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Infant Behavior & Development 28 (2005) 54–61
Infant Behavior & Development

Cross-cultural differences in the structure of infant temperament: United States of America (U.S.) and Russia

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Received 2 March 2004; received in revised form 20 September 2004; accepted 22 September 2004

Abstract

Conducted Confirmatory Factor Analysis (CFA) of the Infant Behavior Questionnaire—Revised (IBQ-R; [Gartstein, M. A., & Rothbart, M. K. (2003). Studying infant temperament via a revision of the infant behavior questionnaire. *Journal of Infant Behavior and Development, 26*, 64–86]) with samples of U.S. and Russian infants, examining cross-cultural differences in the structure of temperament. A generally consistent pattern of factor loadings across the two cultures was obtained following model modification.

Keywords: Infancy; Temperament structure; Cross-cultural differences

Cross-cultural temperament research has not been widespread, especially during the infancy period, however, a number of important findings have emerged. These findings can be divided into two groups: (1) differences in means and variances between the cultural groups; (2) differences in the structure of temperament across cultures. A number of mean differences in the levels of temperament attributes across cultures have been reported. For example, significant differences between American and Taiwanese infants were noted, with parents reporting lower levels of regularity, activity, approach, adaptability, distractibility, and threshold of responsiveness, as well as higher levels of negative mood, and intensity for Taiwanese infants (Hsu, Soong, Stigler, Hong, & Liang, 1981). Similarity in the structure of temperament and

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0163-6383/$ – see front matter © 2004 Elsevier Inc. All rights reserved.
doi:10.1016/j.infbeh.2004.09.003

personality across cultures has been described on the basis of factor-analytic research, which has provided evidence for three and five factor models of personality. Factors of Introversion-Extraversion, Neuroticism, and Psychoticism have been replicated across samples from 24 different countries for adults, and across samples from 10 countries for children (Eysenck & Eysenck, 1983, 1985). Ahadi, Rothbart, and Ye (1993) described a three-factor structure of temperament, including Surgency-Extraversion, Negative Affect, and Attentional Self-regulation/Effortful Control factors, for Chinese and American samples of preschool children. Four factors, labeled as sociability, anger, impulsivity, and fear, derived for a sample of Russian school-aged children, were considered to be consistent with the three/five factor personality models (Digman & Shmelyov, 1996). However, differences in the structure of temperament have also been noted in cross-cultural comparisons. Rothbart, Ahadi, Hershey, and Fisher (2001) noted that factor analyses performed with U.S. and Japanese samples led to a regulatory/attentional factor that included indicators of positive affect, whereas for Chinese samples this relationship between regulatory attentional functions and positive emotionality was not observed. The authors concluded that the cultural emphasis on presenting with positive affect (e.g., smiling when being introduced, while greeting, etc.) may be responsible for the observed difference.

The study of cultural influences on temperament has also focused on comparisons among vastly different cultures, such as those with Eastern/Interdependent and Western/Independent values. There has been little systematic study of Russian children's temperament from the cross-cultural perspective (Digman & Shmelyov,1996; Slobodskaya, 1995), especially in infancy, despite the fact that research in cultures with mixed values (i.e., embracing both Collectivism generally associated with Eastern cultures, and Individualism, identified as a central value in Western cultures) such as Russia, can provide important information regarding cultural influences. Historically, the Slavic people emerged in Central Europe, and the cross roads of Europe and Asia, which has shaped their communities, culture, and customs related to child rearing (Marganoff & Folwarski, 1996). The Russian culture is similar to the East in stressing the importance of communal over individual values (Triandis, 1995), but unlike the Eastern cultures, children in Russia are not discouraged from independent activities, assertiveness and competition. Recently, infant temperament development was investigated cross-culturally, examining differences between U.S. and Russian samples (Gartstein, Slobodskaya, & Kinsht, 2003). This cross-cultural study provided support for the reliability and validity of the Infant Behavior Questionnaire—Revised (IBQ-R) with a Russian sample, and yielded a number of significant mean differences between the two cultures. However, results of the factor analysis performed in the context of this study were not conclusive, and the present study is aimed at addressing this limitation of previous research, attempting to evaluate cross-cultural differences in the structure of temperament for U.S. and Russian infants via the Confirmatory Factor Analysis (CFA). That is, the fit of the three-factor model previously derived for a U.S. sample (Gartstein & Rothbart, 2003), will be examined for a new sample of U.S. infants and a Russian sample, utilizing CFA.

Two U.S. samples were utilized in the presents study. A U.S. community sample of 229 parents with infants in the first year of life (3–12 months of age) recruited in the San Francisco Bay Area, CA, provided the data utilized in the initial CFA procedure. A subsequent CFA procedure was conducted with a total available U.S. sample, to ensure generalizability, including the newly recruited parents of infants from CA and a sample of parents ($N = 379$) who participated in the development of the IBQ-R (see Gartstein & Rothbart, 2003). The U.S. parents were contacted by telephone, on the basis of local birth announcements, and invited to participate in temperament research. A Russian community sample of 202 primary caregivers of infants between 3 and 12 months of age was also recruited, and subsequently completed the IBQ-R. Participants were recruited while visiting healthy child clinic in