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Childhood internalizing behaviour: analysis and implications

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Abstract

The concept of ‘internalizing behaviour’ reflects a child’s emotional or psychological state and typically includes depressive disorders, anxiety disorders, somatic complaints and teenage suicide. Genetic and environmental causes have been largely implicated, although research continues to explore social etiological factors. Some research suggests females may be especially vulnerable to internalizing disorders, while data across ethnicities are somewhat variable. Regarding treatment, cognitive-behavioural therapies and use of pharmacological approaches (i.e. selective serotonin reuptake inhibitors) have both shown great promise in reducing symptoms of internalizing disorders. However, given the role of the social environment, prevention programmes aimed at reducing exposure to drugs, violence/abuse and environmental toxins are highly important. Internalizing disorders are associated with a host of deleterious outcomes (e.g. school drop-out, substance use and potentially suicide) as well as psychopathological outcomes (e.g. co-morbid anxiety or depression, externalizing disorders – including suicide). Children with mental health problems suffer educationally and are more likely to become entangled in the justice and welfare systems. Clearly, early treatment and prevention programmes for internalizing disorders need to be a priority from a public health perspective as well as from a family and community perspective.

Keywords

behaviour problems; children; internalizing behaviour

Introduction

A well-known distinction of psychopathological problems in child psychiatry and psychology is that of ‘externalizing’ versus ‘internalizing’ disorders (Achenbach 1978). While externalizing behaviours are displayed outwardly and are reflected by behaviour towards the physical environment (Eisenberg *et al.* 2001), internalizing disorders are directed inward and are indicative of a child’s psychological and emotional state. Externalizing disorders such as conduct disorder, aggression and violence clearly have a negative impact on the environment and on others, but internalizing disorders can be harmful as well. The

overlap between internalizing and externalizing disorders is great (Hinshaw 1987). For example, children with internalizing disorders can also negatively affect their peers, siblings and parents. Children displaying externalizing behaviour may also have some internal issues as well. However, despite this overlap, it is useful to examine internalizing disorders independently from their externalizing counterparts in order to better understand their unique contributors, courses and consequences.

Liu (2004) wrote a comprehensive review of common externalizing disorders, including implications for care givers. Therefore, this paper will focus on internalizing disorders. In particular, a cursory analysis of four of the most common internalizing conditions in paediatric mental health (depressive disorders, anxiety disorders, somatic complaints and teenage suicide) will be provided. These disorders were chosen based on their prevalence and association with the development of significant deleterious consequences later in life. For example, childhood anxiety disorders are often associated with development of adult anxiety disorders, major depressive disorder, suicidal behaviour and psychiatric hospitalization (Pine *et al.* 1998). Teenage suicide is a grave issue that affects the individuals as well as their friends and family. Overall, this paper is not intended to serve as an exhaustive summary of the literature, which is expansive. Rather, this paper will give a general characterization of the important aspects of the concept of internalizing behaviours, including diagnostic features, prevalence rates, assessment, associated conditions and treatment. Public health and clinical implications for those working with children and adolescents are discussed in the conclusion.

Internalizing disorders and their defining features

Depression

Depression is a psychiatric mood disorder characterized by excessive sadness and loss of interest in usually enjoyable activities. The mean age of onset for adolescents is 14.9 years, but some children can develop depression as early as age 3 (Lewinsohn *et al.* 1994, Copeland *et al.* 2009). Depression occurs in 1% of preschoolers, 2% of school-aged children, and 5–8% of adolescents (Birmaher *et al.* 1998, Jellinek & Snyder 1998), although prevalence rates appear to be increasing from generation to generation with earlier onset ages (Gershon *et al.* 1987, Gotlib & Hammen 2008). The current edition of the *Diagnostic and Statistical Manual of Mental Disorders* [DSM-IV; American Psychiatric Association (APA) 1994] splits depression into two primary diagnoses: major depression and dysthymia. Diagnostic symptoms of the two can be seen in Table 1; full diagnostic criteria is available in *DSM-IV* (APA 1994, Birmaher *et al.* 1996).

Anxiety

Anxiety can be described as a 'state of apprehension without cause' (Johnson & Melamed 1979). Anxiety disorders result when anxiety is consistent and negatively interferes with school, social interactions, activities or family functioning. Anxiety disorders are the most common type of psychiatric disorders in children (Costello & Angold 1995), with separation anxiety disorder and selective mutism occurring exclusively in children (APA 1994). Depending on the diagnosis, mean age of onset can be as early as 7.5 years (e.g. separation

anxiety disorder) (Last *et al.* 1992). In worldwide studies, the prevalence of anxiety disorders in children was greater than 10% (Pine 1994) and ranged from 12% to 20% in the USA (Pine 1994). There are five main anxiety disorders: separation anxiety disorder, social anxiety disorder, general anxiety disorder, post-traumatic stress disorder and obsessive compulsive disorder (Tandon *et al.* 2009). Generic descriptions are shown in Table 2; specific criteria for diagnoses are outlined in *DSM-IV* (APA 1994, Bernstein *et al.* 1996).

Somatic complaints

Somatic complaints are physical symptoms with no identifiable, specific physiological cause (Brown 2007). Common paediatric somatic complaints include headaches, nausea or abdominal pain. Non-specific causes usually include psychological distress, anxiety, family patterns and life events (Chapman 2005). Somatic complaints may result in a vicious cycle wherein the physical symptoms lead to emotional stress, which further exacerbates the somatic symptoms (Vaalamo *et al.* 2002). Somatic complaints have been mainly studied in children greater than 3 or 4 years of age, making it difficult to determine the onset age. However, prevalence rates have been estimated at 20%, increasing to 40% if children are 10 years old or younger, and 55% at 15 years old or younger (Bass & Murphy 1995, Domenech *et al.* 2004).

Teenage suicide

Teenage suicide is a significant public health problem. Suicide is the third leading cause of death for young people aged 10–24 years in the USA (National Center for Health Statistics 2007). Suicide can occur in childhood, but the rate of incidence appears to increase over time (Pelkonen & Marttunen 2003). In addition, according to the 2007 Youth Risk Behaviour Surveillance, about 14.5% of high school students had seriously considered attempting suicide within the 12 months prior to the survey, with 11.3% actually having made a plan how they would attempt suicide (Langhinrichsen-Rohling *et al.* 2009).

A conceptual analysis of internalizing disorders can be found in Table 3.

Causes and precipitating factors

Familiality is considered one of the most highly implicated factors in the development of depression (Tully *et al.* 2008) and anxiety (Biederman *et al.* 2001a). Negative life events in the social environment, particularly violence, poverty, abuse, bereavement/loss of loved ones, or parental separation, are thought to increase the risk for depression (Toth & Cicchetti 1996, Maughan & McCarthy 1997, Conger *et al.* 1999, Reinherz *et al.* 1999), anxiety (Stein *et al.* 1996) and somatic complaints (Friedrich & Schafer 1995).

Environmental hazards such as high serum lead levels and prenatal maternal tobacco exposure have been associated with higher levels of somatic complaints (Sciarillo *et al.* 1992, Carter *et al.* 2008), while the evidence linking depression to chemical exposure, toxicity, lead exposure, prenatal tobacco use, or prenatal cocaine use is weaker (Sciarillo *et al.* 1992, Bada *et al.* 2007, Carter *et al.* 2008). Prenatal marijuana exposure was linked with increased levels of depressive symptoms in 10-year-old children (Gray *et al.* 2005).

Interpersonal relationships and social interactions appear to influence development of anxiety and somatic complaints as well. Behavioural inhibition (BI), which occurs when a child retreats and withdraws from a novel situation or stimulus, may increase likelihood of an anxiety disorder (Schwartz *et al.* 1999) and may in fact even be a biological precursor to later anxiety (Biederman *et al.* 2001b). Temperament, parental somatic complaints and parental stress have all been implicated as potential risk factors (Grunau *et al.* 1994, Craig *et al.* 2002) for somatic symptoms. For instance, Eminson (2007) suggests a model of wherein child-, parent-, and healthcare professional-related factors each possess unique and different mechanisms that could increase or decrease the severity of the child's symptoms.

Finally, determining a distinct cause for adolescent suicidal behaviour is difficult, and likely there are numerous associated factors that may contribute to self-harm. One of the most important risk factors is family history of mental health disorders, which increases the likelihood of completed suicide (Brent & Perper 1995). Studies from the USA show that 90% of completed suicides were associated with a psychiatric disorder (Shaffer *et al.* 1996), which also likely plays a role in increasing susceptibility to self-harm. Other risk factors include family history of suicide, family history of child maltreatment, previous suicide attempts, history of substance abuse, feelings of hopelessness, impulsive and/or aggressive tendencies, social isolation, as well as relational, social, work, or financial loss (Langhinrichsen-Rohling *et al.* 2009).

Gender and ethnic/cultural differences

The prevalence of childhood depression is near-equal across genders at the prepubertal age (Twenge & Nolen-Hoeksema 2002) but more common among females by adolescence (Twenge & Nolen-Hoeksema 2002). Gender analyses of anxiety disorders have been conflicting. A few studies have failed to detect gender differences (Bernstein *et al.* 1996, Gater *et al.* 1998), while others found that anxiety disorders were more prevalent in females (Ollendick & King 1991, Beidel *et al.* 2000). Similar contradictions are present in the reporting of somatic complaints. One study found no differences across gender (Masi *et al.* 2000). However, other studies indicate that females report more somatic complaints (Crijnen *et al.* 1999, Baji *et al.* 2009). Finally, while females are more likely to attempt suicide, males are more likely to die by suicide (National Center for Health Statistics 2007). The mean worldwide annual rates of suicide per 100 000 were 0.5 for females and 0.9 for males among children aged 5–14 years and 12.0 for females and 14.2 for males among people aged 15–24 years (Pelkonen & Marttunen 2003).

Data on internalizing disorders across ethnicities are varied. Among depression, some studies report no ethnic differences (Costello *et al.* 1996, Brooks *et al.* 2002) and others report a higher prevalence of depressive symptoms among minority groups compared with Caucasian groups (Wickrama *et al.* 2005, Wight *et al.* 2005). Hispanic and Native American children may be particularly vulnerable, compared with Caucasian children, while African American and Asian children have the lowest prevalence rates (Saluja *et al.* 2004).

Researchers found in several studies that relative to their North American counterparts, Chinese children and adolescents experience an equal, or even higher, level of affective

disturbance including depression and anxiety (Chen *et al.* 1995, Lee *et al.* 2006). Chinese American youth also seem to have more somatic complaints (Sue *et al.* 1994, Chun *et al.* 1996). Similar results have been found in earlier studies in Asian populations in other countries such as Thailand, Vietnam and Korea as well as in North America (e.g. Bourne & Nguyen 1967, Tongyongk 1972). Interestingly, Chinese boys tend to report higher levels of depression and anxiety than girls (e.g. Chen *et al.* 1995). In addition, a high rate of suicide has been reported in Chinese adolescents. According to Li (2002), the suicide rate for Chinese individuals aged 15–24 years was about 10.63/100 000 in 1998, which was one of the highest in the world. The rate was higher for female than male adolescents (15.96 vs. 8.67 per 100 000), particularly in rural areas.

On the other hand, anxiety disorders as a whole appear to occur equally across ethnic groups, though differences may exist across specific anxiety disorders (Austin & Churpita 2004). For example, post-traumatic stress disorder may be more prevalent in African American children than Caucasian children; but Caucasian children exhibit greater rates of obsessive-compulsive disorder and social anxiety disorder (Last *et al.* 1992). Separation anxiety may be more common among Hispanic children than Caucasian children, possibly because of the role of family interdependence that is specific to many Hispanic cultures (Ginsberg & Silverman 1996). Somatic complaints also vary across nations. In a study of nine countries, Australia and Jamaica had the highest number of complaints, followed by Puerto Rico, the USA, the Netherlands, Sweden, Thailand and Israel (Crijnen *et al.* 1999).

Lastly, among teenage suicide, Native Americans have the highest suicide rate among 10-to 19-year-olds in the USA, followed by Caucasians, Latinos, and Asian and African Americans (Centers for Disease Control and Prevention 2006). Cultural-specific factors likely account for these differences. Having a friend attempt or complete suicide was the strongest predictor of suicide attempts for both male and female Native American adolescents (Langhinrichsen-Rohling *et al.* 2009). Another unique risk factor for Native American adolescents was being more engaged in traditional cultural activities. For Latino adolescents, the strong obligation to family is thought to have a role because it can come into conflict with the desire for autonomy in adolescents. Immigration issues are also a concern for this population (Langhinrichsen-Rohling *et al.* 2009). For Asian Americans, family and cultural issues as well as parenting practices may be associated with suicidal behaviour, while for African Americans, deindustrialization, racism and discrimination, and greater awareness of social and economic inequities are risk factors for suicide (Langhinrichsen-Rohling *et al.* 2009).

An important issue in cross-ethnic and cross-cultural research is about the cultural meaning of psychological or emotional symptoms such as social anxiety. It has been found, for example, that Chinese children were more inhibited than North American children in the early years, as indicated in anxious, vigilant and reactive behaviours in response to stressful and challenging situations (Chen *et al.* 1998). However, BI is perceived and responded to differently in China than in North America, reflecting divergent cultural norms and values. Whereas children's inhibited behaviour is associated with parental punishment, disappointment and rejection in Canada, it is associated with parental warmth and accepting attitudes in China. Chen *et al.* (2006) found that, when making passive and low-power social

initiations, relative to others, inhibited children received fewer positive responses and more rejection from peers in Canada. Alternately, inhibited children in China who displayed the same behaviour were more likely to receive positive responses and support. As a result of different culturally prescribed social attitudes and responses, inhibition is associated with later internalizing disorders in Western societies (e.g. Schwartz *et al.* 1999, Rubin *et al.* 2009), but has been found to predict relatively benign developmental outcomes in Chinese societies (e.g. Chen *et al.* 2009).

Diagnostic assessment

A diagnostic screening for depression is often performed using the Pediatric Symptom Checklist, which is completed by caregivers of children aged 6–12 years and has good specificity (range 68–100%) and sensitivity (80–95%). Other paediatric depression screening tools include the Children's Depression Inventory (CDI) for children aged 7–17 years, the Beck Depression Inventory (BDI) for adolescents and the Center for Epidemiologic Studies Depression (CES-D) Scale (Saylor *et al.* 1984, Beck *et al.* 1988, Radloff 1991). An advantage of the CDI, in addition to its strong validity, is that it is easy for young children to understand as it is written at a first-grade reading level (Carey *et al.* 1987, Sharp & Lipsky 2002). Both the BDI and CES-D have been shown to be reliable and valid and are useful for older children and adolescents (Ambrosini *et al.* 1991, Radloff 1991, Richter *et al.* 1998, Dierker *et al.* 2001). Both are meant for adolescents aged 14 years and older and are written at a sixth-grade reading level (Sharp & Lipsky 2002).

Diagnosis of anxiety is traditionally aided by the widely used Child Behavior Checklist (CBCL) (Achenbach 1991). Other scales that can be used for diagnosis and classification are the Multidimensional Anxiety Scale for Children (MASC), the Revised Children's Manifest Anxiety Scale (RCMAS) and the State-Trait Anxiety Inventory for Children (STAIC) (Maruish 2004). In a meta-analysis of the RCMAS, STAIC and CBCL, Seligman *et al.* (2004) found that all were comparably effective for differentiating children with an anxiety disorder to children without an anxiety disorder. However, they found these tools are not as effective in differentiating between anxiety disorder and another psychological disorder (Seligman *et al.* 2004). In addition, Seligman *et al.* (2004) advised that for clinicians, these tools only be used as part of the comprehensive assessment in addition to diagnostic interviewing. The MASC is a newer scale that includes four dimensions of childhood anxiety: physical symptoms, social anxiety, separation anxiety and harm avoidance (Muris *et al.* 2002). It has shown to be effective and reliable, but again for clinicians is only part of a comprehensive diagnostic assessment (March *et al.* 1999, Muris *et al.* 2002).

Somatic complaints are not by themselves a diagnosable disorder in *DSM-IV* (APA 1994). Instead, somatization disorder is a diagnosis that characterizes the occurrence of numerous and broad somatic complaints in adults, not children. There are a few diagnostic scales that can be used for assessing somatic complaints in children. The CBCL includes a subscale for somatic complaints (Achenbach 1991), as does the CES-D (Radloff 1991), but again, both should be used in the context of more thorough evaluation.

Treatment

Treatment for depression and anxiety has generally involved medication and/or psychotherapy – and cognitive-behavioural therapy (CBT) in particular. Studies suggest CBT is highly effective for child and adolescent depression (Birmaher *et al.* 1998) and anxiety (Heldt *et al.* 2003), as well as somatic symptoms (Sanders *et al.* 1994). In a randomized clinical trial of children aged 4–7 years with anxiety disorders, children treated with CBT showed a significantly greater decrease in anxiety disorders compared with controls (effect size, 0.55) (Hirshfeld-Becker *et al.* 2010). Another study found effect sizes of improvement were large for children's fears and dysfunctional beliefs, and medium for children's internalizing symptoms (Bogels & Siqueland 2006). Data on pharmacological therapy are mixed. For childhood depression, the effectiveness of medication remains unclear (Depression Guideline Panel 1993). For instance, selective serotonin reuptake inhibitors (SSRIs), frequently effective in adults, appear to be effective in children and adolescents but may bring an increased risk of suicide (Bridge *et al.* 2007). Some studies found no effect for SSRIs compared with a placebo in the treatment of depression (Ryan 2005). A study comparing the cost-effectiveness of CBT compared with SSRIs for treating depression found CBT to be the more cost-effective option (Haby *et al.* 2004). However, availability of this therapy is often limited (Haby *et al.* 2004, Ryan 2005). Therefore, a concerted effort must be made to increase access for CBT. A randomized controlled trial comparing use of CBT, fluoxetine (an SSRI), or both for treatment of adolescent depression found that fluoxetine combined with CBT had the greatest efficacy relative to fluoxetine or CBT alone (effect size, 0.78) (Riggs *et al.* 2007).

Anxiety appears to be highly amenable to SSRIs (Duncan *et al.* 2005). In a comparison study, it was found that treatment with only CBT or only sertraline (an SSRI), or a combination of CBT and sertraline was effective (Walkup *et al.* 2008). Combination therapy was superior to both monotherapies, with the percentages of children who were rated as very much or much improved on the Clinician Global Impression-Improvement scale being 80.7% for combination therapy, 59.7% for CBT and 54.9% for sertraline (Walkup *et al.* 2008). Therefore, all three options are indicated, with family preferences, access to treatment, cost and time being taken into consideration on a case-to-case basis (Walkup *et al.* 2008).

Clinicians should be vigilant for the presence of risk factors and associated conditions among their adolescent patients, including suicidal ideation or gestures in patients with substance abuse problems or mental health disorders. Indeed, risk reduction by addressing behavioural risk factors, such as substance use, environmental exposure and violence/abuse, is applicable to the prevention of all internalizing disorders. Specific suicide prevention strategies for adolescent include school-based prevention programmes, which some studies have found to have some success (Portzky & Heeringa 2006, Ciffone 2007). Other studies, however, have concerns about how effective they actually are (Miller *et al.* 2009). Because cultural risk factors play an important role, programmes targeting specific groups should also be implemented as some have been found to be helpful (Goldston *et al.* 2008).

Co-morbidities and consequences

The diagnosis and treatment of internalizing disorders is complicated by the fact that they are often co-morbid with each other as well as other psychiatric, non-internalizing disorders. Childhood depression is highly co-morbid with other psychological disorders – particularly anxiety (as high as 62%) (Brady & Kendall 1992) and conduct disorders (as high as 35%) (Geller *et al.* 1985, Cole & Carpentieri 1990). Anxiety also often appears with other psychiatric diagnoses, such as other anxiety disorders, depression, attention deficit and hyperactivity disorder, oppositional defiant disorder and conduct disorder (Egger & Angold 2006). Anywhere from 15.9% to 61.9% of children identified as anxious or depressed have co-morbid anxiety and depressive disorders (Brady & Kendall 1992). Childhood anxiety disorders are often associated with development of adult anxiety disorders, major depressive disorder, suicidal behaviour and psychiatric hospitalization (Pine *et al.* 1998).

Somatic complaints in toddlers have been linked to internalizing or externalizing problems in adolescence (Pihlakoski *et al.* 2006) and may make diagnosis of somatization disorder in adulthood more likely (Rocha *et al.* 2003). Moreover, a higher occurrence of somatic complaints predicted poorer academic performance for schoolchildren (Hughes *et al.* 2007). Somatic complaints are typically co-morbid with other psychological disorders, particularly anxiety disorders. For example, 60% of children and adolescents with anxiety disorders reported somatic complaints (Beidel *et al.* 1991). As noted earlier, teenage suicide is associated with presence of psychopathology. Furthermore, changes in eating or sleeping habits, social withdrawal, violence, drug abuse, changes in personality, and somatic complaints correlate with teenage suicide. Substance abuse and behavioural disorders, such as antisocial personality disorder and conduct disorder, are more common in teenage suicides compared with older population groups (Conwell & Brent 1995). Attempted suicide by teenagers is also associated with a wide range of future adjustment difficulties, including increased risk for repeated suicide attempts, poor school attendance, interpersonal relationship problems, internalizing disorders (e.g. depression), externalizing behaviours (e.g. running away), substance use, criminal arrests, motor vehicle accidents and violent death (e.g. by homicide, by motor vehicle crash) (Spirito *et al.* 2000).

Conclusions

Internalizing behaviour in children is an important concept in the fields of child and adolescent psychiatry and mental health nursing. Internalizing behaviours carry serious implications for a child's educational performance, development of behavioural problems, vulnerability to psychopathology and even risk of suicide (Pine *et al.* 1998). By developing a better understanding of these problems and their associated risk factors, treatment and prevention become a reality. In addition, a stronger knowledge base of this problem will enable healthcare providers to develop better treatment options and interventions to reduce the effects of internalizing behaviour in children. Healthcare providers should also understand that internalizing behaviour is also often co-morbid with externalizing behaviour, even though a distinction is made between the two. Nurses play an important role in the recognition of internalizing behaviours. Other researchers have noted that effective recognition, referral and diagnosis by primary mental health workers are needed to address

this growing problem (Raphel 2001, Macdonald *et al.* 2004). However, nurses who often work with children needed further education on mental health issues as well as support from specialists (Raphel 2001, O’Kane 2011).

Child mental health is a significant public health problem. Children with psychopathology are less likely to complete schooling, are more dependent on government welfare programmes, and have a greater risk of entering the criminal justice system. Furthermore, suicide is the third-leading cause of death for people aged 10–24 years in the USA (National Center for Health Statistics 2007). Public policy programmes should focus on providing children with mental health problems access to treatment and prevention programmes. These can be administered through the education system as well as through the child-family welfare system. Children are highly dependent on adults such as parents and teachers and are therefore greatly impacted by adult (i.e. parental) behaviours. Consequently, treatment should be family- and community-based, rather than directly solely at children themselves. School-based programmes have shown some success in preventing certain maladaptive behaviours. In addition, because culture and ethnicity play an important role, social and cultural factors such as socialization norms should be considered in designing effective and culturally appropriate programmes for children of different backgrounds who display internalizing behaviours.

If internalizing disorders cannot be prevented, then effective diagnosis and treatment is essential. Use of screening tools can be helpful during a comprehensive and thorough assessment. Research studies have indicated that CBT should be utilized in the treatment of depression and anxiety. Psychopharmacology (particularly SSRIs) can be used in the treatment of anxiety, although a multidisciplinary approach may be even more effective. In conclusion, internalizing behaviour is an important issue for child and adolescent psychiatric and mental health nurses. Early identification and intervention can prevent later pathology and build resilience in at-risk children. Providing both nursing clinicians and researchers with a better understanding of these disorders is an important first step in that direction.

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Accessible summary

- Important internalizing conditions include depressive disorders, anxiety disorders, somatic complaints and teenage suicide.
- Genetic, environmental and social factors have been implicated as potential causes. Data on the prevalence of these disorders varies.
- Although cognitive-behavioural and pharmacological approaches therapies have been effective in managing symptoms, prevention programmes aimed at reducing exposure to drugs, environmental chemicals and violence/abuse are also important given the large role that environmental and social factors play.
- Apart from the significant impact internalizing behaviour can have by itself, it is also associated with other negative outcomes including other psychological disorders.
- Therefore, implementing early treatment and prevention programmes for internalizing disorders needs to be a priority in order to pre-empt these serious consequences.

Table 1

Symptoms of common depressive disorders in children (APA 1994)

Major Depressive Disorder	Dysthymia
<p>A Child Must Have At Least Five Of The Following Nine:</p> <ul style="list-style-type: none"> • Depressed Mood, Most Of The Day • Decreased Interest In Normal Activities • Significant Weight Loss/Gain (Or Increase/Decrease In Appetite) • Insomnia Or Hypersomnia • Psychomotor Agitation Or Retardation • Fatigue • Feelings Of Worthlessness Or Excessive Guilt • Reduced Ability To Concentrate • Thoughts Of Death Or Dying <p>Symptoms Must Be Experienced Over A 2-Week Period Symptoms Must Impair Day-To-Day Functioning And/Or Behaviour</p>	<p>A Child Must Have At Least Two Of The Nine Symptoms For Major Depressive Disorder Symptoms Are At A Reduced Severity Than Those Experienced At The Level Of Major Depressive Disorder Symptoms Must Be Experienced Over A 2-Year Period Symptoms Must Impair Day-To-Day Functioning And/Or Behaviour</p>

Table 2

General descriptions of common anxiety disorders (APA 1994)

Separation anxiety	<ul style="list-style-type: none"> Characterized by excessive apprehension due to separation from a familiar person or place
Social anxiety disorder	<ul style="list-style-type: none"> An excessive fear of public embarrassment or humiliation Also known as social phobia
General anxiety disorder	<ul style="list-style-type: none"> Chronic worry Not specific to one person, situation or stimulus
Post-traumatic stress disorder	<ul style="list-style-type: none"> Arises from exposure to trauma, such as abuse Includes re-experiencing the trauma (e.g., flashbacks, nightmares), avoidance of reminders of the trauma and a hyper-aroused state (e.g. 'jumpy', easily startled)
Obsessive-compulsive disorder	<ul style="list-style-type: none"> Characterized by obsessions (uncontrollable thoughts) and/or compulsions (repetitive actions or rituals)
Selective mutism	<ul style="list-style-type: none"> Occurs when a child who is normally capable of speech cannot speak in certain situations or to certain people

Table 3

Conceptual analysis of internalizing disorders

Internalizing disorder	Prevalence	Aetiology and potential causes	Interventions
Depression	<ul style="list-style-type: none"> 1% of preschoolers 2% of school-aged children 5–8% of adolescents (Birmaher <i>et al.</i> 1998, Jellinek & Snyder 1998) At prepubertal age, slightly more prevalent among males At adolescence, more prevalent among females (Twenge & Nolen-Hoeksema 2002) 	<ul style="list-style-type: none"> Genetic/familial (Tully <i>et al.</i> 2008) Environmental Prenatal marijuana exposure (Gray <i>et al.</i> 2005) Negative life events (violence, poverty, child abuse, bereavement, parental separation, loss of loved ones) (Toth & Cicchetti 1996, Maughan & McCarthy 1997, Conger <i>et al.</i> 1999, Reinherz <i>et al.</i> 1999) 	<ul style="list-style-type: none"> CBT/psychotherapy (Birmaher <i>et al.</i> 1998) SSRIs (Bridge <i>et al.</i> 2007) Prevention via mitigation of risk factors
Anxiety	<ul style="list-style-type: none"> 12–20% in the USA Greater than 10% internationally (Pine 1994) More prevalent in females 	<ul style="list-style-type: none"> Genetic/familial (Biederman <i>et al.</i> 2001b) Environment Lead exposure (Sciarillo <i>et al.</i> 1992) Negative life events (child abuse) (Stein <i>et al.</i> 1996) Behavioural inhibition (Schwartz <i>et al.</i> 1999) 	<ul style="list-style-type: none"> CBT/psychotherapy (Heldt <i>et al.</i> 2003) SSRIs (Duncan <i>et al.</i> 2005) Prevention via mitigation of risk factors
Somatic Complaints	<ul style="list-style-type: none"> 20% (Bass & Murphy 1995, Domenech <i>et al.</i> 2004) More prevalent among females 	<ul style="list-style-type: none"> Temperament Genetic/familial Parental stress (Grunau <i>et al.</i> 1994, Craig <i>et al.</i> 2002) Elevated lead levels (Sciarillo <i>et al.</i> 1992) Prenatal smoking exposure (Carter <i>et al.</i> 2008) Negative life events (child abuse) (Friedrich & Schafer 1995) 	<ul style="list-style-type: none"> CBT/psychotherapy (Sanders <i>et al.</i> 1994) Prevention via mitigation of risk factors
Suicide	<ul style="list-style-type: none"> Third leading cause of death for people ages 10–24 years in the USA (National Center for Health Statistics 2007) In USA, females more likely to attempt, but males more likely to complete 0.5/100 000 for females and 0.9/100 000 for males aged 5–14 	<ul style="list-style-type: none"> Mental and addictive disorders (Shaffer <i>et al.</i> 1996) Substance abuse (Conwell & Brent 1995) Behavioural disorders (Shaffer <i>et al.</i> 1996) Family history of mental health disorders (Brent & Perper 1995) 	<ul style="list-style-type: none"> Prevention via mitigation of risk factors

Internalizing disorder	Prevalence	Aetiology and potential causes	Interventions
	<ul style="list-style-type: none">• 12.0/100 000 for females and 14.2/100 000 for males aged 15–24 (worldwide annual rates)		

CBT, cognitive-behavioural therapy; SSRI, selective serotonin reuptake inhibitor.

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