Factors Impacting the Child with Behavioral Inhibition

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Abstract

Various factors influence the developmental course of the behaviorally inhibited child. These factors include reciprocating, contextual factors, such as the child's own traits, the environment, the maternal characteristics, and the environment. Behaviorally inhibited children show physiological and behavioral signs of fear and anxiety when introduced to unfamiliar persons and situations. Their own behavior seems to elicit negative reactions from others. They often go on to develop internalizing problems, such as depression, anxiety and low self-esteem. Mothers of behaviorally inhibited children typically exhibit anxious, overprotective and critical child rearing. They often have histories of depression, anxiety and insecure attachment relationships. These maternal characteristics exacerbate the child's negativity, anxiety, and sense of powerlessness over his own environment. Environmental stressors, including an absence of social support and poverty can affect the child directly and/or indirectly. This paper discusses the variables that impact the behaviorally inhibited child and provides some suggestions for remediation.

Factors Impacting the Child with Behavioral Inhibition

The temperamental characteristic of behavioral inhibition has been a subject of great interest to researchers in recent years. Infants who show physiological signs of extreme arousability and negativity are often later classified as behaviorally inhibited in later years (Rothbart, 2004). These children are usually very shy and withdrawn and may later suffer from anxiety and depression (Kimberly, 2010). Behavioral inhibition and anxiety are overlapping, but not identical constructs (Fox, 2001). In this paper, the child's anxiety will be viewed as both a risk factor and a descriptor of behavioral inhibition. Other risk factors that influence the behaviorally inhibited child can be viewed in terms of Belsky's ecological model of parenting.

This model asserts that there are three interacting factors which impact parenting: the child, the environment and the characteristics of the mother (Belsky, 1984). A particular type of child elicits a certain type of care (Rubin, 1989). The child's own perceptions of those people and situations in his environment seem more important than the actual environment. The environment is a backdrop containing both stressors and buffers. Stressors can also be bidirectional; a distressed person may be impacted by stressors and may cause of stress, as well (Liu, 2010). Lastly, the most important factor is the sum total of all maternal characteristics (van Bakel, 2010). This paper will discuss the behaviorally inhibited child's risk/protective factors, including the child's own traits, the environment, and the mother's characteristics.

The concept of temperament has evolved since its inception. Many of today's researchers study organized physiological and behavioral systems rather than individual traits to define temperament. This paper will use Mary Rothbart's definition of temperament, which describes temperament as "individual differences in reactivity—that is, the propensity towards

emotional attention and motor responses to stimulation – and in self-regulation, that is, the propensity towards behaviors such as motor approach/avoidance and attentional orienting that act to increase, maintain, or decrease reactivity" (Rothbart, 1988, p. 1241). Rothbart's model assumes that psychobiological forces impact temperamental differences. In Rothbart's model, there are three main dimensions to temperament: negative affect, surgency (social orientation), and effortful control. Negative affect and surgency are classified as part of the reactivity processes. Reactivity includes "emotional reactivity [frequency and intensity of positive and negative emotions], attentional, and motoric responses to stimuli" (Calkins, 1992, p.1458). These processes exhibit themselves as physiological and/or behavioral arousability. The regulatory aspects of behavior are associated with emotion regulation. Regulation includes attentional control, attentional shifting, and the abilities to activate or inhibit behavior as needed (Eisenberg, 1998).

The concept of behavioral inhibition (BI) has also taken on a variety of definitions. Peers of behaviorally inhibited children describe their inhibited classmates as fearful and anxious (Fox, et al, 2001). Professionals have used descriptors such as shy vs. social, cautious vs. bold, and sensitive vs. adaptable (Kagan, 1984). Inhibition suggests an approach-avoidance conflict, as the BI child may *want* to approach, but this desire may be inhibited. This motivational state is differentiated from the regulated shyness valued in Confucian cultures such as Mainland China (Xu, 2009). Regulated shyness implies emotional control and an ability to act in a reserved manner to facilitate group harmony (Xu, 2009).

This paper will adopt Jerome Kagan's definition of behavioral inhibition, which describes behaviorally inhibited (BI) children as "consistently shy and affectively restrained" (Kagan, 1988, p. 668). For the purposes of this paper, this will imply a fear of being negatively evaluated by others (Eisenberg, 1998). Behavioral inhibition has been measured by assessing physiological processes, including heart patterns, cortisol levels, and amygdale activity on fMRIs. Methods of psychological measurement include child, teacher and parent questionnaires and/or home and/or laboratory observations. In Mary Rothbart's initial studies she assesses the behavioral inhibition of infants at various stages of infancy by measuring how much time it took the child to respond to novel toys. In her initial research, she found that an infant who was reticent to respond to the unfamiliar at 6 months would also be reticent to respond at 12 months. She also discovered that the heart rates of such infants were higher than those of uninhibited infants (Rothbart, 1994). However, it has been noted that in later years, the tendency to remain classified as either uninhibited or inhibited occurs most often when children are on extreme ends of the spectrum (Arcus, 2001).

Since BI has a physiological basis, it seems logical that this characteristic would extend into later years. However, since physiology also changes in response to maturation and experience, this is not always the case (Rothbart, 1997). Garcia found that BI children at twenty-one months did not necessarily continue to exhibit behavioral inhibition later on. He also noted that it is more common for behaviorally inhibited children to become uninhibited than the other way around (Garcia, 1984). In general, there is more consistency in behavioral inhibition from

the toddler years to age five (Eisenberg, 1998). As children move into the middle childhood phase, their ability to regulate emotions and use display rules increases. Another confounding variable is that the differences in BI children's heart rates are subtler as they age (Arcus, 2002). Thus there is less information on interindividual consistency in the school years (Eisenberg, 1998).

Child Characteristics

Behaviorally, inhibited children may show a latency to approach the unfamiliar, lack of speech, laughter, eye contact, negative emotionality and a reticence to leave the caregiver to explore. They usually exhibit avoidant coping styles (Eisenberg, 1998) and have attentional biases for threat (De Pauw, 2010). They also exhibit internalizing problems, low self- esteem, and lowered academic performance and poor social skills. In the presence of an unfamiliar peer, the BI child might regress to less mature forms of play (Kimberly, 2010).

From a physiological standpoint, behaviorally inhibited infants are "unresponsive, [with] motor immaturity, and problems with physiological regulation" (Crockenberg, 1981,p. 54). Kagan and Sniderman also found high arousability in infants later classified as behaviorally inhibited. In their seminal study, Kagan and Sniderman followed a group of infants four months old into their second year and classified 20% of these children as inhibited and 40% as uninhibited. Those in the inhibited group were found to have high and stable heart rates and high activity levels (Kagan and Sniderman, 1991). Other researchers also correlated BI with high activity levels, but only when accompanied by negative emotionality (Calkins, 1996; Putnam, 2005; Eisenberg, 1998). Calkins noted that active infants with negative affect showed behavioral inhibition at nine months and had inhibited behavior at fourteen months (Calkins, 1996).

Anxiety is another key feature of the behaviorally inhibited child. Anxiety disorders in children are common, affecting about 5-17% of children (Cosi, 2001; Otto, 2007). Behavioral inhibition has long been implicated in the development of internalizing problems (Marysko, 2009; Bishop, 2003). These children often experience anxiety- related somatic symptoms, such as severe constipation, stomach disorders, sleeplessness, enuresis, allergies and asthma (Pauscharat, 2001). Anxiety disorders have been associated with attentional biases. These attentional biases may be over-ridden by the BI child's high degree of effortful control (De Pauw, 2010). Attentional factors include hypervigilance to threats in the environment, difficulty in disengaging, and purposely focusing attention in locations far from locations of potential threats (Cisler, 2010). Attentional factors can be both protective and risk factors for the BI child.

Negativity and depression have been associated with behavioral inhibition (Calkins, 1996; Putnam, 2005; Martin, et al, 1994). Even as infants, these children were found to be irritable in nature (Kagan, 1991). These traits would be distressful to the child and would be tend to prevent him from gaining social approval from peers and others. In fact, such children have been known to experience peer neglect, ostracism and rejection (Molfese, 2010). Social problems in childhood have also been linked with academic difficulties (Xu, 2009). Children

who are involved in extracurricular school activities perform better academically. The BI child would probably not engage in anything related to school any more than necessary.

Environment

An environment fraught with stress can be a breeding ground for behavioral inhibition. There is a reciprocal relationship between stress and depression, as stress can cause and "depressogenic vulnerabilities increase susceptibility to stress" (Liu, 2010, p. 585). Most stressors are related to interpersonal conflicts (Liu, 2010). The bidirectional nature of stress and depression can be seen in the context of the family, an entity that by its very nature is interpersonal. As such, there are many opportunities for conflict in a family. Marital discord in the home is particularly devastating for a child and puts him at risk for psychiatric disorders (Rutter, 1979). Conversely, marital support and satisfaction promote effective parenting (Rutter, 1979). Marital discord is positively correlated with to poverty and inner-city living conditions (Rutter, 1979). In general, poverty has long been associated with family and personal dissatisfaction. However, a change for the better in family circumstances has been known to ameliorate psychiatric disorders in children.

The amount of social support received by the mother also impacts the outcome for the child-mother dyad (Rutter, 1979). The ability to garner social support is related to ego resilience, which has found to be low in mothers of BI children (van Bakel, 2002). Yet mothers with extreme stressors or a child with an irritable temperament can benefit from social support. Emotional support from a spouse has been shown to be the most important feature in facilitating maternal coping (Crockenberg, 1981). Frequent contact with the mother's physician is also important. Other support networks can include grandparents, neighbors, or older siblings. Such extended members can even *directly* influence the child, providing sensitive care giving and a sense of security. Interestingly, studies have shown that these attachments can have a positive effect on the *primary parental attachment system*, themselves. The availability of an alternative, responsive caretaker enables the child to remain emotionally uninvolved with an unresponsive mother, so that her unresponsiveness does not greatly impact everyday functioning (Crockenberg, 1981).

Maternal Characteristics

Maternal characteristics are the most important influence on the behaviorally inhibited child (Belsky, 1984). Although research indicates that fathers play an important role in child- rearing, for the scope of this paper, only maternal characteristics will be discussed. In the EMBU study (a Swedish acronym for My Memories for Upbringing), parent-rearing behaviors associated with anxiety were as follows: anxious rearing and rejection, over protectiveness, and lack of warmth (Muris, 2002). Research has also linked behavioral inhibition with maternal dysphoria and rigidity and intrusive, overprotectiveness (Weiss, 2002).

Over Protectiveness

Overprotective and intrusive parenting is a hallmark of mothers of behaviorally inhibited children. Maternal control is elicited by children with high levels of anxiety (Eley, 2010). This care is overbearing, and less granting of psychological autonomy (Muris, 2002). Behaviorally inhibited children are usually raised by parents who are especially anxious about letting them explore (Rubin, 1997). When a person is uncertain about his ability to control life's outcomes, he becomes anxious (Chopita, 1998). Anxiety precludes a child from feeling self-efficacy and may play a central role in the development of negative emotions (Chopita, 1998). In contrast, parents who use milder disciplinary methods and a minimal use of power generally produce compliance and an internalization of the parents' moral values. (Kochanska, 1997). Thus, the intrusive parent puts the child at risk for failing to adequately develop moral standards.

Over-protectiveness and intrusive parenting styles are particularly common in mothers who are *most accurate* in their perceptions of their children's distress to novelty (Kiel, 2009). These mothers describe themselves as feeling distressed by their child's shy, withdrawn behavior. They often try to steer their child's behavior away from his behavioral style (Kiel, 2009). However, this only serves to exacerbate the problem, as being overly protected takes control of the environment away from the child. This causes the child to become even more anxious and fearful (Chopita, 1998).

Depression and Anxiety

Maternal depression and anxiety are prevalent in mothers of BI children (Biederman, 1990). Panic disorders and agoraphobia are particularly common in these mothers (Biederman, 1990). Maternal depression and anxiety have also been linked with insecure attachments in the mother- child dyad (Manglesdorf, 2001). Retrospective research shows that these anxious mothers are more likely to describe *their* attachments with *their* caregivers during childhood as insecure (Myhr, 2004). This is consistent with the literature in family therapy, which suggests intergenerational repetition of themes. Also Erikson's theory asserts that the trust a child develops initially through hours of sensitive parental care forms the basis for later successful relationships. One could speculate that the mother without a healthy internal working model of how close relationships should function would probably not be likely to form a secure attachment relationship with *her* child (Kimberly, 2010).

BI children are very attuned to their mothers' moods and use them to interpret the environment (Izard, 1984). In accordance with construct of mood contagion, a child perceiving his parent's anxiety will also become anxious. From a social learning standpoint, his mother is modeling a dysfunctional way of handling emotions. Assisting a child with emotional regulation is one of the most important tasks of a parent (Leerkes, Blankson, Anpenard, O'Brien, 2009). Vygotsky asserts that a child learns from a mentor who teaches by scaffolding (Vygotsky, 1978). A parent should constantly help a child

with affect regulation such that one day he will be able to do it on his own. The parent of the BI child not only fails to teach affect regulation, but actually models poor problem-solving strategies and ineffective coping mechanisms. So too, isolating behaviors often accompany depression. This implies that this mother probably would not afford her child opportunities to engage in activities outside of the family setting, wherein she *could* teach him these skills. She might not even allow him his *own* opportunities to be exposed to social situations.

Anxiety and depression are often linked with an inability to concentrate. Inability to focus on things, including child- rearing could lead to child neglect and could be interpreted by the child as lack of concern or even disdain. The child may feel constantly discounted because his mother is forgetting things about him. Maternal forgetfulnes also leads to inefficiency in planning and executing activities necessary for successful home management and child rearing. It could even put the child's physical welfare in jeopardy.

Lack of Warmth

Mothers of BI children have been described as "hostile and reactive" (Partridge, 2000, p. 73) and showing less respect for the child's views (Muris, 2002). BI children often find themselves the targets of parental criticism and restriction. This parenting has been associated with anxiety in children (Kimberly, 2010). Such parents have unrealistic expectations for their children and more favorable attitudes towards physical punishment. These parents are at risk for being abusive (Partridge, 2007).

Maternal criticism and rejection have played a significant role in the development of childhood anxiety. Lack of warmth has often been linked with insecure attachments (Manglesdorf, 1990; Ainsworth, 1963) and internalizing problems (Rothbart, 1984). The child whose mother is not warm and supportive may feel he is not worthy of love and support. This may lead him to believe that even primary relationships cannot provide the sense of safety and security that seem to evade him (Rothbart, 1984). Conversely, maternal expressiveness of warmth is related to a child's social competence, emotional understanding, prosocial behavior, and self-esteem and coping. It is also related to attachment security (Bowlby, 1982).

Inflexibility

Maternal rigidity has been associated in the literature with BI children. These mothers are " less tolerant of differences of opinion [and] demonstrated less respect for the child's views" (Muris, 2002, p. 265). They had "more judgmental and dismissive reactions", less complexity of thought, and lower educational achievement than mothers of uninhibited children. (Muris, 2002). Presumably, a mother who is goal- oriented and able to delay gratification enough to become educated would also possess ego resilience. Ego resilience has been associated with the ability to find effective solutions to challenging situations. The mother of the BI child seems to lack this quality (van Bakel, 2010). Her

style appears to be constrained and lacking in openness.

Conclusion

In conclusion, the behaviorally inhibited child faces many challenges unknown to less timid children. Common, everyday occurrences that uninhibited children may not even notice are perceived as threatening to this child. Adding to his sense of threat is a feeling of lack of control over his own destiny. He may be totally unaware of his dilemma, except to the extent that he knows he is in dire psychic pain and does not know why. He may experience distress from a confluence of factors, but perhaps the greatest source of anguish comes from his difficult interpersonal relationships. However, there are still reasons to be optimistic.

First of all, with brain maturation and experience, the child may learn emotional regulation skills and outgrow behavioral inhibition. Even though the presence of negativity may interfere with effortful attention (Kochanska, 1998), attentional control can lessen negativity (Eisenberg, 1993) and reactivity to aversive stimuli. Nonetheless, even when attentional control occurs with negativity, there may still be some positive outcomes. Belsky found that the combination of negativity and attentional control causes increased learning in a BI child. This child usually stays in very close proximity to his caregiver. Hence, he is afforded learning opportunities. Also, since he is hypervigilant and constantly scanning for threats in his environment, he learns more about the world around him (Belsky, Friedman, and Hsieh, 2001). Consistent with Bandura's theory of social learning, the acquisition of any mastery skill including learning fosters self-efficacy (Bandura, 1978). This can help the child gain the sense of control that has previously been so tenuous. Also, having this keen learning ability should help with self-esteem issues. The BI child's newly acquired self confidence may even propel him to engage with unfamiliar people.

Secondly, the current focus on psychobiolical processes has made more experts in the social science field more aware of the importance of brain plasticity in early years and the concomitant importance of early intervention. Family therapy is an effective intervention for the BI child and his family. The family functions as a system, so even though the BI child is the identified patient, the whole family must recognize the part they play in facilitating behavioral inhibition. Parents can be educated about how their cognitive distortions cause them to misinterpret the child's behaviors. They can also be taught the importance of providing a warmer, less restrictive environment and to scaffold their child in his learning of social skills and emotion regulation. Siblings also play an important role in ameliorating loneliness and providing experiential social skills training. The BI child himself could be made aware of his cognitive distortions and self-defeating behaviors and be taught new ways of behaving.

Thirdly, educators appear to be focusing more on creating a safe environment at school. Programs designed to get the whole school and the parents involved in eradicating bullying have been implemented successfully in some schools. Such programs would be useful for the BI child, who may find himself in the victim role. Schools could also provide cooperative learning

activities, particularly activities in which students could interact on a one-on-one basis. This would be far less threatening than group work for a BI child. Teacher training to increase awareness of these "invisible children" is also needed. The children with extenalizing problems seem to be the focus of attention for teachers. They *are* an immediate threat to classroom management. However, schools should seek to include *all* children, even if their disability is not readily apparent.

More research about behavioral inhibition is still needed, particularly with regard to school age children and the role of fathers in child rearing. Schools need to continue to focus on the psychological aspects of learning. Funding for community-based counseling needs to be increased, so that parents of these children can participate in family therapy. However, the ultimate responsibility lies with the parents of BI children. Hopefully, in the future such remediations will be accomplished and the burden of the behaviorally inhibited child will be lightened.

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