ASSESSMENT AND DETECTION OF EARLY PSYCHOSIS IN A SCHOOL ENVIRONMENT

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Abstract

Despite treatment uncertainties, early psychosis (EP) assessments and the clinical markers of EP are gaining reliability (Loewry, Bearden, Johnson, Raine and Cannon, 2005). Assessment and appropriate referral in the early phases of the disease shortens the Duration of Untreated Psychosis (DUP) that directly translates into improved long-term outcomes (Spencer, Birchwood and McGovern, 2001). Identifying youth at risk and intervening as early as possible improves life trajectories and reduces the prevalence of mental health problems in adulthood (Kirby, 2008). An educational guide for educators will improve the detection of EP in high school students, increase awareness about youth mental health, and will help to create long-term changes in belief systems related to mental illness in Canadian society.

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Chapter I: Project Scope and Rationale

Early Psychosis (EP) is a specialized area of mental health care with an overwhelming need for improved detection and preventive strategies (Addington, 2005). To date there has been little systematic study of research initiatives specific to clients with first-episode psychosis and an avoidance of premature diagnosis of mental illness (Spencer, Birchwood & McGovern, 2001). The types of effective treatments to be given along with their timing, intensity and duration all remain unknown (Ehmann & Hanson, 2002).

Despite such treatment uncertainties, diagnostic assessments and the clinical markers of EP are gaining reliability (Loewry, Bearden, Johnson, Raine & Cannon, 2005). Assessment and appropriate referral in the early phases of the disease shortens the *Duration of Untreated Psychosis* (DUP), which relates directly to improved long-term outcomes (Spencer et al., 2001). With a concerted effort to improve detection and assessment strategies, necessary reforms will need to be made to mental health care delivery (Addington, 2005). This project will enhance the detection of EP in high school students by providing an educational guide to educators and counsellors working closely with at risk children. An EP guide is needed in order to result in immediate improvements in the detection of EP in this population.

Rationale for the Project

Although EP treatment protocols are still being developed, appropriate intervention during the *prodromal phase,* (the period for some individuals prior to the first episode of psychosis) can assist in the prevention or reduction in the severity of

psychosis (Falloon, 1992). At present, the average prodrome lasts between 12 and 24 months (Seaman, Lee, Strauss & Lieberman, 1997). Although the potential for false positives is large in high school, personnel need to be aware of the prominent features of the prodrome and refer for specialized assessment. Prodromal characteristics are primarily social isolation and withdrawal, marked impairment in role functioning, odd or bizarre ideation, decreased drive and energy and blunting of affect (Ehmann & Hanson, 2002). EP best practice recommends referral based on *suspicion* (my emphasis), not a certainty of psychosis because reassessment should be anticipated and expected (Spencer et al., 2001).

Assessment of the prodromal state has become easier and more exact with assessment tools that are shorter and more concise. For example, a self-report measure called the *Prodromal Questionnaire (PQ)* has achieved preliminary validation with a 90% sensitivity to other lengthier and expert-administered assessments (Loewry et al., 2005). Other brief psychiatric ratings, the Global Assessment of Function (GAF) scale, and quality of life indicators help to measure student psychosocial function over time. Providing educators with a framework to describe and qualify changes in student mental health may assist in the recognition of EP and subsequently reduce DUP.

Prevalence of Mental Disorders in Youth

There is great need for assessment of EP and serious mental illness in adolescence due to a prevalence rate of 3% in the general population (South Fraser Early Psychosis Program, 2007), and the onset of 80% of adult serious mental illness has been found to commence prior to age 18 (Kirby, 2008). Schizophrenia and other forms of psychoses affecting young people represent a major public health problem (WHO, World Health

Organization report, 2001), and are surprisingly the most common illnesses beginning in adolescence (MCCreary Report, 2009). Worldwide, schizophrenia and psychosis rank as the third most disabling condition (defined as the lack of ability to perform an activity within a range considered normal for a human being), and pose an enormous burden, both in terms of economic cost and of human suffering (WHO).

Despite the economic and personal losses associated with EP, Canada is the only G8 country without a unified national prevention, assessment and mental health delivery model for mental illness (Kirby, 2006). With a lack of a coherent system in place, it is not hard to understand why only one in six children and youth with a mental health problem are adequately diagnosed – and long after the onset of symptoms (Kirby, 2008). To compound the problem, adolescent prevalence rates for mental illness are also expected to increase by 50% by the year 2020 (Kirby, 2008). It is obvious that children's mental health requires a transformation and streamlining of services.

The Call for Services in Schools

Training school personnel to identify EP is a useful endeavour in the overall plan to better mental health care for youth. School officials are in a key position to observe changes in a student's academic and social function as a child proceeds through his/her academic career. Often relationships have been developed with students and parents, which makes schools a logical and convenient place to provide mental health assistance. When a 2006 Canadian standing committee asked young adults why they do not access mental health services they were told it is because "…they are in large hospitals, and because they are in settings that they feel very uncomfortable going to"(National Research Council and Institute of Medicine, 2009). Acknowledging a mental health

problem and facing potential stigma is difficult, yet the additional barriers of proximity, waitlists, and the unknown create unnecessary service provision gaps. Other models exist elsewhere in the world, where schools have become a *preferred* location for mental health services (Kirby, 2008).

Despite the initiatives proven and established in other countries, Canada has not followed suit by establishing a coherent system of care (Kirby, 2008). A 2006 senate report on the state of mental health in Canada recommended the development of an integrated youth mental health delivery model coupled with a national best practice program for identifying children in distress (Kirby, 2006). These lofty policy and practice reforms could be achieved in part by establishing school-based teams made up of social workers, child/youth workers and teachers to help family caregivers navigate and access the mental health services their children and youth require (Kirby, 2006). These teams would make use of a variety of treatment techniques and work across disciplines. Members of school-based teams would be trained at their level of expertise and within their scope of training. The senate committee specifically recommended that these teams also receive education about the early identification of mental illness (Kirby, 2008).

In practical terms, a guidebook that acquaints school professionals to the specifics of EP specifically addresses the aforementioned Canadian recommendations for improved mental health care. The guidebook specifically provides the ‘generalist’ (the teacher-counsellor) with the tools to speak the same language as the ‘specialist’ (mental health clinician or family physician). It also provides informal psychosocial and mood assessments to monitor changes in student behaviour. It is these subtle observations which often become the most meaningful to the health clinician during early assessment.

Potential Implications

This project is designed to add to the existing knowledge of EP detection by providing a resource guide for counsellors and teaching staff who work directly with youth. A guidebook is needed to acquaint school professionals to the specifics of EP to specifically address the aforementioned Canadian recommendations for improved mental health care. The guidebook specifically provides the 'generalist' (the teacher-counsellor) with the tools to speak the same language as the 'specialist' (mental health clinician or family physician). It also provides informal psychosocial and mood assessments to monitor changes in student behaviour. It is these subtle observations which often become the most meaningful to the health clinician during early assessment.

Currently, these professionals are an un-tapped workforce of potential EP assessors who are in a privileged position of observing daily behaviour as an adolescent proceeds through his/her academic and social experiences at school. This cross section of experiences permits ongoing informal assessment of psychosocial, behaviour and academic function, and therefore increases the likelihood that subtle changes in student presentation will be noticed. Similarly, behaviour changes are easier to notice when they are captured on well-designed assessment forms. Checklists are useful because the reader is prompted to the information required, assessment information is easily collected and compared, and these informal forms are less cumbersome than full written assessments; which are outside the comfort area or knowledge base of school personnel. In contrast, written case notes do not lend themselves well to specific trait comparison, and take longer to compile.

Educating these professionals not only improves client care, it also has the potential to change how society views mental illness in general. Public education helps to reduce apprehension, promote acceptance, and increases the probability that referrals will be made to appropriate agents. Successful interventions with children and youth will also help create a long-term change in attitudes and behaviours related to mental illness. Mental illness is now being seen as a 'treatable' disease, and one from which full recovery may be very likely (British Columbia Schizophrenia Society, 2008). With recovery as a possibility, educators may feel less apprehension to refer for mental health support when required. In addition, early intervention for those individuals experiencing social, emotional and/or family disruption may assist in the preservation of countless social supports during this fragile time in a young person's life.

The emotional cost of untreated mental illness is high, and so is the financial cost of the disease. Untreated mental illnesses in children and youth eventually cost Canadians exponentially more in long-term health care and social service system costs than they would if early interventional services for screening and diagnosis were to be applied when problems are initially recognized (Kirby, 2008). If referrals based on suspicion were made more readily by school professionals, protocols for referrals and shared-care models of service for EP clients would improve, a reduction in DUP would be realized, and these improvements would equate to more timely treatment for all students with mental health concerns.

With appropriate referral, client care may be improved and a reduction in DUP may be achieved. As demonstrated, a shortened DUP translates into improved long-term outcomes.

Chapter II: Review of the Literature

The purpose of this literature review is to address the current developments of early psychosis (EP) intervention, specifically the methods of detection and assessment that demonstrate reliability in the prediction of psychosis. First, a review of the clinical literature available about the phases of EP, and the need for improved assessment of untreated first episode psychosis is explored. Canada's current direction with EP is examined against the health initiatives available in other Western countries. A review of outcome studies pertaining to assessment for two groups: *high risk* (selective prevention), and *general population* (universal prevention) provides evidence regarding the effectiveness of assessment for each group. A review of specific assessments available to the layperson to assist in EP identification follows, in an attempt to identify useful assessments for inclusion in an educational guidebook intended to improve mental health referrals in a school setting. Lastly, the major findings are discussed as they relate to the development of an educational booklet for high school teachers and counsellors.

The Phases of Early Psychosis

To determine the best starting point for EP assessment, intervention and treatment protocols, researchers began to develop an international language to define the distinctive phases of EP, and to create a comprehensive understanding of the disease. Disease onset, or EP is defined as approximately five years after the onset of psychotic symptoms (Ehmann & Hanson, 2002), and includes the premorbid, prodromal and psychotic stages.

The assessment of the *premorbid phase* examines the biological or environmental influences that may have played a role in the current psychosis. This information is acquired by gathering information about a client's genetic predisposition, prenatal period,

birthing complications and early childhood development (Keshavan, Diwadkar, Montrose, Rajarethinam & Sweeney, 2005). Genetic factors are accepted as the most well established etiological risk factor for schizophrenia, with some studies suggesting the heritability of schizophrenia as high as 60-90% (Keshavan et al.), and others a 35-40% risk increase with two parents with schizophrenia (Lee et al. 2005). Unfortunately, identifying specific genetic markers for this disease is still not possible at this time.

The second phase or *prodromal phase* is characterized as the period of disturbance that represents a deviation from a person's previous experience and behaviour prior to the development of florid features of psychosis. The average prodrome lasts 12 to 24 months; however, it may range in length from days to decades, with a median of about one year for schizophrenia (Ehmann & Hanson, 2002). Interestingly, until recently, this phase was only diagnosed retrospectively – only after the development of psychosis. This stage was viewed as a time of non-specific symptoms; one in which researchers could not consistently agree on the presence of specific symptoms, their stability over time and the reliability of particular symptoms to precede the onset of schizophrenia (Ehmann & Hanson). This assumption changed with the research of Yung and McGorry (1996), who developed the first assessment to achieve empirical validity in predicting future psychosis. This assessment, and other empirically supported measurement tools will be discussed further in the Assessments section.

The third stage of disease progression is the *psychotic stage*, which refers to the "presence of florid psychotic features such as delusions, hallucinations and formal thought disorder" (Lee, McGlashan & Woods, 2005, p.195). This is the acute phase of

the illness and is managed typically with medications. The opportunity for prevention and early detection has been surpassed by the time full psychosis is diagnosed.

Duration of Untreated Psychosis

One area of EP receiving a lot of attention is the *duration of untreated psychosis* (DUP). DUP is defined as the time between the onset of the first psychotic symptoms and the first adequate treatment (Lee et al. 2005). Harris et al. (2005) examined the impact of DUP in a large ongoing follow-up of first episode patients, and found that eight years later, DUP continued to be an independent predictor of prognosis. Drake and Lewis (2001) found similar data correlating a lengthy DUP and more severe base line symptoms for patients at three months, and DUP was the single strongest overall predictor of symptoms. A review study in 2005 by Lee et al., established that approximately 18 of 25 studies indicated a correlation between shorter DUP and a reduction in positive and negative symptoms, and no significant association between a longer DUP and better outcomes on any measure (Thorup et al., 2005). From this data, it is clear that earlier detection and improved assessment of DUP, equates with superior treatment and better long-term outcomes for those with EP.

North American Perspectives on EP

Numerous studies have shown that there is often a major delay in initiating treatment for people affected with EP. These delays vary from person to person across Canada, but currently a Canadian DUP is often more than one year (South Fraser EPI program, 2007). From a treatment and health care perspective, the typical one-to-two years of DUP in Western countries (Larsen et al., 1996 as cited in Spencer, Birchwood & McGovern, 2001) before obtaining professional mental health intervention appears

inattentive, and at worse, negligent. In the United Kingdom, studies of the average DUP are shorter at a median of approximately 12 weeks (Lewis & Drake, 2001).

Researchers have now made considerable gains in their efforts to understand and qualify the risks associated with DUP, yet the awareness needs to translate into practice in Canada. The medical community is beginning to recognize the need to act quickly in the early stages of EP to provide appropriate referral, service and stage-specific treatment, and these measures should translate into improved long-term patient outcomes. With concerted effort and professional and public education, DUP can be reduced, and therefore, patients may realize improved long-term outcomes. For example, one Norwegian county focused on reducing DUP by targeting detection through primary care education and general public education campaigns. This county saw a decrease in median DUP from 26 to 5 weeks, with a corresponding reduction in how severely ill patients were when they presented (Lewis & Drake, 2001). These results are encouraging and add emphasis to the need for better assessment and detection protocols of the prodromal phase of EP in this country.

More Canadian initiatives and structured plans of care for patients are required for EP, as well as for other mental health concerns. A recent study by the Mental Health Commission of Canada (2008) established a number of shortcomings not only in EP assessment, but in also treating serious mental illness in youth and adolescents. For example, research indicates that at any given time, approximately 1 in 7, or 15% of Canadian children and youth under the age of 19 are likely to have a serious mental disorder, and only 1 in 5 indicated children will receive mental health service (Kirby, 2008). These referrals are often identified and referred too late (Kirby). This number will

climb, as researchers predict an increase of 50% in mental health problems among children and youth by the year 2020.

The mental health commission of Canada used strong language to suggest the seriousness of intervening early with this population, and as close to onset as possible (Kirby, 2006). Early interventions can help these children and youth to lead normal productive healthy lives and save the costs that would otherwise be incurred by providing them with social services throughout their adult lives. What is important to learn macroscopically from these studies is that with appropriate detection and intervention shortening the DUP is indeed possible nationwide. What is also significant is the profound human and societal impact of reducing this critical period of untreated psychosis. The numbers of young people requiring assistance is growing, and Canada remains unprepared without an appropriate system of care in place to assist these young patients.

Rationale for Early Intervention

According to the World Health Organization's World Health Report 2001, schizophrenia and other forms of psychoses that affect young people represent a major public health problem. Worldwide, schizophrenia ranks as the third most disabling condition, and poses an enormous burden, both in terms of economic cost and of human suffering. Schizophrenia typically strikes during adolescence or the early twenties, with 39% of males and 23% of females experiencing the onset of this disease before age 19 (Lee et al. 2005). If the definition is extended to include other diagnosable mental illnesses, studies have shown that 1/2 of all lifetime cases of diagnosable mental illness began by age 14, and 3/4 by age 24 (Kessler, Berglund et al., 2005 in Kirby, 2008). In

Canada, 80% of all psychiatric disorders emerge in adolescence, and are the single most common illness that begin in the adolescent age group (Kirby),

This high prevalence rate of adolescence mental disturbance calls upon us as a society to rethink our disproportional emphasis on treatment of existing conditions. Rather, there is a critical need for a more proactive, preventive focus on mental health (Leitch, 2007). Educators, family members and professionals working with young people need to know the signs and symptoms of this disorder because current research suggests that early intervention can delay or even prevent the onset of psychosis (Ehmann, Hanson & Yager, 2005).

Early intervention is important in the assessment of EP because long DUP has been associated with slower and less complete recovery, more biological abnormalities, more relapses and poorer long-term outcomes (Ehmann et al. 2005). Conversely, attention by professionals during this critical period achieves: better short and long-term prognoses, increased speed of recovery, lower use of hospitalization, reduced secondary psychiatric problems (e.g., depression, substance abuse, etc.), the preservation of personal assets, psychosocial skills, role function, family functioning and social/environmental supports (Ehmann et al.).

Studies of early psychosis suggest two main reasons to speculate that intervention targeted in the early years after onset is likely to have a favourable impact relative to interventions later in the course. First, in terms of long-term prediction and stability of functioning, the first three years are often the most difficult due to lack of insight, denial, medication non-compliance and poor social adjustment. Therefore, researchers assert that this period presents the greatest opportunity to reduce treatment resistance, and influence

the way clients appraise their illness (Ehmann & Hanson, 2002). Secondly, further decline is unlikely and improvement can be expected (Ehmann & Hanson). An expectation of better short and long-term prognoses is also due to other course-influencing psychosocial variables such as developing patient and family reactions that demonstrate the greatest opportunity to change positively during this time (Birchwood, 2000).

High Risk Studies

For many decades, the only detailed source of information about early risk factors for psychosis came from genetic high-risk studies. These studies are selective as they target individuals or subgroups whose risk for developing EP is significantly higher than average. Typically, these individuals would include those with an increased genetic risk, such as offspring of schizophrenic parents and twin studies from a parent or parents that have schizophrenia. It is increasingly evident that these risk factors can be detected years before the onset of psychosis. For example, studies have shown that between 25-60% of offspring of a parent with schizophrenia display some or all of the following developmental disorders: gross and fine motor impairment (early development), attention and information processing deficits (early and middle childhood), and cognitive and neuropsychological deficits (childhood and adolescence) (Cannon, 2005).

Similarly, studies of premorbid and prodromal groups of EP clients have shown some noteworthy and reliable precursors to disease onset demonstrated in a client's changing social, educational and functional abilities. For example, Cannon (2005) discussed Carter's (2002) list of 25 premorbid variables that included genetic risk, birth factors, autonomic responsiveness, cognitive functioning, rearing environment,

personality and school behaviour. A quarter century later, 33 of the 212 subjects received diagnoses of schizophrenia (Keshavan, Diwadkar, Montrose, Rajarethinam & Sweeney, 2005). Other psychosocial markers of pre-schizophrenia children are subtle developmental delays, cognitive impairment and the tendency to be solitary and socially anxious (Broome et al. 2005). Earlier studies by Broome et al., confirmed similar social and educational deficits and suggested that cognitive dysfunction is typically followed by the negative symptoms of schizophrenia such as decreased motivation and socialization.

Other high-risk cohort studies demonstrate a variety of affective symptoms that are consistently found in pre-schizophrenic children. These children experience depression, anxiety (Cannon, 2005) and prominent mood symptoms, many of which reach DSM IV diagnostic criteria (Broome et al., 2005). Other generalized complaints or changes in behaviour are noted in "an individual's sleep cycle, somatic complaints, increased suspiciousness, irritability, concentration and memory problems and fatigue" (Ehmann & Hanson, 2005, p. 66).

Overall, an immense amount of literature is now available about the social and functional differences in this client population. Public education and the will of interested professionals to apply these findings is the next step to better detection and client treatment.

General Population Studies

There is some controversy about the best avenue to approach the detection and prevention of schizophrenia. Currently, research has focused on high-risk populations and programs that attempt selective prevention with this group. This seemed the most favourable approach because the etiology of EP is unknown, and some markers of

heritability were hoped to be found in family studies. However, some researcher suggest that a selective approach to prevention may be missing the mark because a "… focus on genetic risk has low sensitivity, as >80% of individuals with schizophrenia have no affected first-degree relatives and >60% have completely negative family histories" (Lee et al. 2005, p.196). Some researchers postulate that there is not enough predictive value to justify interventional studies even in these high-risk groups.

A similar argument is presented for universal prevention by studying generalized psychiatric disturbances. These researchers believe that even though identifying clinically applicable risk factors for schizophrenia in the general population is statistically insignificant, this is because many of the genetic and environmental risk factors are also applicable to numerous other manifestations of psychopathology - not only schizophrenia (Addington, 2005). These researchers suggest broadening the concept of vulnerability for EP because the risk factors relevant to schizophrenia are also risk factors for a range of other mental disorders in adulthood. To illustrate, examining the issue backwards gives a striking impression of the generalizability of traits for mental illnesses. A New Zealand birth cohort study has shown that 75% of adults with a psychiatric disorder at the age of 26 had a diagnosable disorder as children, and of these, 50% were first psychiatrically ill between the ages of 11 and 15 (Cannon, 2005). This leads one to believe one of the best detection methods is to focus on psychiatric illnesses as a whole, as these disorders appear to have strong predictive value in adulthood of diagnosable psychiatric illness. However, the illness that develops may not specifically be schizophrenia.

To complicate the matter of identification further, adolescence is a problematic stage for detection of EP because symptoms associated with the prodrome are common to

other mental disorders and are frequently seen as part of normal developmental phases, responses to stress, and interpersonal problems (Ehmann & Hanson, 2005). Similar findings were revealed in Addington's (2005) review of Davidson et al. (1999), and Malmberg et al. (1998). These authors found that the difference between future cases of EP and population norms is approximately 1/3 to 2/3 of a standard deviation and the vast majority of future EP patients have premorbid cognitive and social functioning well within the range of normal (Addington). The assessor's dilemma becomes whether the functional decline is part of the EP prodrome, or is influenced by a *lingering* premorbid psychiatric disorder from earlier childhood? It appears that widening the scope of assessment to include all psychiatric concerns for the general population is the most suitable form of universal prevention at this time.

Assessment

Assessment and early detection are at the core of early intervention. Accurate assessment in the early phases of the disease process shortens the DUP and provides the opportunity for treatment and ongoing monitoring. It is not surprising that in the last decade the predictability of EP has improved due to the efforts of over a dozen research clinics that have focussed on the early assessment of EP and phase specific treatment (Loewry, Bearden, Johnson, Raine & Cannon, 2005). Based on the findings from clinics, retrospective accounts of prodromal symptoms from clients and caregivers, and high-risk studies, researchers have systematically built assessment tools specific to EP with improved reliability. Until this time, the measurement scales used for clinical, research and administration purposes were global rating scales used to assess specific symptoms

of schizophrenia, or to detect changes in function for patients with an established diagnosis of schizophrenia.

With this change in direction, researchers were now breaking into foreign territory with instruments to assess prodromal symptoms in those *suspected* of experiencing EP. This endeavour has brought researchers increasing success in statistical reliability. For example, in 2002 McGorry and colleagues developed a set of criteria for the identification of prodromal symptoms called the Comprehensive Assessment Of At Risk Mental States (CAARMS). This new tool was based on two earlier assessment questionnaires, the Structured Interview For Prodromal Syndromes (SIPS) and the Scale Of Prodromal Symptoms (SOPS) (Loewry et al. 2005). This new interview was also used with a high-risk population group that was demonstrating an onset of positive symptoms too brief to meet the DSM criteria for psychosis. CAARMS' first sample (n=21) demonstrated an annual conversion rate to psychosis of 21% and the second sample (n=49) reported a conversion rate of 41% (Lee et al. 2005) A study two years later by Miller and McGlashin (2002) demonstrated even better predictability of conversion to EP in those with prodromal symptoms. Their findings were a 46% conversion rate at 6 months and 54% at 12 months (Lee et al.).

While the increasing reliability of these tools and the improving skill of the researchers that use them is encouraging, the time and specific training required to administer the interviews is labour-intensive. In order to increase the number of participants in EP studies and reduce the time spent by clinicians scoring the measures, a brief self-report screening assessment was developed to complement the structured interviews addressed above. This self-report questionnaire was developed in 2005 and is

called the Prodromal Questionnaire (PQ). This 92-item questionnaire is used to measure prodromal or psychotic symptoms in high-risk mental health groups already pre-screened for possible EP. This self-report questionnaire has preliminary validation with 90% sensitivity to that of the lengthier and well-established SIPS questionnaire. (Loewry et al., 2005). Together these assessment tools are improving the detection and assessment of EP.

Interestingly, researchers also found that self-reported psychotic symptoms at age 11 were predictive of schizophreniform disorder in adulthood. The differences in *strength*, or the number of questions answered affirmatively, corresponded directly with an increased risk of adult schizophrenia. To illustrate, children who report a 'definite' psychotic symptom were 16 times more likely than children who answered 'no' to all questions in the self-report to be diagnosed with schizophreniform disorder in adulthood. Children who reported a 'probable' psychotic symptom were also at higher risk (9.5%) than controls of adult schizophreniform disorder (Cannon, 2005). This analysis is the first to date to use a self-report measure in children with predictive qualities that were specific to schizophrenia versus a generalized psychiatric disorder. The value of researching only selective high-risk groups was also inadvertently challenged in this study as these children were from the general population. Cannon (2005) found that 25% of the 'probable' and 'definitive' groups fulfilled diagnostic criteria for later schizophreniform – a higher risk than is found in offspring with a psychotic parent.

As addressed previously, detecting early signs of EP in children and even those experiencing symptoms of EP in the prodromal phase, had little statistical validity until Cannon's new study. Of course, the ability to reproduce this study will have to be

validated by other researchers. In the meantime, this new research leaves one hopeful that perhaps the combination of a self-report measure and a structured interview to screen for EP will effect the future detection of EP in general populations.

How this Pertains to the School Environment

The PQ and other self-report measures may prove to be an asset in the assessment of EP risk in the general population – or at least those who do not specifically fit into the category of high-risk. For instance, school personnel are frequently acquainted with young adults who are functionally, socially and educationally falling behind those of their peers. With these students, opportunities are often present for high-school administrators, teachers, counsellors and other social work professionals to query EP or other psychiatric disorders, and refer accordingly when warranted. Correspondingly, students also believe schools are a suitable place to initiate mental health support. A 2009 British Columbian report about adolescent mental health found that about half (49%) of students would ask for help from a professional (defined as health professionals, social or youth workers, religious leaders or others) for an emotional issue, but young people are *most* likely to seek help from school staff than other social service professionals (MCCreary Report, 2009). School personnel may find themselves in this privileged position because these important informal relationships between staff and students have had the opportunity to develop through daily school interactions. These bonds also appear to strengthen with time because research found the number of youth asking school staff for assistance increases with age, from 28% of 13 year-olds, to 33% of 15 year-olds, and 42% of 17 year-olds (MCCreary Report). Studies elsewhere in the world, including New York and London, found that schools are the *preferred* [italics added] location to deliver children's

mental health services precisely because it is where children and their parents feel most comfortable seeking help (Kirby, 2008). Kirby's Canadian report on children's mental health recommended specifically that a national best practice policy should help to identify mental health issues in children. One recommendation was that this identification would be made easier if people who have regular contact with children were trained appropriately in order to maximize access to all health care professionals (Kirby).

By providing school professionals with appropriate assessment training and referral protocols, this currently un-tapped 'workforce' of potential EP assessors will help to provide immediate improvements to the universal prevention EP, and shorten DUP. These strategies offers school staff a unique opportunity to make a positive impact on student's emotional health (MCCreary report, 2009)

As noted, the need for improved mental health assessment in schools is obvious, but the tools required are lacking. My guidebook will provide school personnel with the ability to identify basic EP characteristics, record changing student behaviours, share pertinent information with referral agencies, and offer a non-intrusive assessment of potential negative symptoms (most often demonstrated in clients experiencing prodromal symptoms). The guidebook provides assessment tools and measures that are within the public domain, and therefore free of cost. The assessments are also easily scored and available to the general public and non-psychologists. These factors taken together will ideally improve the likelihood that the assessments will be used by school personnel.

Conclusion

As noted, the need for early EP assessment and detection to improve long-term outcomes has been demonstrated. If an improved educational campaign were provided to

those who work closely with children 'at-risk', immediate advancements would be made to the universal prevention of EP, and in turn, other psychological disturbances experienced in youth. Because EP often has a slow progression of symptoms (which can appear different from student to student), school professionals need to be aware of the dominant features of the disease and refer based on suspicion rather than a certainty of psychosis (Spencer et al., 2001). Spencer et al., also suggests that a low-threshold of reassessment be expected as part of the intervention of EP. Specific EP education in various public institutions such as teacher's colleges and graduate social work degree programs instructs those most apt to address these issues in the early stages of the disease process, to refer appropriately. Changing the apprehension of these professionals may serve both clients and society well by shortening the DUP.

This literature review has explored the current issues of the prodromal stage of EP research, detection and assessment, and examined some of the areas requiring further study. My hope with this project is to enhance the detection and referral of EP in high school settings. The information provided in this review demonstrates that the school environment is an overlooked and underutilized arena for observation and potential EP assessment. School professionals are in the privileged position of observing behaviour and function over time as a child passes through his/her academic and social life. This examination of functional abilities, beyond the academic, of adolescents with potential prodromal symptoms of EP may help identify psychosocial changes that later *predict* the transition to full-blown psychosis. Ideally, the self-report questionnaires discussed would assist in this process of early identification, promote better understanding of EP, and be realized in improved treatment and care.

Chapter III: Methods

This project consists of a literature review of the recent research developments in EP, specifically the methods of detection and assessment of the prodromal features of EP that demonstrate reliability in the prediction of psychosis. Electronic databases used for the literature review were PsychARTICLES, PsychINFO, MEDLINE, and the Psychology and Behavioural Sciences Collection. Key search terms were *early psychosis, prodrome, psychosis, schizophrenia screening, and prodromal patients.* I limited the research to include only peer reviewed articles published in the last 20 years. To ensure the most up to date EP literature was reviewed, the latest journal of *Schizophrenia Research* was consulted.

After a thorough examination of the published research, I then reviewed clinical practice guidelines from several countries. Subsequent reviews of Canada's EP initiatives permitted cross-comparisons. I obtained an EP best practice manual from the University of British Columbia's Department of Psychiatry, and reviewed the EP training website for British Columbian physicians and mental health clinicians. Canadian research initiatives were considered by reviewing each province's EP clinic webpage. This information provided a comprehensive understanding of the current research in the field of EP.

I then examined Canadian government school policies relating to children's mental health, and found inconsistent or non-existent guiding principles about the management of student mental health concerns. My past work experience in three Canadian provinces also afforded an understanding of the difficulties school districts have providing services (brief assessment, referral and follow up) for these students. A

2006 Canadian senate committee report, and a later 2008 review of policies and services from the Mental Health Commission of Canada, acknowledged shortfalls in children's mental health, and confirmed the difficulties I have observed and experienced. The improvement strategies described in these reports were considered and comparisons made with health policies for American children that had also been recently reviewed.

Part of my product design was also promoted through informal discussions with other health care professionals, colleagues working in social services or education, (without specialized training in EP), impromptu discussions with students about EP, and individuals who commented about the EP materials in my office. From these discussions, I learned that many people have acquired misinformation about schizophrenia ("…isn't that a disease that means you have a split personality?", and beliefs that positive symptoms such as hallucinations and delusions are the *only* characteristics of EP. I also became aware that the prodromal features, and negative symptoms of EP are often overlooked, or attributable to other causes. Increasing awareness about EP also meant demonstrating the need for attention to this area of mental health. Most individuals I spoke with were surprised by the prevalence rate of the disease. Changing some of the perceptions of EP is also fundamental for improving care and reducing stigma.

Next, my attention turned to the information available to the public about EP. I was interested in the content, organization and overall presentation of the materials. The print material analyzed was comprehensive and helped to demonstrate themes. Some of the popular, general interest websites I explored include www.psychosissucks.ca, www.schizophrenia.com, and www.bcss.org. I also carefully considered other online data, informational handouts and brochures available for public consumption. I noticed

that most of the literature appears to focus on what active psychosis looks like, rather than the less noticeable deterioration of functioning (often negative symptoms) that occurs for most people with EP. Many of the concerns of parents, school personnel and friends of persons in the prodromal phase of EP were not addressed because the more prominent positive features of the disease process drew more attention. This erroneous representation of EP is demonstrated prominently in the media, and thereby reinforced in the general population. EP and early intervention was not often linked with the words 'prevention' or 'treatable'.

Reviewing the literature about EP helped me refine the organization and lay out of my educational guidebook. My goal was to compile material that was concise, yet comprehensive enough to acquaint others with the basic facts about EP. Checklists and lists of diagnostic characteristics, rather than lengthy paragraphs permit the reader to examine a student's behaviour in context very quickly, without getting lost in detailed analysis and research. An educator could use the behaviour and psychosocial checklists to ascertain whether a potential mental illness may be underlying the current changes in behaviour, and use one of the informal assessments of the most common negative symptoms to establish a baseline of student function. Assessment tools needed to be in the public domain, free of copyrighting requirements, capture the negative symptoms demonstrated, be easy to score, and be applicable for use by a non-psychologist. The Depression and Anxiety Score Sheet (DASS) met these criteria. It is also a tool that mental health agencies sometimes use as a generalized assessment, thereby lending itself to shared communication between school personnel and referral agency.

My purpose was also to develop a manual that people could read quickly, and use as a general reference. Often, educators are overwhelmed with the amount of new information needed to adequately instruct their students; therefore a succinct manual concerning mental health seemed most beneficial. Keeping the design simple and easy to use should promote the use of the guidebook and be attractive to this population of educators. I saw little use in a cumbersome, theoretical manual that would require focused attention and dedication to read. Presently, educators receive little, if any, training in neither teacher's college, nor educational opportunities about psychiatric concerns as a whole. Therefore, highlighting the warning signs, providing basic background information about EP, and including assessment measures to record student behaviour seemed most appropriate.

Dispelling myths about mental illness, developing recognition of the basic features of the prodromal phase of EP, and reducing stigma were also important considerations. To assist in this way, I included a poster about EP, which was also in the public domain. This is intended to stir conversation about the topic, and provides general information about the disease indirectly to anyone that reads it.

Choosing relevant, reliable assessment tools applicable to the school environment, and level of staff training was a challenge. I wanted to include assessments that were concise, easy to administer and score, provide a global assessment of psychosocial function for later comparison, and would be meaningful to specialized health professionals upon referral. It was important to find tools to express qualitatively the subtleties of what was being observed. As noted in the literature review, this is most often the negative symptoms seen first. Assessments that are in the public domain for use by

non-psychologists (Level C assessments), that captured all of the aforementioned characteristics, and free of copyright laws for reproduction or large initial cost, led me to the Depression and Anxiety Self Report Screen (DASS). As formal assessment can be traumatic to the individual taking the measure, create fear of 'labelling', or appear to treat clients as objects or specimens of pathology (Partington, 1997, as cited in Milner and O'Byrne, 2004), the use of informal assessments seemed appropriate. Informal measures such as scaled questions and self-report inventories help elicit baseline data and measure progress, yet often appear to the client like a curious investigation of a problem situation rather than a formal assessment.

Another consideration in my assessment selection was the categorizations of *diagnosis* (which infers cause of symptoms and classification of disorders), and *assessment* (a descriptive and collaborative ongoing process) (Milner & O'Byrne, 2004). Informal assessment is appropriate because it encourages a successful exchange of information in a common language between the health sector and the educational forum. This exchange of information assists the educator to record significant client behaviours that will be pertinent to the health care professional conducting more extensive testing. At times, there is a disparency between the two 'worlds' of approach to client care which needs to be overcome to obtain best practice in care. To help bridge these gaps in practice, assessments that captured the Latin word *assider,* which means "to sit beside" (Holmes, 1995 as cited in Milner & O'Bryrne, 2004) seemed most useful. This approach underpins the empathetic attempt of the assessor to grasp the nature of the student's predicament (Milner & O'Byrne), and to bring meaning to his/her experiences in a non-clinical or nonintrusive way. Coupling this understanding with a tentative hypothesis

about the potential underlying cause of mental disturbance will encourage school personnel to make better-informed referrals to appropriate mental health agencies. It is often our trepidations about the potential suggestion of mental illness due to the stigma attached to this diagnosis that keeps school professionals from addressing the issue matter-of-factly. It is preferable to believe the student is going through a 'phase' of adolescence, or is experiencing a short-term bout of depression, than to suggest that the characteristics of the EP prodrome need to be ruled out. Making the recommendation that further mental health assessment be undertaken places the educator in the dubious position of appearing over-zealous to the parent, or appearing incorrect if no formal diagnosis is obtained immediately. As noted in previous sections, attention paid to EP during this critical period is crucial to long-term outcome. In essence, capturing clearly the simplest of EP educational literature and combining this with short, yet meaningful assessment tools was my main objective in helping these professionals self-educate about EP.

Chapter IV: Synthesis and Implications

This project is designed to add to the existing knowledge of EP recognition and detection by providing a resource guide for school personnel who work directly with youth. Currently, these professionals are an underutilized 'workforce' of potential EP assessors who are in a privileged position of observing daily behaviour and function objectively as a child proceeds through his/her academic and social experiences at school. Daily observations provide a useful baseline of function across domains that will be valuable should later mental health assessments be required. These informal assessments

are unobtrusive to the struggling student, yet ensure that significant changes in student behaviour, attitude or demeanour are acknowledged and investigated.

Exploration of student mental health concerns within the school system may reduce stigma, potential labelling and allows for ongoing monitoring. This softer, informal approach to assessment may help to create a higher comfort level for the student and family than may be initially experienced with new personnel from an outside mental health agency. School personnel often have developed a casual rapport with the student and/or family, making an initial assessment appear less threatening. The information gathered by the school counsellor, or other staff person, may then be referred onto an outside agency for expert assessment. A collaborative model of care has now been established between the school and mental health care provider from the initial contact. The relationships developed between the school and health provider will serve the student well during the early phases of EP investigation, and later treatment planning.

The potential ease of assessment in an academic setting may also help to bridge the gap between the school setting and obtaining expert assistance from outside agencies. Oftentimes a client with EP does not believe she/he has a difficulty, is afraid to discuss his/her symptoms due to stigma, or is uncertain about what the process of investigation may be. Obtaining assistance from a mental health agency requires some insight into the area of concern, and a desire to explore the options to deal with the concern. This level of client awareness was coined the *Activation* stage by Minkoff and Kline (2007) in their stages of change model. Often, clients with EP are not committed to the helping process making further investigation difficult or impossible. Therefore, initiating in-school assessment serves two distinct purposes more easily than outside referrals. First, brief in-

school assessment does not require that the student has reached the activation stage of their mental health difficulties. Counselling and assessment is viewed as part of the services typically provided by school personnel, and therefore does not appear out of line with the duties and responsibilities of school staff. A reduction in DUP may be more easily achieved if queries of EP are investigated by school staff, rather than waiting for the student and family to develop insight and initiate services with an appropriate agency. Secondly, a dialogue is opened about child and youth mental health that serves to reduce stigma, and reduces assessment and treatment uncertainty immediately. This willingness may help preserve family relationships, provide support to bolster coping mechanisms and reduce overall stress.

By teaching school personnel the warning signs of EP, the public also becomes better educated about EP and mental illness in general. Educators help to disseminate this knowledge directly to their students during a specific lesson plan, or indirectly when conversing with students about health concerns. Parents whom are receiving mental health assistance for their children are directly benefiting from the educators' newly acquired understandings. In turn, this knowledge base may increase comfort about mental health that reduces fear, promotes acceptance, and improves the probability that referrals will be made to appropriate agents. In the long-term, protocols for referrals and shared-care models of service for EP clients will more readily develop. These relationships will equate to quicker assessments and improved treatment for all clients.

One of the limitations of the project is that not every educator will have an interest in EP, or believe that mental health awareness should be part of the skill set of educators. Workload issues may also be cited as reason to not acquaint oneself with

information that appears to be another professional's primary occupation. Valuing the importance of academics, and maintaining the focus of improvement on course curriculum is an admirable goal of progressive schools. Branching out into social service provision may be viewed as detracting from academic excellence and adding needless responsibility to educators. Sometimes schools are viewed as taking on the role of 'parent', when families may be best served by learning to summon internal support to assist their members. However, supporting the family during this difficult time may be simply achieved by assisting with the referral process and working as the contact person between the health agency and school system. Providing this assistance helps to ensure all facets of student well-being are experienced by the school community. This holistic care also includes mental health.

From a mental health agency standpoint, imparting skills of recognition and detection may be seen initially as helpful because more clients would be served adequately in a timely fashion. However, without the skills and experience of trained mental health clinicians, referrals may be made zealously. In some cases, exercising restraint to allow time to better comprehend a student's presentation may be in the student's best interest. Exercising professional judgement in an area fraught with uncertainty is an important skill, and one typically developed through experience that may best remain with mental health professionals. Inherently, school personnel do not deal with EP as often as mental health clinicians or specialized EP programs, so therefore they may not have the skills or experience necessary to assess students effectively. However, given time and with an established collaborative model of care, informal learning about EP may occur and improve student services at each opportunity.

Similarly, the lack of established practice for EP assessment in general is a limitation. This is compounded by the fact that more research is required to ascertain the best approach for EP treatment *after* diagnosis. Although better long-term outcomes for EP clients are associated with shorter DUP, interventions continue to lag because best practice for ongoing treatment has yet to be determined. For example, the most researched initiative for the treatment of EP is medication, but pharmaceuticals for treating *suspected* (my emphasis) onset-prodrome cases is not recommended (Ehmann, Hanson & Yager, 2005). Therefore, having the ability to assess informally and refer a student with EP may not equate with early treatment because interventions are not employed until diagnostic certainty is achieved. However, identifying students with prodromal features of EP is beneficial because a preventive treatment planning approach may occur. This may include ongoing observation, family support and psychoeducation. Obviously, further research is required because a dichotomy exists between providing the best possible care early through reducing DUP, and not knowing what treatment to provide that will be the most effectual.

Because so much remains unknown about EP, a number of opportunities exist to make major positive changes in psychiatric practice. Concerted international efforts to address unanswered questions are required to inform smaller, more specific research initiatives. Until research programmes with larger sample numbers are undertaken and then examined, individual researchers and small project initiatives will be blindly speculating about what appropriate EP detection, assessment and treatment entails. For example, psychosocial therapies and psychoeducation, although an integral part of EP care, remains under researched when compared with research involving pharmaceuticals.

Similarly, EP research also tends to focus on the young, thereby dismissing opportunities to investigate EP that begins in later adulthood. If EP can be recognized prospectively and treatment provided then disability could be minimized, neurobiological changes could be prevented, minimized, or reversed (Galton, 2004). A dramatic shift in our approach to EP may then become *prevention*, versus the treatment of EP for future researchers.

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Appendix: Educational Guidebook

Early Psychosis

The Basic Facts

Detection, Assessment, Referral
For High School Professionals

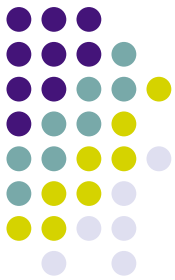


Table of Contents

Introduction

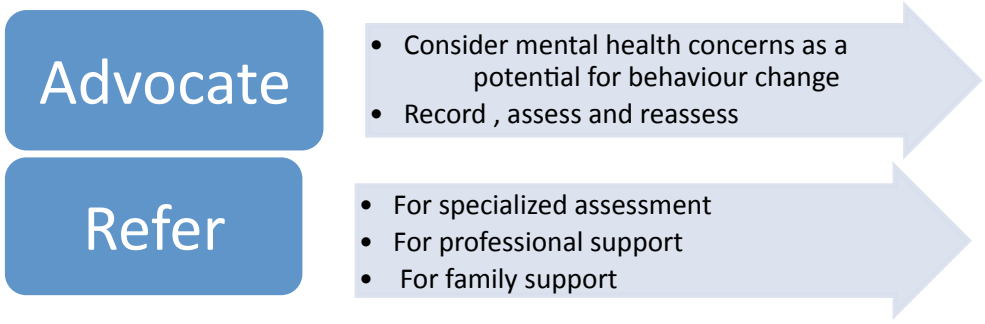
The purpose of this guidebook is to inform educational professionals of the profound influence and prevalence of mental illness upon the lives of students. Often this disability is overlooked or dismissed, perhaps in part due to the stigma surrounding mental health in our society.

This brief manual is intended to provide key information about the typical early warning signs of early psychosis in an easy to read format. As educators we wish to know how to confirm or disconfirm our suspicions, without encountering onerous statistical articles or lengthy medical jargon.

We are often the first to notice student change and need practical tools to assist. This manual provides these tools.

How Can I Help?

1. Become informed.
2. Read the Early Warning Signs bulleted sheet.
3. Use the brief, self report assessments to capture the student changes you notice, and to help describe the subtle personality/behavioural changes over time.
4. REFER (with confidence), and expect a low threshold for future reassessment.
5. Develop a working relationship with mental health service providers in your area.
6. Combat stigma. Post a poster. Generate discussion. Open dialogue.



Mental Illness in the School Setting

One in seven school children has been shown to have a diagnosable mental health problem. This number is said to increase dramatically in Canada by 2012. Many of these children will exhibit difficulties in the classroom, demonstrated through problems with mood, behaviour or thinking.

Sometimes these indicators are viewed as: But, could also be:

- Defiance
- Laziness
- Depression
- Hormonal Changes
- Boredom
- Inattention

(negative symptoms)

Features of underlying mental illness.

The onset may be slow …

and insidious …

and indescribable …

to the student experiencing it.

A team approach is required to provide optimal assistance to children and teenagers experiencing mental health problems. The teacher and/or counsellor are in a privileged position to accurately assess and record vital student health information. Our daily involvement in students' lives makes us optimally suited to ASSESS, REFER, and SUPPORT.

Students and parents alike report "… the school is the place they would be most likely to receive support" because this is where they feel most comfortable. This level of comfort increases as the child ages.

In fact, many countries in Europe and a number of American states already widely provide mental health assessments within schools as it is seen as the best place for meaningful student aged services – without service provision gaps.

Early identification and treatment lead to improved long term outcomes.

Early psychosis affects approximately 1 in a 100 people worldwide.

✦✦

That is about 300,000 fellow Canadians.

✦✦

Men and women are affected with equal frequency.

✦✦

This incidence rate is higher than autism, or any other childhood onset illness.

✦✦

Some of your students are experiencing symptoms, and require assistance.

Schizophrenia and Early Psychosis

The Facts

- Schizophrenia is a neurological disorder that strikes young people in their prime.
- The usual age of onset is between 16 and 25.
- Not all persons experience visual or auditory hallucinations.
- Onset may be sudden or worsen gradually with time
- The duration of untreated psychosis in Canada is currently 2½ years.
- Most people will not know they are experiencing symptoms and ask for help.
  They may know something has changed, but have difficulties explaining these changes.

→ Ask questions and consider possibilities.

SCHIZOPHRENIA IS A MEDICAL ILLNESS

- Schizophrenia accounts for 1 in every 12 hospital beds in Canada
- **More than for any other medical condition**

Our Fears

If we suspect ⇨ refer …

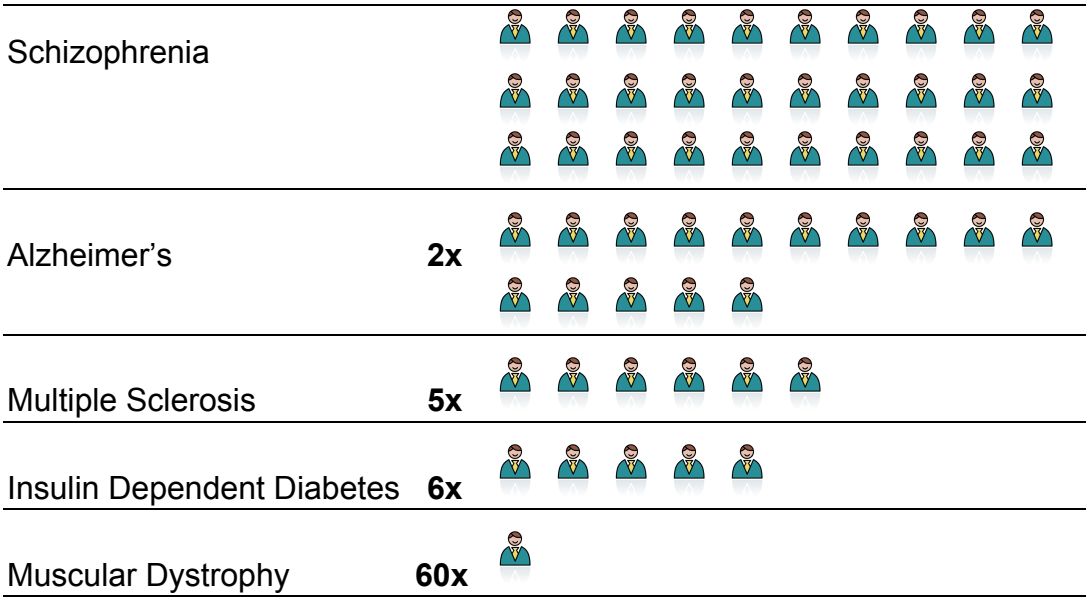
Don't permit societal biases to influence what needs to be done to assist a young person in need.

Relative Prevalence of Schizophrenia

As demonstrated below, schizophrenia is:

- 2 times as prevalent as Alzheimer's disease
- 5 times as prevalent as multiple sclerosis
- 6 times as prevalent as diabetes, and
- 60 times more prevalent than muscular dystrophy.

Relative Prevalence of Schizophrenia



Adapted from J.A. Lieberman as cited in Sadock and Sadock, 2008.

Other Statistics for Comparison Purposes

3/100 persons will become ill with psychosis	BCSS, 2008
1/167 persons have autism spectrum disorders	Can. Library of Parliament, January 2006
1/800 persons born have Down's syndrome	National Institute of Health, March 2010

Adapted from: BC Schizophrenia Society (2008)

Early Warning Signs

Warning signs provide us clues about what is happening in the mind of someone experiencing the prodromal features of early psychosis. The 'signature' of disease onset is unique to each individual.

Of importance, is the overwhelming number of negative symptoms described below. Family members and friends often sense that the behaviour is "unusual"; and that the person is "not the same".

Almost everyone mentions ***noticeable social withdrawal***

Appearance Changes

- Deterioration of personal hygiene and grooming
- Shaving of head or body hair
- Drastic changes in physical appearance
- Preoccupation with one style, change in clothing styles
- Odd posturing

Mood Changes

- Depression
- Inability to cry, or excessive crying / showing no emotion
- Laughter at inappropriate times or situations
- Basic personality changes
- Difficulty expressing joy
- Hyperactivity or inactivity (may vary between extremes)
- Inability to relax
- Unexpected hostility
- Excessive sleep, or an inability to sleep

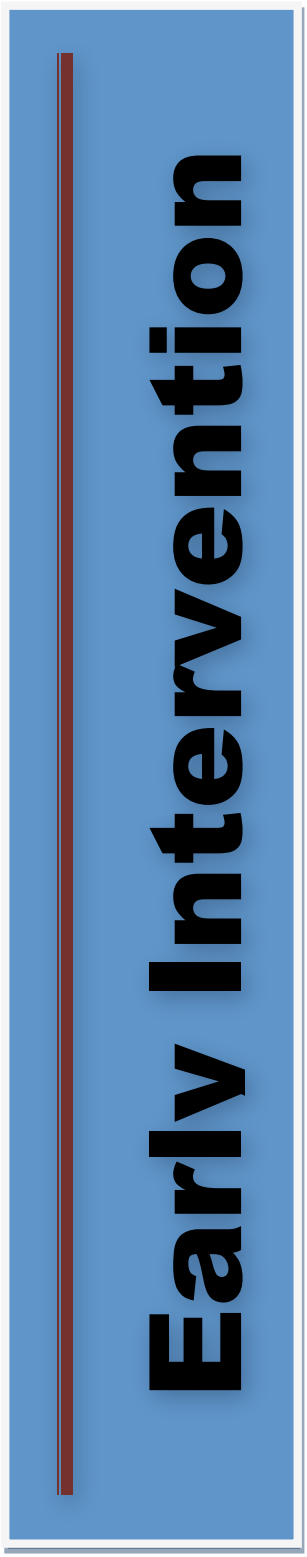
Social Changes

- Extreme reactions to criticism
- Irrational or non-sensible statements
- Deterioration of social relationships
- Social withdrawal, isolation and reclusiveness

Cognitive/School Changes

- Difficulty concentrating or finishing tasks
- Forgetfulness / Losing possessions
- Peculiar use of words or sentence structure
- Loose associations between thoughts
- Excessive writing (typically without meaning)
- Substantial change in academic grades
- Decreased desire to complete school activities
- Inability to plan or orchestrate tasks, problem solve
- Changes in reasoning/judgment – often odd, or inappropriate for age

Adapted from:BC Schizophrenia Society (2008) Cognitive Deficits, Early Warning Signs



The Importance of Early Intervention

Evidence is beginning to demonstrate that the longer a person is left untreated, the more entrenched the illness becomes.

> *The theory is that psychosis itself may be toxic and damaging to the brain – creating less response to treatment.*

Early Intervention =

- Reduced family distress and dysfunction
- Improved family and individual support
- Improved long term outcomes
- Enhanced long term quality of life
- Established relationships with mental health professionals

Delays =

- Slower and less complete recovery
- Poor prognosis
- Increased chance of early relapse
- More treatment resistance
- A compounding of social and relational problems that limit an individual's success
- An interruption in personal and social development that may even regress
- Increased suicide risk
- Increased substance abuse risk

Studies show that the duration of untreated schizophrenia (time between first signs of illness and treatment) is approximately three years. They also indicate that the delay between the onset of acute psychosis and the start of appropriate treatment is often a year or more *(BC Schizophrenia Society, 2008).*

Because young lives are so irreparably damaged when early signs of psychosis are ignored, our health care system needs clear and effective strategies for early intervention.

Assessments

Introduction of Assessment and Screening Tools

The tools included in this manual are brief, easy to administer, provide excellent baseline information for later comparison, and are meaningful to other service providers.

A number of factors were considered:

- The training level of the assessment administrator. Valid and useful tools available to non-psychologists.
- Assessments available in the public domain. Tools available without copyright law infringement.
- Free public access assessments can be easily downloaded or reprinted. This increases the likely that the tools will be used. School district budgetary constraints are not an issue.
- Assessments that have been proven useful to professionals in early psychosis programs that available for public consumption.
- Assessments that capture the negative symptoms seen in students who are demonstrating a long duration of untreated psychosis.
- Assessments valuable in the early stages of the illness that are useful to mental health professionals whom will be completing more in depth assessments.
- Self-report measures that permit the student to acknowledge personal changes in a collaborative way. These tools are often less intrusive and can help to develop better rapport with the student, rather than detract from it. Currently, some self-report measures are demonstrating good reliability in the prediction of psychosis.
- Tools that measure the psychosocial function of a student over time, as these areas of change are often overlooked, and provide meaningful data for later comparison.
- A desire to not ‘re-invent the wheel’, as it is outside the scope of this project to develop assessments that are particular to a school setting.
- The goal of this project is simply to increase awareness about psychosis, help educators to collect meaningful data, and to refer to outside agencies

The Importance of Screening for Early Psychosis

The purpose of screening for early psychosis is to directly affect the duration of untreated psychosis in those persons who may be experiencing symptoms. By creating awareness about the prevalence of early psychosis and the signs of a 'typical' illness progression, educators may refer more quickly to outside agencies for a comprehensive, diagnostic assessment.

The screening tools in this manual are intended to capture the prodromal stage of the illness; one of three distinct phases (the **premorbid, prodromal** and **psychotic stages**).

A brief overview of the stages:

The first stage, the **premorbid stage** takes place invitro or during early childhood development, or prior to the time secondary school educators would be involved with a student. The assessment of the premorbid stage is comprehensive and lengthy, and often incorporates an in-depth health assessment of potential genetic, prenatal or developmental risks and complications (Keshavan, Diwadkar, Montrose, Rajarethinam and Sweeney, 2005). Some of this information may be obtained through the Global Assessment of Function (GAF) and the Brief Psychiatric Rating Scale (Sadock and Sadock, 2003). These assessments become part of a full mental health assessment of psychosis which is undertaken **after** a referral is made to an outside mental health agency.

The second phase or **prodromal phase** is characterized as the "period of disturbance that represents a deviation from a person's previous experience and behaviour prior to the development of florid features of psychosis" (Ehmann & Hanson, 2002). This phase is where educators would be noticing change to student behaviour and academic ability, collecting information about these changes, and referring for mental health assessment. In the guidebook, all assessments relate to this phase of early psychosis.

The third stage, **psychosis**, which refers to the "presence of florid psychotic features such as delusions, hallucinations and formal thought disorder" (Lee, McGlashin and Woods, 2005) is not addressed, because the opportunity for prevention and early detection has been surpassed by the time this stage has received formal diagnosis.

The Specific Assessments and Self Report Measures – An Overview

The Mental Status Examination

The Mental Status Examination (MSE) is an assessment commonly used by health practitioners. The MSE provides categories of inquiry such as mood, behaviour, appearance and affect. The MSE in the guidebook has been provided to remind the educator to inquire about any changes in the categories presented. The mnemonic "ABC STAMP LICKER" assists to structure report writing to incorporate specific mental status change. The use of the MSE also permits an efficient exchange of information between those in the health care sector, and those in the education field.

The Psychopathology and Social and Occupational Functional Screening Tool
(EPI Program, 2009)

This assessment provides the educator with categories to assess mental health and wellness, social and occupational functioning, and a means to quickly rate a student's current presentation. This tool permits efficient categorization of the subtle changes (negative symptoms) in student social, behaviour and academic performance. The educator reviews the descriptors of behaviour (psychopathology), and social/occupational function (SOFAS), and chooses the most appropriate characterization. The chosen characterizations correspond to a number from 1-100. A great deal of information about a student's presentation is quickly analyzed and reported.

This assessment tool is similar to the Global Assessment of Function found in the Diagnostic Statistical Manual IV. This assessment measure is currently in use in early psychosis programs in British Columbia. It is also available without cost, and is in the public domain.

The Role Functioning Scale
(EPI Program, 2009)

Similar to the SOFAS scale addressed above, this tool provides an easily scored measure as it relates to psychosocial features such as productivity, self care, and immediate and extended social relationships. These domains of life are often areas that are difficult to concretely ascertain meaningful change.

The Role Functioning Scale makes documentation of pertinent information efficient; easily permitting comparison over time. This scale is also used in early psychosis programs.

The Depression, Anxiety and Stress Scale (DASS)
(Psychology Foundation of Australia)

The DASS is a 42 item self report measure designed to measure the three related negative emotional states of depression, anxiety and tension/stress. The DASS questionnaire is in the public domain.

Each of the three DASS scales contains fourteen items. The **Depression Scale** assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest in life, adhedonia, and inertia. **The anxiety scale** assesses autonomic arousal, skeleton/muscle effects, situational anxiety and subjective experience of anxious affect. **The stress scale** is sensitive to levels of chronic, non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and inpatient. Subjects are asked to use four-point severity/frequency scales to rate the extent to which they have experienced each state over the past week. Scores for Depression, Anxiety and Stress are calculated by summing the scores for the relevant items.

The DASS is of interest to the educational professional because it provides a non-intrusive way for the student to report their symptoms. It is also important because negative symptoms (depression, withdrawal, low mood) can also be difficult to qualify quantitatively with a specific measure. Negative symptoms, such as what is captured by the DASS, have also been found to often precede positive symptoms in early psychosis.

A scoring sheet is also provided that allows a quick interpretation of the results.

The Rationale for Screening and Assessment

Assessment and early detection are at the core of early intervention. It is not surprising that the predictability of EP has become more accurate due to the interest in EP research in the last decade. In these years, over a dozen research clinics have been established to investigate the assessment and treatment of EP. Based on the findings from these clinics, retrospective accounts of prodromal symptoms have permitted researchers to develop assessment tools specific to EP with improved reliability.

Additionally, self assessment tools are becoming more reliable in the 'prediction' of later EP. One Interesting study found that self-reported psychotic symptoms at age eleven were predictive of schizophreniform disorder in adulthood. The differences in 'strength', or the number of questions answered affirmatively, corresponded directly with an increased risk of adult schizophrenia. To illustrate, children who reported a 'definite' psychotic symptom were 16 times more likely than children who answered 'no' to all questions in the self-report to be diagnosed with schizophreniform disorder in adulthood. Children whom reported a 'probable' psychotic symptom were also at higher risk (9.5%) than controls of adult schizophreniform disorder (Cannon, 2005). Cannon found that 25% of the 'probable' and 'definitive' groups fulfilled diagnostic criteria for later schizophreniform – a higher risk than is found in offspring with a psychotic parent (2005). These studies lend further validity to the usefulness of self-report assessments in the initial assessment of EP, which in turn may bring improved care to this vulnerable population.

In the meantime, these new research initiatives leave one hopeful that perhaps the combination of a self-report measure and a structured interview for EP will have an effect on the future detection of EP. Overall, researchers agree there is a need for accumulating evidence supporting the critical period concept (Spencer, Birchwood and McGovern, 2001). However, the specificity of EP research has limited the call of researchers to those mostly from the medical community.

It is noteworthy to address this issue in secondary schools because numerous experts in the field suggest an early referral based on suspicion rather than a certainty of psychosis is best practice. Changing the apprehension of educational professionals may serve both clients and society very well by providing better assessment, a reduction in DUP, and improve long term outcomes for those with EP.

Role Functioning Scale

Score	**Work Productivity** *Rate the client primarily in the most appropriate expected role (e.g., homemaker, student, wage earner)*	**Independent Living, Self Care** *Management of household, eating, sleeping, hygiene care*	**Immediate Social Network Relationships** *Close friends, spouse, family*	**Extended Social Network Relationships** *Neighborhood, community, church, agencies, recreational activities*
1	Productivity severely limited; often unable to work or adapt to school or homemaking; virtually no skills or attempts to be productive	Lacking self-care skills approaching life endangering threat; often involves multiple and lengthy hospital services; not physically able to participate in running a household	Severely deviant behaviors within immediate social networks *(e.g., often with imminent physical aggression or abuse to others or severely withdrawn from close friends, spouse, family, often rejected by immediate social network)*	Severely deviant behaviors within extended social networks *(e.g., overtly disruptive, often leading to rejection by extended social networks)*
2	Occasional attempts at productivity unsuccessfully; productive only with constant supervision in sheltered work, home or special classes.	Marked limitations in self-care/independent living; often involving constant supervision in or out of protective environment (e.g., frequent utilization of crisis services)	Marked limitations in immediate interpersonal relationships *(e.g. excessive dependency or destructive communication or behaviors)*	Often totally isolated from extended social networks, refusing community involvement or belligerent to helpers, neighbors, etc.
3	Limited productivity, often with restricted skills/abilities for homemaking, school, independent employment *(e.g. requires highly structured routine)*	Limited self-care/independent living skills; often relying on mental/physical health care; limited participation in running household	Limited interpersonal; often no significant participation/ communication with immediate social network	Limited range of successful and appropriate interactions in extended social networks *(i.e. often restricts community involvement in minimal survival level interactions)*
4	Marginal productivity *(e.g. productive in sheltered work or minimal productive in independent work; fluctuates at home, in school, frequent job changes)*	Marginally self sufficient; often uses REGULAR assistance to maintain self-care/independent functioning; minimally participates in running household	Marginal functioning with immediate social network *(i.e. relationships are often minimal and fluctuate in quality)*	Marginally effective interactions; often in a structured environment; may receive multiple public system support in accord with multiple needs
5	Moderately functional in independent employment, at home or in school *(consider very spotty work history of fluctuations in home, in school with extended periods of success)*	Moderately self sufficient; i.e. living independently with ROUTINE assistance *(e.g. home visits by nurses, other helping persons, in private or self-help residences)*	Moderately effective continuing and close relationship with at least one other person	Moderately affective and independent in community interactions, may receive some public support in accord with need
6	Adequate functioning in independent employment, home or school; often not applying all available skills/abilities	Adequate independent living and self-care with MINIMAL support *(e.g. some transportation, shopping assistance with neighbors, friends, other helping persons)*	Adequate personal relationship with one or more immediate member of social network *(e.g. friend or family)*.	Adequate interacts in neighborhood or with at least one community or other organization or recreational activity
7	Optimally performs homemaking, school tasks or employment-related functions with ease and efficiency	Optimal care of health/hygiene; independently manages to meet personal needs and household tasks	Positive relationships with spouse or family and friends; assertively contributes to these relationships	Positively interacts in community; church or clubs, recreational activities, hobbies or personal interests, often with other participants
Score				
			TOTAL RFS SCORE =	

http:epitraining.org

Date: _____ Student: _____

The GAF is the lowest score of the two (PSYCHOPATHOLOGY or SOFAS) ratings

***Psychopathology rating* = _____ *SOFAS rating* = _____**

Psychopathology **Consider psychopathology on a hypothetical continuum of mental health to illness. Do not include impairment due to physical or environmental limitations.**		**Social and Occupational Functioning** **Consider social and occupational functioning on a continuum from excellent to grossly impaired. Include impairments in functioning due to physical limitations, as well as those due to mental impairments. Impairment must be a direct consequence of mental and physical health problems. The effects of lack of opportunity and environmental limitations are not to be considered.**	
100 91	Life's problems never seem to get out of hand, is sought out by others because of his or her many positive qualities. No symptoms.	Superior functioning in a wide range of activities.	100 91
90 81	Absent or minimal symptoms (e.g., mild anxiety before an exam), generally satisfied with life, no more than everyday problems or concerns (e.g., occasional argument with family members)	Good functioning in all areas. Occupationally and socially effective.	90 81
80 71	If symptoms are present, they are transient and expected reactions to psychosocial stressors (e.g., difficulty concentrating after a family argument)	No more than slight impairment in social, occupational, or school functioning (e.g., infrequent interpersonal conflict, temporarily falling behind in schoolwork).	80 71
70 61	Some mild symptoms (e.g., depressed mood, mild insomnia).	Some difficulty in social, occupational, or school functioning but generally functioning well. Has some meaningful interpersonal relationships.	70 61
60 51	Moderate symptoms (e.g., flat affect, circumstantial speech, occasional panic attacks).	Moderate difficulty in social, occupational or school functioning (few friends, conflict with peers or co-workers).	60 51
50 41	Serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting).	Serious impairment in social, occupational or school functioning (e.g., no friends, unable to keep a job).	50 41
40 31	Some impairment in reality testing or communication (e.g., speech is at times illogical, obscure, or irrelevant) OR major impairment in judgement, thinking, or mood.	Major impairment in several areas, such as work, school, or family relations (e.g., depressed man avoids friends, neglects family and is unable to work; child frequently beats up younger children, is defiant at home and is failing at school).	40 31
30 21	Behaviour is considerably influenced by delusions or hallucinations OR serious impairment in communication or judgement (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation)	Inability to function in almost all areas (e.g., stays in bed all day; no job, home, or friends).	30 21
20 11	Some danger of hurting self or others (e.g., suicidal attempts without clear expectation of death; frequently violent; manic excitement) OR gross impairment in communication (e.g., largely incoherent or mute)	Occasionally fails to meet minimal personal hygiene (e.g., smears feces); unable to function independently.	20 11
10 1	Persistent danger of severely hurting self or others (e.g., recurrent violence) OR serious suicidal act with clear expectation of death	Persistent inability to maintain personal hygiene. Unable to function without harming self or others or without considerable external support (nursing care and supervision).	10 1

http://www.epitraining.org

Mental Status Exam
Description of Criteria

The mental status exam (MSE) is a brief examination of the individual that describes the examiner's observations and impressions of the individual at the time recorded. The MSE does not assess history or context in depth and is not diagnostic. It provides a description of areas of interest to the clinician, and is useful in providing an evaluation over time.

The mnemonic **ABC STAMP LICKER** is often used to help the examiner remember the assessment areas.

A	**Appearance -**	Note anything unusual in the person's self-care, dress, posture, poise, and grooming. Be attentive to evidence of self-mutilation.
B	**Behaviour -**	Look for abnormal movements (tics, twitches, gestures, mannerisms), level of motoractivity (restlessness, agitation, pacing, wringing of hands, or slowing of movements etc).
C	**Cooperation -**	Note the person's attitude and cooperation. Any number of adjectives may be used. Record the level of rapport established.
S	**Speech -**	Quantity, rate, and quality. Responsive to cues from the examiner? Look for abnormalities in the person's ability to express and comprehend language.
T	**Thought -**	Thought can be divided into *process* and *content.* Process refers to how a person puts together ideas and associations (eg. vague, empty, rambling, loose associations, irrelevant, creation of new words or meanings). Content disturbances include delusions, preoccupations, obsessions, compulsions, recurrent ideas, phobias, antisocial urges, intentions etc.
A	**Affect -**	Note the person's present emotional responsiveness, inferred from facial expressions. Include the range or expressive behaviour. Does the person have a lack of affective responses to emotionally laden topics? Determine whether affect matches thought content.
M	**Mood -**	Mood is defined as a pervasive and sustained emotion that colours the person's perception of the world. Determine the intensity, level of fluctuation, and duration of any mood symptoms.
P	**Perception**	Ask about perceptual disturbances or hallucinations in all sensory modalities.
L	**Level of Consciousness**	Note how alert the person is during the interview. A person may be unable to sustain attention to environmental stimuli, or maintain goal-directed behaviour or thinking. Fluctuations in level of consciousness from one day to the next is common.
I	**Insight and Judgement**	Determine judgement on specific and practical issues. What is the person's degree of understanding about being ill?
C	**Cognitive Functioning**	Consider changes in memory, ability to plan, prioritize and implement strategies. A reduction in attention span, judgement and reasoning abilities.
K	**Knowledge**	Note whether the person has significant gaps in their current knowledge. Ability to Handle difficult, sophisticated or abstract concepts.
E	**Endings**	Inquire about both suicidal and homicidal ideation. If any ideation, do a thorough risk assessment. Ask about plans, intent and lethality of method.
R	**Reliability**	The evaluator assess the impression of the person's reliability and capacity to report accurately and honestly about his or her situation.

Adapted from: http://www.epitraining.org and
Sadock, B.J., & V.A., Sadock (2003). *Synopsis of Psychiatry: Behavioural Sciences/Clinical Psychiatry* (9th Ed). Philadelphia, PA, Lippincott Williams and Wilkins.

Mental Status Exam Checklist

Student:_____

Date:_____

Appearance
- ☐ Poor hygiene
- ☐ Odd appearance

Behaviour
- ☐ Psychomotor agitation
- ☐ Psychomotor retardation
- ☐ Disorganization
- ☐ Increase in goal-directed behaviour

Speech and Thought Processes
- ☐ Increased production or pressured speech
- ☐ Decreased production of speech
- ☐ Disorganization
- ☐ Loose associations
- ☐ Racing thoughts or flight of ideas

Thought Content
- ☐ Delusions
  (provide details on content, systematization and bizarreness)
- ☐ Ideas of reference
- ☐ Obsessive or intrusive thoughts
- ☐ Hopelessness
- ☐ Worthlessness
- ☐ Guilt
- ☐ Grandiosity

Perception
- ☐ Auditory hallucinations
  (indicate if running commentary or two voices conversing)
- ☐ Visual hallucinations
- ☐ Other hallucinations (e.g., olfactory, tactile)
- ☐ Dissociative experiences

Affect and Mood
- ☐ Depressed
- ☐ Anhedonia (loss of interest or pleasure)
- ☐ Euphoric
- ☐ Angry or irritable
- ☐ Anxious
- ☐ Suspicious
- ☐ Blunted or flat affect
- ☐ Labile affect
- ☐ Panic attacks

Risk
- ☐ Self-harm or suicide
- ☐ Violence to others
- ☐ Activities with high potential for painful consequences

Cognition
- ☐ Disorientation
- ☐ Concentration problems
- ☐ Memory problems
- ☐ Distractibility
- ☐ Indecisiveness

Somatic problems
- ☐ Sleep disturbance (insomnia, hypersomnia, etc.)
- ☐ Fatigue or loss of energy
- ☐ Appetite or weight disturbance (increase or decrease)

Insight and Reliability
- ☐ Poor insight or Uncooperative

Provide details
(including severity and duration)

Depression Anxiety Stress Scales (DASS)

Psychology Foundation of Australia

The DASS is a 42-item self-report instrument designed to measure the three related negative emotional states of depression, anxiety and tension/stress.
The DASS questionnaire is in the public domain.

Each of the three DASS scales contains 14 items, divided into subscales of 2-5 items with similar content. **The Depression scale** assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. **The Anxiety scale** assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. **The Stress scale** is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Subjects are asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state *over the past week*. Scores for Depression, Anxiety and Stress are calculated by summing the scores for the relevant items.

The DASS is of interest to the teacher-counsellor because it provides a non-intrusive way for students to self-report their symptoms. It is also important because negative symptoms (depression, social withdrawal, low mood) are often difficult to qualify objectively. Negative symptoms have also been found to often precede positive symptoms in early psychosis.

Adapted from: http://www2.psy.unsw.edu.au/groups/dass//

DASS

Name: *Date:*

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you ***over the past week***. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1	I found myself getting upset by quite trivial things	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I just couldn't seem to get going	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I had a feeling of shakiness (eg, legs going to give way)	0	1	2	3
8	I found it difficult to relax	0	1	2	3
9	I found myself in situations that made me so anxious I was most relieved when they ended	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting upset rather easily	0	1	2	3
12	I felt that I was using a lot of nervous energy	0	1	2	3
13	I felt sad and depressed	0	1	2	3
14	I found myself getting impatient when I was delayed in any way (eg, lifts, traffic lights, being kept waiting)	0	1	2	3
15	I had a feeling of faintness	0	1	2	3
16	I felt that I had lost interest in just about everything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life wasn't worthwhile	0	1	2	3

http;//ww2.psy.unsw.edu.au/groups/dass

DASS Scoring Template

S
A
D
A

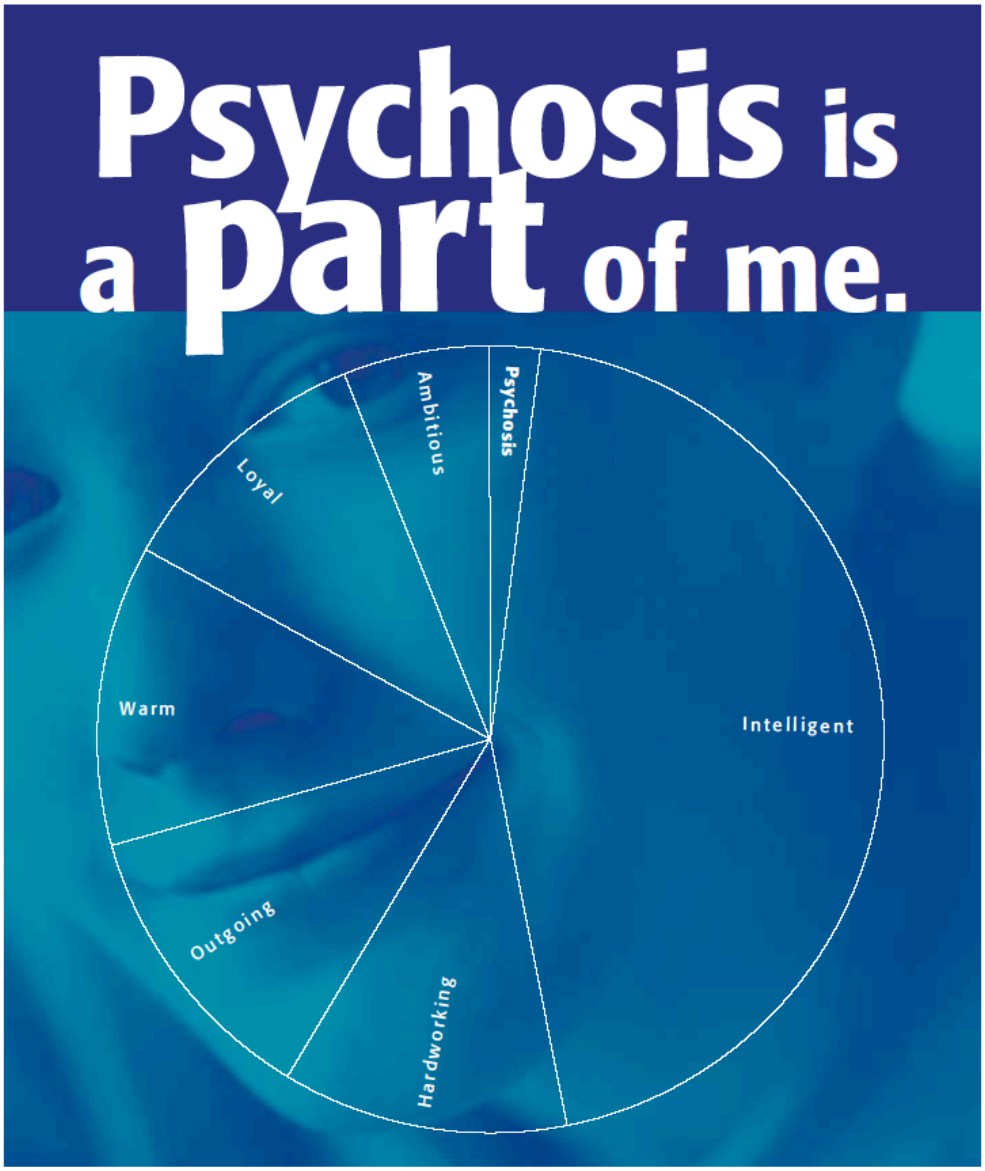
D
S
A
S
A

D
S
S
D
S

A
D
D
S
A

A
D

Apply template to both sides of sheet and sum scores for each scale.
For short (21-item) version, multiply sum by 2.
http://www2.psy.unsw.edu.au/groups/dass//



http://www.gethelpearly.ca

Schizophrenia and Early Psychosis Resources

Important Websites

- www.psychosissucks.ca
- www.pepp.ca
- www.epic.org.au
- www.bcss.org

Provincial and International Resources

British Columbia

British Columbia Schizophrenia Society
(604) 270-7841
http://www.bcss.org

Alberta

Schizophrenia Society of Alberta
(780) 429 -7880 1 -800-661 -4644
www.schizophrenia.ab.ca

Saskatchewan

Schizophrenia Society of Saskatchewan
(306) 584-2620
www.schizophrenia.sk.ca

Manitoba

Manitoba Schizophrenia Society
(204) 786-1616 1 -800-263 -5545
www.mss.mb.ca

Ontario

Schizophrenia Society of Ontario
(416) 449-6830 1-800-449-6367
www.schizophrenia.on.ca

Quebec

Assn. Québécoise de la Schizophrénie
Tel: (514) 251-4000 1-800-323-0474
www.schizophrenie.qc.ca
AMI Québec (*Anglophone Association*)
Tel: (514) 486-1448
www.amiquebec.org

Nova Scotia

Schizophrenia Society of Nova Scotia
Tel: (902) 465-2601 1-800-465-2601
www.ssns.ca

New Brunswick

Schizophrenia Society of New Brunswick
(506) 622-1595
www.schizophrenia.ca/ssnb

Prince Edward Island

Schizophrenia Society of P.E.I.
(902) 566-5573
info@schizophreniapei.pe.ca

Newfoundland and Labrador

Schizophrenia Society of Newfoundland
and Labrador Tel: (709) 745-7765
www.ssnl.org

Schizophrenia Society of Canada

(416) 415-2007 1 -888-772- 4673
www.schizophrenia.ca

United States (NAMI)

National Institute for the Mentally Ill
1-800 -950-NAMI (toll free helpline)

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