a male person with mental health issues or assess his risk of harm. In previously mentioned research it was observed that male respondents, studying non-clinically relevant degrees, showed lower ALGEE scores after receiving the male vignette [22].

There are several limitations to this study. Firstly, its utilisation of a cross-sectional design captures MHFA knowledge and practices among participants at a single point in time, thereby hindering the assessment of temporal changes or causal relationships. Future studies could benefit from evaluating MHFA knowledge both before and after the MHFA course and implementing an experimental study design. Secondly, the different ALGEE scoring systems partially constrained our ability to compare our findings with those of other studies. Thirdly, potentially relevant factors, such as the participants' degree profile (e.g., clinical or non-clinical), were not included in the study. Additionally, participants who chose to respond to the survey may have had a higher level of interest or awareness in mental health issues compared to non-respondents, leading to potential response bias. On the other hand, a comparatively large and homogeneous sample allowed us to draw important insights from our data. Another strength is that we managed to reach students from all three levels of education (vocational, college, and university) in the three largest cities of Lithuania, where the majority of Lithuanian youth study.

Despite the limitations, this was the first research to investigate MHFA competencies among young people studying in Lithuania. The comparably large number of respondents shows that mental health well-being is

a relevant topic in our society. Our findings emphasised the importance of personal experience and educational background in shaping one's ability to respond effectively to other people's mental health challenges. Some of our results differed from those found in other studies, likely due to methodological and cultural differences. Despite this, most of the tendencies in this study were comparable to those described previously. Therefore, we assume that the MHFA courses with mild adaptations could be beneficial in Lithuania as well. We suggest integrating the MHFA classes into educational programmes to enhance mental health literacy, improve support, and reduce the stigma associated with mental illness. Due to the high prevalence of mental health problems among students and their presence throughout educational institutions, we think that young adults engaged in academic pursuits could be the ideal target group for launching these courses. In this case, we suggest conducting prospective case-controlled studies to evaluate the effectiveness of the programme in a specific population.

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Conflict of Interest

None to declare.

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