Mental Health Literacy: New Zealand Adolescents' Knowledge of Depression, Schizophrenia and Help-Seeking

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Mental health literacy is defined as knowledge and beliefs of mental disorders and of appropriate treatments. The aim of this study was to assess mental health literacy in New Zealand adolescents (*N* =114, *M* = 16.72). Participants read two vignettes; the first presented an adolescent meeting DSM-5 diagnostic criteria for depression and the second presented an adolescent meeting DSM-5 diagnostic criteria schizophrenia. The majority of participants (73.7%) correctly recognised depression and 51.8% recognised schizophrenia. Almost half the participants recommended professional help for both depression and schizophrenia, whereas the majority also suggested a non-professional form of help, including talking to the patient, providing reassurance and seeking adult support. Even though these first data are promising, there is still potential for further improving the mental health literacy levels of adolescents. This will ensure early recognition of mental illnesses, leading to appropriate and timely help-seeking behaviours and greater quality of life.

Keywords: Depression, schizophrenia, adolescents, mental health literacy, help-seeking

Introduction

Mental health problems account for a large proportion of the disease burden in young people worldwide (World Health Organization [WHO], 2012). New Zealand has the highest rate of completed youth suicides in the developed world for those aged 15-19 years (WHO, 2017) and mental health issues are particularly salient for many New Zealand adolescents (Feehan, McGee, Raja, & Williams, 1994; Fergusson & Horwood, 2001; Fleming et al., 2014). Most mental disorders emerge during adolescence (10–19 years of age) (Sawyer et al., 2012), although these are often first detected later in life with serious impacts for young people (Kessler et al., 2005). This high susceptibility in adolescents to developing a mental illness is coupled with a strong reluctance to seek professional help (Rickwood, Deane & Wilson, 2007). To date, numerous factors have been identified as help-seeking influences, including the nature of past help-seeking experiences (Wilson & Deane, 2001), gender (Rickwood, Deane, Wilson, & Ciarrochi, 2005) and the optimism bias–that is, believing one is less susceptible to negative events than others (Spendelow, & Jose, 2010). In addition, the lack of knowledge about mental health issues, sources of help and treatment options (Jorm et al., 1997) have been associated with help-seeking behaviours. Such knowledge, which is well encapsulated by the concept of mental health literacy, was of particular interest in the current study.

Mental health literacy (Jorm et al., 1997) is defined as the "knowledge and beliefs about mental disorders which aid their recognition, management or prevention" (Jorm et al., 1997, p. 182). Mental health literacy was further conceptualized in 2012 to include five basic components: a) knowledge of mental illness prevention strategies, b) symptom recognition during onset of mental disorder, c) knowledge of appropriate help-seeking responses and treatment options, d) knowledge of valuable self-help techniques in milder cases and e) mental health first aid knowledge of how to effectively support individuals developing mental illness or experiencing a mental health crisis (Jorm, 2012). Jorm and colleagues (1997, 2012) argued that poor mental health literacy may contribute to poor recognition of mental illness, making it less likely to facilitate professional help-seeking and thus, lead to the exacerbation or maintenance of symptoms. This is consistent with a systematic review on the barriers and facilitators of help-seeking for mental illness (Gulliver, Griffiths, & Christensen, 2010), which identified poor mental health literacy, namely, poor recognition of mental illness and poor knowledge of mental health services, as a key barrier to early and appropriate help-seeking responses among adolescents. Understanding mental health literacy and how to improve it may be an important target for ensuring adolescents recognise mental illnesses early and access appropriate help.

Since the inception of the concept of mental health literacy, many studies have examined mental health literacy among youth around the world, including Australia (Burns & Rapee, 2006; Marshall & Dunstan, 2013; Reavley & Jorm, 2011; Wright et al., 2005), the United States (Coles et al., 2016), Sweden (Melas, Tartani, Forsner, Edhborg, & Forsell, 2013), Ireland (Byrne, Swords, & Nixon, 2015), Portugal (Loureiro et al., 2013; Loureiro et al., 2015), China (Lam, 2014), Japan (Yoshioka, Reavley, Hart, & Jorm, 2015), Iran (Essau, Olaya, Pasha, Pauli, & Bray, 2013), and Nigeria (Aluh, Anyachebelu, Anosike, & Anizoba, 2018). The majority of these studies focused on recognition of specific disorders, mainly depression and schizophrenia, and knowledge of appropriate sources of help. In one of the earlier studies among Australian youth, Wright and colleagues (2005) found that almost 50% identified depression correctly. Since then, mental health literacy studies in most countries show that, among young people, rates of depression recognition range between 30%–70% (Burns & Rapee, 2006; Byrne et al., 2017; Coles et al.,

2016; Essau et al., 2013; Loureiro et al., 2013; Melas et al., 2013; Marshall & Dunstan, 2013; Reavly & Jorm, 2011). In contrast, very low rates of recognition have been reported among youth in Nigeria (Aluh et al., 2018), Japan (Yoshioka et al., 2015) and China (Lam, 2014), with only 4. 8%, 14.3% and 23.4% of adolescents respectively, correctly identifying depression. However, these low rates could be related to the use of a vignette-based questionnaire, which required participants to generate their thoughts and beliefs, rather than selecting answers from a pool as in the case of Aluh et al.'s (2018) study. Further, there is also the possibility that there may be lack of mental health awareness designed to target youth in these countries (Lam, 2014).

In studies investigating both depression and another mental health disorder, participants were more accurate at recognising depression. Rates of schizophrenia recognition were low, with between 8.3%– < 50% of young people able to identify schizophrenia (Loureiro et al., 2015; Melas et al., 2013; Reavley & Jorm, 2011; Yoshioka et al., 2015). In addition, gender differences in adolescent mental health literacy have been observed, with rates of recognition being much lower in young men than young women (Burns & Rapee, 2006; Cotton, Wright, Harris, Jorm & McGorry, 2006; Melas et al., 2013).

Adolescents have also been found to have very different ideas about what treatments are most helpful for mental illnesses. For example, in Australia, Reavley and Jorm (2011) showed that participants gave the highest helpfulness rating to GPs, counsellors, medications and lifestyle interventions, such as exercise, and relaxation; in another study (Burns & Rapee, 2006), 58% of adolescents endorsed counsellors as being helpful for depression, followed by friends (42%), and family (41%), whereas few recommended seeking help from a psychologist (6%), psychiatrist (4%), or another type of doctor (1.5%). In sharp contrast, Loureiro et al. (2013) found high endorsement for the helpfulness of appropriate health professionals, such as psychologists (89%), GPs (74.6%) and psychiatrists (55.1%) among Portuguese young people. In the same study and consistent with others from other countries (e.g., Aluh et al., 2018; Wright et al., 2005; Yoshioka et al., 2015), friends or family were also reported as common sources of recommended help. Finally, approximate one-third of American youth did not recommend any sources of help for depression or social anxiety (Coles et al., 2016). However, this may have been due to lack of knowledge of the help available, efficacy of treatment, and/or fear of stigmatisation (Kelly, Jorm & Rodgers, 2006; Rickwood et al., 2007).

The previous studies discussed above have yielded mixed findings. One plausible explanation could be that, even though most studies assess mental health literacy with case studies or vignettes describing the target mental health disorder, there is variation with regard to different response formats that may have influenced participants' ability to recognise the disorders and recommend appropriate treatment. The problem is that adopting a fixed response style, with answers already presented to participants, may not as accurately assess young people's knowledge of mental health disorders and help-seeking responses compared to open-ended answers, which require participants to generate their thoughts and beliefs (Sai & Furnham, 2013).

Melas et al. (2013) examined the knowledge of depression, schizophrenia and associated hep-seeking behaviours in a sample (n=426) of Swedish adolescents. These researchers addressed the above methodological limitation by including only open-ended questions to prevent participants from potentially guessing the correct answers. This study partially replicates the work of Melas et al. (2013). Replication occurs through the use of two identical written vignettes, and an open-ended question methodology. The aim of this study was to examine the mental health literacy of a sample of New Zealand adolescents, specifically in relation to (a) disorder recognition/symptom knowledge and (b) knowledge of appropriate help-seeking for major depressive disorder and schizophrenia. Although this investigation is exploratory, based on the results of previous studies we anticipated that males and females will differ in their knowledge about mental illness, with females demonstrating higher mental health literacy. We also hypothesised that respondents will report lower levels of recognition of schizophrenia compared to depression.

METHODS

Participants

A total of 114 students (27 males, 87 females) aged between 16 and 18 years (M = 16.72, SD = .56) were recruited from five secondary schools (two co-educational schools n = 53; and three single-sex girls' schools: n = 61) in Wellington, New Zealand. The majority of participants (76%) were female because three of the participating schools were single-sex girls' schools. Most participants identified their ethnicity as New Zealand European (63%); the remaining were Māori, the indigenous people of New Zealand (4.5%), Asian (20%), Pasifika (8%), and 4.5% of European background.

Measures

Participants completed a pen-and-paper survey that consisted of a few demographic questions (i.e., gender; age; ethnicity) and two pre-established vignettes originally developed by Jorm et al. (1997) and later adapted by Melas et al. (2013) to be self-administered and age-appropriate. The vignettes were slightly modified to ensure suitability for New Zealand adolescents (see Table 1 for the description of the two vignettes). Each vignette presented a 17 year-old person who met DSM-5 (American Psychiatric Association, 2013) diagnostic criteria for either major depression or schizophrenia. Two versions of the survey were administered; the first version was administered to male participants where both diagnostic conditions presented a hypothetical adolescent named "John" and the second version was administered to female participants where both diagnostic conditions presented a hypothetical adolescent named "Jane". This was to avoid possible gender-based biases influencing participant responses. Following the vignettes, participants were asked the following two open-ended questions "Is everything fine with John/Jane? If not, what would you say is wrong with him/her?" and "Imagine John/Jane was a friend of yours that you cared about. You want to help him/her. What would you do?" These

Table 1. Depression and schizophrenia vignettes used in the survey

Depression

John (Jane) is 17 years old. He (she) has been feeling unusually sad and miserable for the last few weeks. Nothing unusual has happened the weeks before so he (she) does not understand why. Even though he (she) is tired all the time, he (she) has trouble sleeping nearly every night. John (Jane) doesn't feel like eating and has lost weight. He (she) has difficulties in concentrating in school and his (her) test results haven't been as good as usual.

Schizophrenia

John (Jane) is 17 and lives at home with his (her) parents. Over the last months he (she) has stopped seeing his (her) friends and going to school. He (she) spends most of his (her) time in his (her) room. His (her) parents also hear him (her) walking around his (her) bedroom at night while they are in bed. Even though they know he (she) is alone, they have heard him (her) talking as if someone else is there. When they try to encourage him (her) to do more things outdoors, he (she) whispers that he (she) won't leave home because the neighbour is spying upon him (her). They know he (she) is not taking drugs because he (she) never sees anyone or goes anywhere.

questions were identical to those used by Melas et al. (2013).

Data Analysis

Participants' responses were transcribed verbatim on an excel file. Data were qualitatively analysed using a content analysis method according to Burnard (1991), and then sought agreement on the generated categories and subcategories. Following the qualitative data analysis, data were quantitatively processed to generate the percentages of respondents belonging to each of the generated categories. The category percentages did not always add up to 100% as some respondents gave more than one answer belonging to different categories.

RESULTS

Disorder Recognition

The first question of the depression and the schizophrenia vignette assessed the adolescents' ability to recognise the presented mental disorder. Qualitative analyses of responses yielded three main categories, (a) Recognition, (b) Other labels and (c) No problem recognised. Responses that mentioned depression and/or "depressed" were categorised under *recognition* for depression. For schizophrenia, recognition was confirmed if schizophrenia or symptoms of psychosis, including delusions, hallucinations or paranoia were mentioned.

Table 2. Adolescents' recognition of the mental disorder in the vignette

	N	%
(a) Recognition of depression		
Total	84	73.7
Gender		
Females	65	74.7
Males	19	70.4
(b) Recognition of schizophrenia		
Total	59	51.8
Gender		
Females	45	51.7
Males	14	51.9

N denotes number of participants who recognised the presented mental disorder; % denotes percentage of participants.

Results are presented in Table 2 and show that, consistent with our prediction, the majority of participants (73.7%) correctly identified depression in the first vignette, while approximately half correctly recognised schizophrenia in the second vignette. No gender differences were found on adolescents' ability to recognise either depression, χ^2 (1, N = 114) = 0.20, p = .654, or schizophrenia χ^2 (1, N = 114) = 0.00, p = .991.

Responses were categorised under *other labels* if participants did not recognise the disorder and attributed symptoms to be a consequence of another problem. These responses were further qualitatively analysed into subcategories. Results are summarised in Table 3 along with representative citations. Overall, for the depression vignette, 25.4% of participants did not identify depression and commonly attributed the symptoms to be a consequence of stress or preoccupation with excessive thoughts. Some participants suggested a mental health issue without specifying a mental disorder, while others responded that the symptoms were due to physical health problems. Other mental disorders mentioned included anxiety and eating disorders, while other conditions included changes typical of puberty (e.g., 'hormones'), nutritional deficiency, and interpersonal problems. One participant did not recognise any problem at all in the depression vignette.

For the schizophrenia vignette, 43.9% of participants did not correctly label schizophrenia and most explained psychotic symptoms to be a consequence of either another mental disorder, mainly depression, anxiety or an unspecified mental illness. Other responses less frequently mentioned included being stalked, traumatic experience, interpersonal and/or school problems, being bullied, loneliness, paranormal activity and unspecified difficulties. Six participants (5.3%) exhibited stigmatizing attitudes toward schizophrenia conveyed through the use of derogatory words such as "crazy" or "mad", while five participants (4.4%) did not recognise any problem at all in the schizophrenia vignette.

Help-Seeking Recommendations

The second question assessed adolescents' help-seeking responses for the presented mental disorders. Qualitative analyses of responses yielded three main categories, (a) Professional help, (b) Non-professional help and (c) No help. Responses that mentioned healthcare professionals, including GPs, psychiatrists, psychologists and school counsellors, terms like "medicine" and "medication", including reference to specific medications, such antidepressants were categorised under professional help. Approximately half of the participants (55.3%) recommended professional help for depression and similarly 53.5% recommended professional help for schizophrenia.

Table 3. Other labels for mental disorders: Subcategories and representative citations

Subcategories	Representative citations
Other labels for depression	
Stress	'She may be under a lot of stress...'
Preoccupied with thoughts	'He's obviously thinking about something a lot…'
Mental health illness not specified	'She might have a mental illness.'
Physical health problems	'…perhaps a brain tumour? Or some disease… for example, meningitis.'
Pubertal changes	'It could be normal teenage hormones...'
Nutritional deficiency	'She may be low on iron/magnesium...'
Interpersonal problems	'She could be sad and miserable because of relationships, for example, friendship or family matters or relationships…'
Anxiety	'He could be experiencing a vast amount of anxiety'
Eating disorder	'Jane may be developing an eating disorder.'
Other labels for schizophrenia	
Other mental disorders	'He has social anxiety.'
Mental health illness not specified	'My best guess is that she has a psychological illness.'
Stress	'She is just stressed out about school and life, full stop.'
Being stalked	'...I think she is being stalked by her next door neighbour...'
Traumatic experience	'...some sort of traumatic experience she doesn't want to talk about.'
Interpersonal problems	'...I think there might be some issue with friends in school...'
School problems	'...things could be wrong at school.'
Being bullied	'John may have been bullied at school.'
Loneliness	'She could be feeling lonely...'
Paranormal activity	'...maybe there's an entity with her.'
Unspecified difficulties	'John is not okay and could have problems that caused this.'

Responses were categorised as *non-professional* when participants mentioned forms of help not related to the health care system. These responses were further qualitatively analysed into subcategories and are presented in Table 4 along with representative citations. For the depression vignette, the vast majority of participants (93.9%) also suggested a non-professional form of help. The most frequently mentioned response was "talk to patient" coded as communication, followed by "provide support/reassurance", help not specified and seeking support from an adult, including parents and teachers.

Similar to depression, 74.6% of participants recommended a non-professional form of help for schizophrenia. Talking to John/Jane, spending time with him/her, seeking support from adults and providing support/reassurance were commonly mentioned as appropriate help-seeking responses. Some participants recommended help without specifying the type, while other less frequently mentioned responses included distraction, and notifying the police. Finally, four participants did not suggest any type of help for schizophrenia. These participants reported that they would not know what to do or expressed suspicion about

Table 4. Non-professional sources of help: Subcategories and representative citations

Subcategories	Representative citations
Non-professional help for depression	
Communication	'I would talk to her and try to console her...'
Provide support/Reassurance	'I would just let her know that I am there for her…'
Help not specified	'...I would point him towards help.'
Adult support	'...If she doesn't improve maybe talk to someone e.g., a parent and work out what to do with her.'
Company	'...make sure she's okay/keep her company.'
Entertainment	'Play some video games …Hang out with him doing fun stuff.'
Distraction	'Try and go do some fun stuff to take her mind off whatever is upsetting her.'
Lifestyle improvement	'Make sure that she eats her lunch every day at school...'
Keep in contact	'I would check on her from time to time...'
Seek peer support	'I'd talk to other good friends of John...'
Non-professional help for schizophrenia	
Communication	'...I'd reach out and try talk it out...'
Company	'Go over and just keep her company...'
Adult support	'...I would talk to Jane's parents about Jane's situation.'
Provide support/Reassurance	'Well I would reassure her that I am there for her...'
Help not specified	'Tell someone who will help.'
Distraction	'Just keep his mind occupied at all times...'
Police	'I would advise Jane or the parents to receive help. If either of them are unwilling to co-operate, I would then notify police or CYFs if I felt she was at risk.'

the presented symptoms (e.g., "...how do I know she is doing that?") and therefore, gave no help-seeking recommendation. For the depression vignette, all respondents suggested some form of help either professional or non-professional.

Finally, chi-square analyses were performed to examine whether adolescents who accurately labelled the diagnostic categories also suggested more professional help-seeking recommendations than adolescents who did not correctly label these problems. Accurate labelling of depression was not associated with increased professional help-seeking recommendations, χ^2 (1, N = 114) = 0.46, p = .499. On the contrary, the relation between these variables for schizophrenia was significant χ^2 (1, N = 114) = 5.84, p = .016. Adolescents who correctly labelled schizophrenia were more likely to recommend professional help-seeking than were those who did not recognise the disorder and attributed symptoms to be a consequence of another problem.

DISCUSSION

Recognition of the Disorders

This investigation adds to the literature by being the first study to examine levels of mental health literacy in a sample of New Zealand adolescents. Our results indicated that rates of recognition of depression were relatively high, with nearly 75% of adolescents correctly labelling depression. This is in agreement with some studies, which showed similarly high rates of depression recognition (Burns & Rapee, 2006; Marshall & Dunstan, 2013; Sai & Furnham, 2013; Reavley & Jorm, 2011). With regards to the schizophrenia vignette, approximately half of respondents used the correct label. Only one study, which was conducted in Portugal, showed that 42% of participants aged 14-24 years recognised schizophrenia (Loureiro et al., 2015). Overall, most previous studies indicated that less than 50% of young people were able to identify depression correctly (Byrne et al., 2015; Coles et al., 2016; Essau et al., 2013; Lam, 2014) and only about one third were able to identify schizophrenia (Melas et al., 2013; Reavly & Jorm, 2011). As expected and consistent with previous studies, adolescents in our study were better at recognising depression than they were with schizophrenia (Cotton et al., 2006; Melas et al., 2013; Reavly & Jorm, 2011). Overall, adolescent depression is a highly prevalent mental disorder, much more frequent than schizophrenia, which may explain the higher levels of literacy regarding depression. Further, in New Zealand, depression has a high prevalence among youth (Oakley Browne, Wells, Scott, & McGee, 2006), which may have increased the likelihood of exposure to depressive symptoms. Likewise, the *Like Minds Like Mine* television campaign and the National Depression Initiative (Ministry of Health, 2017; Ministry of Health and Health Promotion Agency, 2014), aimed at increasing awareness of mental illness, may further explain the observed high rates. Another plausible explanation on the high recognition rates relates to the fact that most young people studied herein were females in late adolescence. Indeed, in line with findings from earlier studies (e.g., Burns & Rapee, 2016; Coles et al., 2016; Cotton et al., 2006; Marshall & Dunstan, 2013), females consistently demonstrate higher mental health literacy than males. Such findings have been attributed to girls having greater personal experience with depression in both themselves and their peers as by late adolescence depression is approximately twice as prevalent among women as it is among men (Lewinsohn, Rohde, & Seeley, 1998; Nolen-Hoeksema & Girgus, 1994).

Further, we found that young people, who did not recognise the disorders, used more general terms to label the disorders such as stress, anxiety, or psychological/mental illness, demonstrating their ability to identify a mental health problem, even though they could not provide the correct psychiatric label. This was also in line with many of adolescents' responses including terms like 'could/might be' and 'not sure', indicating some uncertainty and showing appropriate caution as expected. Similarly, depression was also commonly used to describe schizophrenia, a finding consistent with other studies, which showed that depression was commonly used to describe other disorders in the vignettes, including schizophrenia (Loureiro et al., 2015; Melas et al., 2013), social phobia and PTSD (Reavley & Jorm, 2011).

Help-Seeking Recommendations

It is promising that approximately half the sample considered both problems described in the vignettes serious to require help offered by health care professionals or medication. In response to open-ended questions regarding the most appropriate form of treatment, similar findings have been reported among young people in Australia, where GPs were considered as the best source of help for depression and GPs and psychiatrists for schizophrenia (Reavley & Jorm, 2011). In another study among Irish adolescents, mental health professionals were the most frequently recommended source of help for depression (Byrne et al., 2015). In contrast only 22.5% and 32.6% of Swedish adolescents identified professional help for depression and schizophrenia respectably (Melas et al., 2013). It is possible that New Zealand adolescents may have an increased awareness of the value of seeking professional help when dealing with mental illnesses as a result of the National Depression Initiative and the *Like Minds Like Mine* television campaign (Ministry of Health, 2017; Ministry of Health and Health Promotion Agency, 2014). However, the fact that New Zealand adolescents recommended a variety of professional labels may also reflect their lack of knowledge of the specialisation of different professions. It will be important in future research to further assess adolescents' knowledge about differences between non-specific health services and specialist mental health services.

It has been posited that recognising that a problem exists while lacking the ability to correctly label it, may still be sufficient to promote appropriate help-seeking responses (Leighton, 2009). Our findings indicated that accurately labelling depression as a mental health illness was not associated with increased responses about sources of help. A plausible explanation may be that the mere detection of abnormality may be adequate to prompt adolescents to recommend or seek professional help. Hence, it may be considered good practice to encourage adolescents to check unusual behaviours or experiences affecting functioning rather than to assert diagnostic categories based on limited information. On the other hand, accurate labelling of schizophrenia or identification

of symptoms of psychosis, including delusions, hallucinations or paranoia was significantly associated with adolescents' recommending seeking help from specialist mental health services, consistent with the notion that seeking professional help appears to be influenced by the ability to correctly label a mental disorder and an individual's perception of the severity of symptoms (Clement et al., 2015; Gulliver et al., 2010; Hannah et al., 2015).

The association between stigma and the use of psychiatric terms by the public to label mental disorders has been the subject of continuing debate (Jorm & Griffiths, 2008; Read et al., 2006, 2009). Many researchers have argued that the use of diagnostic labels by the public (Penn & Nowlin-Drummond, 2001; Angermeyer & Matschinger, 2005; Rose & Thornicroft, 2010), including youth (Rose et al., 2007) can have a stigmatising impact, which, in turn can have a deterrent effect on help-seeking (Clement et al., 2015; Gulliver et al., 2010). On the other hand, there is evidence that accurate psychiatric label use may have potential to counter various aspects of stigma, particularly the belief that mental illness is a weakness (Yap, Reavley, & Jorm, 2014; Yap, Reavley, Mackinnon, & Jorm, 2013). In a large national survey, Yap and colleagues (2013) examined the associations between unprompted label use and stigma in young people. Results indicated that accurate psychiatric labelling of the mental illness presented in the vignette and community awareness campaigns were the best predictors of less stigmatizing attitudes, followed closely by exposure to family or friends with mental health problems. These findings reinforce that accurate psychiatric label use may have potential to counter various aspects of stigma, particularly the belief that mental illness is a weakness. Therefore, promoting recognition of mental disorders by youth and their conceptualization as treatable illnesses may decrease the delay in treatment seeking by young people, and increase the chances of accurate diagnosis and appropriate treatment when young people do present to health services (Haller et al., 2009; Jorm & Griffiths, 2008).

In agreement with previous studies (Melas et al., 2013; Marshall & Dunstan, 2013; Wright et al., 2005), the majority of New Zealand adolescents also recommended non-professional sources of help for both disorders, including talking to the patient, providing support/reassurance, and seeking support from an adult. Although talking to the distressed adolescent and spending time with him/her may be supportive in recovery (Jacob, 2015), it is unlikely to assure positive health outcomes and good management of symptoms for depression or schizophrenia – disorders requiring treatment by trained professionals. Further, the quality of advice given by peers may unintentionally prove detrimental due to their own lack of knowledge of mental health problems and appropriate treatments. Therefore, these findings underline the influence that peers can have on an adolescent's life and the need of related mental health awareness programmes for youth. Consistent with Melas et al. (2013), we also found that adult support, mainly support from parents, was identified as an important source of help. It is promising that most adolescents in our study appeared willing to disclose mental health worries to caring adults, demonstrating the equal importance of education for parents on adolescent mental health issues. Finally, some participants recommended "help" without identifying a specific form, showing their ability to recognise a need for help even though they were not able to correctly label who or what could be of most assistance. This finding reflects adolescents' ambiguity of appropriate treatment options, pointing to the potential value of mental health education.

Limitations

The findings of this study should be evaluated in light of its limitations. First, the sample was relatively small with an unbalanced ratio of females to males and a narrow age range of adolescents; thus, limiting the interpretation of the results for this subgroup of adolescents. Further, we did not obtain data on socio-economic status, which may have affected rates of mental health literacy. Future research with a larger, gender-balanced, representative sample from diverse locations, including rural areas, is required to ensure the generalisability of results. Third, a convenience sample of students was used, which can lead to the under-representation of particular groups, such as adolescents who are not at school. It is also unclear why some adolescents agreed to take part in the survey while others did not. Since the sample is not chosen at random, the inherent bias in convenience sampling means that any generalisations of findings must be made with caution. Fourth, we used written vignettes to assess mental health literacy and it may be that participants' recognition of mental health disorders and recommendations of sources of help in real-life situations (as depicted in a short film) may have produced very different results, especially as real-life cases may involve subtle cues and non-verbal communication, which require active interpretation. Next, mental health literacy was evaluated using the vignette approach and related only to depression and schizophrenia. However, it has been argued that the entire construct of mental health literacy cannot be assessed by this measurement tool, which includes a small number of disorders and does not consider mental health promotion (Kutcher, Wei, & Coniglio, 2016). Future studies would benefit from considering using other evaluation techniques sufficiently capturing multiple components of the construct, thus allowing a more robust assessment of mental health literacy. Lastly, future research efforts would do well to investigate personal characteristics of youth that predict accurate diagnoses or more useful help-seeking recommendations, such as education, presence of depressive symptoms or other psychiatric disorders.

Despite the above limitations, the current study has demonstrated relative adequate levels of mental health literacy in New Zealand adolescents between the ages of 16 and 18 years. Even though these first data are promising, there is still potential for young New Zealanders to benefit from further education in the areas of recognition and treatment beliefs for mental disorders, particularly, schizophrenia in order to access early intervention and prevent the onset or exacerbation of mental illness. Based on these findings and taking into account the high levels of mental distress among New Zealand adolescents, consideration needs to be given to the implementation of universal school-based programmes designed to enhance mental health literacy of

youth. Additionally, further research to address the effectiveness of such strategies in improving adolescent well-being in New Zealand is indicated.

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