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Abstract

The empirical finding that school-aged children could suffer clinical depression refuted the widely held assumption that this age group would be too developmentally immature to experience depressive symptoms. Currently childhood depression is a well-recognized and widely treated clinical disorder. Following more recent developmental findings emphasizing the emotional sophistication of very young children, scientific studies have demonstrated that depression can arise early in life, during the preschool period of development. Preschool depression is characterized by typical symptoms of depression such as anhedonia; changes in sleep, appetite, and activity level; and excessive guilt. Further, longitudinal continuity of preschool depression into school age has been established, suggesting that preschool depression is an early manifestation of the later childhood disorder. Based on the known efficacy of early developmental intervention in a number of domains and disorders related to the greater neuroplasticity of the brain earlier rather than later in childhood, it is important to identify depression at the earliest possible point. Early intervention strategies for preschool depression that focus on enhancing emotional development are currently being tested.

Keywords

preschool, depression, emotion development

Developmental psychologists and child mental health clinicians had long assumed that school-aged children would be too developmentally immature to experience clinical depression. Based on this, the idea that a child could become depressed was discounted in clinical mental health practice, with practitioners often advising that such symptoms would be transient and not clinically significant. However, this idea was disproven in the mid-1980s, when scientific studies became available showing that children as young as age 6 not only could demonstrate depressive symptoms but also could manifest clinical Major Depressive Disorder (MDD; Carlson & Cantwell, 1980). In contrast to the common assumption that school-aged children would not show typical symptoms of depression but were more likely to instead manifest “masked” symptoms such as somatic complaints (e.g., stomachaches) or disruptive behavior, studies showed that children more frequently displayed typical symptoms of depression such as sadness, anhedonia, and excessive guilt. Subsequently, a large body of empirical data characterizing the manifestations and course of depression in school-aged children was published (Kovacs, Feinberg, Crouse-Novak, Paulauskas, & Finkelstein, 1984; Kovacs, Feinberg, Crouse-Novak, Paulauskas, Pollock,

& Finkelstein, 1984). These studies changed the practice of child mental health, resulting in the widespread identification and treatment of depression in school-aged and adolescent children in mental health clinics worldwide.

Despite this dramatic progress in our understanding of depression in school-age children and adolescents, there has so far been little scientific exploration of depression in children younger than 6 years of age. This gap in the scientific literature is particularly notable in light of the compelling observations of depressed affect in institutionalized infants that was provided as early as the 1940s by pediatrician Renee Spitz (1946). These clinical observations of apathy, social withdrawal, and failure to brighten in institutionalized infants experiencing psychosocial deprivation suggested that signs and symptoms of depression were developmentally possible, in extreme circumstances,

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even as early as infancy. While studies of clinical depression in infants have not yet been pursued, a relatively large body of research on high-risk infants has reported alterations in emotional expression and response in the infant offspring of depressed mothers. Several studies have shown that the infants of depressed mothers expressed more negative and less positive affect in interactions with their caregivers (Field, 2000). These findings suggest that, in individuals at high risk for depression (based on genetic and/or psychosocial risk factors), emotion development may be altered as early as infancy. Building on these findings, additional studies have also reported biological changes in these high-risk infants, particularly changes in EEG patterns and elevations in stress-hormone reactivity, both of which are known to occur in adult depression. These biological findings further support the notion that unique changes in the brain may be occurring as early as infancy in children at high risk to develop depression.

Empirical Studies of Preschool Depression

Over the last 10 years, relatively large scientific studies have begun to systematically investigate whether preschool-aged children (between 3 and 6 years old) can experience clinical depression. These studies have shown that a clinical depressive syndrome distinct from other early childhood mental disorders may arise as early as the preschool period of development (Stalets & Luby, 2006).

One key advance that led to this discovery was the development of age-appropriate psychiatric interviews that can assess depressive symptoms as they would manifest in a young child as opposed to how they manifest in an adult. These so-called "age adjusted symptom translations" are key to capturing depression and other mental disorders in young children. In the past, when investigators had looked for depression in preschool children, they found many preschoolers with concerning symptoms but few who met full criteria for the disorder (Kashani, Holcomb, & Orvaschel, 1986). One methodological weakness of these early studies was that they did not utilize age-adjusted symptom translations and therefore may have missed symptoms present in preschoolers. One obvious example of an age-adjusted symptom translation is provided by anhedonia (the inability to enjoy pleasurable experiences): It would be impossible for anhedonia to manifest in a young child the way it commonly does in adults, for instance as decreased libido; in a young child, anhedonia would more likely be manifest as an inability to enjoy play activities. Another age-adjusted symptom might be that a child may not express feeling preoccupied with negative thoughts but instead might display this preoccupation in play themes. Using age-adjusted symptom manifestations, studies have now shown that preschool children do display typical symptoms of depression rather than "masked" symptoms, very similar to findings already well established in school-age children (Luby, Heffelfinger, Mrakotsky, Brown, Hessler, Wallis, et al., 2003).

Validation of Preschool Depression

Once preschool children with depression were identified, a key next step was to investigate the validity of the disorder in this age group. Investigations of the validity of mental disorders (and any health condition) are critical both to designing treatment studies and to understanding the disorders' pathophysiology and etiology. One method for establishing the validity of mental disorders has been previously outlined by Robins and Guze (1970). This method, similar to that used for validating general medical disorders, revolutionized the understanding of mental disorders in the context of the medical model. This was also instrumental in the development of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) classification system, outlining the clinical criteria for major mental disorders, that is now in widespread use. Robins and Guze underscored four key areas useful to establishing the validity of a clinical syndrome: (a) stable and specific symptoms, (b) familial transmission, (c) biological correlates, and (d) longitudinal stability. This model, which serves as one method of validation but is not applicable to all valid mental disorders, was later elaborated by Cantwell (1996) for more specific application to childhood disorders. While further studies of the validation of preschool depression at independent sites are now needed, the validation of preschool depression, based on all of these markers, has now been established at one study site. Preschool depression has been shown to have discriminant validity from other early-onset mental disorders, as well as familial transmission (Luby et al., 2002). In addition, biological markers evidenced by a pattern of alterations in stress-hormone reactivity (specifically, elevations of stress hormones) similar to those known in adult depression have also been reported (Luby, Heffelfinger, Mrakotsky, Brown, Hessler, & Spitznagel, 2003). Further, and perhaps most importantly for clinical decision making, preschool depression has now been shown to display homotypic continuity with later childhood depression (Luby, Si, Belden, Tandon, & Spitznagel, 2009). That is, depressed preschoolers are much more likely to have depression at school age than are preschoolers with other disorders and those who are healthy. These findings suggest that preschool depression is not a transient and clinically insignificant or nonspecific developmental phenomenon but an early manifestation of the same chronic and relapsing disorder known to occur in later childhood and adolescence.

Impairment in Functioning Associated With Preschool Depression

Another key issue in defining a clinically significant disorder is the question of whether the condition produces impairment in functioning. While many children may suffer from emotional and behavioral difficulties, some of these problems are transient in nature or are at such a mild level that they do not cause problems in the child's daily life. Accordingly, in order to classify emotional and behavioral symptoms as clinically significant, those symptoms must produce impairment in

functioning according to the DSM system. The requirement makes sense both at the level of the individual and at the level of society, as treatment is not necessary for symptoms that do not result in a decrement in functioning or significant internal distress. Impairment is somewhat more difficult to ascertain and measure in a preschool-aged child, as there are fewer social expectations and responsibilities during which one can measure functioning. However, social and emotional development, which are both central challenges and the main “work” of the preschooler, are parameters that mark impairment and can be measured. Further, many preschool children are in structured preschool and daycare settings, and adaptive functioning within those frameworks provides good markers of impairment. Impairment is measured in several different domains, such as social and emotional functioning as well as across contexts such as school, home, and so on. Studies have also demonstrated that depressed preschoolers display impairment in adaptive functioning across domains and contexts, further underscoring the clinical importance of the early-onset form of depression (Luby, Belden, Pautsch, Si, & Spitznagel, 2009).

A Depressed Preschooler Is Hard To Imagine

It is difficult to imagine a child as young as preschool age suffering from clinical depression. The preschool period is characterized by the transition into more independent social functioning and greater emotional competence and, along with these emerging skills, joyful play exploration. In this context, the absence of joyfulness, as well as the preoccupation with negative play themes, may be a key marker of depression in preschool children. While sadness and irritability are also observed in depressed preschoolers, the most sensitive and specific markers, or those that enable the clinician to distinguish depression from other early-onset disorders, are anhedonia, excessive guilt, changes in sleep and appetite, and decreases in activity level. Unlike depressed adults, a depressed preschooler may not appear morbidly or obviously sad or withdrawn, and may have periods of brightening or apparently normal functioning during any given day. These features, as well as an inherent resistance to imagining that a preschooler may be depressed, make it more difficult to identify the disorder in young children.

Early Identification of Depression and Brain Development

One key question for consideration is why it may be important to identify depression at such an early developmental point rather than wait until later in life to diagnose and treat the condition. At issue, and a central principle to the field of preschool mental health more globally, is that mental disorders may be more effectively treated earlier, as opposed to later, in development. This hypothesis is based on several developmental principles. The first is the phenomenon of experience-dependent neuroplasticity, or the brain’s capacity to change in response to experiences and events. While neuroplasticity occurs

throughout the life span, it has been well established that the brain is uniquely neuroplastic during the first several years of life. This early neuroplasticity is cited as one possible reason why developmental interventions are often more effective earlier in development, and the same may prove to be true for psychosocial or psychotherapeutic interventions. Another developmental phenomenon that may be related to neuroplasticity is known as “critical periods.” Critical periods are phases of development during which skills are much more easily learned. For example, there are known critical periods for language development. There is emerging evidence that critical periods of emotion development also occur in human development. These principles may underlie why some early mental health interventions have proven more effective than later treatments (Nelson, 2000). The importance of early identification of depression is based on the possibility that earlier intervention during a period of higher brain neuroplasticity may be more effective in a known chronic and relapsing disorder that is often difficult to treat later in life.

Early Intervention in Depression

Although some potentially promising early childhood prevention programs targeting depression and anxiety have been developed and pilot tested (Barrett, Farrell, Ollendick, & Dadds, 2006), so far age-appropriate treatments for early childhood depression remain virtually unexplored. One impediment to progress in this area is the lack of a robustly effective intervention for depression in older children that could be used as a model to design treatment for younger, preschool-aged children. The efficacy of cognitive behavioral therapy, an intervention with known efficacy in adolescent and adult depression, has been tested for childhood depression in numerous investigations to date. However, a large meta-analysis that combined findings from many of these studies to estimate an overall result found that the effect size of these treatments for childhood depression is quite modest (Weisz, McCarty, & Valeri, 2006). At least one study has demonstrated the efficacy of SSRI antidepressants for the treatment of childhood depression in children 6 and older; however, concerns about side effects have also heightened in recent years. Based on these issues, there has been widespread consensus that novel treatments for childhood depression are now needed.

A novel psychotherapeutic treatment for preschool depression is currently undergoing testing, with an open trial (treatment tested with no comparison condition) appearing very promising. This treatment is based on a parent–child therapy known to be effective for the treatment of early disruptive disorders, called Parent Child Interaction Therapy (PCIT). PCIT focuses on enhancing the parent–child relationship and on teaching the parent to set more nurturing and effective limits with the child. For the treatment of depression, this treatment has been modified and expanded to also focus on enhancing the young child’s emotion development. This novel treatment program is based on an emotional development model of depression that has been proposed by Luby and Belden (2006), in

which early alterations in emotional development skills and capacities are deemed key to the risk for depression. This model builds on the increasing database on normative emotional development in young children (Saarni, 2000). The treatment aims to correct such alterations very early in development, in a manner similar to the more standard developmental therapies applied routinely to young children with delays (e.g., of speech and language and motor development). A key scientific question will be whether early intervention in depression is more effective than later intervention and importantly whether gains made early are sustained later in childhood.

Conclusions

In summary, empirical data demonstrating that children as young as preschool age can experience clinical depression have now become available. Preschool depression appears to be an early manifestation of the same disorder now well known in older children and adolescents. Contrary to early theory and widely held beliefs, preschoolers are not too developmentally immature to experience the core affects of depression. Depressed preschoolers are observed to display the same basic symptoms known in adults, but in order to detect these symptoms, age-appropriate manifestations must be assessed. Depressed preschoolers may appear less joyful; be more prone to guilt; fail to enjoy activities and play; and have changes in sleep, appetite, and activity as compared to healthy peers. Preschool depression often goes undetected by parents and/or other caregivers, as the symptoms of the disorder are not disruptive. Validation for preschool depression has also been provided, based on the criteria outlined by Robins and Guze for the validation of psychiatric disorders. These findings underscore the importance of early identification of depression for earlier and potentially more effective intervention in known chronic and relapsing depression. Future studies should now focus on the relative efficacy of early compared to later intervention and whether early changes observed are sustained over time.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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Recommended Reading

Carlson, G.A., & Cantwell, D.P. (1980). (See References). A landmark paper demonstrating that school age children manifest typical symptoms of depression.

Nelson, C.A. (Ed.). (2000). (See References). Reviews early intervention and why it may be uniquely effective based on brain development.

Stalets, M.M., & Luby, J.L. (2006). (See References). Reviews the empirical and clinical data on preschool depression.

References

- Barrett, P.M., Farrell, L.J., Ollendick, T.H., & Dadds, M. (2006). Long-term outcomes of an Australian universal prevention trial of anxiety and depression symptoms in children and youth: An evaluation of the friends program. *Journal of Clinical Child & Adolescent Psychology, 35*, 403–411.
- Cantwell, D.P. (1996). Classification of child and adolescent psychopathology. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 37*, 3–12.
- Carlson, G.A., & Cantwell, D.P. (1980). Unmasking masked depression from childhood through adulthood: Analysis of three studies. *American Journal of Psychiatry, 145*, 1222–1225.
- Field, T.M. (2000). Infants of depressed mothers. In S.L. Johnson, A.M. Hayes, T.M. Field, N. Schneiderman, and P.M. McCabe (Eds.), *Stress, coping, and depression* (pp. 3–22). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Kashani, J.H., Holcomb, W.R., & Orvaschel, H. (1986). Depression and depressive symptoms in preschool children from the general population. *American Journal of Psychiatry, 143*, 1138–1143.
- Kovacs, M., Feinberg, T.L., Crouse-Novak, M.A., Paulauskas, S.L., & Finkelstein, R. (1984). Depressive disorders in childhood. I. A longitudinal prospective study of characteristics and recovery. *Archives of General Psychiatry, 41*, 229–237.
- Kovacs, M., Feinberg, T.L., Crouse-Novak, M., Paulauskas, S.L., Pollock, M., & Finkelstein, R. (1984). Depressive disorders in childhood. II. A longitudinal study of the risk for a subsequent major depression. *Archives of General Psychiatry, 41*, 643–649.
- Luby, J.L., & Belden, A.C. (2006). Mood disorders: Phenomenology and a developmental emotion reactivity model. In J.L. Luby (Ed.), *Handbook of preschool mental health: Development, disorders, and treatment* (pp. 209–230). New York: Guilford Press.
- Luby, J.L., Belden, A.C., Pautsch, J., Si, X., & Spitznagel, E. (2009). The clinical significance of preschool depression: Impairment in functioning and clinical markers of the disorder. *Journal of Affective Disorders, 112*, 111–119.
- Luby, J.L., Heffelfinger, A., Mrakotsky, C., Brown, K., Hessler, M., & Spitznagel, E. (2003). Alterations in stress cortisol reactivity in depressed preschoolers relative to psychiatric and no-disorder comparison groups. *Archives of General Psychiatry, 60*, 1248–1255.
- Luby, J.L., Heffelfinger, A.K., Mrakotsky, C., Brown, K.M., Hessler, M.J., Wallis, J.M., et al. (2003). The clinical picture of depression in preschool children. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*, 340–348.
- Luby, J.L., Heffelfinger, A., Mrakotsky, C., Hessler, M., Brown, K., & Hildebrand, T. (2002). Preschool major depressive disorder: preliminary validation for developmentally modified DSM-IV criteria. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 928–937.
- Luby, J.L., Si, X., Belden, A., Tandon, M., & Spitznagel, E. (2009). Preschool depression: Homotypic continuity and course over 24 months. *Archives of General Psychiatry, 66*, 897–905.

- Nelson, C.A. (2000). The neurobiological bases of early intervention. In J.P. Shonkoff and S.J. Meisels (Eds.), *Handbook of early childhood intervention* (2nd ed., pp. 204–227). Cambridge, MA: Cambridge University Press.
- Robins, E., & Guze, S.B. (1970). Establishment of diagnostic validity in psychiatric illness: Its application to schizophrenia. *American Journal of Psychiatry*, *126*, 983–987.
- Saarni, C. (2000). Emotional competence: A developmental perspective. In R. Bar-On and J.D.A. Parker (Eds.), *The handbook of emotional intelligence* (pp. 68–91). San Francisco: Jossey-Bass.
- Spitz, R. (1946). Anaclitic depression: An inquiry into the genesis of psychiatric conditions in early childhood. *Psychoanalytic Study of the Child*, *1*, 47–53.
- Stalets, M.M., & Luby, J.L. (2006). Preschool depression. *Child and Adolescent Psychiatric Clinics of North America*, *15*, 899–917, viii–ix.
- Weisz, J., McCarty, C., & Valeri, S. (2006). Effects of psychotherapy for depression in children and adolescents: A meta-analysis. *Psychological Bulletin*, *132*, 132–149.