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Parental care-giving and home environment predicting offspring's temperament and character traits after 18 years

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ABSTRACT

Although many personality theories emphasize the role of parental behaviors in shaping personality development, empirical data from longitudinal studies remain scarce. It is also not known, if parental behaviors affect character development more strongly than temperament or vice versa. In a prospective study, 1083 volunteer participants of the Young Finns study completed the Temperament and Character Inventory (TCI). Parents of the participants had answered questions about parenting attitudes, socioeconomic status, health behaviors, and role satisfaction 18 years before. We studied the univariate and the cumulative effects of parental care-giving and family environment on offspring's personality traits. Parental care-giving and home-environment were more strongly associated with offspring character traits reflecting personality maturity (Self-directedness and Cooperativeness) than with offspring temperament traits (Novelty seeking, Harm avoidance, Reward dependence and Persistence) reflecting emotional and behavioral tendencies. The differences were most evident in the cumulative effects model. Maternal variables were stronger predictors than paternal variables. The present findings suggest that not all personality traits are similarly predicted by parental care-giving and home-environment. In particular, character development is more strongly related to such measures than temperament. Parental care-giving and home-environment are more strongly related to psychological maturity (character) than emotional and behavioral tendencies (temperament).

1. Introduction

There is a long tradition of studying how parenting and family environment are related to child development (Baumrind, 1967; Bowlby, 1969; Ainsworth et al., 1978). Recent theorizing has concentrated particularly on the difference between normal or "good-enough parenting" vs. pathological variation in the rearing environment (Maccoby, 2000). The adverse effects of severe environmental deprivation and parental maltreatment on abnormal child development have been demonstrated. The influence of non-pathological variation in parental behaviors, on the other hand, is still debated (Scarr, 1992). The present study examines how characteristics of the early developmental environment in childhood and adolescence predict temperament and character traits in adulthood.

1.1. Early environment and development

Non-pathological differences in rearing environments can be delineated by considering the basic needs of children. Such common basic needs include physical needs (e.g., food and health care), need for stable family environment (e.g., no violence, no family conflict, stable caregiver relationship), and need for guidance and support (e.g., emotional support, parental structure, and cognitive stimulation; Dubowitz et al., 2005).

Children whose basic needs are not adequately met are considered to be neglected (Dubowitz et al., 2005). Thus, a neglectful environment is defined as a deficiency of appropriate parenting behavior whether or not more severe aspects of

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inappropriate parenting, such as abuse, are present (Schumacher et al., 2001). Although appearing less severe, neglect can cause adverse consequences comparable to physical and sexual abuse or domestic violence (Hildyard and Wolfe, 2002).

Dysfunctional family environments do not provide children many of the experiences that are necessary for normal development and adaptation (Cicchetti and Toth, 2005). Repeated developmental disruptions caused by unsupportive environment can lead to relatively enduring vulnerability that increases the probability of further developmental disruptions (Cicchetti, 2004; Cicchetti and Toth, 2005). Even normal developmental tasks may challenge children, if important developmental milestones are not achieved (Maughan and McCarthy, 1997; Hildyard and Wolfe, 2002; Cicchetti and Toth, 2005). Children growing up in an environment failing to provide consistent and appropriate opportunities for development are more likely to internalize negative self-perceptions or self-schemas which, in turn, increase the risk of adult psychopathology, especially that of anxiety and depression (Brewin et al., 1993; Schilling et al., 2007; Tyrka et al., 2009; Scott et al., 2010).

Human development and transmission of behaviors from parents to offspring is also affected by genetic factors (Harris, 1995; Collins et al., 2000; Caspi et al., 2004). Twin studies suggest only a modest role for shared environment in the resemblance of biological relatives in many psychological traits. However, some of the specific associations between parenting and child development appear to be environmentally rather than solely genetically mediated. For example, father–infant and mother–infant attachment security is strongly explained by environmental factors (Bokhorst et al., 2003; Bakermans-Kranenburg et al., 2004; Roisman and Fraley, 2006). Furthermore, mother's expressed emotion and emotional attitudes have been shown to predict child's antisocial behavior even when the shared genetic background of mothers and offspring has been taken into account (Caspi et al., 2004). Evidence from behavior-changing interventions focusing on parental behavior also suggests that changes in parental behavior are accompanied by changes in the behavior of the (untreated) children (Anisman et al., 1998; Collins et al., 2000). The influence of parental behavior on socioemotional development of offspring has also been observed in experimental animal studies (Meaney, 2001; Zhang and Meaney, 2010).

1.2. Personality as an indicator of adaptive development

Personality reflects the coherence of behavior and emotions, and adaptation of the individual to the environment. In this study, we use the psychobiological model of personality developed by Cloninger et al. (1993) to examine the relationship between parental care-giving and family-environment in childhood and personality in adulthood. The psychobiological theory of personality (Cloninger, 2008) postulates that personality is composed of temperament and character, two inter-related domains which are hypothesized to interact as a non-linear dynamic system regulating the development of human psychological functions. Temperament traits become manifested early in life and reflect biases in automatic responses to emotional stimuli, whereas character traits depict differences in higher cognitive functions underlying a person's goals and values (Cloninger et al., 1993). Temperament involves involuntary emotional processes, whereas character involves voluntary rational processes (Cloninger, 2008). Temperament and character are considered to interact dynamically in the development of personality across the lifespan (Cloninger et al., 1997; Cloninger, 2008). Immature character has important psychopathological consequences and is typical of individuals with most forms of psychopathology, including mood disorders, depressive symptoms, schizophrenia, substance dependence, and personality disorders (Cloninger et al., 2010; Josefsson et al., 2011a, 2011b).

1.3. Cumulative nature of environmental risks

Most children with only one risk factor follow a normal and healthy developmental path (Sabates and Dex, 2012). A large number of accumulated risk factors seems to be the best predictor of negative developmental outcomes, regardless of which specific risk factors occur together (Sameroff et al., 1987; Evans, 2003; Atzaba-Poria et al., 2004; Flouri, 2008; Sabates and Dex, 2012). A cumulative risk factor model may be the best choice because it reflects the typical natural covariation of many childhood risk factors (Evans, 2003). Due to this rather strong covariation, the independent effects of single risk factors are usually small. A cumulative model captures the complex dynamics of risk factors better than models based on independent effects. A cumulative risk index is also more stable than any individual risk measure alone (Flouri, 2008). This helps in establishing plausible causal pathways between childhood risks and adulthood outcomes.

1.4. Current study

The present study examines whether parental care-giving and home-environment assessed in a prospective population-based sample predict offspring's personality in adulthood assessed 18 years later. We explore both the effects of single parental variables independently and the cumulative effect of several parental variables. The study design is prospective with parent-reported data on childhood and adolescence environments at baseline and self-reported data on personality 18 years later. The parental variables included in the study (care-giving, socioeconomical status (SES), age, unhealthy habits, dissatisfaction) are associated with important broad family context factors that can influence child development via learning, emotional climate of the family and parental expectations of their children (Sheffield Morris et al., 2007).

Current evidence on the persistence of the effects of childhood environment into adulthood personality is very limited (Mersky and Topitzes, 2010). Most of these studies have been based on retrospective recollections of childhood environment (Reti et al., 2002; Oshino et al., 2007). These studies suggest that retrospectively reported adverse parental behaviors correlate modestly with high neuroticism and low conscientiousness (Mccrae and Costa, 1988; Hojat and Borenstein, 1990; Lundberg et al., 1999). In retrospective studies using TCI, negative parental behaviors have been associated with high Harm avoidance and low Self-directedness in adulthood (Schlette et al., 1998; Reti et al., 2002; Oshino et al., 2007; Takeuchi et al., 2011). Some studies have found associations with low Reward dependence (Schlette et al., 1998), low Cooperativeness (Schlette et al., 1998; Takeuchi et al., 2011), low Persistence (Takeuchi et al., 2011), and low Self-transcendence (Takeuchi et al., 2011). However, these studies are subject to recall and common informant biases, i.e. people with different personalities may remember or perceive their childhood experiences differently.

By definition, temperament is influenced less by sociocultural learning than character (Cloninger, 1994a). In addition, both high and low extremes of each temperament trait can be advantageous or disadvantageous depending on the situational context (Cloninger et al., 1993). In comparison, maturity of character (high Self-directedness, high Cooperativeness) is culturally preferred to immaturity of character (low Self-directedness, low Cooperativeness) because a mature character is advantageous in most life situations. Previous research also suggests that childhood family environment may be more strongly related to psychological maturity than to