RESEARCH SUMMARY

Mother's affection at 8 months predicts emotional distress in adulthood

Maselko, J., Kubzansky, L., Lipsitt, L. and Buka, S.L.

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Epidemiologists have increasingly been examining the link between early life experiences and adult mental health. As a development from attachment theory and the idea that close loving bonds are a necessary secure base from which we explore the world, researchers have looked at whether high levels of nurturing promote physical and mental health in adulthood. A consensus has grown that levels of warmth and affection, particularly between mother and child, can moderate the stress response and make children more resilient to stressful and difficult situations. Maselko and her colleagues cite research from Fouts et al (2007) and Atzaba-Poria and Pike (2008) showing that higher socioeconomic status has been linked to warmth and affection in developed countries, which suggests that this could be one way through which socioeconomic status in early life is linked to health outcomes in adulthood.

Research across many mammalian species has shown that the hormone oxytocin serves an important function in creating a strong bond between mother and child, whilst disruptions in the bond can lead to dysregulation of brain chemistry, specifically the stress response in babies. Lower stress reactivity has been linked with better health outcomes in both humans and animals. Researchers have suggested that nurturing behaviour may stimulate developmental processes which are critical for future stress regulatory capacity.

The study used longitudinal data from a prenatal cohort to look at the association between objective assessments of mother-infant nurturing at 8 months and distress symptoms at age 34. The hypothesis that greater levels of warmth and affection exhibited by the mother to her child would be associated with less distress in adulthood was tested. They also looked at links between parental socioeconomic status (SES), affection and distress. Data was collected from the adult offspring of participants from the National Collaborative Perinatal Project (NCPP) carried out in the USA, a multi-site, community-based observational cohort of pregnant women and their children, with a final sample size of respondents of 482. NCPP psychologists observed mother-child interaction during cognitive and developmental testing of the children at eight months old. The psychologist assessed how the mother managed the testing situation, her affection and attention towards her infant and her reaction to the test performance. Each item was rated on a set of five pre-determined categories. Mothers' affection expressed towards their infant was rated as 'low', 'normal' or 'high'. Items from the Parental Bonding Instrument were used to ask adults whether they felt their carer was affectionate towards them. This was rated on a four-point Likert scale from "strongly agree" to "strongly disagree". The Symptom Checklist-90 (SCL-90) was used to assess emotional functioning, with a general distress score being created by combining four subscales. Other covariates were also used, including parental SES, parental history of mental illness, participant race, high school completion and marital

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status. People with childhood evidence of learning disability were over-sampled for the study so this factor was adjusted for.

At the 8 month assessment 10% of the cohort had low levels of affection from the mother, compared to 85% with normal levels and just 6% were highly affectionate. These levels correlated with parental SES. The mean general distress score at 55.16 was within the normal range of 40-60, with no sex differences in any subscale or general distress score. More individuals recollected affection from their mothers than was observed from the 8 month assessment. Participants with highly affectionate mothers reported statistically significant lower scores on two of the SCL-90 subscales than those with normal or low affection levels. This showed that highly affectionate mothers lead to less anxiety in their offspring. Their children also displayed lower levels of somatisation, that is to say physical expressions of psychological distress, for example tension headaches. The anxiety subscale showed the largest statistically significant difference, with a 7.5 point difference between the low/normal and the high affection participants. Highly affectionate mothers were associated with a reduction on the overall general distress score, showing that more maternal affection was associated with less distress. Across all the subscales higher levels of affection were associated with less distress.

The authors found that observed levels of high affection between mothers and infants were associated with fewer symptoms of distress 30 years later compared to offspring of mothers who showed low or normal levels of affection. The findings of this study strongly support the view that early life experience influences adult health and emphasise the importance of a strong nurturing relationship.

The authors consider high levels of maternal affection promote secure attachment and bonding which lead to lower levels of distress in both childhood and adulthood. Secure attachment can facilitate other environmental conditions that help develop children's ability to learn strategies for emotional regulation, appropriate social skills, a stronger sense of self and effective behavioural or cognitive responses to stress. Resilience factors developed in early childhood may extend into adulthood and protect the individual from psychological distress.

The authors admit some limitations in the study, such as the limitation of the single item measure of mother's affection and the lack of additional objective information on attachment or the nurturing nature of the mother-child bond. Bias could have been introduced by the observing psychologist's subjectivity as well as use of terms such as 'caressing' or 'extravagant', which could have had different meaning when the original study was carried out. There were also limitations in regard to examination of other aspects of the early social environment.

The strengths of the study are considered by the authors to be the long follow-up, measures of the childhood environment such as SES, and observational measures of maternal affection as these have been shown to be more predictive of outcomes than self-reported measures. This study is unique in that it has used longitudinal data of mother-child interaction from childhood through to its effects in adulthood.

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The authors conclude that the study indicates how early childhood nurturing can determine life experiences three decades later. Psychological and physiological systems can be affected in adulthood by biological 'memories' from early childhood. Therefore, the quality of early socio-emotional development may influence us more than has been previously thought. Focusing on positive affect factors during infancy increases our capacity to be more emotionally resilient later in life.

The authors consider that these findings have implications for the detection of risk and subsequent intervention early in life at both the individual and policy levels. Psychosocial and behavioural interventions may need to be targeted at a much younger age group than is currently the norm. There should also be greater appreciation of the importance of the quality of the child's relationship with their carers early in life, which may alter policy priorities. The study suggests that a combination of factors is needed to encourage greater overall population mental health. These would include improved access to high-quality nurturing childcare for targeted families, and more sensitive intervention for those at risk, as well as specific strategies to enable families to build strong, loving relationships.

Dr Clare Cunningham

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