“It should be something we can talk about, I think.”

A mixed-method evaluation of a classroom intervention on psychological problems among adolescents

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Studentnr.: 6414184
Date: 24 June 2019
Word count: 9996

Abstract

Background

This study evaluates a classroom intervention including peer education in the Netherlands on mental health problems among adolescents (14-23 years old). It focusses on two important barriers towards help-seeking: poor mental health literacy and perceived stigma. Based on social norms theory and Goffman's stigma theory, the research question was: "*What is the perceived impact of the intervention, including peer education, on mental health literacy and perceived stigma on psychological problems among adolescents?"*. We expected that the intervention would 1) increase mental health literacy, and 2) reduce the perceived stigma on psychological problems among adolescents. We expected 3) peer education to enhance the effectiveness of the intervention.

Methods

A cross-sectional, concurrent mixed-method design was employed. A questionnaire, mainly intended to measure the role of peer education, was taken right after the last session from 302 adolescents (male n = 133, female n = 168). Semi-structured interviews, mainly intended to measure impact on mental health literacy and perceived stigma, were held with another 14 adolescents (male n = 7, female n = 7). Perceived stigma was defined as "easiness to talk about psychological problems".

Results

Adolescents indicated increased mental health literacy (M = 2.46, SD = .597), which consisted mostly of knowledge about potential sources of help. However, much information was already known. The effect on perceived stigma was smaller (M = 2.03, SD = .735), and in the interviews more ambiguous. This may have to do with environmental factors. Peer education was overall rated positively (M = 2.70, SD = .320), which the interviewees linked to the age and personal experience of the peer educators.

Conclusions

The intervention is moderately effective in increasing mental health literacy and, to a lesser extent, in reducing perceived stigma. Methodological issues should be resolved in future research. Peer education was an effective tool.

1. Introduction

1.1. Problem statement

Mental disorders are quite prevalent among adolescents and young adults (Kieling et al., 2011). Worldwide, 10 to 20 percent of the adolescents are estimated by the World Health Organization (WHO) (2018) to experience mental health problems. In the Netherlands, where general satisfaction with life among adolescents is relatively high, 19.7 percent of secondary school students experienced symptoms of mental health problems at the same time (HBSC, 2018; Kleinjan, 2018). The age of onset for these mental disorders is often early in life; in fact, half of all mental health disorders starts by 14 years of age (Kessler et al., 2005; WHO, 2018). These findings reflect the high susceptibility for young people to mental health problems. Nevertheless, young people are reluctant to seek help for their symptoms (Bland, Newman & Orn, 1997). A large study in the Netherlands found that many of the 19-year-old respondents who had been experiencing mental health problems since childhood had not sought help for them yet (Raven et al., 2017). Important barriers to help-seeking for mental health problems among adolescents are perceived stigma and embarrassment, lack of confidentiality and trust regarding the potential source of help and poor mental health literacy, that is, having trouble to recognise symptoms (Gulliver, Griffith & Christensen, 2010).

Mental health problems during adolescence can have a profound impact with possible disruptive effects for adulthood (Rickwood et al., 2005). Untreated mental disorders are associated with reduced academic performance, poorer quality of life and social isolation (Hunt & Eisenberg, 2010; O'Connor et al., 2014). This suggests that tackling mental health problems early in life can promote the wellbeing of the adolescent and offer long-term benefits. In that light, it is important that adolescents learn about psychological problems and seek help when it is needed. An intervention in the Netherlands[1] intends to bring the topic of psychological problems under attention in classrooms with students from secondary and intermediate vocational education, ranging from 14 to 23 years old. The intervention is a school-based program. It consists of three one-hour classroom sessions in three weeks, where so-called peer educators share their experiences with psychological problems and practical information. The goal of the program is three-fold: learning to recognise psychological problems or symptoms, talking about them and learning what to do when they are experienced. These goals address two important barriers to help-seeking: poor mental health literacy and perceived stigma (Gulliver, Griffith & Christensen, 2010).

[1] The name of the intervention was requested to remain unknown

In the light of a planned nationwide roll-out of the intervention, a *preliminary* evaluation (rather than an official evaluation research) of the programme was requested. The aim of this research is two-fold. First of all, to evaluate to what extent adolescents perceive the intervention to reduce stigma and increase mental health literacy, two important identified barriers to help-seeking for mental health problems (Gulliver, Griffith & Christensen, 2010). Second, the perceived role of peer education is evaluated. Such an evaluation is relevant, as it will give insight into the impact of the intervention and possible areas for adjustment. From a scientific point of view, it is important to investigate what factors contribute to the effectiveness of an intervention on mental health problems among adolescents. The proposed research adds to this knowledge by investigating what the perceived effectiveness of an intervention including peer education is on mental health literacy and perceived stigma. Considering the high susceptibility to and negative consequences of mental health problems for adolescents (Rickwood et al., 2005; WHO, 2008), it is important to find an effective intervention that prevents them.

1.2. Theoretical perspective

Above, the terms "adolescents", "young adults" and "students" have been used interchangeably. This research takes adolescents and young adults together as individuals between 12 and 24 years old (Kleinjan, 2018), as this definition was adopted for the intervention. A more precise description of mental health problems is needed as well. Mental health problems can be experienced in varying degrees of severity (Keyes, 2005). Consequently, not all adolescents with symptoms of mental illness will have a diagnosis. Moreover, the intervention focusses on psychological *complaints*, not so much on disorders specifically. Therefore, in this research we will adhere to their definition and consider psychological problems as both diagnosed cases and as experiencing symptoms of mental health problems without being diagnosed or even being fully aware of them. Having provided definitions of two core concepts, we will go on to explain why the intervention is expected to address mental health literacy and stigma.

Goffman's stigma theory

The most important barrier for adolescents toward seeking help for mental health problems is perceived stigma (Gulliver, Griffith & Christensen, 2010). Stigma can be defined as "*a socialized, simplified, standardized image of the disgrace of a particular social group*" (Smith, 2012, p. 258). Sociologist Erving Goffman has described stigma as the discrepancy between a

person's *virtual* social identity – how the person is characterized by society – and their *actual* social identity – the attributes really possessed by a person. He argues that three categories of people exist, based on their association with and reactions to stigmatized persons. The 'own' are those who share the stigma, the 'wise' those who are not members of the stigmatized group, but are sympathetic towards them, and the 'normals' are those who are not members of the stigmatized group, but who uphold the stigma. Coping with stigmatization happens through either concealing features that can facilitate categorization, withdrawal from stigmatizers, or educating or challenging the stigmatizers. All three categories of people can use these coping strategies (Goffman, 1963; Smith, 2012; Yang, 2007). In the intervention, the peer educators are the *wise* for whom the stigma is personally relevant. They aim to educate and challenge the stigmatizers and stigmatised, hoping to reduce the stigma and thereby potentially warding off rejection of the stigmatised.

In later research, stigma has been categorized into either perceived stigma, personal (or public) stigma or self-stigma. This article focusses on perceived stigma, defined as "*the level of stigma that [people] believe is held by the greater community towards a certain group of people*" (Batterham, Griffiths, Barney, & Parsons, 2013, pp. 282). An overview of sociological approaches shows that stigma is difficult to define, as it is more of an umbrella term, a social concept consisting of multiple dimensions such as labelling, emotional reactions and discrimination (Yang, 2007).

Social norms theory

The way in which stigmatization reduces the likelihood of seeking help can be explained by the *social norms theory*. This theory describes how individuals *incorrectly* perceive attitudes and behaviour of their peers as being different from their own: individuals often overestimate problematic or risky behaviours of their peers and tend to underestimate their peers' healthy or protective behaviours. As a result, individuals change their behaviour to approximate that misperceived norm, which causes risky behaviour to be expressed or rationalized more often, and healthy behaviour to be inhibited (Berkowitz, 2003; Perkins & Berkowitz, 1986).

Social norms theory has its origin in alcohol abuse among college students but has gained increasing attention as an approach to other health issues as well (Berkowitz, 2003). In fact, it has been shown that the social norms approach can be advanced to help-seeking behaviour for mental health problems among college students. Both Conley (2012) and Kerns (2013) found that most college students perceived their peers to feel less favourably about help-seeking and were less likely to seek help for mental health problems than they did themselves. These

findings show that young people perceive their peers' norms toward healthy behaviour, that is, help-seeking for mental health problems, as less favourable than their own norms. Consequently, according to social norms theory, they will try to approximate to this norm and engage less in healthy, help-seeking behaviours. Since adolescents are sensitive to peer influence when it comes to health behaviour (Rivis & Sheeran, 2003), adolescents are presumably relatively likely to adjust their health behaviour to a misperceived social norm.

Social norms theory predicts that interventions that reveal the actual, healthier norm will correct the misperceptions about norms, in that way increasing engagement in healthy behaviours (Berkowitz, 2003). In the intervention, the actual, healthier norm of talking about and seeking help for mental health problems is revealed through the information and personal stories told by the peer educators. As such, the misperception of the unhealthy norm ("we do not talk about it, we do not seek help") should be corrected, and adolescents should feel less held back to engage in healthy, help-seeking behaviours.

Synthesis

Even though social norms theory (Berkowitz, 2003) and Goffman's theory on stigma (Goffman, 1963; Smith, 2012; Yang, 2007) are two different theories, they do have overlap: both theories describe how stigma influences individual (health) behaviour. The theories provide a useful framework for the factors the intervention aims to address. But whereas social norms theory puts an emphasis on the role of peers, Goffman does not mention a specific context. Moreover, while Goffman mostly explains what stigma is and how the process of stigma works in general, the social norms approach focuses on how *perceived* stigma shapes and explains (health) behaviour, that is, how the idea of a stigma operates on people (Berkowitz, 2003; Smith, 2012; Yang, 2007). Lastly, some pitfalls of these theories are relevant for this research. Social norms theory explains health behaviour from the context of peers only (Berkowitz, 2013). However, adolescents live in other social contexts too, such as their family or their jobs. Here, they meet role models of all ages. Goffman's stigma theory is more inclusive of different social contexts, as it describes the working of stigma in general (Smith, 2012). An important notion that both theories lack is the culture-specificity of stigma. Attitudes towards mental health problems may differ between cultures and countries, which may influence what the stigma on mental health problems exactly entails (Sheikh & Furnham, 2000). Moreover, neither of the theories gives an easily quantifiable definition of stigma. This may be because of the multiple dimensions of stigma (Yang, 2007), which makes it difficult to formulate a simple,

measurable definition. Even so, the use of both theories is of added value, as they complement each other.

1.3. Empirical evidence

Mental health literacy

Besides perceived stigma, poor mental health literacy is a second important barrier towards help seeking among adolescents (Gulliver, Griffith & Christensen, 2010). Mental health literacy can be defined as the '*knowledge and beliefs about mental disorders that aid their recognition, management and prevention*' (Jorm et al., 1997, p. 182). It encompasses the ability to recognize specific disorders; the knowledge of causes, risk-factors and where to find information and professional help; and attitudes that promote recognition of symptoms and help-seeking (Jorm et al., 1997). As a result, *poor* mental health literacy has negative health outcomes: it contributes to delayed treatment seeking, premature termination of treatment, and poorer health outcomes for people with mental health problems (Van 't Hof et al., 2011; Corrigan, 2004). Moreover, mental health literacy is often assumed to be interrelated with stigma; some propose that attitudes towards mental health problems are a result of the level of mental health literacy (Wei et al., 2013). Multiple classroom or school-based interventions aimed at educating adolescents about psychological health and distress, stigma and help-seeking, showed improved mental health literacy and, at the same time, reduced stigma among participants (Perry et al., 2014; Sharp et al., 2006; Esters, Cooker & Ittenbach, 1998). This is in some way what social norms theory proposes too: through increasing knowledge about healthy behaviour, the attitude towards mental health problems and help-seeking behaviour changes (Berkowitz, 2003).

Peer education

Peer educators are trained young adults, who have personal experience with the topic and who try to sustain positive behaviour change among the target group (Abdi & Simbar, 2013). Peer education, an important and distinctive factor of the intervention, is growing in popularity and seems a promising method. Since adolescents consider their peers a credible source of information and advice, they have an important influence on health-related behaviour. And as people identify with peers, the latter tend to be more successful than professionals in passing on information. Moreover, peer education is cost-effective (Turner & Shepherd, 1999; Green, 2001). Evidence suggests that peer-delivered health promotion programmes can be effective in education about (mental) health among adolescents (Patalay et al., 2017). However, other

findings on effectiveness of peer education are still ambiguous and show the importance of context and implementation factors (Southgate & Aggleton, 2017; Turner & Shepherd, 1999). As research on peer education is not univocal and the perspective of participants is somewhat neglected in the literature, this research will investigate the role of peer education from the participants' perspective.

1.4. Research question

Theory and empirical evidence imply the need to address mental health literacy and perceived stigma, but also the likeliness of the intervention under evaluation to be effective. The research question was thus: "*What is the perceived impact of the intervention, including peer education, on mental health literacy and perceived stigma on psychological problems among adolescents?"* In line with social norms theory and Goffman's stigma theory, we expected that the intervention, which informed the target group about healthy behaviours (talking about psychological problems and seeking help), would 1) increase the mental health literacy of the students, and 2) reduce the perceived stigma on psychological problems among students (Berkowitz, 2003; Smith, 2012). Even though the literature on peer education is not univocal, peers are important for adolescents in forming attitudes towards health behaviour specifically (Berkowitz, 2003; Rivis & Sheeran, 2003). Thus, in the context of this intervention we expected 3) peer education to be an effective tool in an intervention on adolescents' mental health.

2. Methods

2.1. Design, instruments and procedures

The study consisted of a cross-sectional, concurrent mixed-method design, meaning that the evaluation included qualitative and quantitative research methods that are used and interpreted at the same time. These methods – a questionnaire among the students and semi-structured interviews with other students – complemented each other in testing the expectations, as the questionnaire focused mainly on the effect of peer education, and the interviews more on evaluation of the intervention goals. The current research was part of a larger evaluation study by the Verwey-Jonker Institute, and thus included some instrument items that were not used in this research.

The questionnaire (Appendix 1) was designed to provide general insight into the students' evaluation of (the goals of) the intervention – with regard to mental health literacy and stigma,

as proposed by Gulliver, Griffith and Christensen, 2010 – and more specifically, test the effect of peer education on these evaluations. It was formulated by one of the researchers of the Verwey-Jonker Institute, was anonymous and took five to seven minutes to be completed. It included 19 items, divided over four sections. Only the items relevant for this research are described here. See Table 1. The independent variable was the evaluation of peer education: the dependent variables were general satisfaction, and the evaluation of mental health literacy and perceived stigma.

Table 1. Questions used in the questionnaire

Question 5 – Peer education
a. I think the peer educators gave interesting information about psychological complaints and problems.
b. I think the peer educators understand well which psychological problems young people (may) face.
c. The peer educators had a good "connection" with the class.
d. I thought it was interesting when the peer educators told about their own psychological complaints.
Question 6 – Intervention goals
a. Young people know more after the sessions about psychological complaints and problems
b. After a few sessions, it became easier to talk with the class about 'psychological complaints'
Question 8 – General satisfaction
Would you recommend this program to other classes?

The first section comprised of sociodemographic information: age, gender, and educational level. Then, the evaluation of peer education was operationalized with four statements where students could indicate to what extent they agreed ('True'/'Somewhat true'/'Not true'/'I don't know'). The third section included a statement about mental health literacy and one about easiness of talking about problems, in order to evaluate the goals of the intervention ('Agree'/'Somewhat agree'/'Not agree'/'I don't know'). As 'perceived stigma' is a rather broad and theoretical term, it was operationalised here as 'talking about psychological complaints more easily' so that it would be measurable for researchers and understandable for adolescents. Besides, it is difficult to define stigma and assess it with only one question (Yang et al., 2007).

However, social norms theory explains that stigma, the *idea* that peers may upheld a certain norm towards health behaviour, causes individuals to adhere to that norm (Berkowitz, 2003). This implies that these norms are not talked about, but only inferred. Whenever health behaviour and healthy norms are discussed, however, the perceived stigma decreases (Conley, 2012; Kerns, 2013). One way of measuring perceived stigma might therefore be to assess to what extent adolescents feel at ease talking about the topic of psychological problems. Lastly, question 8 assessed general satisfaction with the programme by asking students to rate whether they would recommend this intervention to others ('Yes'/'Maybe'/'No').

For the interviews with the students, a topic list was set up (Appendix 2). The aim of the interviews with students was to explore the effect of the intervention on mental health literacy and perceived stigma and to a lesser extent, evaluation of peer education. Topics included effect on perceived stigma and mental health literacy again (Gulliver, Griffith & Christensen, 2010), and role of the peer educators – reflecting the effect of peers who reveal a healthier norm of talking openly and help-seeking, as proposed by social norms theory (Berkowitz, 2003). The topics were formulated based on literature about interviewing adolescents (Beyer, n.d.; Boyle, 2007). Perceived reduced stigma was again operationalised as ease of talking about the topic of psychological complaints in class. Perceived increased mental health literacy was operationalised as information learned in the sessions about psychological problems and finding help, following the definition by Jorm et al. (1997).

The data collection procedure was as follows. At the end of the third session, the peer educators handed out the questionnaire, explained its aim and asked students to fill it out. After about ten minutes, the questionnaires were collected again and stored in envelopes. They were sent to the Verwey-Jonker Institute, where they were stored safely. Filling out the questions and handing it back to be sent to the Verwey-Jonker Institute was considered informed consent. Interviews were held preferably right after the third session, with students who had agreed to be interviewed. They were recruited by the researchers, who attended a lesson and asked in class if students were willing to be interviewed right after the session. Students who wanted to join were asked to raise their hand. After obtaining informed consent, the sessions were discussed by means of the topic list (Appendix 2) in individual interviews. Duo-interviews were held in case there was not enough time for several individual interviews. The interviews were recorded with permission from the students, transcribed as soon as possible and recordings were deleted afterward.

2.2. Participants

The participating students were adolescents (12 to 23 years old) in higher secondary education (pre-vocational secondary education (VMBO) year 3 and 4, senior general secondary education (HAVO) year 4 and 5, and pre-university education (VWO) year 4, 5 and 6) and intermediate vocational education (MBO year 2, 3 and 4) in the urban west of the Netherlands. Due to different locations and levels of education, we believed the students would provide a representative sample. Exclusion criteria for participants were not defined. Hereinafter, the Dutch acronyms will be used for the educational level of the respondents.

2.3. Analysis

The questionnaire was analysed through IBM SPSS. Since the questionnaire was not an existing one but composed by a researcher from the Verwey-Jonker Institute specifically for this evaluation, the internal reliability was unknown and needed to be calculated first. As such, Cronbach's alpha was calculated for the scale on peer education, which was question 5a through 5d. As the other questions measured different concepts individually, calculating reliability was not necessary. Then, frequencies were calculated for the sample characteristics (gender, age, educational level), for the questions on peer education, evaluation of the perceived impact on the three goals of the intervention, and for general satisfaction (Table 1). Next, in order to calculate a mean score on peer education and determine the effect of peer education on the goals of the intervention, the values of the variables were transformed to make them fit for a statistical test. See Table 2. As "I don't know" is considered as non-response in a Likert-scale, it was classified as system-missing.

Table 2. Transformation of values on question 5, 6a, 6b, and 8

Labels			**Old values**	**New values**
Question 5a-5d	*Question 6a-6b*	*Question 8*		
True	Agree	Yes	1	3
Somewhat true	Somewhat agree	Maybe	2	2
Not true	Not agree	No	3	1
I don't know	I don't know		4	Missing

Then, a mean score on peer education was calculated by adding up the scores of the individual items (5a-5d). Descriptive statistics on the peer education score and question 6a, 6b

and 8 (with these new values) were calculated. After that, the role of peer education was tested. As all variables were at least on an ordinal measurement level, Spearman's rho was the most appropriate statistical test to calculate correlations between the mean score on peer education and the questions about the goals of the intervention (6a and 6b) and general satisfaction (question 8). These correlations showed whether the use of peer education was significantly (p<.05) related to the perceived effectiveness of the intervention.

The interviews were transcribed and analysed through NVivo. The themes that emerged from the literature (mental health literacy, reduction in perceived stigma, and peer education) were formulated into *a priori* codes. After that, inductive coding was applied to information that did not fit the a priori codes. See Appendix 3 for the coding tree.

2.4. Ethical aspects

The research was approved by the advice commission *Wet Mensgebonden Onderzoek (WMO)* from the Faculty Social and Behavioral Sciences at Utrecht University. Informed consent was obtained from the interviewed participants, and also from parents for all participants under 16. For the questionnaire, filling it out and handing it back to the researchers was considered giving consent. The questionnaire was already anonymous, but for the interviews, participants' names were pseudonymised. Interview recordings were deleted right after transcription.

3. Results

In this section, the study's findings are discussed. The section will follow the order of the topics of the interview, starting with general satisfaction with the program, followed by effect on knowledge and easiness of talking about the topic, and ending with peer education. Information from the interviews that did not fit the theoretical concepts will be described in the last section. For each concept the findings from the questionnaire will be complemented with findings from the interviews. But first, the reliability analysis was done. Cronbach's alpha for the peer education scale (α = .626) was quite low, but was considered acceptable, as it was a short scale and several factors of peer education were measured (similar to Berger & Hänze, 2015).

Sample characteristics

A total of 302 participants (male n = 133, female n = 168), age 12 to 21 years old, filled out the questionnaire. Three respondents had obviously not filled out the questionnaire seriously, leaving 299 participants for the analysis. Educational level was not filled out by 38 participants. One participant did not fill out their age and gender. Others did not answer some of the items on peer education or goals of the intervention. The distribution of respondents over sociodemographic variables can be found in Appendix 4, Table A. A separate sample of 14 students was interviewed (male n = 7, female n = 7), age 15 to 21 years old. A descriptive table of the participants' pseudonyms, gender, age (group) and educational level is presented in Appendix 4, Table B.

Descriptive statistics and general satisfaction

After recoding, descriptive statistics for the answers on peer education, goals of the intervention and general satisfaction were calculated. See Table 3 for the results, and Appendix 5 for the frequency tables.

Table 3. Descriptive statistics on intervention goals, general satisfaction and peer education

	N	*Minimum*	*Maximum*	*Mean*	*SD*
Mental health literacy	282	1	3	2.46	.597
Reduced perceived stigma	247	1	3	2.03	.735
General satisfaction	291	1	3	2.69	.551
Peer education (mean)	259	1.75	3.00	2.70	.320

Note. For this calculation, total N = 192.

In general, students seemed positive about the program (M = 2.69, SD = .320). A total of 214 participants (71.6%) would recommend this program to others (Appendix 5, Table A). During the interviews, the intervention was evaluated quite positively as well. Moreover, some participants explicitly mentioned that they thought it was important that students learned more about the topic:

> *I thought it was rather interesting, but I mainly thought it was useful that people got an idea of it. Because it could be that there are people in the class who have something like*

that, and they give an idea of how you can deal with that. (…) I feel like that is needed. (…) It should be something we can talk about, I think.

Christian, male, MBO 4

3.1. Mental health literacy

The majority of the questionnaire's respondents believes to some extent that young people know more about psychological problems after the program (M = 2.46, SD = .597). 48.5 percent (n = 145) answered '*Agree'* to this statement ("*Young people know more after the sessions about psychological complaints and problems*"), and 40.8 percent (n = 122) answered '*Somewhat agree*'. Only 10.7 percent (n = 32) did not agree or answered, '*I don't know*' (Appendix 5, Table A). This statement reflected mental health literacy in general.

In the topic list of the interviews, mental health literacy was divided into knowledge about psychological problems, and knowledge about available help. Increase in mental health literacy was expressed in that students had learned more about where to find help if they or someone in their environment would ever need it, or that they believed classmates had learned this. Especially help within the school, other than common sources of help such as teachers or mentors, was new information. Besides knowledge about sources of help, the participants had learned more about psychological problems and recognizing symptoms:

D: Yeah, I have a lot of new information. For example, that ADHD and ADD are psychological disorders, too, I did not know that at all. I just thought, I could only think of depression.

Interviewer: What did you take home from these sessions?

D: Ehm, that you shouldn't label people too quickly, that you have to deal with people in a certain way, and how you can recognise psychological disorders. And that, if someone is depressed for example, you shouldn't say like, 'stop being such a wuss, just go and do something, then you will not think about it'. It doesn't work that way. I did think it worked like that, to be honest.

David, male, MBO 4

This quote not only reflects increased mental health literacy, but also reduced stigma. David's attitudes toward people with mental health problems have changed as a result of his increased knowledge about what mental health problems entail. This fits the proposed link between mental health literacy and stigmatization, advocated by Wei et al. (2015).

However, a great deal of the information was already known to the adolescents. This finding was not related to participants' educational level, gender or age, but for some this knowledge was due to personal experience with mental health problems. Six of the students indicated that they had experienced some form of mental health problems themselves or from close by. Kirsten, for example, says she did not learn new things since she has had a lot of therapy when she was younger, whereas her classmate Lieke now has a better understanding of psychological problems:

> *Interviewer: Did you learn something from these sessions?*
> *K: I personally have not, but I have followed a lot of therapy when I was young, so I already knew quite a lot. But I can imagine that people who did not have all that, that they have come to know things they did not know before, so to speak.*
> *L: I did, I have started to look at it somewhat differently. That is something you learn of course, but just… about depression and all that, you had an idea of it in your head, and it becomes more elaborate in this way. And when you hear for example, when one of those [peer educators] had told her story, it was really like, wow. How is it possible that someone has been through so much? Very heavy stuff.*
> **Kirsten and Lieke (duo-interview), females, Atheneum 4**

Here, too, Lieke links the information she has obtained to her perspective on peers with mental health problems. Other students, who stated that they had *not* obtained new information, added that they believed classmates did learn some new information, and/or that they at least had become more aware of the existence of mental health problems among youths.

> *Interviewer: They already discussed it shortly during the session; do you have an idea of where you could go to at the school?*
> *E: I never really have trouble talking about my feelings, so I often tell it to my parents right away. (…) But I think that for other people it is good that they did it. Especially that they listed multiple options, not just the IB-er* [a counsellor at the school] *and the mentor.*
> *Interviewer: Is that new information for you or your classmates?*
> *E: Yes, for example the youth nurse; I did not have a clue that she was here in school. I always thought you had to go to the IB-er or the teacher.*
> **Eric, male, MBO 4**

It can be deduced from the findings that the intervention is relatively effective in increasing knowledge about psychological problems and potential sources of help. Moreover, the participants confirm how their increased knowledge impacts their attitudes and prejudice towards adolescent's mental health, as was proposed based on social norms theory (Berkowitz, 2003). However, regardless of educational differences, the level of knowledge that already exists among adolescents should not be underestimated.

3.5. Feeling more at ease to talk about psychological problems

Compared to results on the other questions, the respondents were the least positive on a statement on the intervention's effect on perceived stigma (M = 2.03, SD = .735). Only 23.4 percent (n = 70) of the respondents of the questionnaire believes it became easier to talk about psychological problems in their class, and 38.1 percent (n = 114) agreed a little with this statement ("*After a few sessions, it became easier to talk with the class about 'psychological complaints"*). Moreover, a relatively large share of the respondents (n = 63, 21.1 percent) did *not* agree with this statement, which was operationalised as the effect on perceived stigma, as discussed in section 2.1 (Berkowitz, 2003) (see Appendix 5, Table A). Findings from the interviews about perceived easiness of talking about psychological problems are somewhat ambiguous. Students who have personal experience with mental health problems say they did not and would not talk about it in class. Similarly, more than half of the participants state they have not noticed a change in ease of talking about the topic in class. Perceived stigma as a reason to refrain from opening up is expressed through the mention of shame and judgement:

> *J: I did not really notice it that much in our classroom myself, but [there were] some friends during the break who were talking about it. They said then, for example, that they thought the story of those two [peer educators] was heavy stuff and that it got very close, that sort of things.*
> *I: For me the same thing, our class thought that story was heavy, too. But it is not like people will show themselves, or say that they are not feeling well either, let's say. It is still something you can feel pretty ashamed for, something that many people who have [mental disorders] still do.*
> *Interviewer: So, you're thinking these sessions did not bring any change to that?*

> *I: Well, a little. I think people would think like, maybe I should go talk to someone who knows something about this. But in my direct environment I did not notice that, at least.*
> **Ivo and Julian (duo-interview), male, MBO 4**

Similarly, Brenda describes how fear of judgement and prejudice keeps her from telling about her own psychological problems:

> *B: Well, I don't [talk about it in class]. In general, I am a very open person, but only to the people who are close to me. My classmates don't know about it, and I don't want them to. (…). Because of that taboo. The prejudice. The judgement you will get.*
> *Interviewer: Are you afraid of their response?*
> *B: Yes, very much so.*
> **Brenda, female, MBO 4**

These statements confirm the link between (easiness of) talking about psychological problems and perceived stigmatization. Even though most participants can or do not directly say whether their perceived stigma is reduced or not, they imply it by saying they do or would not talk about their own experiences because of shame and fear of judgement and prejudice. On the other hand, students who do feel like it is easier to talk about it mention that they feel like classmates are more understanding, or that they now know how their classmates will think about it:

> *L: [It is easier to talk about it now,] definitely. Not like people told their own stories, but they told their own experiences, how they think about [mental health problems] and all. I think that helps.*
> *K: Yes, [I recognize that]. It's like she says, it's not like people shared their own stories but they did tell how they think about it. So, you don't know whether there are people with problems in our class, but the others did say like, if something like that would happen, I would think about it like this and this. So, that gives sort of a safe feeling, that you know the people around you will not think like, she is dramatizing.*
> **Kirsten & Lieke (duo-interview), females, Atheneum 4**

These students believe it is easier to discuss psychological problems because they now know the attitude of their classmates is not negative, that is, their misperceived norm is

corrected (Berkowitz, 2003). These statements imply that reduction of perceived stigma is a possible effect of the intervention, through providing information and showing that it is good to talk about psychological problems. However, more than half of the participants did not notice a change in their class. This may have something to do with the effectiveness of the intervention, but it may also have to do with group sizes: whereas it did not become easier to talk about the topic in class, one on one or in small (friend) groups, the program has been discussed by some. Moreover, for some it has become easier to talk about mental health problems with (groups of) friends:

> *N: I do recognize that people do not talk about it as easy as you might think. (…) It's not a common subject. I think it will be discussed easier with people that you trust, so to speak. [I think that is because of] trust. That you just, because you don't know the people, that you do not tell everything right away.*
> *Interviewer: Do you notice that in your class, too?*
> *N: Yes, I think so.*
> **Noelle, female, MBO 4**

Another factor influencing openness may be the atmosphere in the class. Students who report more easiness to talk about the topic mention follow-up from the schools, a trusting atmosphere in the classroom, or knowing now that it is safe to talk to classmates, if they ever need to. Adolescents who report not talking or not wanting to talk about their own experiences in class, (often) express an unsafe environment or lack of trust in their classmates:

> *No, in our class you just cannot do that. People talk anyways. It may sound crazy, but I mean, if I would tell you something confidentially here – I would do that with you, but in the class… that's difficult. Then it will be on Facebook tomorrow, so to speak.*
> **Hugo, male, MBO 3**

Thus, the possible effectiveness of the intervention in terms of reducing perceived stigmatization is probably to a certain extent dependent of the size and the atmosphere in the group.

The effect of the intervention on perceived stigma may be linked to the personal stories, as participants mention the impact the personal stories from the peer educators had on them and

their class. These stories were often unexpected, in they increased the adolescents' awareness of the fact that there are people their age suffering from mental disorders:

> *Let me say it like this: they are standing like that in front of the class, and you would not say they went through something. They appeared very normal. (…) It could just be a random person. (…) You see someone walking around and you wouldn't immediately think they had a psychological disorder. And when you hear those stories…*
> **Christian, male, MBO 4**

Here, the role of peer educators in revealing a healthier norm (mental health problems among adolescents exist, and it is good to talk about it) and changing the ideas of the target audience is reflected, as proposed by social norms theory (Berkowitz, 2003). Moreover, half of the participants stresses the importance of talking openly about this topic. Even though they might not be open about their own experiences, they apparently do believe talking about psychological complaints is important. This may reflect how they have adopted the healthier norm ('it is good to talk about psychological problems') (Berkowitz, 2003).

3.6. Peer education

Students were the most positive about peer education on the whole (M = 2.70, SD = .320). However, the rating of the "connection' with the class was lower, compared to the other questions on peer education (M = 2.48, SD = .579). Thus, most respondents think the information peer educators share is interesting (M = 2.66, SD = .522), that they understand adolescents' problems well (M = 2.78, SD = .434), and that their personal stories were interesting (M = 2.78, SD = .470), but a feeling of connectedness still lacks (see Appendix 5, Table B).

The total scores on the computed peer education scale were significantly positively correlated with the evaluation of the intervention goals, that is, with knowing more about psychological problems ($r = .136$, $n = 252$, $p = .031$) and with easiness of talking about it in class ($r = .302$, $n = 223$, $p = .000$). Peer education also correlated significantly with general satisfaction with the intervention ($r = .520$, $n = 252$, $p = .000$). See Appendix 5, Table C. This indicates that peer education is indeed important with regard to the evaluation of the effectiveness of the intervention, and to general satisfaction with the intervention as a whole. A causal relationship, however, cannot be deduced with this data.

From the interviews follows that the majority of the students liked the use of peer education, the two main reasons being that peer educators are younger than "normal" teachers, and that they talk from experience. The participants reported that the young age of the peer educators made them feel understood and made the topic more personally relevant.

> *Interviewer: And what did you think of those girls in front of the class? The fact that they were so young, for example?*
> *K: I think that helped as well. Because then you had the feeling like, they understand the way we talk and what we are talking about. And if it had been a 50-year-old woman, everyone would have thought like, in your time it was like that, and nowadays it is like this.*
> **Kirsten, female, Atheneum 4**

Apparently, the fact that the peer educators had had experienced psychological problems themselves made the information they shared livelier for the students. When comparing the young peer educators to a 40-year-old teacher, most of the students expected that would be less interesting, because teachers would have no personal experiences, or that their experiences would be less recognizable:

> *A teacher does not per se have to have dealt with a psychological problem. [The peer educators] really know what they are talking about, they talk from experience. And you don't know that from a teacher, of course. If you have studied for it you can know a lot as well of course, but that is different than when you have experienced something yourself.*
> **Brenda, female, MBO 4**

Due to the age of the peer educators and their lack of experience as a teacher, however, they may lack some didactical skills. For example, some students mentioned the peer educators were obviously nervous; others say they could've asked more (personal) questions; still others mention time management and planning, or the attitude of peer educators during a discussion. As social norms theory focusses merely on the influence of peers among each other (Berkowitz, 2003), factors that are of importance for the success of peer education do not fit in the theory per se. In terms of effectiveness of peer education, however, this is important to take into account.

3.7. Program in general

In this section, findings that did not directly fit in the theoretical framework but were deemed important will be discussed. For example**,** unintentional side-effects that were mentioned were the stimulation of negative thinking, and the uncomfortableness of attending the sessions while having experienced mental health problems personally. Two students reported having experienced and hearing others about increased negative thinking:

> *The only thing that happens is, you start to think about it more. But then I notice with myself, and others have that often, too, that you start to have negative thoughts about it. I do not think it is very useful, then. (…) Like, if you are thinking a lot about depression, you start to think like, am I depressed, too, and why. Then you just go like, all negative things come up.*
>
> **Finn, male, gymnasium 3**

Students who have had personal experiences with mental health problems themselves reported mixed feelings about having to attend these sessions. Some find it difficult but at the same time important, but two students explicitly mention having a hard time dealing with these topics again. For example:

> *I did find it difficult, like, discussing it in the class like that. Because some things, you experienced them from close by and all. So, and then all of a sudden, it's being discussed. And then you start thinking about it again. And you're thinking like, some people may not have experienced it from close by. But […] I have, I know how bad it can be.*
>
> **Maura, female, MBO 4**

It is important that with such sensitive topics, enough attention is being paid to vulnerable students. Especially since this age group is already susceptible to mental health problems (Kieling et al., 2011).

4. Discussion

The purpose of this study was to evaluate an intervention in the Netherlands that aimed to increase knowledge on psychological problems and reduce the stigma that surrounds the topic

among adolescents. These intervention goals were linked to barriers towards help-seeking, as found in the literature: poor mental health literacy and experiencing stigma (Gulliver, Griffith & Christensen, 2010). In line with social norms theory, Goffman's stigma theory, and findings from the literature about peer education, it was expected that the intervention would be effective in increasing knowledge about psychological problems and sources of help, that it would become easier to talk about psychological problems in class, and that peer education would be an effective tool in reaching those goals.

The findings from this research indicate that the intervention has been moderately effective in increasing mental health literacy (Jorm et al., 1997). What students reported to have learned often concerned knowing how to deal with possible symptoms of psychological problems (from others), and where to find help. However, a considerable number of the adolescents already knew a lot about psychological problems. It is therefore safe to assume that the approach adopted by this intervention is relatively effective in increasing mental health literacy, but that the knowledge students already have should not be underestimated. What is more, adolescents apparently often do not know how and where to find help. This is an important notion for interventions on mental health among adolescents. More information, especially on sources of help, could potentially be provided in the future in order to increase mental health literacy even more.

The findings related to stigma reduction cannot be interpreted as easily. Most of the respondents report not having noticed a change in their class, and not being willing to open up themselves. Unwillingness to talk about own experiences is often linked to fear of shame and judgement, which confirms the link between perceived stigmatization and (un)ease of talking about psychological problems, as was assumed in this research based on social norms theory (Berkowitz, 2003). However, easiness of talking about psychological problems also seems dependent of the group size and the safety or atmosphere in the group. When students feel like the attitudes towards mental health from a trusted classmate are not negative, they express willingness to talk to this person whenever it would be necessary. This is in line with social norms theory, which dictates that an intervention that reveals the actual, healthy norm (talk about psychological problems, seek help) will correct the misperceived, unhealthy norm (Berkowitz, 2003). Besides, adolescents express a change in their attitude towards peers with mental health problems, due to their increased knowledge. This not only affirms the link between mental health literacy and reduced stigma (Wei et al., 2015), it also shows that, even though it often may not become easier to talk openly in the class, stigma *does* decrease. However, as the questionnaires and interviews are taken right after the last session, it may take

some time for these changed attitudes to become evident and have further effect in the class. In addition, the results from this study show that adolescents now know that it is important to talk about mental health (problems), and that it happens or is more likely to happen with close friends or professional help. This is in line with earlier research, showing that social norms theory can be applied to help-seeking behaviour for mental health problems (Conley, 2012; Kerns, 2013).

However, the importance of contextual factors such as safety, group atmosphere and group size in the choice for (non-)disclosure become evident as well. Further research needs to reveal these underlying mechanisms, in order to tackle them more effectively. But firstly, reduction in perceived stigma requires better operationalization and instruments.

As mental health literacy and perceived stigma are barriers toward help-seeking for adolescents (Gulliver, Griffith & Christensen, 2010), it is likely that a peer-led intervention on mental health among adolescents with a similar design will make help-seeking for psychological problems more likely. This is confirmed by statements from the adolescents that they now know where to find help, and how to help others whenever this would be necessary. Moreover, it fits the claim from social norms theory that correcting the misperceived norm (not talking about it, not seeking help) will result in increased healthy behaviour (Berkowitz, 2003). As this is not a goal of the intervention, and the adopted instruments were not designed to measure help-seeking appropriately, however, this expectation needs further validation. Moreover, as it does not fit this study's theoretical background, future research could investigate the negative side-effects that were mentioned by several participants, that is, the sparking of negative thoughts and the uncomfortableness of attending these sessions while having personal experience with mental disorders.

Peer education is evaluated positively by adolescents, especially when they have personal experiences with a sensitive topic such as mental health. The findings show that peer education is related to increased knowledge on psychological problems and experiencing easiness to talk about psychological problems in class. According to the adolescents, this is because peer educators are easy to relate to, due to their age, and they make the information personally relevant by sharing their personal experiences with mental health problems. This confirms theory and empirical evidence about peer education, advocating that people identify more with peers, which makes them more successful in passing on (health) information (Turner & Shepherd, 1999; Green, 2001; Patalay et al., 2017). These findings also confirm the important role of peers in attitudes toward health behaviour (Berkowitz, 2003). However, with these findings, a causal relationship between peer education, mental health literacy and reduction in

perceived stigma cannot yet be determined. Moreover, as the peer educators were prominent figures throughout the sessions, it is not unlikely the evaluation of the intervention goals is partly based on their evaluation of the peer education, which would explain the correlation as well. Unfortunately, we could not correct for these co-founding factors with this study's design. The use of a control group, including a similar evaluation led by regular teachers, would be recommended in future evaluation studies on peer education.

Limitations

The most important limitation was the use of non-standardized research instruments. As the questionnaire and the topic list were designed initially for another, non-scientific research, these could not be matched appropriately to the theory and the aim of this study. This decreased the validity of the research instruments. It is also the reason why some of the items could have been formulated more appropriately. The best example is the formulation of the statement on reduction of perceived stigma: by measuring 'talking about it more easily', we are only indirectly measuring reduction in perceived stigma. Future evaluation of interventions on perceived stigma should first identify or define a reliable measurement of perceived stigma. As talking about personal experiences is dependent on perceived stigma, but also on atmosphere in the classroom, trust in classmates and the context of the group, "easiness of talking about psychological problems" is probably not the best indicator of perceived stigma. However, Yang et al. (2007) indicated that stigma is more of an umbrella term, a social process with multiple dimensions. This shows that assessing stigma is relatively difficult, especially with only one question. Moreover, as the definition of perceived stigma that was used, was adopted from the theoretical framework, it was probably the best fitting for this research.

Unfortunately, it was not possible to obtain data from every educational level, because of limited time and dependency of an external organization in recruiting respondents. Thus, adolescents from general secondary education (HAVO) were not included in the interviews and the questionnaire, similar to adolescents from pre-vocational secondary education (VMBO) in the interviews. However, as most of the Dutch student population is in pre-vocational secondary education (VMBO) and intermediate vocational education (MBO), the distribution of students over the educational levels that were represented is still relatively good.

During the interviews, it became clear that almost half of the participants had experienced mental health problems personally or from close by. This is more than 20% of the adolescents (HBSC, 2018). It is possible that some sort of bias has occurred here; perhaps, students with personal affirmation with the topic are more motivated to participate in such a research.

However, as their interviews on the whole did not deviate from the findings of the adolescents without personal experience with mental health problems, it probably did not influence the findings.

Conclusion

All in all, an intervention on mental health among adolescents with this design is proven moderately effective in increasing mental health literacy, and by doing so in possibly changing adolescents' attitudes towards people with mental health problems. Adolescents feel like it is easier to talk about mental health problems in groups where the atmosphere feels safe enough. Peer education is received positively and seems an effective intervention tool. Especially in the context of mental health, adolescents appreciate young teachers who talk from experience.

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APPENDIX 1
Questionnaire

[Name of the intervention] is a program about mental health and psychological complaints.

Young people, who have experience with psychological complaints, will provide the sessions.

We'd like to know your opinion about the program. Thank you for participating!

1. **What is the name of your school/educational program? ……**
2. **What year are you in? ……..**
3. **What is your age? ……**
4. **What is your gender? ……..**

5. Can you indicate below what you think of these statements about the peer educators?				
	true	**somewhat true**	**not true**	**I don't know**
a. I think the peer educators gave interesting information about psychological complaints and problems.				
b. I think the peer educators understand well which psychological problems young people (may) face.				
c. The peer educators had a good "connection" with the class.				
d. I thought it was interesting when the peer educators told about their own psychological complaints.				

6. And do you agree with the following statements about the sessions?	**agree**	**somewhat agree**	**not agree**	**I don't know**
a. Young people know more after the sessions about psychological complaints and problems				
b. After a few sessions, it became easier to talk with the class about 'psychological complaints'				
c. I think that young people, who do not feel well mentally, will ask for help earlier due to the sessions				

7. Imagine that one of your good friends has had psychological complaints for some time now. What advice or advices would you give this person?				
	yes	**maybe**	**no**	**I don't know**
a. To not feel ashamed about it				
b. To talk about it at school (for example with a mentor or care coordinator or counsellor)				
c. To look for information on the internet				
d. To talk about it with friends				
e. To talk about it with parents or caregivers				
f. To talk with a GP				
g. Something else, namely				

8. Would you recommend this program to other classes? ☐ yes ☐ maybe ☐ no

9. Do you have any tips for the program or the peer educators? We'd like to read them here below.

.....

.....

.....

You are finished. Thank you for filling this out!

APPENDIX 2

Topic list student interviews

Questions for students from secondary schools and intermediate vocational educations

Main question: To what extent does the student feel like the sessions did add to their recognition of and openness about psychological complaints and knowledge about help, and what role did peer education have?

Introduction:

- What is the first thing that comes to mind when you think about the sessions?
- What did you think of the sessions? Why?
- What did you like most about the sessions and what did you like the least? Why?

Openness about the topic

- What was it like to talk about this subject? And when you compare this to how it was like before the sessions? How do you think that comes?

Recognition of complaints, knowledge about help

- What did you learn from these sessions? Why has that stayed with you the most?
- What do you think you will be doing with this information? Did you talk to someone outside of your class about these sessions? And if so, to whom? Why (not)?
- Do you think you will be better able to help others now (for example, by sending them to a source of help) when they are experiencing psychological complaints?

Peer education

- What did you think of the people who gave these sessions? Can you explain why that is?
- Do you think they were in some way similar to you or your classmates? Why (not)?
- Had a teacher been able to discuss this subject with your class as well? Why (not)?
- Is there something these young people could have done any better?

Finishing questions

- Do you have ideas about how these sessions could be improved?
- Do you have any more questions or remarks about these sessions? Or about this interview?
- [When there is still time:] If these sessions will be held at your school next year again, what should the people who give these sessions know about your school? Or about the students?

APPENDIX 3

Code tree

Table A. Code tree after deductive and inductive coding

*Mental Health Literacy
Already knew much about the topic
*Effect – Learned more about help (for others)
*Effect – Learned more about psychological problems
Awareness
Importance of knowing more
Participant's own mental health
Side–effect, negative thinking
*Peer education
*Effect
*Why
Peer educators lack certain skills
Personal stories were interesting
Not interesting
*Program – general
Effect of a classroom intervention
Atmosphere in class
Things that could be better in the program
What would work with this class
*Stigma reduction
*Effect – Not talking about it in class
*Why
*Effect – talking about it in class
*Why
Importance of talking about the topic

Note. Codes with an * were formulated *a priori*.

APPENDIX 4

Sample characteristics

Table A. Sociodemographic characteristics of the sample of the questionnaire (n = 299).

Variables	N	Percentage (%)	
Gender			
Male	133	44.6	
Female	165	55.4	
Total	298		
Educational level			
Vmbo 3	116	44.4	
Vwo4	21	8.0	
Vwo5	15	5.7	
MBO 3	29	11.1	
MBO 4	80	30.7	
Total	261		
Age			
Mean			15.82
SD			1.585
Range			12-21

Table B. Sociodemographic characteristics of the interviewed students (n = 14)

Participant name	Gender	Educational level	Age
Anna	Female	MBO4	18u-21
Brenda	Female	MBO4	18-21
Christian	Male	MBO4	18-21
David	Male	MBO4	18-21
Eric	Male	Gymnasium3	15
Finn	Male	Gymnasium3	15
Gabrielle	Female	MBO3	18-21
Hugo	Male	MBO3	18-21
Ivo	Male	Vwo4	15
Julian	Male	Vwo4	15
Kirsten	Female	Vwo4	16
Lieke	Female	Vwo4	15
Maura	Female	MBO4	16-20
Noelle	Female	MBO4	16-20

APPENDIX 5

Tables

Table A. *Frequencies for general satisfaction and intervention goals, in numbers and percentages.*

	Yes/Agree	**Maybe/ Somewhat agree**	**No/Not agree**	**I don't know**
General satisfaction (n = 291)	n = 214 71.6%	n = 64 21.4%	n = 13 4.3%	
Mental health literacy (n = 298)	n = 145 48.5%	n = 122 40.8%	n = 15 5.0%	n = 17 5.7%
Reduced perceived stigma (n = 299)	n = 70 23.4%	n = 114 38.1%	n = 63 21.1%	n = 52 17.4%

Table B. Descriptive statistics on peer education

	N	*Minimum*	*Maximum*	*Mean*	*SD*
Peer educators shared interesting information	292	1	3	2.66	.522
Peer educators understand adolescents' mental health problems well	290	1	3	2.78	.434
Peer educators had a good "connection"	282	1	3	2.48	.579
Personal stories were interesting	281	1.75	3.00	2.78	.470

Note. For this calculation, total N = 259.

Table C. Spearman's Rho correlations

		Peer education	**Mental health literacy**	**Perceived stigma**	**General satisfaction**
Mental health literacy	*Corr. coëfficient*	,136*			
	Sig. (2-tailed)	,031			
	N	252			
Perceived stigma	*Corr. coëfficient*	,302**	,206**		
	Sig. (2-tailed)	,000	,001		
	N	223	238		
General satisfaction	*Corr. coëfficient*	,520**	,379**	,379**	
	Sig. (2-tailed)	,000	,000	,000	
	N	252	274	241	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).