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Article 88

Is Touch Beyond Infancy Important for Children's Mental Health?

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Numerous studies from various fields have established that touch is vital to healthy adjustment during infancy and also during old age. Physiological research emphasizes the importance of touch to physical and psychological systems (Field, 2003). Attachment research emphasizes the importance of touch in the sensitive responsiveness and availability characteristic of the secure attachment style (Kassow & Dunst, 2004). Behavioral research emphasize the importance of contingent touch in reinforcement of infant behavior (Gewirtz & Pelaez- Nogueras, 2000). Recently, attention has been given to research examining touch in medical situations for elderly populations.

Theoretically, touch should remain important throughout the lifespan, but most touch research has focused on infants or elders (Field, 2003). It stands to reason that sensitive, contingent physical touch between parent and child would be associated with positive adjustment beyond infancy, such as in middle childhood. However, this relation has been seldom investigated. This article describes a study we conducted to add to current knowledge by focusing on middle childhood, investigating the links between parents' touch of their children during interaction and their children's psychological adjustment. It is our hope that our findings, which highlight the importance that parental touch has for children's well-being, will be beneficial for parents and professionals alike.

Importance of Touch During Infancy

We have all heard stories about the terrible outcomes experienced by children deprived of physical touch (e.g., Pines, 1997). Yet, many parents today brush off the importance of touch as relatively insignificant beyond infancy, despite the fact that research suggests that humans are "hardwired" to crave touch and actually require it for normal physical, social, and emotional development to occur (Field, 2001, 2003). Many

systems in the brain are activated by touch, without which optimal physiological development is not possible (Field, 2001, 2003, 2007). Moreover, positive, nurturing touch triggers the release of the “bonding hormone,” Oxytocin, which increases feelings of closeness and facilitates parent-child attachment and social-emotional adjustment (Field, 2003, 2007). Thus, touch serves an important role for the developing infant.

While sensitive, contingent touch is vital to positive adjustment, non-contingent touch given in an insensitive manner can be detrimental to adjustment. When parents touch their infant in a manner that is experienced by the baby as intrusive, over-stimulating or insensitive to his or her needs and wants, the infant is more likely to suffer from poor adjustment (Field, 2003, 2007; Shaw, Owens, Vondra, Keenan, & Winslow, 1996). In fact, research suggests that young children who do not receive enough positive physical touch from their parents during early development seek out physical contact through aggression during childhood and later in life (Field, 2001). Providing children with the nurturing touch they need may decrease the amount of aggression expressed.

Is Touch Important Beyond Infancy?

There is ample practical and empirical support for the importance of touch during infancy, but based on our research, parents tend to touch their children far less as they age (Kram, Whiddon, & Montgomery, 2007). Hugs become less frequent; back rubs to help regulate sad feelings become a thing of the past. Parents may believe that physical affection is less important as children age, or may consciously try to avoid “babying” their children by treating them as they did as infants. Also, children may demand less physical attention as they show more independence.

Is touch as critical during other life stages as it is during infancy? Routasalo and Isola (1996) posit that touch is an integral part of human behavior from birth until death (see also Field, 2003), however, few studies can be found that examine the effects of touch during childhood beyond infancy, such as during middle childhood. What about other age groups?

Touch in Old Age

Mention of a grandmother often conjures up images of warm hugs and sitting on her lap for a story. Aging seems to bring out a soft side of many people. Grandparents are often quite comfortable giving and receiving physical touch. Interestingly, an entire research agenda strives to elucidate the importance of touch for the elderly (Butts, 2001). There is empirical support advocating for the importance of touch for the elderly in nursing care and its positive effects on the overall well-being, or adjustment, of the elder (Bush, 2001). So touch really is important beyond infancy, at least during old age.

Missing Pieces: Does Touch Matter Between Infancy and Old Age?

Touch is important during infancy, and also for the elderly, but what about in between? Despite the fact that we lack empirical testing of this idea, it makes practical and theoretical sense that one’s ability or lack thereof to receive and give touch would have important implications beyond infancy. Touch affects both tactile and pressure receptors and stimulates the central nervous system into relaxing (Field, 2003), which is

in line with the fact that many individuals pay top dollar for massaging touch. The physiological impact of touch rests on mechanisms that are present across the lifespan, suggesting its continuous importance.

But does touch actually take place across the lifespan? Presumably due to our individualistic society's valuing of independence and self-reliance, U.S. children are the least touched in the world (Heller, 1997). Caregivers tend to be less affectionate and are more likely to use it as a means of control over their children (Clay, 1966). Perhaps because of this and related reasons, children in the U.S. rate much higher on measures of insecure attachment and problem behavior compared to other countries where children experience more sensitive physical contact.. Thus, the need for more research and intervention on touch across the lifespan are of vital importance. This study takes a step in the right direction by examining the role of touch for an age group beyond infancy.

The Impact of Touch During Middle Childhood: The Current Study

As noted above, research has shown the importance of contingent, sensitive touch to the healthy development of infants (Muir, 2002). Also, as noted, very few studies have explored psychological outcomes that are related to touch in middle childhood. Specifically, no studies have examined the significance of touch during parent-child interaction, and whether or not it is associated with psychological outcomes for children. Thus, the purpose of this study was to examine the relationship between appropriate physical touch and subsequent child psychological adjustment during middle childhood. Building upon previous work that established the numerous beneficial results of touch for infants and elders, we expected that children who experienced more positive or functional physical touch during parent-child play would have fewer psychological adjustment problems.

Methodology

To test the aims of this study, observational ratings were used in addition to self-report and parent-report measures. Observational ratings of parent-child interaction were coded using a computer software package (The Noldus Observer XT 7.0) by viewing samples of parent-child interaction that were video-taped through a one-way mirror. Additional data were obtained through measures completed by parents.

Participants

The data were obtained as part of an ongoing observational study, "The Child Development and Family Enrichment Project," which was conducted in the Youth and Family Development (YFDP) clinic Florida International University. Parents contacted the YFDP for developmental assessments or with concerns they had about their child's development or behavior. A total of 54 mother/school-aged child dyads were included in the analyses reported in this study. Child age ranged from 4 to 12 with a mean of 8.12 years. The sample included 29 males (54%) and 25 females (46%). Forty families (74%) of the sample were of Hispanic origin, twelve families (22%) were non-Hispanic White, one (2%) was African American, and one (2%) was Jamaican. Parent participants

included 54 mothers, whose mean age was 36.8 years. The majority of the mothers ($n = 40$) were married (75%), 8 were divorced, 2 were separated, and 3 were single .

Assessment Procedures

Parents and children received a Developmental Assessment during their first two visits to the YFDP lab, which included the assessments and observations used in this study. During the first visit, parents gave informed consent for the research study, which included consent for videotaping. Next, the parent-child dyad were administered the Play Tasks Assessment, an observational assessment that was video-recorded through a one-way mirror (see Play Task Description in Methods section). After the Play Task Assessment, the child stayed in the room for the remainder of the session with one of the therapists and was administered age-appropriate assessments that were part of the YFDP routine battery and appropriate to the particular developmental concerns. The parent also completed a series of self-report questionnaires.

Measures

Background questionnaire. Parent participants were asked to report demographics such as age, gender, and ethnicity for themselves and the target child,

The Child Behavior Checklist. The Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1987; Achenbach & Edelbrock, 1991) was used to measure parents' perception of child problems including attention problems, anxiety, and internalizing and externalizing behaviors. Parents responded to 113 item descriptors, for example: "unhappy, sad, or depressed," on a 0-2 scale (0 = not true, 2 = very or often true). A computer scoring program furnished by Achenbach System of Empirically Based Assessments (ASEBA) provided internalizing and externalizing age-normed subscale z-scores and a total age-normed problems scale z-score. The CBCL, which has been widely used with children ages 4 to 16 years old, has a strong empirical base, has been found to have internal reliability coefficients ranging from .78 to .97, and construct validity for measurement of child problem behaviors and competencies among children ages 1 ½ to 18 years of age (Achenbach & Edelbrock, 1983, Achenbach. & Rescorla, 2001; Biederman, Monuteaux, Greene, Braaten, Doyle, & Faraone, 2001). For the purposes of this study, the total scale, which is a composite of all items, was used to measure children's overall (social, emotional, and behavioral) adjustment.

Assessment of Physical Touch

Observational data was obtained by examining the first 5 minutes of a puppet Play Task, which was videotaped and coded using *The Noldus Observer 5.0* version. During the puppet task, the parent and child were instructed to play together with three puppets as they typically would for 5 minutes. Interval coding of the videotaped interaction was used to assess how often the following types of parent touch occurred within each 15 second interval: aggression (e.g., any aversive physical contact, including light hitting, pinching, slapping, ear flicking, grabbing another's hand, destructiveness to objects, or cruelty to animals), positive touch (e.g., any physical behavior that involved affectionate or positive contact that was either initiated by Mom or positively received by her), neutral restraint (e.g., a physical attempt to change the other's behavior in a mild or neutral way), positive restraint (e.g., any form of positive touch that occurred in

conjunction with a restraining action), and neutral touch (e.g., “functional” touching or perfunctory efforts to help each other). Frequency sums and percentiles for types of touch were used to test the aims of this study. Two coders with parallel training independently coded the physical touch. Percent agreement remained above 80%.

Results

Multiple linear regression was employed to assess whether the amount of various types of parent and child touch predicted aspects of psychological adjustment of the children in the study. The dependent variable in the first regression was child anxious/depressed behavior and the parent touch variables (parent aggressive touch, parent neutral restraint, and parent positive touch) were the independent variables. Subsequent regressions were run with the other psychological adjustment variables (withdrawn/depressed behavior, somatic complaints) as the dependent variables and the parent touch variables as independent variables.

Results revealed that maternal aggressive touch during interaction predicted poor child adjustment behavior, including child anxious behavior ($B = 1.20, t(48) = 1.82, p < .05$), withdrawn/depressed behavior ($B = .77, t(48) = 1.96, p < .05$), and somatic complaints ($B = 1.21, t(48) = 2.94, p < .01$). This suggests that parents’ aggressive touch has negative implications for the adjustment of their child. Specifically, it may cause children to suffer from internalizing psychological adjustment problems. In contrast, parents’ neutral restraint (i.e., intervening physically to keep a child from getting hurt or making a mistake) seems to serve as a buffer for child psychological adjustment problems. In this study, parents’ neutral (or functional) restraint was associated with lower levels of children’s withdrawn/depressed behavior ($B = -1.93, t(48) = 1.99, p < .05$) and somatic complaints ($B = -2.17, t(48) = -2.13, p < .05$). These results may suggest that children with physically responsive parents experience less autonomic arousal because they have learned that their parent is available to appropriately restrain them when necessary. Finally, parents’ positive touch negatively predicted child somatic complaints ($B = -.45, t(48) = -2.38, p < .05$), meaning that when parents touched their child positively (e.g., with nurturing and loving touch), their child was less apt to complain of somatic disturbances. This finding is consistent with the fact that touch is important to physiological well-being (Field, 2003).

Conclusions

Much research illuminates the importance of touch to the healthy development of infants (Muir, 2002). This study sought to build upon this research by examining links between parental touch and child adjustment in middle childhood. It was anticipated that children who experienced more positive and/or functional physical touch during parent-child play would have lower scores on measures of psychological adjustment problems. This hypothesis was based on previous assertions about the importance of the parent-child responsive (i.e., contingent) interaction and child psychological functioning and some empirical work demonstrating that parent touch is fundamental to many facets of infant development (Field, 2003). Overall, our hypothesis about the importance of positive parental touch for school-age children was supported.

Children who experience more functional touch and less aggressive touch were less likely to show symptoms of poor psychological adjustment. These findings are consistent with the assumption that children of parents who are more responsive, including through touch, are less likely to suffer from emotional and behavioral problems (Hertenstein, 2002). It may be that when signs of such problems start to emerge, responsive parents are more inclined to take action and prevent escalation of the problem.

Despite robustly significant findings, limitations should be mentioned. First, while this study utilized observational measures of parent-child touch during interaction, measures of child psychological adjustment were based solely on parents' reports. However, recent studies have shown high concordance between parent report of child psychological problems with this measure and clinicians' independent reports (Achenbach, Krukowski, Dumenci, & Ivanova, 2005; Renk & Phares, 2004).

In conclusion, we hope this study makes an important step in illuminating the complex relationships between parent-child touch during interaction and child psychological adjustment. This research makes empirical and theoretical contributions that may facilitate more efficacious prevention and intervention efforts, specifically those geared toward reducing child psychopathology. As rates of child psychopathology continue to increase in the United States, the need for identifying mechanisms whereby positive child adjustment is fostered and poor adjustment is prevented or ameliorated is even more imperative. We believe that future research should investigate the efficacy of educating parents on the importance of touch.

Implications for Counselors

Although this study was correlational in nature, results suggest that lack of nurturing positive and neutral touch is associated with children's behavior problems, including anxiety, depression, somatic complaints, and overall internalizing and externalizing behavior problems. Therefore, counselors should inform parents about the importance of positive touch for school-age children, and should be encouraged to use it in their interactions with them. In particular, parents should be coached on the use of sensitive, positive touch, helpful neutral touch, and helpful neutral restraint, and should be supported as they practice avoiding negative, aggressive touch. However, some parents may need support in exploring the psychological roadblocks that may lead to their discomfort with touch beyond their child's earliest years.

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