

Educators as Facilitators of Mental Health: An Investigation of the Mental Health  
Literacy of Pre-Service Teachers

Emily Atkinson

Mount Saint Vincent University

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### **Abstract**

This investigation examined differences in levels of mental health literacy between first and second year pre-service educators enrolled in the Bachelor of Education program at Mount Saint Vincent University. Participants completed a basic demographic questionnaire, the Beliefs about Mental Health Problems: Professional and Public Views' questionnaire (Jorm, 1997) , and questions regarding course work completed about mental health as part of their education degree. Participants were asked to rate the helpfulness of various professionals and interventions in the treatment of mental illness, the likelihood of potential causes of mental illness, and questions about discrimination towards people with mental illness. It was predicted that overall, levels of mental health literacy would be low, but comparable to the Canadian general population. It was also predicted that second year students would show higher levels of mental health literacy. It was expected that few participants would have completed coursework including mental health topics, and that it was not required to complete their education degree. Overall levels of mental health literacy were found to be somewhat higher than the Canadian general population levels. Results indicated there was not a significant difference between levels of mental health literacy in first and second year pre-service educators. As predicted, few participants had completed coursework including mental health topics, which were not required to complete their degree. The current findings expand upon the body of evidence in the domain of mental health literacy of pre-service educators. It will be important for future research to confirm the present findings.

### **Introduction**

One in five Canadians will experience mental illness at some point in their life and over 70% of adults living with mental illness report development of their symptoms occurring in childhood and early adolescence (Government of Canada, 2006). At any point in time 15% of children and youth are living with a mental illness (Public Health Agency of Canada, 2002). Given the high percentage of adults living with mental illness who developed symptoms at an early age, it is important to identify children and youth who are developing symptoms so that early intervention can occur, resulting in better long term prognosis.

### **Mental Illness in the Classroom**

Children and youth spend a large portion of their day in school, interacting with educators. This places educators and schools in a unique position to be able to facilitate positive mental health. The school environment has unique demands, which students may not experience in other situations. If the demands of the school environment are too much for the student, behaviours and symptoms of mental illness that are present may become more apparent in this environment, as compared to other environments with fewer demands. As well, educators may be able to provide a more objective view of child or adolescent's behaviour. Children and adolescents who are experiencing symptoms of mental illness sometimes come from families with a history of mental illness, thus the child or adolescent's behaviour may not be viewed as problematic or affecting their functioning, as it is similar to others in their family (Rothi, Leavey, & Best, 2008). Another reason symptoms may not appear problematic to family members is the symptoms may have been present for a long enough period of time that the family has accepted the behaviours to be an inherent and inadapttable part of the child's or adolescent's "personality". Also, in families with only one child, parents do not have any other experience, such as the

course of development of siblings, to compare their child's behaviour to and thus may not realize that it is atypical.

### **Educators' Current Role in Mental Health**

Educators have a unique experience, compared to most people, with respect to their interactions with children. They deal with a large group of children on a regular basis, which enables them to observe typical patterns of behaviour within that particular group. In addition, educators who teach the same grade or range of ages for a continuous period of time are able to observe what typical patterns of behaviour look like for certain age groups. Although an educator may be able to observe a child behaving in a way that is not typical, and problematic for their functioning in school and other settings, the educator may not have the knowledge to identify the cause of the behaviour or know how to remediate it. In the case of a child exhibiting symptoms of mental illness, it is not appropriate for an educator to be diagnosing or treating mental illness, however access to proper services and resources may not be readily available. In Nova Scotia it is estimated that there are 82 school psychologists working across the province in order to meet the Department of Education's core professional service ratio of one psychologist to 2,500 students (Association of Psychologists of Nova Scotia, 2004). As well, school psychologists spend the majority of their time completing psycho-educational assessments and have a limited amount of time for other activities such as consultation, and behavioural programming. This places educators in a difficult position. They know students in their classroom are having difficulties but feel unable to help (Rothi, Leavey, and Best, 2008).

A study conducted by Rothi and colleagues (2008) examined educators' role in the mental health of their students. They found educators' felt they have a responsibility to care for the mental health of their students but do not feel they are competent to do so. The majority of

educators in the sample indicated they would like to obtain training in mental health issues but it would be difficult (Rothi et al, 2008). Barriers to receiving training identified were a lack of time to attend training sessions, availability of information specific to teaching and the school environment, lack of policy in schools regarding mental health, and a lack of open discussion of mental health issues in the school environment (Rothi et al., 2008). Educators also reported that if they were able to receive training they felt it would be best delivered by an expert such as a psychologist. Topic areas of interest identified for training were identification of mental health issues in students, knowledge of resources in the community and school, and practical skills on how to manage students in the classroom experiencing mental illness (Rothi et al., 2008).

### **Pre-Service Educators' Training in Mental Health**

A lack of knowledge in the area of mental health is not only a problem for educators in the work force but also for pre-service educators. Few education programs provide courses in mental health (Koller, Osterlind, Paris, & Weston,2004). Those that do, rarely label these courses as necessary to complete the degree. If pre-service educators do not receive this training as part of their degree, then it is not likely that they will receive this training when they are in the work force, due to the barriers that exist in that environment as outlined above.

Whereas some researchers in the area of mental health literacy have examined the mental health literacy of in-service educators, little research in this area has focused on the mental health literacy of pre-service educators. It is important to examine the mental health literacy of both in-service and pre-service educators in order to gain a comprehensive understanding of all educators and any changes in their mental health literacy that could occur throughout their career. Knowledge of mental health literacy in all educators is also important information for administration and instructors of teacher education programs.

### **Conceptual Framework**

Mental healthy literacy is important for the population as a whole. Given the high levels of mental illness in the general population it is likely that many people have personally experienced difficulty with their mental health or know someone who has (Jorm, 2000). That being said, mental health literacy is even more important for health care workers, emergency personnel, and teachers, all of whom come into contact with people with mental illness on a regular basis. The mental health literacy of these individuals is especially important because their levels of mental health literacy can have an impact on symptom management in people with mental illness (Jorm, 2000). Symptom management involves an individual engaging in activities or behaviours that reduce the symptoms of mental illness, or any side effects of those symptoms (Jorm, 2000). Examples of symptom management activities include seeking help from a professional, adhering to any necessary medication regimens, monitoring of symptoms, and maintaining positive physical health (Jorm, 2000). The goal of symptom management is not to eradicate mental illness but rather to improve quality of life for the individual (Jorm, 2000).

If a person with a mental illness interacts with someone who has a high level of mental health literacy, then the likelihood of symptom management increases, and they will likely see a reduction in their symptoms (Jorm, 2000). If this interaction occurs in an early point in the course of the mental illness then it is possible to prevent worsening of symptoms and slow the progression of the disorder (Jorm, 2000). By increasing the levels of mental health literacy of professions that interact with people with mental illness frequently, then the likelihood of changing levels of symptom management in people with mental illness is also increased (Jorm, 2000) (See Figure 1).

The level of mental health literacy within the individual with mental illness also has an effect on symptom management. If the individual with mental illness has high level of mental health literacy then it is more likely that they will engage in symptom management (Jorm, 2000).

### **Mental Health Literacy**

Mental health literacy was defined by Jorm and colleagues (1997a) as “knowledge and beliefs about mental disorders which aid their recognition, management or prevention” (p.182). Jorm and colleagues (1997a) also included the following elements in the concept of mental health literacy:(1) the ability to recognize specific disorders or different types of psychological distress (2) knowledge and beliefs about risk factors and causes (3) knowledge and beliefs about self help interventions (4) knowledge and beliefs about professional help available (5) attitudes which facilitate recognition and appropriate help seeking (6) knowledge of how to find mental health information.

### **Mental Health Literacy in the General Population**

The majority of researchers in the area of mental health literacy have focused on levels of mental health literacy in the population at large. It has been found that when members of the general public are given a vignette describing a person experiencing symptoms of either depression or schizophrenia, participants were only able to correctly identify depression 39% of the time and schizophrenia 27% of the time (Jorm et al., 1997a). The general public is also deficient in their knowledge specific to treatment of mental disorders. Jorm et al. (1997a) found that when participants were asked to rate the helpfulness of a range of interventions for mental disorders, self help options were rated the highest. This includes interventions such as

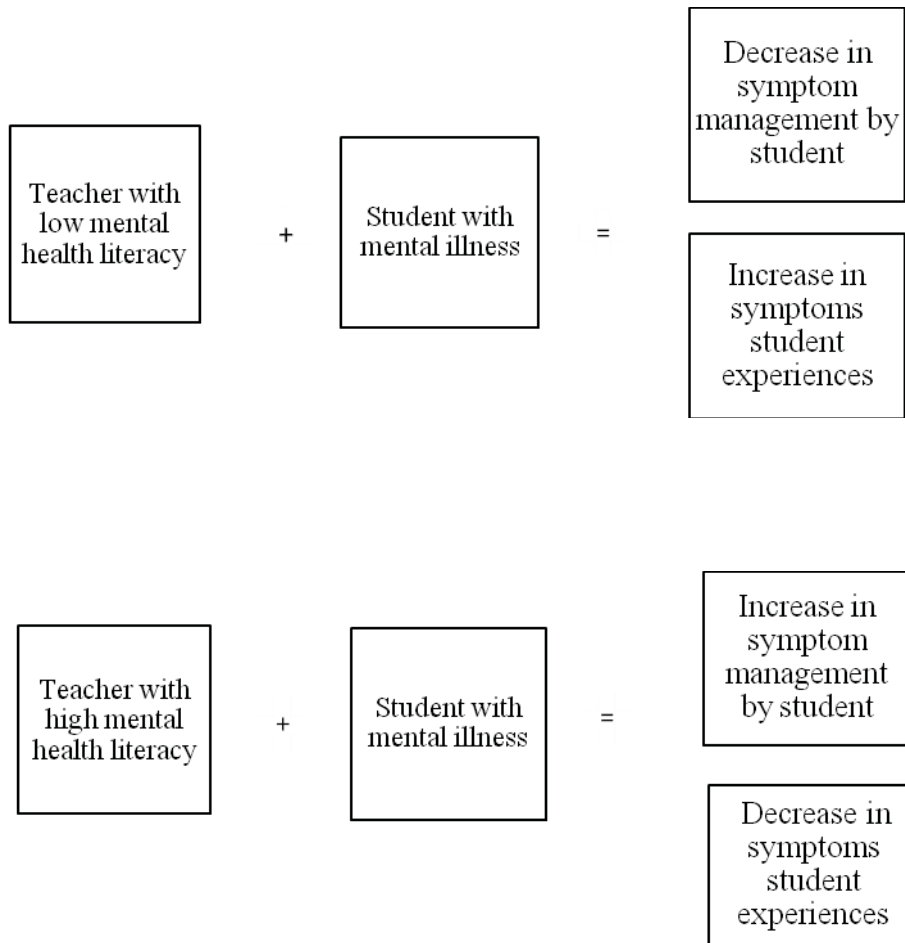


Figure 1. Interaction between levels of mental health literacy in the educators and symptom management in mental health consumers.



support from family members and friends, exercising, and participating in new activities. This belief is incorrect, as little research currently exists to support the use of self help methods for the treatment of mental illness (Jorm et al, 2000). Other findings ( e.g. Matschinger & Angermeyer, 1996; Jorm et al., 1997b; Priest, Vize, Roberts, Roberts, & Tylee, 1996) suggest that the public prefer behavioural and psychotherapeutic treatments over the use of psychotropic medications.

In terms of the public's perception of the causes of mental disorders, it has been found that psychosocial, and personality factors are frequently viewed as causes of depression and schizophrenia (Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999; Matschinger & Angermeyer, 1996; Jorm, Korten, Jacomb, & Rodgers, 1997c). Psychosocial factors that were believed to cause depression were day to day stressors, traumatic events, the death of a loved one, and childhood environment (Jorm et al. 1997c). Personal vulnerability was also highly endorsed as a cause, however genetic factors were given little endorsement. Whereas the public's view of psychosocial factors is consistent with the literature, their perception of personality factors is not. The diathesis-stress model of mental illness suggests that mental illness occurs as a result of an interaction between genetic or neurological vulnerability for mental disorders and environmental factors such as those stated above (Rosenthal, 1970).

### **Age Differences in Mental Health Literacy**

Another area of research in the field of mental health literacy that has garnered much attention is age differences in mental health literacy in the general public. Farrer, Leach, Griffiths, Christensen, and Jorm (2008) examined the Australian population and found that levels of mental health literacy varied across age groups with respect to identification of depression and psychosis, in addition to treatment sources and providers. Specifically, there was a significant difference between the oldest group in the sample (70+years) and all other age

groups. The oldest group in the sample was less likely to identify the mental illness presented in the vignette, indicated fewer types of treatments as helpful, and often reported the cause of schizophrenia to be “weakness of character” (Farrer et al., 2008). Younger adults reported employing informal sources for treatment such as friends and family, and books. They were also more open to the use of a counsellor than a psychologist or psychiatrist. Interestingly, participants in the 18-24 year old group were extremely competent in their ability to correctly identify depression, however they often misdiagnosed schizophrenia as depression. The authors (Farrer et al., 2008) suggest that this may be due to a focus on raising awareness about depression in the recent past, especially in Australia where media campaigns have been launched with that sole purpose. The authors (Farrer et al., 2008) also suggest a variety of reasons why these differences of mental health literacy of different age groups may have occurred. It may be a result of media campaigns not being presented in way that is accessible to older populations (e.g. via the internet), that media campaigns are not targeted at older adults, or programs targeting mental health literacy are often based in schools and such programs have not been available to previous generations (Farrer et al., 2008).

### **Mental Health Literacy in Canada**

Australia has been the most common population to be studied regarding their citizens' level of mental health literacy. However, a small body of research has examined the mental health literacy of Canadians. In 2007, the Canadian Alliance for Mental Illness and Mental Health (CAMIMH) found that Canadians have an average level of mental health literacy in terms of their knowledge of prevalence rates of mental disorders, warning signs, and the ability to identify a mental disorder. Like other populations, Canadians were found to be more likely to endorse psychosocial causes of mental disorders and were unsure about the use of medications in

treatment (CAMIMH, 2007). Canadians differed from other populations, in that they were more likely to recommend medical help for symptoms of mental disorders. Findings also indicate that Canadians have good knowledge about prevention strategies, that they would be reluctant to disclose having a mental disorder, and have a good knowledge of the mind body connection (CAMIMH, 2007).

Another study conducted in Canada examined the levels of mental health literacy for depression in Alberta and found women had better literacy than men (Wang et al, 2007). Other findings were that 43% of the participants attributed the cause of depression to be a “weakness of character” and 75.6% were able to correctly identify and label depressive symptoms. At the time at which the study was conducted, the level of mental health literacy found was higher than that which currently existed in the Australian population (67.6 %) (Wang et al, 2007). Although the participants' level of identification and labelling depressive symptoms was high, they had limited knowledge about how to help someone with depression, as 11% of men and 4.1 % of women indicated they would not know how to help someone with depression. For those participants who were able to identify a way of helping, the majority identified general practitioners as most helpful (Wang et al, 2007). This view is consistent with the reality that many individuals with depression seek help and receive treatment from a general practitioner but is in contrast with evidenced based treatment which suggests a psychologist or psychiatrist is the most appropriate practitioner (Wang et al, 2007).

### **Mental Health Literacy of Adolescents**

As discussed previously, mental health literacy of young people is higher than that of older age groups. Adolescents have likely been a large focus of mental health literacy as a result of the fact that most mental disorders develop between the ages of 13-18 years of age

(Government of Canada, 2006). Although many adolescents develop a mental disorder, many do not seek treatment for reasons including fear of discrimination, and lack of knowledge about treatment. Increasing mental health literacy in this age group may lead to early intervention for mental disorders, and better prognosis later in life (Kelly, Jorm, & Wright, 2007). It may also lead to increased awareness and understanding in the peers of those with mental disorders, which could in turn lessen discrimination and increase support for those with mental disorders (Kelly et al., 2007). One study examined the mental health literacy of 16 year olds in Australia and found mixed results (Burns & Rapee, 2006). Participants were able to correctly identify and label symptoms of depression when the person described in the vignette was described as experiencing more severe symptoms such as suicidal ideation, and feelings of worthlessness but had difficulty when the symptoms were more subtle such as sleep disruption and difficulty concentrating. However, in both cases, over 90% of participants indicated that the individual described in the vignette needed help (Burns & Rapee, 2006). In relation to where to receive help, the most common source indicated by participants was a counsellor, rather than a psychologist or psychiatrist. This finding is in accordance with adult findings previously discussed. Interestingly, whereas adults saw physicians helpful for treatment of mental disorders, the adolescents in this sample did not (Burns & Rapee, 2006).

Other researchers who have examined the mental health literacy of young people have focused on increasing mental health literacy through school based educational programs. These programs are delivered in a variety of forms including mental health curriculum delivered by classroom teachers, and workshops or information sessions delivered by mental health professionals or mental health consumers. Levels of mental health literacy are measured pre and post implementation of the programs, with the hypothesis that providing accurate and accessible

information will increase knowledge. One example of a mental health curriculum program is the MindMatters program implemented in 24 Australian schools in 1997. This program covered a wide variety of topics including bullying, suicide, general well being, and information about specific mental illnesses such as causes, symptoms and treatments (Kelly et al., 2007).

Researchers (MindMatters Evaluation Consortium, 2000) examining the effects of this program surprisingly found a decrease in mental health literacy of the students, however, there was an increase in students reporting willingness to seek help from a professional, and willingness to have a teacher with a mental illness. The findings of this study may be due to a lack of consistent implementation across schools, as many schools did not implement all of the modules included in the program (MindMatters Evaluation Consortium 2000; Wyn et al. 2000). Due to this and other methodological issues, the authors were unable to draw any causal conclusions in regard to changes in knowledge and attitudes following the program (Francis, Pirkis, Dunt, Blood, & Davis, 2002).

### **Mental Health Literacy of In-Service Educators**

Given the high rate of mental disorders in young people and in schools (Mental Health Commission of Canada, 2012) it would be reasonable to assume that individuals who work directly with youth and in schools, such as educators, would be a focus of study in the area of mental health literacy. Educators are in a particularly unique position, as they interact with youth for the majority of the day and therefore are able to observe behaviours that may not be as overt in other situations. If educators have knowledge and awareness about mental health and mental illness then they may be able to act as a gatekeeper, that is, to guide students to appropriate professionals and resources in order to facilitate early intervention in mental disorders. Unfortunately, little research in the area of mental health literacy research has focused

on this population. Of the research that has been conducted, findings suggest that levels of mental health literacy in educators is average (60%), but can be increased with programs focused on enhancing mental health literacy (Collins & Holmshaw, 2008). It has been found that educators who had participated in a mental health literacy program were better able to identify psychosis from a vignette following completion of the program (Langeveled et al., 2010).

Another earlier study which focused on mental health literacy for schizophrenia found that 60% of teachers were able to correctly identify psychosis or schizophrenia (Collins & Holmshaw, 2008). Knowledge surrounding causes of schizophrenia and treatment were also examined. With respect to the causes of schizophrenia, the majority of participants attributed schizophrenia to be caused by a "disorder of the brain". The most popular first choice treatments reported by participants were psychotherapy and family systems interventions, with medication as a popular second choice (Collins & Holmshaw, 2008). Whereas psychotherapy and family systems interventions were popular first choice treatments, there was no consensus in the sample about the best treatment option as each was selected by one-fifth of the sample. This finding demonstrates a lack of knowledge surrounding evidenced based treatment, which is consistent with findings from other populations (Collins & Holmshaw, 2008). The findings of this study were also consistent with previous research conducted by Swami, Furnham, Kannan, and Sinniah (2003) who found that educators showed a preference for the use of psychiatrists and counsellors for treatment of schizophrenia and were reluctant to use medication. Other findings of this study differed slightly from Collins and Holmshaw (2008), as it was found participants most often attributed the cause of schizophrenia to be "stress from personal relations". It was also found that the levels of identification of schizophrenia in the Japanese and Taiwanese sample used for this study were much lower than that found by Collins and Holmshaw (2008). Japanese

participants were able to identify schizophrenia from a vignette 23.3% of the time and Taiwanese participants 34% of the time (Swami et al., 2003).

Other researchers have focused on the mental health literacy of in-service educators for one specific disorder, Attention Deficit Hyperactivity Disorder (ADHD). In the previous classification system in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, 2000) ADHD was considered to be a disruptive behaviour disorder. Disruptive behaviour disorders are often noticed in the classroom, because as their name suggests, they are disruptive to their surrounding environment. As well, teachers are responsible for managing this behaviour in the classroom, thus it is important they have a solid understanding of the disorder.

Researchers have examined various aspects of educators' mental health literacy concerning ADHD such as knowledge and misperceptions of the symptoms and epidemiology of the disorder. It has been found that primary school teachers' overall knowledge of ADHD is poor (Perold, Louw, & Kleynhans, 2010). Whereas the teachers in the study were found to be very knowledgeable in the symptoms and treatment of ADHD, there was a lack of knowledge and misperception of the causes and epidemiology of the disorder (Perold et al., 2010). For example, 31.2% of participants indicated that 15% of all school children have ADHD, whereas the prevalence rate in the country the study was conducted, the United States, is between five to eight percent. In relation to the causes of ADHD, 70.8 % of teachers had a lack of knowledge, and 9.6% misperceived causes, as determined by the Knowledge of Attention Deficit Disorders Scale (KADDS). The main misperception found in the sample was that genetics were not considered a large contributing factor in the development of ADHD (Perold et al., 2010).

Other studies have compared general educators mental health literacy for ADHD to the mental health literacy of other groups such as parents and special education teachers. It has

been found that both teachers and parents had the most knowledge in regarding the causes of ADHD and less knowledge about its treatment (West, Taylor, Houghton, & Hudyma, 2005). It was also found that teachers knew more about the symptoms of ADHD than treatment. Similarly, it has been found that when comparing general and special education teachers, both groups had little knowledge regarding stimulant medication, however there was no difference in factual knowledge of the disorder between the two groups (Snider, Busch, & Arrowood, 2005). Primary school teachers in the sample comparing parents and teachers were found to have higher levels of knowledge about ADHD than the secondary school teachers. Differences in knowledge for the sub-types of ADHD were not examined. The authors (West et al, 2005) suggest two possible explanations for the above finding. First, it may be that primary school teachers interact with the same group of students for a longer period of time and secondly, that secondary school teachers inaccurately believe that students grow out of ADHD by the time they reach adolescence, thus these teachers are attributing symptoms of ADHD to other causes (West et al, 2005).

### **Pedagogical Understandings of Mental Illness**

It is important for educators to have a solid understanding of mental illness, but it is also important that they have a strong pedagogical foundation in this knowledge so they can effectively pass this knowledge onto their students. Programs aiming to enhance mental health literacy through school based educational programs have often overlooked this important component. One study examined educators experience teaching a mental health literacy education program and the impact of the program on their students' level of mental health literacy (Askwell-Williams, Lawson, & Murray-Harvey, 2007). It was found that, overall, teachers enjoyed the program materials but differed in their opinions on the suitability of the



material to their students. Some educators felt the language in the materials was below their students' abilities whereas others felt it was outside their students' current knowledge. The authors (Askwell-Williams et al., 2007) suggest future programs should include materials with a wide range of levels of activities so the program could be generalized across schools and grade levels. Also, teachers felt teaching some activities such as role playing and group work was difficult if their students weren't already comfortable learning through these avenues, and they emphasized that in order for students to properly learn the content for these activities these skills must first be present (Askwell-Williams et al., 2007). The participants in this study were all educators who had experience teaching about mental health, but interestingly, they acknowledged that many of their colleagues who have less experience with mental health would not be comfortable teaching the material. Responses from participants indicated that they had limited knowledge and training in mental health and that the knowledge they did have was not current (Askwell-Williams et al., 2007).

Barriers to increasing teacher knowledge were reported as restrictions on the number of staff allowed to attend in-service presentations related to mental health, and the ability of teachers to travel to attend presentations. There were also barriers in relation to the feasibility of delivering the program, the largest of which was time constraints. Educators found that they were unable to complete all of the lessons in the time available. Such time constraints can lead to a superficial level of teaching and educators found that they were unable to explore issues in depth or engage in discussion of meaningful questions and comments that the material elicited from their students (Askwell-Williams et al., 2007). Participants also noted that time for teaching mental health content is often in competition with time for teaching other equally relevant health topics such as bullying prevention, drugs, and sexual education. Participants

suggested that in order to overcome this barrier, the content of the program could be integrated with other areas of the curriculum such as English, and Science (Askwell-Williams et al., 2007).

### **Mental Health Literacy of Pre-Service Educators**

Not only do educators have a lack of opportunities for training in mental health information in the work force but also in the training they receive to become an educator. One would surmise that with increasing mental health needs in schools, that teacher education program administrators would adjust their curriculum to accommodate this growth, however the research suggests otherwise. A study by Koller et al. (2004) examined the differences in pre-service training at the undergraduate level between new teachers entering the work force and experienced teachers already in the work force. It was found that new teachers felt better prepared for dealing with mental health than experienced teachers. Differences in knowledge levels of mental health between the two groups was not examined. The authors (Koller et al. 2004) suggest it is likely that new teachers felt better prepared because they may not yet be aware that their training is not sufficient, whereas more experienced teachers are. In the 10 year gap between the experienced teachers and the beginning teachers, there was little difference in the amount of mental health training received, therefore, an increase in training is not likely to account for the differences between the two groups (Koller et al. 2004).

As with research that has been conducted with educators in the work force, a number of studies examining the mental health literacy of pre-service teachers have also focused specifically on ADHD. A study by Ohan, Visser, Strain, & Allen (2010) examined the perceptions and reactions of teachers and education students to children with and without ADHD. Participants were presented with four vignettes, all of which described symptomatology of ADHD, however only two explicitly stated that the hypothetical child had been diagnosed

with ADHD. Participants were then asked to complete a questionnaire which asked questions that targeted teachers perceptions of the seriousness of behaviour problems, disruptiveness to the classroom, disruptiveness to friendships, willingness to support the student, medication, and classroom based behavioural strategies. The findings of this study indicated that both teachers and education students varied in their perceptions of the identical description of a child, depending on whether or not the label of ADHD was present (Ohan et al, 2010). When the label of ADHD was present, participants were more willing to support professionals in implementing treatments, increased their negative expectations toward severity of behaviour, increased their negative emotions, and decreased their confidence in their competence to teach the child (Ohan et al., 2010). Furthermore, education students perceived behaviours resulting from ADHD as more serious than teachers, but were less likely to intervene or help with medication and treatment. Not surprisingly, it was also found that the impact of the ADHD label was influenced by training and experience with ADHD. Whereas both training and experience with students with ADHD decreased the amount of "label-bias" (changing of perception of the child as a result of a diagnostic label such as ADHD) that occurred, specific training in ADHD had a greater influence on decreasing "label bias" (Ohan et al, 2010).

Similar evidence has been found concerning perceptions of physical illnesses. It has been found that nursing students reported higher levels of motivation to help patients when the hypothetical patient was perceived to have a serious illness. Negative emotions were also present as the perception of the patient having a serious illness elicited feelings of sadness and powerlessness (Dijker, & Raeijmaekers, 1999).

Another study compared knowledge of ADHD in in-service and pre-service educators (Kos, Richdale, & Jackson, 2004). It was found that practicing teachers had higher levels of

knowledge of ADHD than pre-service teachers. The authors (Kos et al., 2004) indicate that is likely a result of the fact that practicing teachers have had more time to gain experience working with a child with ADHD and pre-service teachers have not yet had the opportunity. It was found that in-service teachers' knowledge of ADHD was significantly related to having additional training in ADHD in addition to experience with students who have ADHD (Kos et al., 2004).

### **Current Study and Hypotheses**

The goal of the current investigation was to determine the overall mental health literacy of a sample of pre-service educators and expand the existing body of literature on the subject by adding to the knowledge base of mental health literacy for depression and schizophrenia. Past researchers have not examined levels of mental health literacy in pre-service educators for these specific disorders. As the majority of mental health literacy of research conducted with educators has focused on ADHD, this investigation will help to better determine pre-service educators' knowledge and attitudes of other disorders. This investigation also examined differences in the level of mental health literacy between first and second year students in Mount Saint Vincent University's Bachelor of Education program. Given the differences in course requirements and practicum experiences, there may have been differences in mental health literacy between the two groups. Any training received related mental health that was completed as part of the education program was also explored.

It was predicted that overall, the levels of mental health literacy of all participants will be low (<58%), but comparable to levels in the Canadian population. It was also predicted that second year students would show higher levels of mental health literacy, as they have had more practicum experience, and thus would have been more likely to have come in contact with students with mental illness. With respect to training received in the program related to mental

health, it was predicted that few participants completed coursework including mental health topics, and that this coursework was not a requirement to complete their degree.

## **Methods**

### **Participants**

Twenty -nine students (males=10,females=19) with a mean age of 26.1 years (SD=5.41) were recruited from the first and second year of the Bachelor of Education program at Mount Saint Vincent University.

### **Measures**

*Demographics.* Participants completed a basic demographic questionnaire covering the following information: age, sex, year of study, section of the Bachelor of Education program (elementary or secondary), and if they or someone close to them (such as an immediate relative or romantic partner) had ever experienced mental illness (See Appendix D).

*Beliefs about Mental Health Problems: Professional and Public Views' Questionnaire* (Jorm, 1997a). This measure has been used predominately in mental health literacy research for a number of years. This questionnaire presents participants with one of two vignettes which describe a person with a mental disorder (either depression or schizophrenia) and asks respondents to answer questions based on the vignette (See Appendix E & F). Participants were randomly assigned to either the depression or schizophrenia vignette. Additionally, the sex of the person described in the vignette was randomly assigned as either John or Mary. Questions about the vignette targeted whether or not the participant was able to correctly identify the mental disorder described in the vignette (e.g. "What if anything would you say is wrong with John/ Mary?"), usefulness of various professionals and treatments, causes of the disorder, and discriminatory behaviours and stigmatizing beliefs toward the individual described.

Written responses regarding what is wrong with the individual described in the vignette were considered to be correct using the procedure developed by O'Reilly, Bell, and Chen (2010) whereby the definition of depression and schizophrenia were specifically defined. For the purposes of the current study responses to the depression vignette were considered to be correct if they contained any of the following phrases: "depression", "depressed", "affective disorder", or "mood disorder". Responses to the schizophrenia vignette were considered to be correct if they contained the phrases "schizophrenia", "schizoaffective disorder", or "psychosis" (O'Reilly et al., 2010). All other questions were answered using a Likert scale.

Usefulness of various professionals and treatments were rated using a three point Likert scale in which professionals and treatments were rated as helpful, harmful, or neither. Causes of the disorder were rated using a five point Likert scale as very likely, likely, not likely, depends, and don't know. Beliefs associated with discrimination were rated using a four point Likert scale as definitely willing, probably willing, probably unwilling, and definitely unwilling to rate how willing participants would be to engage in various activities with someone like the person described in the vignette (e.g. Move next door to Mary/John). Participants were also asked to answer questions about any specific training in mental health provided during the course of their education degree (e.g. Have you taken any courses in your program specific to mental health?) (See Appendix G).

### **Procedure**

Once the study received ethical clearance from the Mount Saint Vincent University Research Ethics Board the researcher contacted the coordinators of the Mount Saint Vincent University Bachelor of Education program in order to receive permission to recruit participants via e-mail. An e-mail (See Appendix A) was then sent to all students enrolled in the Bachelor of

Education program which explained the purpose and parameters of the study and provided a link to an online survey through which participants completed all questionnaires. Upon entering the online survey site, students were presented with an Information Form for Informed Consent. Those who chose to participate checked the consent box and were directed on to complete a basic demographic questionnaire, the Beliefs about Mental Health Problems: Professional and Public Views' questionnaire (Jorm, 1997a) , and questions regarding any education or training concerning mental health received during their education degree. Those who declined to participate checked the decline box and the site closed. Following completion of the questionnaires participants were presented with a Debriefing Letter which summarized the purpose of the study and provided the researcher's contact information in case of future questions and concerns regarding the study.

## **Results**

### **Demographic Analyses**

The majority of participants (n=19) were in their first year of study in the Bachelor of Education program (B.Ed), with 10 participants in their second year of study. Most participants (n=24) were in the elementary stream of the B.Ed program, whereas four participants were in the secondary stream of the program. Most participants (n=19) had experienced or knew someone close to them (e.g. immediate relative, romantic partner) who had experienced mental illness.

### **Levels of Mental Health Literacy**

Overall, 69% percent of participants were able to correctly identify the disorder described in the vignette. An independent samples t-test was conducted to determine if there was a significant difference in levels of mental health literacy between participants in the first (M=0.79, SD= 0.42) and second (M=0.50, SD= 0.53) year of the B.Ed program. No significant

difference was found,  $t(27)=1.62$ ,  $p>0.05$ . Differences in levels of mental health literacy for each condition ; a female experiencing depression ( $M=1.0$ ,  $SD= 0.0$  ), a male experiencing depression ( $M= 0.86$ ,  $SD=0.37$ ), a female experiencing schizophrenia ( $M=0.50$ ,  $SD=0.53$ ) and a male experiencing schizophrenia ( $M= 0.42$ ,  $SD= 0.53$ ) were also examined using a one-way ANOVA. No significant differences in mental health literacy for each condition was found,  $F(3,25)= 2.98$ ,  $p>.05$ .

### **Sex Differences in Mental Health Literacy**

An independent samples t-test was conducted in order to determine if there was a difference in levels of mental health literacy between males and females in the sample. No significant difference was found,  $t(27)=1.63$ ,  $p>0.05$ . The difference between the means of those who correctly identified the disorder described in the vignette and those who did not were compared for each disorder to determine any possible influence of sex on mental health literacy. A significant difference in levels of mental health literacy was found when female students read a vignette describing a female experiencing depression,  $t(17)=1.83$ ,  $p<0.05$  as compared to when presented with vignettes describing a male experiencing depression, and vignettes describing schizophrenia symptoms in both sexes. No significant differences were found in levels of mental health literacy in male students when they were presented with a male experiencing symptoms depression,  $t(8)= 1.79$ ,  $p>0.05$  , as compared to when presented with vignettes describing a female experiencing depression, and vignettes describing both sexes experiencing schizophrenia.

### **Helpfulness of Professionals**

Descriptive statistics were used to determine professionals participants rated as helpful, harmful or neither. The professionals highly rated as helpful by participants were a Counsellor (86.2%), a Psychiatrist (79.3%) and a General Practitioner or Family Doctor (75.9%). Help from close family (6.9%) and help from friends (6.9 %) were most highly rated as harmful by



participants. Professionals most highly rated as neither helpful or harmful were Social Workers (58.6 %), Spiritual Leaders (58.6%), and Pharmacists (55.2%) (See Table 1).

### **Helpfulness of Interventions**

Descriptive statistics were used to determine the interventions participants rated as helpful, harmful or neither in treatment of the person described in the vignette. Interventions rated most highly by participants as helpful were counselling (89.7%), stress management (75.9%), and increasing physical activity (72.4%). Dealing with their problems on their own (51.7%), Electroconvulsive Therapy (41.4%), and admittance to a psychiatric ward of a hospital (37.9 %) were most highly rated as harmful. Interventions most highly rated in the sample as neither helpful or harmful were vitamins, and eating a special diet and avoiding certain foods (See Table 2).

### **Causes of Mental Illness**

Descriptive statistics were used to determine which potential causes participants rated as very likely, likely, not likely, depends, and don't know. Potential causes most highly rated as very likely causes of mental illness were day to day problems such as stress, family arguments, difficulties at work or financial difficulties (34.5%), problems from childhood such as being badly treated or abused, losing one or both parents when young, or coming from a broken home (31%), and the recent death of a close friend or relative (27.6 %). Participants most highly rated genetics (41.4%), a recent death (34.5%) , and a recent traumatic event such as a hurricane severely damaging their home, a severe traffic accident, or being mugged (31%) as likely causes. Potential causes most highly rated in the sample as not likely were having a weakness of character (58.6%), an allergy or other reaction (55.2%), and being a nervous person (51.7%). Participants thought that a virus (34.5%), and a chemical imbalance in the brain (20.7%) could

sometimes be causes of mental illness as these causes were most highly rated as depends (See Table 3).

### **Stigma and Discrimination**

Descriptive statistics were used to determine the willingness of participants to engage in various activities and interactions with the person described in the vignette. Participants were most willing to make friends (44.8%) with the person described in the vignette, as this activity was most highly rated as definitely willing by the majority of participants. Participants were most unwilling to have the person in the vignette work closely with them on a project (27.6%) as this interaction was most highly rated probably unwilling by the majority of participants (See Table 4).

### **Mental Health Education or Training and Mental Health Literacy**

It was found that 37.9 percent of the sample had taken courses about mental illness during their education degree. Within those participants, 13.8 percent indicated that the course was a mandatory requirement of their degree, whereas 17.8 percent indicated that the course was elective. A Pearson product moment correlation coefficient was calculated in order to determine if there was a relationship between mental health education (i.e. specific academic courses in mental health) received during the completion of the participant's education degree and levels of mental health literacy. There was not a significant relationship between levels of mental health literacy and mental health education (See Table 5). It was found that 13.8 percent of participants had received mental health training (i.e. education other than coursework, such as a workshop) during their education, whereas 65.5 percent had not. Of those participants who had received mental health training, 10.3 percent indicated that this training was mandatory whereas 3.4

percent indicated that it was an elective component of their degree. A Pearson product moment correlation coefficient was calculated to establish if there was a relationship between mental health training and levels of mental health literacy. No significant relationship was found (See Table 6).

### **Importance of Mental Health Education**

When asked if they thought if it is important to have information on mental health and mental illness taught as part of their education degree, 79.3 percent of participants indicated that it is important, 3.4 percent indicated that it is not, and 17.2 percent did not answer the question.

### **Discussion**

The purpose of the current study was to examine if year of study in a sample of pre-service educators had an effect on levels of mental health literacy. First, it was predicted that overall, levels of mental health literacy would be low but comparable to levels in the Canadian general population. This hypothesis was not confirmed as it was found that levels of mental health literacy were somewhat higher than that of the Canadian general population. This finding is encouraging as educators have frequent interactions with children with mental illnesses, or children who are at risk of developing mental illnesses. This finding has promising implications for when these pre-service educators enter the work force, as they may be more likely to identify children with mental health needs and advocate for them. Despite the promising implications of the above finding it is vital to continue efforts to increase the mental health literacy of pre and in-service educators, in order to elevate levels of mental health literacy to the highest level. When examining levels of mental health literacy it is important to do so from a perspective that encompasses the full definition of the concept, not only on recognition of disorders. The definition emphasizes knowledge of appropriate treatments, professionals, and causes of mental disorders as well (Jorm et al., 1997). Whereas the current sample had above average levels with

respect to the recognition of mental disorders, there were gaps in knowledge of other areas such as appropriate professionals for the treatment of mental illness, harmfulness of some interventions and causes of mental illness. Although other researchers have examined levels of mental health literacy in pre-service educators, there have not been any researchers who have focused specifically on depression and schizophrenia. Thus, further research is needed to confirm the above findings.

Second, it was predicted that second year Bachelor of Education students would have higher levels of mental health literacy than first year students in the program, which was not supported by the current findings. This may be a result of the small number of second year students present in the sample, or due to the fact that few participants in the sample overall indicated education and training in mental health topics. This indicates that the difference in education and experiences (e.g. practicum teaching experience) between first and second year students did not impact levels of mental health literacy. It would be reasonable to expect that second year students would have higher levels of mental health literacy as they would be more likely to have come in contact with a child with mental illness during their practicum experience, and have taken different courses than first year students during which they may have been educated about mental health. However, this was not evident in the current sample. This finding is concerning given that it is not likely that their mental health literacy will increase over time in the work force, as pre-service educators will not likely be exposed to professional development that will give them the opportunity to do so. It has been found that in-service educators have few opportunities to receive mental health training or education and that there are many barriers (e.g. transportation, funding, time constraints) to obtaining this education when it is provided (Askwell-Williams et al., 2007).

Third, it was predicted that few participants in the sample would have taken courses or training regarding mental health, and of those that had, and it was also hypothesized that the education and training received was not a mandatory component of their degree. Both of these hypotheses were supported. Interestingly, although few participants had taken courses about mental illness or received related training, the majority of the sample indicated that it is important to learn information about mental health and mental illness during their education degree. This finding is in accordance with research conducted by Rothi, Leavey, and Best (2008) who found that educators feel they have a responsibility regarding the mental health care of their students, and that educators would like to receive education and training in order to do so. When asked to elaborate on what specific information about mental health would be important to learn, participants reported a variety of topics including symptoms, treatments, intervention strategies, how to support children in their classroom experiencing mental illness, how to eliminate stigma, when to seek professional help, resources and where to find help, and how symptoms of mental illness differ in adults and children. It is encouraging that participants in the current sample had a positive attitude toward training and education in mental health as part of their degree, but it will be important that administrators of education programs are receiving feedback from students in order to address any possible gaps in training. Although other researchers have examined levels of mental health education and training in educators, few have examined whether any of it was a mandatory component of their teaching degree. Therefore, further research is needed to confirm the above finding.

With respect to professionals who would be helpful in the treatment of the person described in the vignette, the majority of participants rated general practitioners or family doctors, counsellors, a helpline, psychiatrists, clinical psychologists, help from close family, and

help from friends as helpful in treatment. Most participants rated pharmacists, social workers, naturopathic doctors, and spiritual leaders as neither helpful or harmful. None of the professionals which participants were asked about were rated as harmful. The most highly endorsed professional deemed to be helpful by participants was a counsellor. This finding is inconsistent with evidenced based treatment which suggests that a psychologist or psychiatrist is the most appropriate practitioner for the treatment of mental disorders (Wang et al, 2007). These findings indicate pre-service educators currently have a lack of knowledge regarding appropriate professionals for treatment of mental illness. Although some of the professionals (i.e. general practitioner or family doctor, helpline, counsellor) rated as helpful by the sample can support treatment as part of a multi-disciplinary approach they should not be considered the main source of treatment. This finding may be a result of a general lack of understanding of the roles of various mental health professionals. A study by Farberman (1997) found the general public was unable to distinguish the differences between different mental health providers. Furthermore, it was found that participants had a negative view of psychiatrists, and that they were deficient in their knowledge of the education and credentials required to become a psychologist (Farberman, 1997). There are no researchers currently, who have examined pre-service educators views of helpfulness of various professionals to treat mental illness, therefore, further research is needed to confirm these findings.

When asked to rate the helpfulness of various interventions in the treatment of the person described in the vignette, the majority of participants rated counselling, stress management, increasing physical activity, meditation or yoga, reading about people with similar problems and how they have dealt with them, psychotherapy, Cognitive Behavioural Therapy (CBT), eating a special diet or avoiding certain foods, and antidepressants as helpful interventions.

Electroconvulsive Therapy (ECT) and dealing with the problem on their own were rated as harmful interventions by most participants. The majority of the sample rated vitamins, antipsychotics, admittance to a psychiatric ward of a hospital, and ECT as neither helpful or harmful in the treatment of the disorder described in the vignette. The most highly endorsed intervention considered to be helpful was counselling. These findings indicate pre-service educators are open to both biological and psychological interventions. However, pre-service educators prefer psychological interventions as the top three interventions rated as helpful were psychological. This means that if presented with a child that needs help, pre-service educators would be more likely to try psychological interventions first. More severe, or invasive interventions were viewed as more harmful by participants such as ECT, and admittance to the psychiatric ward of a hospital. This may be a result of a general lack of information or in depth understanding of parameters of these treatments. When individuals lack knowledge about health problems they tend to rely on generally accepted views of these problems (Jorm, Christensen, et al.,2000). The particular interventions the current sample selected as harmful may be considered to be generally accepted as harmful, as they are often portrayed in such a way in the media . This indicates that pre-service educators would be less likely to seek out these interventions when presented with a student who needed treatment for a mental illness. These findings are somewhat consistent with evidenced based treatment for mental disorders which indicates that a combination of psycho-pharmalogical medication, behavioural and psychotherapeutic interventions are effective in the treatment of mental disorders (Wang et al, 2007). Presently, there are no researchers who have examined pre-service educators views of helpfulness of various interventions in treating mental illness. Thus further research is needed to confirm the above findings.

With respect to potential causes of the disorder described in the vignette, the majority of the sample rated day to day stresses, and problems in childhood as very likely causes. Most participants rated the recent death of a close friend or relative, a recent trauma, genetics, and a chemical imbalance in the brain as likely causes of the disorder in the vignette. A virus, allergy, being a nervous person, and having a weakness of character were rated as not likely causes by the majority of participants. The potential cause rated the highest as a very likely cause by participants was day to day problems such as stress, family arguments, difficulties at work, or financial difficulties. These findings are inconsistent with the currently accepted theory of the development of mental illness, the diathesis-stress model, which outlines that mental disorders result from a combination of genetics, neurobiological vulnerability for mental disorders, and environmental factors (Rosenthal, 1970). Thus, pre-service educators currently do not have an accurate understanding of the causes of mental illness and therefore any programs targeted at educating this population should focus on emphasizing the interaction between biological and psychosocial causes of mental illness. This finding has implications for pre-service educators interactions with students with mental illness. As they are more likely to endorse environmental causes of mental illness, this could result in "blame" unintentionally being placed on people involved in the student's life, such as their parents. It could also result in stigmatization of the student as pre-service educators may feel that the student with mental illness should be able to "control" their illness. Research (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003) has shown that when individuals view mental illness as being a result of uncontrollable factors, such as biological factors, they are more likely to help a person with mental illness than when the cause is viewed as controllable (i.e. psychosocial factors). Other researchers have not examined



pre-service educators views of the likelihood of potential causes of mental illness, so further research is needed to confirm the above findings.

In terms of how likely pre-service educators would be to engage in various activities with the person described in the vignette, the majority of participants indicated that they would be definitely willing to move next door to the person in the vignette, spend an evening socializing with the person in the vignette, and to make friends with the person. Most participants reported that they would be probably willing to move next door to the person, work closely with the person on a job, and have the person marry into their family. Participants were most willing to make friends with the person described in the vignette, as this activity was rated as definitely willing by more participants than any other activity. Although the present sample indicated little stigma and discrimination towards people with a mental illness, as most participants indicated that they would be willing to some degree to interact with the person in the vignette, research (Angermeyer, Beck, Dietrich, & Holzinger, 2004 ) has shown in reality this is not often the case as people with mental illness report rejection or loss of contact with others when their mental illness is known. Participants in the current sample may have responded in a way that they felt was socially acceptable or that would be viewed positively by others. However, the above findings are in accordance with the CAMIMH investigation (2007) of the Mental Health Literacy of the Canadian general population which found that Canadians were more open to social interaction with people experiencing mental illness than to interactions which involved positions of responsibility for the person, such as in a work environment. Previous researchers have not examined levels of discrimination in pre-service educators, therefore, further research is needed to confirm the above findings.

Sex differences in mental health literacy were also explored. No difference was found in overall levels of mental health literacy between male and female participants. However, it was found that females were more likely to correctly identify symptoms of depression when presented with a vignette describing a female individual experiencing those symptoms, thus had higher levels of mental health literacy for the female depression vignette. It is speculated that this is due to the fact that most mental illness awareness campaigns in Canada cover all disorders, but focus heavily on depression such as the Faces of Mental Illness campaign (CAMIMH), Mental Illness Awareness week (CAMIMH), and the Bell Let's Talk campaign. Additionally, research shows that depression is more prevalent in females (Nolen-Hoeksema, 2001). Thus, the females in the sample may have been primed to recognize depressive symptoms in females. Although the depression vignettes presented for each sex were identical, with the exception of the person's name, the way in which depressive symptoms present in males and females can differ (Khan, Gardner, Prescott, & Kendler, 2002). Depressive symptoms in females commonly present as changes in appetite, weight gain, difficulty sleeping, and fatigue (Khan et al., 2002) whereas males tend to exhibit irritability, anger, and hostile behaviour (Möller-Leimkühler, 2002). This may explain why males in the current sample did not significantly differ in their identification of depression from schizophrenia when presented with a male or female vignette, as the depressive symptoms described may not have been in accordance with male presentation of depression as described above. The above findings suggest that those who are female experiencing symptoms of schizophrenia, or males experiencing symptoms of depression or schizophrenia may not be as likely to be recognized as needing support when these pre-service educators enter the work force, and as a result these students may miss receiving any necessary intervention. It is also concerning because as females may be primed to recognize symptoms of

depression in female students, they may misinterpret symptoms as indicative of depression. Depression is known to often be comorbid with anxiety disorders (Kaufman & Charney, 2000), so if symptoms of anxiety disorders are misinterpreted as depression, students may not receive effective support. Again, sex differences in the mental health literacy of pre-service educators has not been examined in previous investigations, thus further research is needed to confirm the above findings.

### **Limitations and Future Research**

Given these findings, limitations of the present study must be taken into account. First, due to a challenge in recruiting participants, the current study employed a small sample of participants which decreased the options for statistical analysis. Therefore, the current results should be interpreted with caution. There is currently little existing evidence regarding the mental health literacy of pre-service educators, thus the findings of current investigation provide important insight in this domain, but further replication is required. Second, the vignettes describing an individual experiencing symptoms of depression or schizophrenia described and adult experiencing these symptoms. As educators have more experience with children and youth, and symptoms of mental illness present differently in children and adults, results may differ. Vignettes are used that describe a child experiencing mental illness or when presented with mental disorders more commonly experienced in childhood, such as anxiety disorders. Third, few participants in the sample had taken courses in mental health or received related training. Consequently, it is currently unclear what effect education and training regarding mental health has on levels of mental health literacy in pre-service educators.

The current investigation provides a starting point for future researchers to expand upon in the area of mental health literacy in all educators. It will be important for further

investigations to be conducted in the area of mental health literacy in pre-service educators, in order to confirm the findings of the current investigation and to expand the body of evidence in this area. Future researchers may also expand on the current study by comparing levels of mental health literacy in pre and in-service educators, as well as by examining levels of mental health literacy for disorders that primarily present in childhood, as educators will be more likely to observe their students experiencing these disorders. Despite these limitations, this study provides evidence that pre-service educators have a somewhat above average level of mental health literacy.

### **Conclusion**

In conclusion, the goal of the current investigation was to examine differences in levels of mental health literacy between first and second year students enrolled in a bachelor of education program. The overall level of mental health literacy in the sample was found to be somewhat above average (>58%). There was no significant difference in levels of mental health literacy between first and second year students. Education and training concerning mental health as part of the education degree was also examined. It was found that few participants had taken courses or received training about mental health. Additionally, very few participants who had received this education and training indicated that it was a mandatory component of their education degree.

Although pre-service educators in the present study were found to have a somewhat above average level of mental health literacy, this does not mean that they do not need to receive education and training about mental health. There are areas in which their level of knowledge needs to be increased, such as causes of mental illness, and symptoms for disorders other than depression. The majority of participants in the current sample indicated that this education

would be an important component of completing their education degree. If they are provided with this education they may feel more competent in supporting students with mental illness in their classroom when they enter the work force.

The current study has implications for required components of education degrees. Program administrators may want to consider including course work and training that covers mental health as required components of the university's Bachelor of Education program. For example, students could be required to complete a course work in child psychopathology, or attend workshops which relate to mental illness in students. It will be important for program administrators to address any gaps in knowledge in this domain, as their students will likely need this knowledge when they enter the work force.

This investigation also has implications for the practice of school psychologists. As there was no significant difference between first and second year students in the sample, pre-existing levels of mental health literacy will likely remain constant as these students enter the workforce. It will be important for school psychologists to continue to provide professional development opportunities for educators to receive mental health education, in order to increase levels of mental health literacy. As noted by Rothi et al. (2008) there are often barriers to educators attending these type of professional development sessions, therefore it will be important for school psychologists to promote this education by taking the opportunity to work with school staff to increase knowledge of mental health when consulting with individual staff, or school teams.

The current investigation provides opportunities for future research in the area of mental health literacy. A large body of evidence examining mental health literacy of pre-service educators, or educators in general, does not currently exist. It will be important to obtain this

evidence in order to gain a clearer picture of the status of mental health literacy in all educators, so that any gaps in knowledge can be addressed. Addressing any knowledge gap is vitally important as mental health needs in today's classrooms continue to be prevalent.

Table 1

*Helpfulness ratings of professionals by percentage*

Professional	Helpful		Harmful		Neither	
	n	%	n	%	n	%
General Practitioner or Family Doctor	22	75.9	1	3.4	5	17.2
Pharmacist	12	41.4			16	55.2
Counsellor	23	86.2			4	10.3
Social Worker	11	37.9			17	58.6
Helpline	18	62.1	1	3.4	9	31.0
Psychiatrist	23	79.3	1	3.4	4	13.8
Clinical Psychologist	20	69.0	1	3.4	7	24.1
Help from close family	20	69.0	2	6.9	6	20.7
Help from friends	20	69.0	2	6.9	6	20.7
Naturopathic Doctor	11	37.9			16	55.2
Spiritual Leader	10	34.5			17	58.6

Table 2

*Helpfulness rating of interventions by percentage*

Intervention	Helpful		Harmful		Neither	
	n	%	n	%	n	%
Deal with problems on their own	3	10.3	15	51.7	10	34.5
Vitamins	6	20.7			22	75.9
Antidepressants	13	44.8	5	17.2	10	34.5
Antipsychotics	8	27.6	9	31.0	10	34.5
Increasing Physical Activity	21	72.4			7	24.1
Meditation or Yoga	8	69.0			20	27.6
Reading about people with similar problems	18	62.1	3	10.3	7	24.1
Psychotherapy	17	58.6			11	37.9
Cognitive Behavioural Therapy	16	55.2	1	3.4	11	37.9
Admittance to a Psychiatric Ward of a Hospital	2	6.9	11	37.9	13	44.8
Electroconvulsive Therapy (ECT)	2	6.9	12	41.4	12	41.4
Eating a special diet or avoiding certain foods	14	48.3			13	44.8
Counselling	26	89.7			2	6.9
Stress Management	22	75.9			4	13.8



Table 3

*Potential causes of mental illness by percentage*

Cause	Very Likely		Likely		Not Likely		Depends		Don't Know	
	n	%	n	%	n	%	n	%	n	%
Virus			2	6.9	13	44.8	10	34.5	3	10.3
Allergy or Other Reaction	2	6.9	2	6.9	16	55.2	5	17.2	3	10.3
Day to Day Problems	10	34.5	7	24.1	4	13.8	5	17.2	2	6.9
Recent Death	8	27.6	10	34.5	2	6.9	5	17.2	3	10.3
Recent Trauma	7	24.1	9	31.	3	10.3	6	20.7	3	10.3
Childhood Problems	9	31.0	8	27.6	2	6.9	5	17.2	4	13.8
Genetics	4	13.8	12	41.4	3	10.3	7	24.1	2	6.9
Chemical Imbalance	7	24.1	9	31.0	2	6.9	4	20.7	6	13.8
Being a nervous person	1	3.4	3	10.3	15	51.7	5	17.2	4	13.8
Weakness of Character					17	58.6	6	20.7	5	17.2

Table 4

*Willingness to interact with people with mental illness by percentage*

Interaction	Definitely Willing		Probably Willing		Probably Unwilling		Definitely Unwilling	
	n	%	n	%	n	%	n	%
Move next door to John/Mary	11	37.9	11	37.9	5	17.2	1	3.4
Socialize with John/Mary	12	41.4	9	31.0	4	13.8	2	6.9
Make friends with John/Mary	13	44.8	8	27.6	6	20.7		
Have John/Mary work closely on a project with you	6	20.7	12	41.4	8	27.6		
Have John/Mary marry into your family	6	20.7	14	48.3	5	17.2		

Table 5

*Relationship between mental health literacy and mental health education*

	Correct Disorder	Mental Health Education
Mental Health Education	-.14	1
Correct Disorder	1	-.14

Table 6

*Relationship between mental health literacy and mental health training*

	Correct Disorder	Mental Health Training
Mental Health Training	-.25	1
Correct Disorder	1	-.25

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**Appendix A**  
**Recruitment E-mail**

Dear Student,

My name is Emily Atkinson. I am 2<sup>nd</sup> year student in the Master of Arts in School Psychology student. I am writing to you to invite you to participate in a research study which I am conducting as part of my degree.

My study is about mental health literacy. I am investigating the level of mental health literacy of education students .If you consent to participate in this study, you will be asked to complete an online questionnaire that takes about 15-20 minutes to complete.

Your participation is completely voluntary and will in no way affect your grades or standing in the Bachelor of Education program. You may withdraw your permission at any time during the study without penalty by exiting the online questionnaire. If there are any questions that you do not wish to answer, you may also leave those questions blank.

Benefits involved with participation in this study are that you will be making a contribution to science and you may gain useful knowledge about yourself. There are no known risks in participating in this study. The study has been cleared by the Graduate Department Research Ethics Committee.

If you have any concerns regarding the confidentiality of the data we are collecting, please know that only my supervisor and I will have access to it. The data will be kept on secure university servers and will be destroyed once the study is completed.

If you are interested in participating please follow the link below which will lead to you to the online questionnaire:

<http://surveys.msvu.ca/index.php?sid=35847&lang=en>

Thank you for your participation.

Sincerely,

Emily Atkinson  
Graduate Student  
Master of Arts in School Psychology Program

Mount Saint Vincent University

**Appendix B**  
**Information Sheet for Informed Consent**

**Mount Saint Vincent University**  
**Department of Education**

**Title of the Study:** Educators as Facilitators of Mental Health: An Investigation of the Mental Health Literacy of Pre-Service Teachers

**Name of Researcher:** Emily Atkinson

**Name of Faculty Supervisor:** Dr. Daniel Seguin, 457-6460, daniel.seguin@msvu.ca

**What is the Study About?**

This study is my thesis that I am completing as part of my Master's of Arts in School Psychology under the supervision of Dr. Daniel Seguin. In this study we are interested in looking at your knowledge and attitudes of mental illness.

**What Will I be Expected to Do and How Much Time Will it Take?**

We are asking that you complete a questionnaire that measures your knowledge and attitudes about mental illness. Specifically you will be asked to complete the *Public Attitudes and Beliefs about Mental Illness questionnaire*. This questionnaire should take from 15 minutes to 20 minutes to complete.

**Will Anyone Know What I Said or Did?**

All information collected will be strictly confidential and your name will never be used. No identifying information will be included in any document resulting from this study. Information based on the results of the entire group of participants will be provided to the university and to you upon request. We may also report the results of our study to psychology classes, conferences, and in written articles.

**What Happens If I Change My Mind and Wish to Withdraw?**

Your participation is completely voluntary. You may decide to withdraw from the study at any time. If there are any questions in the questionnaires that you do not wish to answer, you may leave those questions blank. If you choose to withdraw from the study, any data collected from you to that point will be destroyed.

**What are the Potential Benefits and Risks Associated with Participation in the Study?**

Benefits involved with participation in this study are that you will be making a significant contribution to science and you may gain useful knowledge about yourself. No risky or hazardous equipment will be used in this research and there are no known risks in participating

in this study.

**Where Do I Get Questions Answered?**

Following completion of questionnaires you will be given a debriefing letter. At this point in time the researcher will be available to answer any questions that you might have. If you have any further questions at a later date you may contact the researcher using the contact information provided above.

This study has been reviewed by, and received ethics clearance through the University Research Ethics Board (UREB) of Mount Saint Vincent University. If you have questions about how this study is being conducted and wish to speak with someone not involved in the study, you may contact the Vice Chair of the University Research Ethics Board Dr. Sara King at 457-6552, or [sara.king@msvu.ca](mailto:sara.king@msvu.ca).

Signature of researcher

Signature of Faculty supervisor

\_\_\_\_\_

\_\_\_\_\_

Emily Atkinson

Dr. Daniel Seguin

**Appendix C**  
**Consent Form**

Educators as Facilitators of Mental Health: An Investigation of the Mental Health Literacy of Pre-Service Teachers  
Mount Saint Vincent University  
Department of Education

**Researcher:** Emily Atkinson

**Faculty Supervisor:** Dr. Daniel Seguin

I have received a copy of the Invitation to Participate for the research project entitled *Educators as Facilitators of Mental Health: An Investigation of the Mental Health Literacy of Pre-Service Teachers*, I have had an opportunity to read the information provided or it has been explained to me, and any questions that I may have had have been answered.

I agree to participate in this research project, understanding that I am doing so voluntarily, that confidentiality will be maintained, and that I have the right to withdraw from the study at any point using the means outlined in the Invitation to Participate.

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Name

---

Signature

---

Date

**Appendix D**  
**Demographic Questionnaire**

Age: \_\_\_\_\_

Sex:    M    F

Year of Study:    1<sup>st</sup>    2nd

B.ed Program:   Elementary    Secondary

Have you or someone close to you such as an immediate relative or romantic partner, ever experienced any type of mental illness?:

Yes

No



**Appendix E**

**Beliefs about Mental Health Problems: Professional and Public Views' Questionnaire**

***Vignette #1 : Depression***

John/Mary is 30 years old. He/She has been feeling unusually sad and miserable for the last few weeks. Even though he/she is tired all the time, he/she has trouble sleeping nearly every night. John/Mary doesn't feel like eating and has lost weight. He/She can't keep her mind on her work and puts off making decisions. Even day-to-day tasks seem too much for him/her. This has come to the attention of his/her boss, who is concerned about John's/Mary's lowered productivity.

What if anything would you say is wrong with John/Mary?

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Do you think Mary/John needs professional help?

- Yes
- No

Rate the following people in terms of their helpfulness in treating John/Mary

1. General Practitioner or Family Doctor

- Helpful
- Harmful
- Neither

2. Pharmacist

- Helpful
- Harmful
- Neither

3. Counsellor

- Helpful
- Harmful
- Neither

4. Social Worker

- |  |                                  |                                  |                                  |
|--|----------------------------------|----------------------------------|----------------------------------|
|  | <input type="checkbox"/> Helpful | <input type="checkbox"/> Harmful | <input type="checkbox"/> Neither |
| 5. Helpline  | <input type="checkbox"/> Helpful | <input type="checkbox"/> Harmful | <input type="checkbox"/> Neither |
| 6. Psychiatrist  | <input type="checkbox"/> Helpful | <input type="checkbox"/> Harmful | <input type="checkbox"/> Neither |
| 7. Clinical Psychologist                                 | <input type="checkbox"/> Helpful | <input type="checkbox"/> Harmful | <input type="checkbox"/> Neither |
| 8. Help from his/her close family                        | <input type="checkbox"/> Helpful | <input type="checkbox"/> Harmful | <input type="checkbox"/> Neither |
| 9. Help from friends                                     | <input type="checkbox"/> Helpful | <input type="checkbox"/> Harmful | <input type="checkbox"/> Neither |
| 10. Naturopath   | <input type="checkbox"/> Helpful | <input type="checkbox"/> Harmful | <input type="checkbox"/> Neither |
| 11. Spiritual Leader (e.g. Priest, Minister, Rabbi etc.) | <input type="checkbox"/> Helpful | <input type="checkbox"/> Harmful | <input type="checkbox"/> Neither |

Rate the following interventions in terms of their helpfulness for John/Mary

- |  |                                  |                                  |                                  |
|--|----------------------------------|----------------------------------|----------------------------------|
| 1. Mary/John tries to deal with her/his problem on her/his own | <input type="checkbox"/> Helpful | <input type="checkbox"/> Harmful | <input type="checkbox"/> Neither |
| 2. Vitamins and Minerals (e.g. St. John's Wort)                | <input type="checkbox"/> Helpful | <input type="checkbox"/> Harmful | <input type="checkbox"/> Neither |

3. Antidepressants

Helpful

Harmful

Neither

4. Antipsychotics

Helpful

Harmful

Neither

5. Increasing physical activity

Helpful

Harmful

Neither

6. Reading about people with similar problems and how they have dealt with them

Helpful

Harmful

Neither

7. Meditation or yoga

Helpful

Harmful

Neither

8. Psychotherapy

Helpful

Harmful

Neither

9. Cognitive Behavioural Therapy

Helpful

Harmful

Neither

10. Admission to a Psychiatric Ward of a hospital

Helpful

Harmful

Neither

11. Electroconvulsive Therapy (ECT)

Helpful

Harmful

Neither

12. A special diet or avoiding certain foods

Helpful

Harmful

Neither



Very likely      Likely      Not likely      Depends      Don't know

8. How likely is it that these sorts of problems are caused by a chemical imbalance in the brain?

Very likely      Likely      Not likely      Depends      Don't know

9. Is being a nervous person likely to be a reason?

Very likely      Likely      Not likely      Depends      Don't know

10. Could having weakness of character be a cause?

Very likely      Likely      Not likely      Depends      Don't know

Rate how willing you would be to do the following activities.

1. Move next door to John/Mary

Definitely willing      Probably willing      Probably unwilling      Definitely unwilling

2. Spend an evening socializing with John/Mary

Definitely willing      Probably willing      Probably unwilling      Definitely unwilling

3. Make friends with John/ Mary

Definitely willing      Probably willing      Probably unwilling      Definitely unwilling

4. Have John/Mary start working closely with you on a job

Definitely willing      Probably willing      Probably unwilling      Definitely unwilling

5. Have John/Mary marry into your family

Definitely willing      Probably willing      Probably unwilling      Definitely unwilling

**Appendix F**

**Beliefs about Mental Health Problems: Professional and Public Views' Questionnaire**

*Vignette # 2 : Schizophrenia*

John/Mary is a young person who lives at home with his/her parents. He/she has had a few temporary jobs since finishing school but is now unemployed. Over the last 6 months he/she has stopped seeing his/her friends and has begun locking himself/herself in his/ her bedroom and refusing to eat with the family or to have a bath. His/her parents also hear him/her walking about in his/her bedroom at night while they are in bed. Even though they know he/she is alone, they have heard him/her shouting and arguing as if someone else is there. When they try to encourage him/her to do more things, he/she whispers that he/she will not leave home because he/she is being spied upon by the neighbour. They realize he/she is not taking drugs because he/she never sees anyone or goes anywhere

What if anything would you say is wrong with John/Mary?

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Do you think Mary/John needs professional help?

- Yes
- No

Rate the following people in terms of their helpfulness in treating John/Mary

1. General Practitioner or Family Doctor

- Helpful
- Harmful
- Neither

2. Pharmacist

- Helpful
- Harmful
- Neither

3. Counsellor

- Helpful
- Harmful
- Neither

4. Social Worker

Helpful

Harmful

Neither

5. Helpline

Helpful

Harmful

Neither

6. Psychiatrist

Helpful

Harmful

Neither

7. Clinical Psychologist

Helpful

Harmful

Neither

8. Help from his/her close family

Helpful

Harmful

Neither

9. Help from friends

Helpful

Harmful

Neither

10. Naturopath

Helpful

Harmful

Neither

11. Spiritual Leader (e.g. Priest, Minister, Rabbi etc.)

Helpful

Harmful

Neither

Rate the following interventions in terms of their helpfulness for John/Mary

1. Mary/John tries to deal with her/his problem on her/his own

Helpful

Harmful

Neither

2. Vitamins and Minerals (e.g. St. John's Wort)

Helpful Harmful Neither

3. Antidepressants

Helpful Harmful Neither

4. Antipsychotics

Helpful Harmful Neither

5. Increasing physical activity

Helpful Harmful Neither

6. Reading about people with similar problems and how they have dealt with them

Helpful Harmful Neither

7. Meditation or yoga

Helpful Harmful Neither

8. Psychotherapy

Helpful Harmful Neither

9. Cognitive Behavioural Therapy

Helpful Harmful Neither

10. Admission to a Psychiatric Ward of a hospital

Helpful Harmful Neither

11. Electroconvulsive Therapy (ECT)

Helpful Harmful Neither



12. A special diet or avoiding certain foods

Helpful Harmful Neither

13. Counselling

Helpful Harmful Neither

14. Stress Management

Helpful Harmful Neither

How likely do you think each of the following is to be a reason for such problems?

1. Virus or other infection

Very likely Likely Not likely Depends Don't know

2. Allergy or reaction

Very likely Likely Not likely Depends Don't know

3. Day-to-day problems such as stress, family arguments, difficulties at work or financial difficulties

Very likely Likely Not likely Depends Don't know

4. Recent death of a close friend or relative

Very likely Likely Not likely Depends Don't know

5. Recent traumatic event such as a hurricane severely damaging your home, a severe traffic accident or being mugged

Very likely Likely Not likely Depends Don't know

6. Problems from childhood such as being badly treated or abused, losing one or both parents when young or coming from a broken home

Very likely      Likely      Not likely      Depends      Don't know

7. How likely is it that these sorts of problems are inherited or genetic?

Very likely      Likely      Not likely      Depends      Don't know

8. How likely is it that these sorts of problems are caused by a chemical imbalance in the brain?

Very likely      Likely      Not likely      Depends      Don't know

9. Is being a nervous person likely to be a reason?

Very likely      Likely      Not likely      Depends      Don't know

10. Could having weakness of character be a cause?

Very likely      Likely      Not likely      Depends      Don't know

Rate how willing you would be to do the following activities.

1. Move next door to John/Mary

Definitely willing      Probably willing      Probably unwilling      Definitely unwilling

2. Spend an evening socializing with John/Mary

Definitely willing      Probably willing      Probably unwilling      Definitely unwilling

3. Make friends with John/ Mary

Definitely willing      Probably willing      Probably unwilling      Definitely unwilling

4. Have John/Mary start working closely with you on a job

Definitely willing      Probably willing      Probably unwilling      Definitely unwilling

5. Have John/Mary marry into your family

Definitely willing     Probably willing     Probably unwilling     Definitely unwilling

**Appendix G**  
**Questions Regarding Education**

At any point during your education have you taken a course in developmental psychology?

- Yes
- No

Have you taken any courses about mental illness during your education degree?

- Yes
- No

If you answered yes to the previous question, what was the name of the course?

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Was this course mandatory or an elective?

- Mandatory
- Elective

Have you received other training (besides coursework) about mental illness as part of your education degree ?

- Yes
- No

If you answered yes to the previous question, what type of training did you receive?

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Was this training mandatory or an elective?

- Mandatory
- Elective

Do you think it is important to be taught information on mental health and mental illness as part of your degree?

Yes

No

If you answered yes to the above question, what specific information about mental health and mental illness do you think is important, or would you like to learn?

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## **Appendix H**

### **Debriefing Letter**

Thank you very much for participating in this study. Your time and effort are much appreciated. As you know we are interested in examining the relationship between the year of study you are currently enrolled in and your mental health literacy. Mental health literacy is knowledge and beliefs about mental disorders which aid their recognition, management or prevention. You were asked to complete a questionnaire about your level of mental health literacy, as well as some questions about any education you have received on mental health information as part of your degree.

This study has received ethics clearance through the University Research Ethics Board of the Graduate Studies Department at Mount Saint Vincent University. If you have any questions or concerns about your participation in this study, you can contact Dr. Daniel Seguin by telephone at 902-457-6460 or by email at [daniel.seguin@msvu.ca](mailto:daniel.seguin@msvu.ca). If you would like to receive a copy of our results when the study is complete, please leave your mailing address or e-mail with us.

If you are interested in reading more about mental health literacy in educators I have provided references below:

Collins, A., & Holmshaw, J. (2008). Early detection: a survey of secondary school teachers' knowledge about psychosis. *Early Intervention in Psychiatry*, 2, 2, 90-7.

Koller, J. R., Osterlind, S. J., Paris, K., & Weston, K. J. (2004). Differences Between Novice and Expert Teachers' Undergraduate Preparation and Ratings of Importance in the Area of Children's Mental Health. *International Journal of Mental Health Promotion*, 6, 2, 40-45.