Short Communication

Emotional intelligence (EI) is an indicator of a slow life history strategy: A test of ability and trait EI

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A B S T R A C T

Life history (LH) theory applied to humans states that individual differences exist in reproductive strategies. A slow LH strategy implies that one invests relatively much into parental care but less so in mating effort. A fast LH strategy implies a reversed pattern (i.e., high mating effort, lower parental investment). It has been hypothesized that due to higher demands of social complexity, slow LH strategist may have higher levels of emotional intelligence (EI). In a sample of $N = 201$, mainly high-school students, the present study is the first to use well-known ability and trait measures of EI in order to test this hypothesis. Ability and trait measures of EI, as well as a general EI factor, all were significantly related to a slow life history strategy. Findings provide further insight into the characteristics of fast versus slow life history strategies.

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1. Introduction

Life history (LH) theory was originally developed as a mid-level evolutionary account of difference in the reproductive strategies between species (Wilson, 1975). Essentially, it focuses on the trade-off between mating effort versus parental care. Species investing relatively much effort into mating and lower effort into parenting (e.g., rabbits) are considered to adopt a fast LH strategy. In contrast, species investing relatively much in parental care at the expense of mating effort (e.g., elephants) adopt a slow LH strategy. These differences are assumed to have evolved in order to maximize reproductive success in relation to environmental characteristics such as the presence of pathogens or predators, and climate.

Compared to other species, all humans adopt a slow LH strategy. Nevertheless, it has been argued and shown that even *among* humans, individual differences exists in LH strategy with some inclining more towards a slower strategy and others towards a faster strategy (Figueredo, Vásquez, Brumbach, & Schneider, 2004; Rushton, 1985). Such variations in LH strategy arise from adaptations to optimize reproductive success and have been proposed to play a key role in numerous individual differences among humans, including speed of maturation, parenting styles,

personality, and cognitive and physical abilities (e.g., Figueredo et al., 2004; Rushton, 1985).

One major area of individual differences in which LH strategy is considered to be relevant is social behavior. Specifically, a slow LH strategy is presumed to be associated with an increased sensitivity for social norms and higher levels of prosocial and cooperative behavior (e.g., Figueredo & Rushton, 2009). Also, during human development, a slow LH strategy implied a more stable relationship between parents to ensure that both contribute to parental care until the offspring reached the reproductive age. The social behavior typically associated with a slow LH strategy requires emotional impulse control and behavioral self-regulation (Figueredo, Andrzejczak, Jones, Smith-Castro, & Montero, 2011). Interestingly, a recent controlled laboratory study provided direct evidence for this by showing that slow LH-strategists displayed higher levels of socially desirable, prosocial, and cooperative behavior in a task in which they had to interact with others (Sherman, Figueredo, & Funder, 2013).

In line with the above, it is likely that a slow LH strategy is associated with higher levels of emotional intelligence (EI). Researchers currently still debate about which theoretical EI model to adopt and whether EI can best be measured with ability tests or self-report surveys (e.g., Zeidner, Robert, & Mathews, 2008). However, there is general consensus that high-EI individuals have the social knowledge and skills to regulate their behavior and emotions and those of others in order to optimize social interaction (Zeidner et al., 2008). Defined as such, a high EI may be particularly useful

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to support the cooperative and relation-building behavior that is presumably linked to a slow LH strategy. A study of Figueredo et al. (2011) found initial support for an EI–LH strategy association, but they only used a self-report EI measure (the Emotional Intelligence Short Form; *EISF*), and one that is not widely used in mainstream EI research.

The present study goes beyond previous research by, as far as we know, being the first to use an established ability (maximum performance) test of EI in relation to LH-strategy indicators, namely the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT). Second, we combine the ability test of EI with one of the currently most widely used EI surveys, namely the Trait Emotional Intelligence Questionnaire (TEIQue), which has not been directly related to LH-strategy indicators before. We expected a slow LH strategy to be associated with both EI measures.

2. Method

2.1. Participants and procedure

We tested 201 students (100 females, 101 males) from various schools ranging from vocational education to higher education. Mean age was 19 years (*SD* = 2.3). Testing was done individually on a computer in a quiet room in the schools. Self-report measures of LH indicators and EI, and an ability test of EI were administered (see Section 2.2). Financial constraints limited the administration of the ability EI test to 130 participants.

2.2. Measures

2.2.1. LH-strategy indicators

Our set of LH-strategy measures was based on a selection of those indicators that were repeatedly mentioned in previous studies (e.g., Figueredo et al., 2004, 2011; Figueredo & Rushton, 2009; Rushton, 1985; Sherman et al., 2013):

(1) *The Mini-K* (Figueredo et al., 2004) is a direct assessment of LH-strategy, asking for the bond with biological parents, civic engagement, and sexual attitudes. For obvious reasons we excluded the question about the relationship participants had with their children. Cronbach's alpha of the remaining 19 items was .71.
(2) *Socially undesirable behavior at school* was measured with the 46 item Questionnaire for Maladaptive Social Behavior (QMSB; Koerhuis, 2007). Sample reliability was .71.
(3) *Aggression* was measured by a compound measure of the verbal aggression scale (9 items) and the physical aggression scale (5 items) of the Aggression Questionnaire (AQ; Buss & Perry, 1998). Sample reliability over all items was .84.
(4) *Sociosexuality.* By definition, a fast LH strategy involves a more casual, uncommitted sexual orientation, which can be referred to as a less restrictive sociosexual orientation. We used the 9 item Sociosexual Orientation Inventory (SOI; Penke & Asendorf, 2008) which can be used to calculate a global sociosexual orientation score. Sample reliability was .83.
(5) *Personality*. Previous LH studies confirmed that a slow LH strategy is associated with a General factor of Personality (GFP; Dunkel & Decker, 2010; Figueredo et al., 2004). Although the literature reveals a debate about the nature of this construct, most researchers would acknowledge that a general factor exists representing scores towards the socially desirable end of personality dimensions (Dunkel & Decker, 2010; Figueredo et al., 2004). Personality was assessed with 50 items from the International Personality Item Pool (IPIP, Goldberg et al., 2006) measuring the well-

established Big Five dimensions, openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Reliabilities of the scales ranged from .71 (Openness) to .84 (Neuroticism). We extracted the general factor of personality (GFP) that explained 37% of the variance in the Big five measures. All dimensions loaded in the expected direction (.15, .46, .48, .42, and −.71, for O, C, E, A, and N, respectively).

(6) *Health (covitality).* A slow LH strategy has been associated with higher levels of covitality; increased levels of psychological and physical health and well-being. Covitality was measured with nine items – in a yes or no answering format – of the Perceived Health Survey Questionnaire (VOEG, Dirken, 1967). Sample Cronbach's alpha was .73.

2.2.2. Emotional intelligence (EI)

Ability EI was measured with the computerized Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT, Mayer, Salovey, Caruso, & Sitarenios, 2003). The test contains 141 items assessing four aspects of EI, namely perceiving, using, understanding, and regulating emotions. It is common, however, to calculate a single EI score. The (Guttman split-half coefficient) sample reliability of the total EI score was .81.

Trait EI is generally defined as a constellation of emotional self-perceptions located at the lower levels of personality hierarchies (Petrides, Pita, & Kokkinaki, 2007) and was measured with the 30-item version of the Trait Emotional Intelligence Questionnaire (TEIQue, Petrides et al., 2007). The TEIQue contains the subfactors, wellbeing, self-control, emotionality, and sociability, but often a single EI score is used (reliability was .86).

2.2.3. Social desirability

For testing possible effects of socially desirability bias, we included the 9 items that measure self-deception from the social desirability scale of the Eysenck Personality Questionnaire (EPQ; Eysenck & Eysenck, 1975). Sample reliability was .54.

3. Results

3.1. LH-strategy factor

The principal axis factoring (PAF) method was used to test for the presence of a LH strategy factor in the measures. The first unrotated factor explained 41% of the variance in the LH indicators, with factor loadings of .63, .66, −.17, −.73, −.46, and .51, for aggressive behavior, inappropriate behavior at school, covitality, mini-K, the GFP, and less restricted sex, respectively. Higher scores on the LH factor reflected a faster LH strategy as indicated by lower scores on the Mini-K, more aggressive and socially undesirable behavior at school, lower scores on the GFP, a less restricted sociosexuality, and lower subjective health. Compared to women, men scored significantly higher on the fast LH factor than women (M_{men} = 0.38 (*SD* 0.84), M_{women} = −0.39 (*SD* 0.73), $F(1, 199)$ = 49.46, p < .001), which is in line with the well-known finding that men generally display higher mating effort.

3.2. LH-strategy and emotional intelligence

The ability EI and trait EI measures were positively associated. Their correlation of r = .23 is in line with the typical correlation between the two types of EI measures as reported in the literature (e.g., Zeidner et al., 2008). There were no significant sex differences in trait EI ($F(1, 199)$ = 0.16, p = .69), but women scored significantly higher on the ability EI test (M_{men} = 0.36 (*SD* 0.09), M_{women} = 0.42 (*SD* 0.08), $F(1, 128)$ = 14.91, p < .001).