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SENSATION SEEKING AND PARENT-CHILD RELATIONS: THE ACTOR-PARTNER INTERDEPENDENCE MODEL

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Abstract

Sensation seeking, a concept introduced in the early 1960s by M. Zuckerman, is a dispositional personality trait that refers to individuals' preference for sensory stimulation and their urge to achieve its optimal level. The higher an individual's sensation seeking score, the more pronounced his or her orientation toward novelty, variety of experiences, and risk. The correlation of sensation seeking with biological substructures invites the assumption that sensation seeking and its associated behavioral patterns influence an individual's behavior in a wide range of situations, including interpersonal relationships. Our study examines sensation seeking in the context of the parent-child relationship. The sample consisted of 224 two-parent, two-child families, with age differences between siblings not exceeding 5 years. Parents and children completed the Sensation Seeking Scale (the Russian version of the SSS-V) and a parent-child relationship questionnaire with parallel versions for the parents and teenagers. We examined the correlation between sensation seeking and the assessment of the parent-child relationship (both by the parents and the children). The Actor-Partner Interdependence Model was used for analyzing the data. We were able to demonstrate that sensation seeking both on the part of the parents and the children has a larger impact on the parental assessment of their relationship with the children than the children's perception of the parent-child relationship. Sensation seeking has a negative impact on such factors of the parent-child relationship as Leniency, Positive relations, and Control (actor-effects) and a positive impact on maternal Confidence (actor- and partner-effects).

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Keywords: Actor-Partner Interdependence Model, parent-child relations, sensation seeking.



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1. Introduction

Sensation Seeking, a dispositional personality trait, was first described in the 1960s by Zuckerman (Zuckerman, 1971; 1994; 2009; Zuckerman et al., 1964). Sensation seeking manifests itself as a desire for new and varied experiences and intense sensations. Sensation seeking is driven by a desire to reach the optimal level of arousal, which is different for different individuals. Accordingly, the situations in which different individuals will feel comfortable will also differ, ranging from a slow-paced lifestyle to a tendency toward extreme, life-threatening experiences.

When investigating the biology of sensation seeking, researchers had first viewed it from the standpoint of the equilibrium between excitement and inhibition, per Pavlov's theory. After the discovery of the reticular formation, the individual differences in sensation seeking were attributed to ascending – descending brain activation. In the early 21st century, the monoamine theory of sensation seeking was proposed, attributing sensation seeking to the reactivity of dopamine, serotonin, and norepinephrine: the high reactivity of dopamine at the emergence of a new situation; low reactivity of serotonin which leads to impulsiveness; low reactivity of norepinephrine reduces fear (Johnson & Vernon, 2004).

Sensation seeking has a hierarchical structure. The general Sensation Seeking score combines four independent factors: Thrill and Adventure Seeking (TAS), Experience Seeking (ES), Disinhibition (Dis) and Boredom Susceptibility (BS).

Zuckerman et al. (1988) theorized that Sensation Seeking is a lower-level structure with respect to basic personality traits (such as EPI or the Big Five), with its indicators positively correlated with extraversion and psychotism and negatively with neuroticism. Our study conducted on a sample of university students illustrates this (see Table 1, Egorova et al. 2013).

Table 01. Correlations between sensation seeking and personality traits (N=372)

Sensation seeking	Novelty seeking	Harm-avoidance	Extraversion	Psychoticism	Neuroticism
TAS	.16***	-.29***	.20***	.20***	-.14**
ES	..35***	-.22***	.38***	.15**	-.03
BS	.15*	-.28***	.29***	.19***	-.07

Note: * – p<0.05, ** – p<0.01, *** – p<0.001

In their efforts to explain the variability of sensation seeking, researchers lean toward genetically informed studies. Genetic study results show that from 25 to 65 percent of the Sensation Seeking factors that form the general Sensation Seeking factor are explained by genetics, while the remaining variability can be largely explained by non-shared environment (see Bezdjian et al., 2011; Bratko & Butković, 2003; Fulker et al., 1980; Hur & Bouchard, 1997; Johnson & Vernon, 2004).

The investigation of the aspects formally defined as the “non-shared” environment is sluggish by comparison: on one hand, psychologists aspire to understand the reasons that push young people toward unjustifiably risky behavior and asocial behavior including drug addiction and crime (Hittner & Swickert, 2006; Meil et al., 2016; Piasecki et al., 2011; Zhao et al., 2019). On the other hand, the attempts to investigate the correlation between sensation seeking and environmental factors such as demographic factors, economic developmental conditions, peer group traits, and various family environment factors,

frequently lead to disappointment, explaining just a small fraction of the variability of sensation seeking scales (Bardo et al., 1996; Jensen et al., 2017; Stephenson & Helme, 2006; Zhao et al., 2019).

2. Problem Statement

When investigating the ties between sensation seeking and the parent-child relationship, we were especially intrigued by two parental characteristics: control in its various manifestations and the emotional connection between parents and children. Early studies had demonstrated a positive correlation between sensation seeking and factors such as overprotection (prevention of independent behaviour) and a negative correlation with parental care, as manifested by affection and closeness (see Kraft & Zuckerman, 1999; Parker et al., 1979).

The correlation of sensation seeking with birth order and family size has been interpreted in the context of increased control (first children in a family and children in large families demonstrate higher sensation seeking scores). The correlation between sensation seeking and parental control has been confirmed in later studies (see Burlew et al., 2009; Feij & Taris, 2010) and in studies that uncovered a correlation between parental control and decreased discipline in adolescents (see Xing et al., 2017). Correlations with sensation seeking have also been demonstrated for particular manifestations of control, i.e. behavioral and psychological control (Zhao et al., 2019).

The isolation of two forms of parental control – psychological and behavioral (Barber et al., 1994) has to some degree explained the negative correlation between sensation seeking and parental care, which had been demonstrated in early studies. Behavioral Control refers to limiting a child's autonomy and to the protest of the child against it; thus, its positive correlation with sensation seeking is well understood.

Psychological Control is in a reciprocal relationship with behavioral control and negatively correlates with sensation seeking. Psychological Control assumes that parents are informed about their child's feelings, the child's attitudes toward friends and various events, and about the details of the child's interactions with other people. Psychological Control can be achieved only if there is an atmosphere in the family is marked by comfort and trust, and the parent-child relationship manifests the qualities included in parental care. Thus, the negative correlation of sensation seeking with parental care stems from the fact that the parent-child relationship does not drive the child to protest, or encourage breaking the rules being forced on the child, or various types of disinhibition.

At the same time it must be said that, despite the fact that sensation seeking has been studied in the context of the parent-child relationship for over fifty years, in this time there have been relatively few studies. In modern studies, researchers have frequently examined the collective influence of parental control and sensation seeking on problem behavior (i.g. Zhao et al., 2019), but not the correlation between them. As a rule, such studies follow one of two patterns: 1) the parent-child relationship is assessed by the mother and/or the father, while sensation seeking is assessed in the children; 2) grown-up respondents whose sensation seeking scores are known retrospectively assess their parents' attitude toward them. In the second case, there is an explicit or implicit assumption that a retrospective assessment of the parent-child relationship of the children will be consistent with the actual parent-child relationship that had existed. A complete investigation of both indicators in the parents and the children has been performed extremely infrequently. Moreover, when analyzing the causality, authors have considered the influence of the parent-

child relationship on shaping sensation seeking; however, given the nature of sensation seeking, influence in the opposite direction cannot be ruled out.

We have investigated sensation seeking in two-parent, two-child families, both in the parents and the children. Likewise, the parent-child relationship was assessed both by parents and the siblings. The Actor-Partner Interdependence model was used to analyze the mutual influence of sensation seeking and the parent-child relationship.

3. Research Questions

The following research questions were investigated in our study:

- 3.1. Does the general sensation seeking score in the parents correlate with their assessment of the parent-child relationship and the perception of the parent-child relationship by the children?
- 3.2. Does the general sensation seeking score in the older and the younger sibling correlate with the parents' assessment of the parent-child relationship and the perception of the parent-child relationship by the children?

4. Purpose of the Study

The purpose of the study was to analyze the links between sensation seeking and the parent-child relationship and to determine the direction of the influence, if such links are found.

5. Research Methods

5.1. Participants

The participants in the study were parents and siblings in the Moscow Sibling Study sample. We have included (n=224) two-parent, two-child families in the study. The average age of the mothers is – 43.07 (SD=4.16), of the fathers – 45.75 (SD=5.32). The siblings ranged in age from 12 to 23 years old. The average age of the older sibling was – 18.04 (SD=2.25), while the average age of the younger sibling was – 15.40 (SD=1.54). The age difference between the siblings in any given family did not exceed 5 years.

5.2. Methods

The sensation seeking score in the parents and the children was assessed using the Russian adaptation of the Sensation Seeking Scale V (Egorova & Pyankova, 1992). SSS-V includes 62 pairs of alternative statements. The subject is invited to pick one statement from each pair that most closely corresponds to his or her attitude and pattern of conduct.

The parent-child relationship was assessed using the Parent-Child Relationship Questionnaire (Markovskaya, 2006), which consists of two parallel versions for the parents and the adolescent children. The parental questionnaire assesses 5 aspects of the parent-child relationship (Parental Positive Relations with Child, Control, Leniency, Inconsistency, and Confidence), while the adolescent version assesses 3

aspects of the parent-child relationship (Parental Positive Relations with Child, Parental Negative Control, and Parental Democracy).

Pass analysis was used to construct the models. All calculations were done in EQS 6.3.

6. Findings

6.1. Correlational analysis results

Correlational analysis uncovered the following low (ranging from .14 to .16) yet significant correlations between the general sensation seeking score in parents and aspects of the parent-child relationship: a negative correlation with Leniency in the parent-child relationship and a positive correlation with the mother's Confidence ($p < .05$ for all correlations). These correlations are in line with previous results. For instance, a Norwegian study of the parent-child relationship and sensation seeking obtained correlation coefficients ranging from .05 to .13 (Feij & Taris, 2010).

No significant correlations between sensation seeking in siblings and their perception of the parent-child relationship were found.

Sensation seeking scores in mothers and siblings, as well as in fathers and younger siblings, correlate significantly ($p < .01$) (Table 2). These results are in agreement with our expectations. For instance, when comparing sensation seeking scores between relatives of the same degree of kinship, Bratko and Butković (2003) obtained intrapair correlations ranging from .14 to .36.

Table 02. Intrapair similarity of relatives

	Father		Mother	
	Older sibling	Younger sibling	Older sibling	Younger sibling
Sensation seeking	0,09	0,20**	0,17**	0,29**

Note: ** – $p < 0.01$

6.2. Parental assessment of the parent-child relationship and how it is influenced by the sensation seeking scores of the mother, the father, the older and the younger sibling

Data analysis using the Actor-Partner Interdependence Model showed that parental sensation seeking affects two aspects of their relationship with children. The father's sensation seeking negatively affects both his own Leniency toward the older sibling (actor-effect, Model 1, $\chi^2(3)=3.895$, CFI=0.922, RMSEA=0.035), and the mother's Leniency toward the older sibling (partner-effect, Model 2, $\chi^2(4)=4.05$, CFI=0.989, RMSEA=0.008).

The mother's sensation seeking influences her Confidence in the older sibling and the Father's Confidence in the older sibling (actor- and partner-effect, Model 3, $\chi^2(2)=0.286$, CFI=1.0, RMSEA=0.0). Similarly, the mother's sensation seeking affects her Confidence in the younger sibling child (actor-effect, Model 4, $\chi^2(2)=1.135$, CFI=1.0, RMSEA=0.0).

The older sibling's sensation seeking score demonstrates a range of actor-effects. It negatively affects the father's Positive relations (Model 5, $\chi^2(3)=1.385$, CFI=1.0, RMSEA=0.0) as well as the mother's (Model 6, $\chi^2(3)=2.404$, CFI=1.0, RMSEA=0.0) and the mother's Control (Model 7, $\chi^2(3)=5.03$, CFI=0.974, RMSEA=0.056).

The mother's Confidence in the older sibling is determined by the sensation seeking score of both the older (actor-effect) and the younger sibling (partner-effect) (Model 8, $\chi^2(2)=0,434$, CFI=1.0, RMSEA=0.0).

6.3. The children's perception of the parent-child relationship and the impact on it by sensation seeking on the part of the mother, the father, the older sibling, and the younger sibling

The parents' sensation seeking scores do not affect the sibling's perception of the parent-child relationship.

Sensation seeking scores both of the older and the younger child negatively affect their perception of the parents' Positive relations (actor-effects, Model 9, $\chi^2(2)=0,592$, CFI=1.0, RMSEA=0.0).

7. Conclusion

The subject of this study was the mutual impact of sensation seeking scores and the parent-child relationship, as analyzed using the framework of the Actor-Partner Interdependence Model.

Although there was a reasonable fit between the models and the data, the impact of both the parents' and the siblings' sensation seeking on the parent-child relationship was small; thus, our results confirm the conclusions of previous studies that this aspect of the parents' personality explains just a small fraction of the variability in the parent-child relationship.

In contrast to previous studies, sensation seeking did not show a clear correlation to parental Control. Aspects of the parent-child relationship involved in the acceptance of a child have opposite effects: a negative influence on Leniency, and a positive influence on Confidence. The parents' sensation seeking has more of an influence on the parent-child relationship than the sibling's sensation seeking. Mainly actor-effects were observed.

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