Crying Behaviour and its Impact on Psychosocial Child Development

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Topic
Crying behaviour

Introduction
All infants cry and all cry for a reason. Indeed, the attributions applied to early infant crying range from pain to anger to boredom.[1] In the first months of life, crying is particularly salient as infants have relatively few effective methods of communicating their needs and states. Developmentally, crying in early infancy is distinguished by its temporal qualities. Several studies have demonstrated that infants typically show an increase in their crying across the first three months, with a peak at around six to eight weeks of age.[2,3] Importantly, crying decreases significantly around three to four months of age, coinciding with important developmental changes in affect, non-negative vocalizations and motor behaviour. As crying is considered a normal communicative signal,[4] developmental outcomes for children who cry within the normal range are not of concern. However, some infants exceed the typical pattern of crying, such as those who cry long, hard and inconsolably during the first three months or those who fuss frequently beyond three to four months of age. It is these infants who are often believed to be "at risk" for developmental problems.

Subject
Unexplained, excessive or persistent crying in the first three months of life that occurs in an otherwise healthy infant is labelled "infant colic."[5,6] Colic can be found in approximately 10% of the population. First-born infants and those born to middle-class Caucasian families are more likely to be reported as colicky. The causes of colic are quite diverse and can be categorized as residing either in the infant or the parent-infant dyad. Only 5 to 10% of infants who cry excessively, however, are believed to suffer from some organic disease.[7] There is a growing consensus among researchers that infant colic is a developmental phenomenon involving individual differences in reactivity and regulatory function.[8]

Infants who fuss and cry for shorter periods of time, but whose fussiness persists throughout infancy, are said to have a difficult temperament. Although difficult temperament was originally defined as involving extremes in several characteristics, current conceptualizations focus on frequent fussing/crying and difficulty soothing.

Temperament is believed to be constitutionally-based and heritable.[9] Although temperament can be modified, it is considerably stable across the life span.[10,11,12] And, because difficult temperament represents an extreme case, it has been found to demonstrate significant continuity.[13]

While at first infant colic and difficult temperament appear strikingly similar, they differ in the quality and quantity of the crying, as well as in their developmental course. Colic is characterized by more intense crying, whereas frequent fussing is the predominant feature of difficult temperament. And while colic ends by the fourth month of life, difficult temperament is moderately stable throughout infancy and beyond.

Problem

The intense crying and inconsolability of an excessively crying or fussy infant creates a host of parental reactions and concerns about the behavioural development of the infant. Because temperament is relatively stable, it is proposed to have implications for more negative, persistent outcomes than the transitory condition of colic. Nevertheless, this does not preclude colic's effect on the family environment nor its long-term outcome.

Key Research Question

Whether infants cry intensely for a few months or fuss frequently for the first year of life, a systems approach to development would suggest that the impact of extremes in crying on the infants' immediate environment may have negative consequences for the dynamics of the parent-child relationship, which in turn would have implications for the child's psychosocial development. Thus, researchers have asked: Is the effect of early infant crying on later development direct, or is it indirect through interactions with the child's early social partners?

Recent Research

Longitudinal observations and parent ratings show that infants with colic may continue to be more negatively reactive shortly after the colic has resolved;[14-16] however, long-term assessments of temperament have revealed few differences.[14-17] Interestingly, this early difference in reactivity may be due to a delay in the development of regulatory strategies.[16] In one study, mothers reported more temper tantrums in their three-year-olds who had had colic, although there were no differences in reported behaviour problems between the colic and non-colic groups.[18] Finally, several studies have also examined mental development in infants with colic and likewise have demonstrated no effect of colic.[14,15,18] In one study, although differences on the Bayley MDI were revealed at six months, both groups were within the normal range, and no differences were found at 12 months of age.[19]

As might be expected, the impact of infant colic is felt more by the parents, particularly mothers who have the burden of caring for the excessively crying child. Mothers reported more stress and greater separation anxiety,[20] while also manifesting symptoms of psychological distress[21] and low self-efficacy.[22,23] The few studies to date that have examined the consequences of having a colicky child indicate that there are no negative outcomes for parent behaviour and, importantly, for the parent-child relationship. In two

separate studies,[15,24] mothers of colic and non-colic infants were observed to be alike in maternal sensitivity shortly after the colic resolved. These findings may explain why no long-term effects of infant colic on the parent-child relationship have been found. Infants who developed colic were no more likely to be insecurely attached than infants who did not have colic.[22]

As with the research on the outcomes of infants with colic, findings with regard to difficult temperament suggest that it influences more than the infant. The psychosocial outcome receiving the most attention from researchers is problem behaviour, with most studies finding perceived difficultness in infancy to be a predictor for preschool problem behaviour[25-27] and adolescent adjustment.[28] Specifically, fussy, hard-to-soothe infants were found to be at increased risk for aggressive behaviours, attention difficulties and thought problems in the clinical range according to parental and/or teacher report. Two things are important to note about these findings: (1) not every difficult infant expressed behavioural problems later in life; and (2) both temperament and problem behaviours were, in most studies, rated by parents, raising the issue of respondent bias.

Researchers have tested the "goodness of fit model,"[29] which proposes that difficult temperament would only result in negative outcomes when the environment that sustains the infant is deficient (e.g. parental stress, insensitivity). This may be through the effects of difficult temperament on parent behaviour. Mothers of difficult infants have been found to be less responsive and to exhibit lower levels of positive maternal behaviour.[30, 31] In one study, mothers of irritable infants displayed less visual contact, effective stimulation, physical contact and soothing behaviours than mothers of non-irritable infants.[32] These data suggest that the impact of caring for a fussy, hard-to-soothe infant stresses the parenting system, which in turn may affect child developmental outcomes. Indeed, several studies have shown the correlation between infant difficult temperament and later psychosocial outcome such as attachment to be mediated or moderated by maternal personality or behaviour.[33,34] Further support is found in studies indicating that interventions that alter parental attitudes and/or behaviours buffer the negative effects of difficult temperament.[35,36]

Conclusions and Implications

Aside from clear and diagnosable medical conditions, parents' primary complaint to clinicians during the infancy period is that of excessive fussing and crying, generally that which cannot be soothed or tolerated. There are, however, important distinctions to be made about crying in infancy: (a) Crying in early infancy increases over the first two months of life and then decreases thereafter. Thus, excessive crying may be mis-attributed if the developmental course of crying is not understood; (b) Crying in excess of the normative rate during the first three months of life is categorized as colic. Colic is a transient condition that ends around the third to fourth month of an infant's life and appears to have few consequences for the child; (c) Crying and/or fussing frequently is a characteristic of difficult temperament but can be distinguished from colic in several ways; colic is not a stable phenomenon and it manifests itself as intense crying bouts of long duration, whereas difficult temperament is stable and is characterized by frequent bouts of fussiness. Finally, because of the persistence of difficult temperament more

negative outcomes are likely, particularly if the parental environment is non-supportive. It appears that difficult temperament may tax parents, leading to stressful interactions and negative perceptions. Clinicians receiving complaints of excessive crying and fussing in infants should be aware of these distinctions and use appropriate measures to validate parental assessments.

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