Original Article

When Emotional Intelligence Backfires

Interactions Between Intra- and Interpersonal Emotional Competencies in the Case of Parental Burnout

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Abstract: While emotional intelligence is generally associated with positive outcomes, little is known about the specific contribution of its *intra-* and *inter*personal dimensions, even less about their interaction. By taking a variable that a priori involves both dimensions, that is, parenting, this study aimed to examine the possibility that *intra-* and *inter*personal emotional competencies (EC) sometimes interact in such a way that the highest is not always the best. In this study, 842 parents (92% of mothers) completed self-reported measures of EC and parental burnout. Hierarchical multiple regression and moderation analyses showed that the level of intrapersonal EC mainly and negatively predicted parental burnout. On the other hand, the level of interpersonal EC positively predicted parental burnout and moderated the relation between intrapersonal EC and parental burnout. As interpersonal EC increased, the protective effect of intrapersonal EC on parental burnout decreased. Our findings therefore highlight the fact that intra- and interpersonal EC do not always work in a cumulative manner and emphasize the importance of studying intra- and interpersonal EC separately. As mothers were overrepresented in our sample, more data on fathers are needed to further generalize these findings.

Keywords: emotional intelligence, empathy, distress, parenting, moderation

Although we all experience and witness all sorts of emotions throughout our lives, we markedly differ in the extent to which we identify, express, understand, regulate, and use our own and others' emotions (Mayer & Salovey, 1997; Mikolajczak et al., 2009; Petrides & Furnham, 2003). The concept of emotional competencies (EC) – embedded within the global term of "emotional intelligence" (EI) and sometimes used as synonym for the latter – has been proposed to account for this idea. According to the 3-level integrative model, EI encompasses the knowledge individuals may have about emotionally intelligent behaviors, the ability they may show to enact these behaviors, and their general propensity to use them (Mikolajczak et al., 2009). Interestingly, this model assumes a relative independence between EI levels. For example, one may be aware of emotion regulation strategies that are most functional (knowledge level) but may struggle with applying them (ability level). Similarly, one may be able to apply these emotion regulation strategies properly upon request, but may not spontaneously implement them in everyday life (trait level or trait EI). Moreover, EI can be subdivided in two dimensions: intra-personal (i.e., related to the processing of one's own emotions) and interpersonal (i.e., related to the processing of others' emotions). EI can be operationalized through diverse measures based on the assessment of individuals' cognitions, emotions and/or behaviors, either directly observed (e.g., via computerized tasks and physiological indices) or self-reported (e.g., via questionnaires). EC, more specifically, can refer to the second level or, as in this study, the third level of EI.

Both intuitively and experimentally, EI is generally associated with positive outcomes. Indeed, an impressive body of literature indicates that the level of EI has a significant impact on psychological, social, and physical adjustment. At the psychological level, higher EI is for instance associated with greater well-being (Austin, Saklofske, & Egan, 2005) and life satisfaction (Di Fabio & Saklofske, 2014), and with decreased psychological disorders (Petrides, Pérez-González, & Furnham, 2007), stress (Mikolajczak, Roy, Luminet, Fillée, & de Timary, 2007), and burnout (Lindeman et al., 2017). At a social level, higher EI is associated with increased social support (Mikolajczak, Luminet, Leroy, & Roy, 2007) and better social and marital relationships (Malouff, Schutte, & Thorsteinsson, 2014; Petrides, Sangareau, Furnham, & Frederickson, 2006; Schutte et al., 2001). At the physical level, higher EI is linked to better physical health, both subjectively reported (Martins, Ramalho, & Morin, 2010) and objectively measured

(Mikolajczak et al., 2015). Importantly, these relations appear to be causal: when EI is improved through training, psychological, social, and physical adjustment improve (Karahan & Yalcin, 2009; Kotsou, Nelis, Grégoire, & Mikolajczak, 2011; Nelis et al., 2011).

Importantly, however, little is known about the EI dimensions that contribute to those effects. For example, most of EI instruments do not make a clear distinction between self- and other-focused EC (Pekaar, Bakker, van der Linden, & Born, 2018). Interestingly, according to several studies who did take this distinction into account, (mental) health benefits associated with EI stem particularly from the intrapersonal dimensions of EI (e.g., the capacity to regulate one's own emotional states) (Batselé, Stefaniak, & Fantini-Hauwel, 2019), whereas interpersonal EI (e.g., the capacity to assess other's emotional states) seem to act more specifically on social outcomes (e.g., peer-rated likeability) (Baudry, Grynberg, Dassonneville, Lelorain, & Christophe, 2018; Nozaki, 2015; Nozaki & Koyasu, 2013; Szczygiel & Mikolajczak, 2018). Although beneficial for the community, socially oriented behaviors consume resources and may therefore interfere in some cases with individual well-being. For example, the attention we allocate to others' needs, emotions, and mental representations, and the energy we use to properly respond to the latter, are not available for concurrent self-related needs and concerns. As in the case of health care professionals, parents' other-care processes may possibly interfere with self-care processes, increasing the risk of burnout (Colville, 2018; Tei et al., 2014). As a matter of fact, the cost of being other-oriented has been observed on physical health. In their nationally representative study, Mikolajczak et al. (2015) showed that people who have the lowest health care consumption are people with high intrapersonal EC and low interpersonal EC. These pioneering results further demonstrate the need to look deeper into the interaction between EI/EC dimensions and its related outcomes. Most importantly, these data illustrate how the highest may not always be the best, even in the case of EI. For example, the downsides of emotion recognition ability (interpersonal EC) have hardly been investigated in the literature (Schlegel, 2020). Interestingly, scales such as the Profile of Emotional Competencies (PEC; Brasseur, Grégoire, Bourdu, & Mikolajczak, 2013) were purposely conceived for the investigation of trait individual differences in the identification, understanding, expression, use, and regulation of one's own (intrapersonal EC) and others' emotional states (interpersonal EC), and therefore allow to narrow the gap in this part of the EI literature.

In line with health care professions, parenting is one context in which both intrapersonal and interpersonal EC are strongly involved. On the one hand, *intra*personal EC are essential in coping with the multiple stressors that punctuate a parent's life, including daily hassles (e.g., chores, homework, home-school-extracurricular activities journeys), acute stressors (e.g., a child choking, an adolescent running away), and chronic stressors (e.g., a child with behavioral, learning, or physical disorder). On the other hand, *inter*personal EC or empathic responding plays an important role in the quality of parent-child relationship as well as child developmental and well-being outcomes (e.g., psychopathology, attachment security) (Perez-Albeniz & de Paul, 2004; Psychogiou, Daley, Thompson, & Sonuga-Barke, 2008; Soenens, Duriez, Vansteenkiste, & Goossens, 2007; Stern, Borelli, & Smiley, 2014). While intrapersonal EC (e.g., the capacity to regulate one's own emotions efficiently) may protect individuals from psychological distress (Gleichgerrcht & Decety, 2013), high interpersonal EC (e.g., identification of other's emotions) may lead to behaviors (e.g., support) that consume emotional resources and therefore make parents more vulnerable to stress.

It has recently been shown that when stress-enhancing factors chronically outweigh stress-alleviating factors (i.e., in case of prolonged imbalance between demands and resources), parents may experience parental burnout, a syndrome encompassing three dimensions: an overwhelming exhaustion related to one's parental role, emotional distancing from one's children, and feelings of being fed up with one's parental role, which all contrast with previous parental self (Roskam, Brianda, & Mikolajczak, 2018). The only study that investigated the role of trait EI in parental burnout reported a substantial association between those variables. As a matter of fact, global EI explained 20% of the variance in parental burnout ($r = -.45$, $p < .001$) (Mikolajczak, Raes, Avalosse, & Roskam, 2018). However, these results relied on a short measure of EI. Therefore, the effect of specific EI/EC dimensions could not be examined. As regards the large effects of parental burnout on escape, suicidal ideation as well as on neglectful and violent behaviors toward children (Mikolajczak, Brianda, Avalosse, & Roskam, 2018), going deeper into the role of EC may foster the development of more targeted prevention and intervention programs. On the one hand, it is possible that interpersonal EC protect from parental burnout by helping parents to better deal with their children's emotions. On the other hand, and according to the literature on the cost of other-oriented behaviors, it is also possible that interpersonal EC make parents more vulnerable to parental burnout. This might be specifically true for the capacity to identify other's emotions. Indeed, it is possible that the perception of discomfort signals in others (e.g., one's child) triggers self- and other-regulation behaviors (e.g., verbal support) that deplete emotional resources and therefore increases the risk of burning out. Finally, it is possible that intra- and inter-personal EC interact with each other and that the effect of interpersonal EC on parental burnout

partially depends on the level of intrapersonal EC (and vice versa), like Mikolajczak et al. (2015) found regarding health. In conclusion, we need to disentangle the role of both intra- and interpersonal EC dimensions in order to design efficient interventions (e.g., focusing on intrapersonal vs. interpersonal EC development) for parents in burnout, and more globally, to further investigate the role played by each dimension in the relation between EI and its (usually) positive outcomes.

The aim of this study is to shed further light on the effects of EI on parental burnout, looking more deeply into the main and interactive effects of intra- and interpersonal EC. In line with the literature on EI and mental health, we expected a strong main effect of intrapersonal EC: the higher the level of intrapersonal EC, the lower the level of parental burnout. As regards the main and interactive effects of interpersonal EC, no strong hypothesis could be drawn from previous literature and the analyses were therefore exploratory.

Method

Participants and Procedure

The study protocol as well as the information and written consent documents were approved by the Université catholique de Louvain Review Board. Participants were informed about the survey through social networks, websites, schools, pediatricians, or word of mouth. In order to avoid (self-) selection bias, participants were not informed that the study was about parental burnout. The study was presented as a study about "Factors of parental well-being and exhaustion in Belgium". Parents were eligible to participate only if they had (at least) one child still living at home. Participants were invited to complete the survey after giving informed consent. They were assured that data would remain anonymous. The questionnaire was completed online with forced answering, ensuring a dataset with no missing data. Among the 1,428 respondents, 842 answered the whole questionnaire (M_{age} = 38.72 years, SD_{age} = 7.21 years). The majority of parents in our final sample were mothers (91.9%), had two children (47.5%), lived with the father/mother of their child[ren] (78.3%), and had higher education (15 or more succeeded school years from the age of 6) (75%).

Measures

Demographics

Participants were asked to indicate their age, gender, number of children (living in the same house), age of the youngest child, type of family (single parent, living with the children's father/mother, blended family, same-sex parents, living with grand-parents/other relatives, polygamy, other), and level of education (number of succeeded school years from the age of 6).

Emotional Intelligence

Emotional intelligence was assessed with the Profile of Emotional Competence (PEC; Brasseur et al., 2013). This fifty, 5-point item (from 1 = *strongly disagree* to 5 = *strongly agree*) measure was designed to evaluate the five core emotional competencies separately, distinctly for one's own and others' emotions. It thus provides 10 sub-scores (identification of one's emotions, identification of others' emotions, understanding of one's emotions, understanding of others' emotions, expression of one's emotions, listening to others' emotions, regulation of one's emotions, regulation of others' emotions, use of one's emotions, use of others' emotions), forming 3 global scores: an intrapersonal EC score (= mean of the five intrapersonal subscales; α = .88), an interpersonal EC score (= mean of the five interpersonal subscales; α = .88), and a total EC score (= mean of intra- and inter-personal scores; α = .92). All sub-scales of the PEC in the current sample showed satisfying internal consistency (α_s between .68 and .79). Examples of items are "during an argument, I can't identify whether I am sad or angry" and "my emotions inform me of what is important to me".

Parental Burnout

Parental burnout was measured with the Parental Burnout Assessment (PBA; Roskam et al., 2018), including 23 items rated on a 7-point frequency scale (0 = *never*, 1 = *a few times a year or less*, 2 = *once a month or less*, 3 = *a few times a month*, 4 = *once a week*, 5 = *a few times a week*, 6 = *everyday*), organized into four subscales: Exhaustion in one's parental role (9 items) (e.g., "I feel completely run down by my role as a parent"), emotional distancing from one's child(ren) (3 items) (e.g., "I do what I'm supposed to do for my child (ren), but nothing more"), feelings of being fed up with one's parental role (5 items) (e.g., "I can't stand my role as father/mother any more"), contrast with previous parental self (6 items) (e.g., "I don't think I'm the good father/-mother that I used to be to my child(ren)"), and forming a global score. The reliability of the scale in the current sample was excellent (α = .97).

Data Analyses

After checking for significant outliers (i.e., 4 for demographic variables) and normality, we ran our analyses in four steps. First, we applied a multiple regression analysis to estimate the validity of discrete demographic variables in predicting parental burnout. Since level of education (β

Table 1. Hierarchical multiple regression analysis predicting parental burnout

	ΔR^2	β	*p*-value
Model 1	.16		< .001
Level of education		−0.086	.009
Number of children		0.083	.012
Age of the youngest child		−0.131	< .001
Intrapersonal EC		−0.387	< .001
Interpersonal EC		0.119	.002
Model 2	.012		.001
Level of education		−0.087	.008
Number of children		0.087	.008
Age of the youngest child		−0.133	< .001
Intrapersonal EC		−0.395	< .001
Interpersonal EC		0.130	.001
Intra × Inter		0.109	.001
Total R^2	.172		< .001

= −0.12, p < .001), number of children (β = 0.08, p = .02), and age of the youngest child (β = −0.19, p = .001) significantly predicted parental burnout, they were added into the model. Second, the main and interactive effects of intra-and inter-personal EC were examined through a hierarchical multiple regression analysis (Table 1). In the first model, intrapersonal EC and interpersonal EC were included in addition to the abovementioned demographic variables. Then variables were centered and an interaction term between intra- and interpersonal EC was created (Intra × Inter). The interaction term was added to the regression model (model 2). Third, in order to go deeper into the interaction, a moderation model was run using Hayes' PROCESS macro version 3.1 (Hayes, 2018). The model was adjusted for level of education, number of children, and age of the youngest child (note that the results reported hereafter hold even when these control variables are not taken into account). Interaction was assessed by entering the variable Intra × Inter with parental burnout as an outcome. We ran a stratified model at 16th, 50th, and 84th percentiles and used the Johnson-Neyman technique to identify the direction of the interaction. A two-sided *p*-value of < .05 was considered statistically significant. Fourth, in order to assess the extent to which each sub-dimension of interpersonal EC (i.e., identification, understanding, listening, regulation, and use of/to others' emotions) contributes to the moderation effect by interpersonal EC, we entered them in a multiple regression analysis with demographic variables and intrapersonal EC for the prediction of parental burnout. Hierarchical multiple regression (step 2) and moderation (step 3) analyses were replicated for each sub-dimension if they accounted for a significant part of the variance in parental burnout. The assumptions of non-collinearity (VIF), multivariate normality, independence of residuals (Durbin-Watson test), and homoscedasticity were respected in linear regression analyses. Descriptive data for trait variables and their correlation with relevant demographic variables are displayed in Electronic Supplementary Material, ESM 1.

Results

Main Effects of Intrapersonal and Interpersonal EC

As shown in Table 1, both intrapersonal EC and interpersonal EC had a significant main effect on parental burnout. These effects nonetheless varied in size and direction. As expected, intrapersonal EC had a large negative effect on parental burnout. On the contrary, interpersonal EC had a small positive effect on parental burnout.

Interaction Between Intrapersonal and Interpersonal EC

As shown in Table 1, intrapersonal and interpersonal EC also significantly interacted to predict parental burnout. Process outputs showed that the part of parental burnout variance explained by moderated multiple regression (R^2 = .171, F(6, 780) = 26.91, p < .0001) was significantly greater than multiple regression (ΔR^2 = .011, ΔF(1, 780) = 11.105, p < .001), further confirming the added-value of the interaction term Intra × Inter in our model. Coefficients from our model indicated that when the level of interpersonal EC was held constant (mean value), intrapersonal EC had a negative effect on parental burnout (β = −19.91 ± 1.962, p < .0001, CI [−23.761, −16.058]). Inversely, when the level of intrapersonal EC was held constant (mean value), interpersonal EC had a positive effect on parental burnout (β = 7.377 ± 2.193, p = .0008, CI [3.072, 11.682]). As regards the interaction term, when the level of interpersonal EC increased by one unit, the simple effect of intrapersonal EC on parental burnout increased by 9.677 (β ± 2.193, p = .0009, CI [3.976, 15.377]), therefore leaning toward zero. A detailed moderation analysis with the Johnson-Neyman technique showed that when the level of interpersonal EC was the highest, the protective effect of intrapersonal EC on parental burnout became non significant. Put differently, when intrapersonal EC were low, parents with high, moderate, or low levels of interpersonal EC showed the same high risk to experience parental burnout, whereas when intrapersonal EC were high, parents with high levels of interpersonal EC showed more risk to experience parental burnout than parents with moderate and low levels of interpersonal EC (Figure 1).

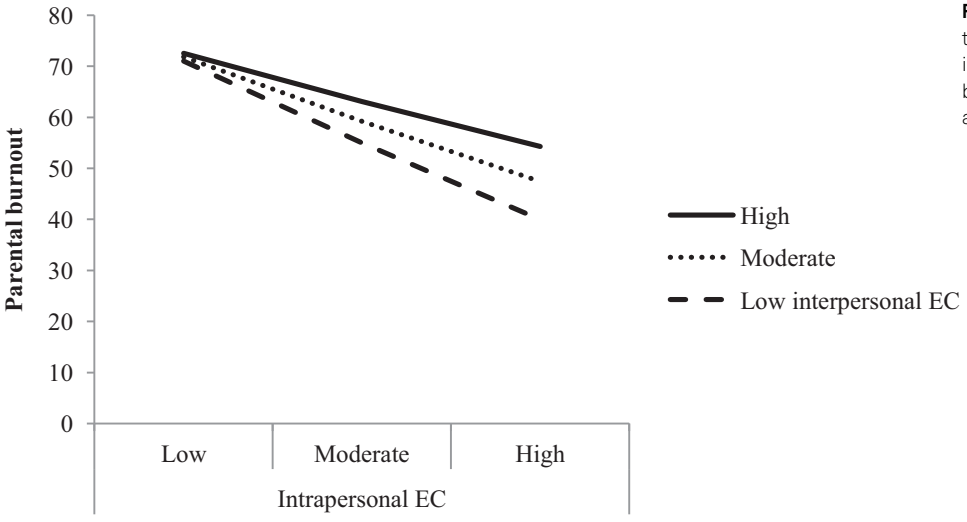

Figure 1. Graphic representation of the interaction between intra- and interpersonal EC in predicting parental burnout based on Process moderation analysis.

Complementary analyses run to identify which interpersonal EC dimensions contributed most to the abovementioned effect revealed that the dimension "identification of others' emotions" (IOE) was the only one to remain significant in the presence of the others (β = 0.13, p = .007). Results from hierarchical multiple regression and moderation analysis (R^2 = .171, $F(6, 780)$ = 26.99, p < .0001) with the interaction term Intra × IOE yielded similar results as Intra × Inter.

Discussion

In a nutshell, the current findings suggest that (1) self-reported *intra*personal EC have a strong protective effect vis-à-vis parental burnout, (2) self-reported *inter*personal EC slightly increase the vulnerability vis-à-vis parental burnout, (3) the protective effect of self-reported intrapersonal EC on parental burnout is hampered by self-reported interpersonal EC. Parents with low intrapersonal EC have the highest parental burnout levels, independently of their interpersonal EC. When intrapersonal EC are high, parents with high levels of interpersonal EC show more risk to experience parental burnout than parents with moderate and low levels of interpersonal EC. Analyses by sub-dimensions of interpersonal EC show that the capacity to identify others' emotions is responsible for this moderation effect.

The finding that parental burnout is most strongly predicted by self-reported intrapersonal EC than self-reported interpersonal EC is consistent with the EI literature. Indeed, in studies where intra- and interpersonal EC were both considered, depression, stress, anxiety, and job burnout (Batselé et al., 2019; Cejudo, Rodrigo-Ruiz, López-Delgado, & Losada, 2018; Görgens-Ekermans & Brand, 2012; Weng et al., 2011) were only predicted by intrapersonal EC. The association between the intrapersonal dimension of EI and parental burnout makes perfect sense in the parenting context too. Even if our data do not allow to draw any causal inference, one can imagine that the capacity to identify one's own emotions may allow detecting when personal limits (emotional or physical) in parent-child interactions are surpassed and offers the opportunity to act in a sense that preserves psychological balance of the parent (e.g., calmly expressing one's own emotions to child). Similarly, the capacity to regulate one's own emotions can easily be considered as a resource when parents are emotionally aroused by their child's behavior (e.g., feelings of anger when the child disobeys) or their child's experience (e.g., feelings of distress as regards a situation of social rejection at school).

Interestingly, our data do not show an absence of effect of interpersonal EC. Self-reported interpersonal EC also influence the likelihood of experiencing exhaustion and emotional distress in parenting. The novelty of our finding is that interpersonal EC, albeit comprised in the broadly adaptive notion of EI, are not associated with positive outcomes but rather appear as a risk factor. A study of nearly 10,000 subjects already showed that, when intrapersonal EC was held constant, presenting good interpersonal EC was deleterious for health (Mikolajczak et al., 2015). Our data dovetail with these findings and support the hypothesis that having good interpersonal EC can be a disadvantage in some contexts and for some outcomes. While high interpersonal EC seem to be functional regarding a number of social outcomes (Nozaki, 2015; Nozaki & Koyasu, 2013), our results and those of Mikolajczak et al. (2015) show that there might also be costs (for the self) of being

"other-oriented." Moreover, the self-reported capacity to identify others' emotions tends to weaken the negative relation between intrapersonal EC and parental burnout. One way to understand this moderation effect is to think of the fact that when parents perceive changes in their children's emotional state, they may feel prompted to act in a sense that will respond to their children's underlying need and restore their children's emotional balance (Preston & de Waal, 2002). As this regulation process consumes emotional resources, parents' capacity to regulate their own emotions cannot fully compensate for the related cost. As underlined above, this interactive effect might be moderated by other individual differences. For example, parental perfectionism (e.g., expressed by a fear of missing out on children's emotions and/or a feeling of urgency in responding to these), which is particularly at stake in parental burnout (Mikolajczak, Raes, et al., 2018), might underlie the relation we observed between interpersonal EC and parental burnout. Anyway, future research needs to go deeper into these findings through experimental designs that allow to disentangle the direction of causality between EC and parental burnout, and more generally, would benefit from systematically performing sub-dimension analyses when investigating this issue.

Beyond contributing to the field of EI, our results bring new questions to the parenting literature. Most evidence-based parenting programs mainly focus on child and family's outcomes rather than on parental outcomes (Barlow, Smailagic, Huband, Roloff, & Bennett, 2014; Duncan, Coatsworth, & Greenberg, 2009), hence tend to promote parents' interpersonal EC for the sake of children's well-being (Psychogiou et al., 2008; Stern et al., 2014). As a matter of fact, parental empathy increases perceived maternal support and warmth (Soenens et al., 2007) but might also deplete parents' resources in the face of parenting-related stressors. Our results indeed show that the capacity to identify others' emotions – as beneficial for interpersonal outcomes as it can be (Baudry et al., 2018) – is positively related to parents' emotional exhaustion. Therefore, future research on the direction of causality between these variables might yield new clinical guidelines for the prevention and treatment of parental burnout.

In spite of its contributions to the fields of both EI and parental burnout, this study bears several limitations that should be taken into account in future studies. Firstly, although this study highlighted a strong link between EC and parental burnout and even if intervention studies have already shown that EI plays a causal role in burnout (Karahan & Yalcin, 2009), the cross-sectional nature of the current study precludes formal conclusions regarding causation direction. Secondly, fathers were poorly represented within our sample (8%). Therefore, the current results may not generalize to fathers. Future studies with a larger sample of fathers are needed to draw any conclusion on the role of EC in parental burnout experienced by fathers. Although we find no evidence of gender differences in the relation between EI and parental burnout in the literature, these results should be interpreted cautiously as regard to fathers. Thirdly, where EI was only measured via self-assessment, it is possible that EI ability measured by tasks (e.g., facial emotion categorization) would yield different results and draw a different association between intrapersonal EC, interpersonal EC and parental burnout. Therefore, more research is needed in order to investigate whether high interpersonal EC increase the vulnerability to parental burnout in the same way as empathy triggers caregivers' burnout (Tei et al., 2014). Indeed, the cost of caring, which has been extensively studied among health care professionals, remains relatively understudied in the parallel domain of parenting (Roskam, Raes, & Mikolajczak, 2017). More globally, futures studies should aim at disentangling the specific effects of intra- and interpersonal EC on psychological functioning and health variables in order to enrich the EI literature.

Electronic Supplementary Material

The electronic supplementary material is available with the online version of the article at https://doi.org/10.1027/1614-0001/a000324

ESM 1. Means, standard deviations, skewness and kurtosis indices, and bivariate Pearson correlations of trait variables with relevant demographic variables

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