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THE RELATIONSHIP BETWEEN WELL-BEING AND HYPERSENSITIVITY AMONG YOUNG ADULTS

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Abstract: *The study investigates the relationship between personality traits, childhood environment and well-being in young adults with increased sensitivity to sensory processing (118 participants, 20-35 years). The results show that there is no significant association between well-being and hypersensitivity, but these individuals present maladaptive traits, such as anxiety and depression. Emotional regulation and hypersensitivity are predictors of well-being, and individuals from adverse environments are at increased risk for behavioral disorders and psychopathology. Women have higher levels of hypersensitivity and emotional suppression, without significant differences in well-being or childhood experiences.*

Key words: *well-being, hypersensitivity, childhood experiences, emotional regulation*

1. Introduction

Well-being is commonly defined as the presence of positive emotions combined with a relative absence of negative emotions, which together contribute to life satisfaction (McMahon, 2006 cited by McMahan et al., 2016). One of the most prominent models of well-being is subjective well-being, which encompasses three essential elements: frequent positive emotional states, the relative absence of negative emotions, and overall life satisfaction (Bradburn, 1969 cited by Adler & Seligman, 2016). This model suggests that individuals with high levels of well-being experience consistent positive feelings, minimal negative emotions, and generally feel satisfied with their lives.

Although external factors, such as objective life circumstances, do correlate with subjective well-being, there are significant individual differences in how people assess their well-being. These differences are often attributed to personality traits. For instance, personality traits like self-esteem and optimism have been shown to have moderate associations with subjective well-being, serving as predictors of a person's overall happiness (Diener & Lucas, 1999 cited by Diener et al., 2018).

In addition to these traits, Seligman (2011 cited by Goodman et al., 2018) proposed a model of well-being known as PERMA, which consists of five key components: positive

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emotions (P), engagement (E), relationships (R), meaning (M), and achievement (A). According to this model, each of these components contributes to well-being in unique ways. They are intrinsically satisfying, representing fundamental goals that people pursue because they bring value and fulfillment. Seligman argued that these five elements are not only important for well-being but also measurable and distinct from one another, offering a comprehensive framework for understanding the factors that lead to happiness and life satisfaction.

Another significant factor affecting well-being is sensory processing sensitivity (SPS), which refers to an individual's sensitivity to environmental stimuli. High SPS has been linked to both positive and negative outcomes. On one hand, individuals with high SPS tend to be more sensitive to their surroundings and may experience increased emotional reactivity, which can lead to maladaptive outcomes like anxiety, depression, and lower life satisfaction (Aron et al., 2012 cited by Greven et al., 2019). On the other hand, SPS can also lead to positive outcomes under certain conditions, such as improved positive mood following mood inductions, enhanced social competence in supportive environments, and better outcomes in interactions with positive parenting styles (Lionetti et al., 2018; Slagt et al., 2017).

Individuals with high SPS are more vulnerable to the effects of negative environmental factors, particularly in childhood. Studies have shown that those with high SPS scores tend to have lower life satisfaction when exposed to negative childhood experiences, and they may be at higher risk for developing behavioral problems and psychopathology in both childhood and adulthood (Aron et al., 2005; Booth et al., 2015 cited by Greven et al., 2019). In contrast, individuals with high SPS who are exposed to positive experiences are more likely to thrive, with research showing that they can perform exceptionally well in environments that foster growth and positive outcomes (Pluess & Boniwell, 2015; Slagt et al., 2017).

For example, research has shown that children with high SPS scores were the only group to respond positively to a school-based mood intervention, suggesting that they may have a greater ability to internalize coping strategies compared to children with lower SPS scores (Pluess & Boniwell, 2015 cited in Booth et al., 2015). This indicates that high SPS individuals might benefit from interventions that emphasize coping strategies and positive emotional experiences. Furthermore, individuals with high SPS who experienced negative childhood environments scored particularly high on measures of negative emotionality, while those with high SPS but more positive childhood experiences had lower negative emotionality scores, highlighting the role of environmental factors in shaping the emotional experiences of high SPS individuals.

This phenomenon, known as “differential sensitivity”, suggests that individuals with high SPS have a heightened responsiveness to both positive and negative stimuli. As a result, their well-being and life satisfaction can be significantly influenced by the quality of their environment. Positive life events and supportive environments can lead to greater well-being, while negative life events, particularly in childhood, can result in greater emotional difficulties and lower life satisfaction. This research underscores the importance of understanding individual differences in sensitivity to environmental factors when examining the complex relationship between personality traits and well-being.

2. Methods

2.1. Objectives and hypotheses

The study aims to identify the relationship between well-being and hypersensitivity among young adults, to identify how highly sensitive individuals experience and cultivate well-being, and how childhood experiences affect individuals with a high level of sensory processing sensitivity.

The hypotheses are the following:

H1: There is an association between well-being and hypersensitivity.

H2: Hypersensitivity and emotional regulation predict the level of well-being in young adults.

H3: Women score significantly higher than men on the hypersensitivity scale.

2.2. Participants

The current study included 120 respondents, whose participation was voluntary. The eligibility criteria for participation were: (1) to be between 20 and 35 years old and (2) to agree to the processing of personal data provided for scientific purposes. Following data collection, 2 participants from the initial sample were eliminated, as they did not meet the age criterion, the final group being composed of 118 respondents (N = 118). Of these, 49 were male (41.5%) and 69 were female (58.5%), aged between 20 and 35 years old (mean age 23.31; SD = 3.83). 30.5% of the respondents came from rural areas, respectively 69.5% from rural areas.

2.3. Instruments

To measure the participants' level of well-being, PERMA (Butler & Kern, 2016), a self-report questionnaire consisting of a series of 23 items (example items: "In general, how often do you feel happy?", "How often do you feel absorbed in what you are doing?", "In general, to what extent do you lead a consistent and meaningful life?") was used. In the current study, the Cronbach's alpha coefficient value is 0.95.

The self-report Highly Sensitive Person Scale (HSPS) (Aron & Aron, 1997) measured individual differences in temperament associated with sensitivity to emotional, physical, and social stimuli. Participants answered a series of 27 questions, indicating how much the described situation applies to them (example items: "Does the mood of others affect you?", "Do you think you are aware of subtleties?", "Are you particularly sensitive to the effects of caffeine?"). In the current study, the value of the Cronbach's alpha coefficient is 0.90.

To measure the emotional regulation variable, the Emotion Regulation Questionnaire (ERQ) (Gross & John, 2003) was used. The scale includes 10 self-report items based on Gross's (1998) emotion regulation process model (example items: "When I want to have

more positive emotions (such as joy or amusement), I change what I was thinking about," "I keep my emotions to myself"). In the current study, the Cronbach's alpha coefficient value is 0.81.

3. Results

Table 1 presents the results obtained by the participants for each scale applied, as well as the distribution of scores. The data on well-being suggest that the majority of respondents declare themselves happy.

Descriptive statistics Table 1

Variables	M	SD	Skewness	Kurtosis	Min	Max
Wellbeing	118.94	26.63	-1.36	2.27	22	158
Hypersensitivity	120.07	28.87	-.46	-.06	32	178
PERMA: Positive Emotions	21.30	5.87	-.88	.14	4	30
PERMA: Engagement	22.79	5.36	-1.62	3.63	0	30
PERMA: Relationships	22.87	5.70	-1.35	1.73	3	30
PERMA: Meaning	22.11	6.10	-1.41	2.07	1	30
PERMA: Accomplishment	22.52	5.26	-1.40	2.33	5	30
PERMA: Happiness	7.32	2.11	-1.22	1.33	0	10
HSPS: Ease of Excitation	54.62	15.39	-.70	.15	2	80
HSPS: Aesthetic Sensitivity	35.66	6.97	-.89	1.15	11	47
HSPS: Low Sensory Threshold	21.02	9.43	.04	-.60	.0	42
ERQ: Cognitive Reappraisal	30.47	6.85	-.50	-.35	13	42
ERQ: Expressive Suppression	15.73	6.37	.03	-.80	4	28

Data analysis suggests that the majority of respondents report an increased level of well-being, indicating a positive perception of their own lives and a predominance of positive emotions. This trend can be correlated with personal and contextual factors that influence subjective well-being. A high level of sensory processing sensitivity is highlighted, indicating an increased predisposition to hypersensitivity. Regarding emotional regulation strategies, cognitive reappraisal is the most frequently used, reflecting a well-defined approach in reinterpreting crises to reduce the emotional impact. On the other hand, low levels of expressive suppression indicate a reduced tendency to inhibit the expression of emotions and their associated behaviors.

Intercorrelations between study variables Table 2

Variables		1	2	3	4	5	6	7	8	9	10
Wellbeing	(1)										
Positive emotions	(2)	.89**	1								
Engagement	(3)	.83**	.64**	1							
Relationship	(4)	.84**	.70**	.65**	1						
Meaning	(5)	.91**	.80**	.70**	.69**	1					
Accomplishment	(6)	.87**	.71**	.73**	.62**	.78**	1				
Happiness	(7)	.88**	.87**	.60**	.75**	.83**	.68**	1			
Hypersensitivity	(8)	-.07	-.13	.11	-.10	-.08	-.09	-.12	1		
Ease of Excitation	(9)	-.16	-.20*	.01	-.15	-.16	-.19*	-.19*	.92**	1	
Aesthetic Sensitivity	(10)	.37*	.28**	.48**	.23*	.32**	.36**	.21*	.62**	.40**	1
Low Sensory Threshold	(11)	-.17*	-.19*	-.03	-.17*	-.14	-.19*	-.15	.85**	.70**	.40**

N = 118, **p ≤ .001, *p ≤ .05

Table 2 shows the correlation matrix between the dimensions of well-being and hypersensitivity (H). The association between well-being and hypersensitivity is weakly negative and statistically insignificant ($r = -.07$, $p = .40$, $p > .05$). This suggests that the hypothesis of a significant relationship between these variables is not supported in the analyzed sample. This finding is in agreement with the specialized literature, which indicates lower levels of subjective happiness in people with high hypersensitivity (Sobocko & Zelenski, 2015; Greven et al., 2019).

Low sensory threshold, a component of hypersensitivity, is negatively associated with well-being. People who have difficulty tolerating strong sensory stimuli are more prone to stress and discomfort, which can limit positive experiences. This trait is also negatively associated with achievement ($r = -.19$, $p \leq .05$) and positive emotions ($r = -.19$, $p \leq .05$), indicating possible emotional vulnerability and difficulty maintaining a stable mood. In addition, both low sensory threshold and ease of arousal are negatively correlated with some facets of well-being, indicating increased sensitivity to stress among individuals with high hypersensitivity, who are more likely to perceive high levels of stress, which may negatively affect their overall well-being ($r = .70$, $p \leq .001$). This result suggests that hypersensitivity may amplify emotional reactivity to environmental factors, which increases vulnerability to stress and decreases emotional regulation capacity.

Table 3 shows the analysis of the relationship between aesthetic sensitivity, low sensory threshold and cognitive reappraisal (predictor variables) and well-being (outcome variable). The regression model indicates that 33% of the variance in well-being can be explained by emotion regulation (ERQ) strategies and hypersensitivity ($F = 18.69$, $p < .001$), suggesting a moderate effect of these variables on psychological well-being.

Prediction of well-being Table 3

Variable		Unstandardized regression coefficients		Standardized regression coefficients	t	p
		B	SE B	β		
R2	.33					
F	18.69					.001
Constant		45.62	12.91		3.53	.001
ERQ: Cognitive Reappraisal		1.03	.30	.26	3.34	.001
HSPS: Aesthetic Sensitivity		1.73	.33	.45	5.24	.001
HSPS: Low Sensory Threshold		-.95	.24	-.33	-3.96	.001

Note: Dependent variable: Well-being, N = 180

Regression analysis shows that all three predictor variables are statistically significant with different effects on well-being. Aesthetic Sensitivity ($t = 5.24$, $p < .001$) is a positive predictor, indicating that appreciation of beauty and aesthetics is a protective factor for emotional health. Low Sensory Threshold ($t = -3.96$, $p < .001$) is a negative predictor, suggesting that high sensitivity to stimuli may contribute to decreased well-being, possibly through increased stress and sensory overload. Cognitive reappraisal ($t = 3.34$, $p < .001$) is a positive predictor, confirming that the ability to reinterpret events in a constructive manner is an important predictor of psychological well-being.

These findings are in line with the literature that difficulties in emotional regulation partially mediate the relationship between sensory processing sensitivity and well-being (Brindle et al., 2015, cited in Greven et al., 2019). Thus, individuals who are more sensitive to sensory stimuli and have difficulties in emotional regulation may be more vulnerable to psychological stress and discomfort, which may affect their level of well-being.

Gender differences in hypersensitivity Table 4

Variable	Gender	N	M	SD	t	df	p
Hypersensitivity	masculin	49	112.63	29.19	-2.40	116	.01*
	feminin	69	125.35	27.64			

*$p \leq .05$

The data analysis in Table 4 confirms the hypothesis proposing significant differences in hypersensitivity between men and women. Independent samples t-test results indicate that female participants scored significantly higher ($M = 125.35$, $SD = 27.64$) compared to male participants ($M = 112.63$, $SD = 29.19$). The difference is statistically significant ($t(116) = -2.40$, $p = .01$), suggesting that females tend to exhibit higher levels of hypersensitivity compared to males. This result is consistent with the literature, which claims that women consistently score higher on measures of hypersensitivity. For example, Aron & Aron (1997), as cited by May et al. (2020), found that women are more likely to display specific hypersensitivity traits, such as more intense perception of sensory stimuli, heightened empathy, and more pronounced emotional reactivity. A

possible reason for this difference could be biological and socio-cultural influences. From a neurobiological point of view, women have a stronger activation of the limbic system, responsible for processing emotions, which may make them more receptive to internal and external stimuli.

4. Discussions

Although most people desire well-being, the experience of well-being varies depending on individual and cultural factors. Individuals with high hypersensitivity (Aron, 2011, as cited in Black & Kern, 2020) have traits often considered incompatible with general norms of well-being. Hypersensitivity is frequently perceived as an undesirable trait associated with maladaptive outcomes (Meyerson et al., 2019, as cited by Black & Kern, 2020). However, some individuals with heightened sensory sensitivity may have increased well-being. This study explores the role of hypersensitivity in the relationship between childhood experiences and adult well-being.

The main hypothesis regarding the association between hypersensitivity and well-being has not been confirmed. According to Aron (2004), hypersensitive individuals perceive the social environment as overwhelming, which can lead to anxiety and self-blame. Also, high sensory sensitivity is correlated with various psychological problems such as anxiety, panic, social phobia and depression (Neal et al., 2002; Liss et al., 2008, cited by Wyller et al., 2017).

A possible explanatory mechanism is hyperawareness of bodily sensations, specific to people with hypersensitivity, in line with the hypervigilance model of pain (McDermid et al., 1996, cited by Wyller et al., 2017). In the study, low sensory threshold size was the main significant predictor correlating with well-being, whereas ease of arousal did not influence this. This suggests that sensory sensitivity is not always a risk factor and its effects vary depending on the component analyzed.

Hypersensitivity is often associated with emotional vulnerability and coping difficulties (Ahadi & Basharpoor, 2010, cited by Booth et al., 2015), which may explain the lack of a clear relationship with well-being. A possible bias of the instrument used is the focus on negative reactions (e.g. feeling overwhelmed) without also measuring positive reactivity. Thus, a future research direction could include a scale that captures both negative and positive experiences for a more balanced assessment.

Previous research (Neal et al., 2002; Liss et al., 2005) indicates a link between low sensory threshold and relational anxiety, influenced by coping style and emotional regulation. Hypersensitive individuals are more prone to disorders such as social phobia and relational avoidance (Meyer & Carver, 2000), and the lack of effective coping strategies may reduce well-being. However, emotional awareness in those with SPS may facilitate the adoption of emotional regulation strategies, which increases their resilience and adaptability (Esbjørn et al., 2012; Willroth & Hilimire, 2016). Women score higher on the hypersensitivity scale (Aron, 1997), and gender differences do not appear to be innate but culturally influenced. In many Western cultures, men are discouraged from expressing their sensitivity and are encouraged to avoid gender stereotypes that associate their vulnerability with weakness (Aron & Aron, 1997). Women also tend to

experience their emotions more intensely and are more willing to express them, with greater sensitivity to nonverbal cues such as smiles or subtle gestures from those around them (Hall et al., 2008). This heightened sensitivity can help them build more empathic relationships, but it can also bring risks, as a more intense perception of emotions can lead to increased vulnerability to stress and anxiety.

Although the present study did not analyze childhood experiences, existing literature highlights their long-term impact on adult well-being. Cohort studies (Flèche et al., 2019) show that cognitive and emotional abilities developed in childhood, along with family environment, predict life satisfaction decades later. Negative childhood experiences—such as abuse, neglect, or parental mental illness—are associated with poorer health and emotional outcomes in adulthood, while warm, supportive parenting promotes self-esteem and adaptive functioning (Flèche et al., 2021).

Given the heightened environmental sensitivity of individuals with high SPS, it is likely that early life conditions influence their emotional development more strongly. Future studies should examine how early experiences interact with sensitivity and emotion regulation in shaping well-being.

5. Limitations and Future Research Directions

The current hypersensitivity scale includes items that measure mainly negative emotional reactions, such as 'overwhelmed', reflecting susceptibility to negative experiences, without addressing positive experiences. In future research directions, it is necessary to develop a scale that includes both negative and positive emotional reactions to provide a more balanced assessment of the diversity of participants' emotional reactions.

In addition, future research could explore the role of high-hypersensitivity identification on well-being behaviors and perceptions. A qualitative study could investigate how individuals understand and how their hypersensitivity influences how they live and relate to the world. It would also be relevant to study the characteristics that impact well-being experiences, as well as facilitators and barriers to them.

A possible limitation of the study is that the majority of participants reported positive childhood experiences, which may suggest an assessment bias. It is possible that hypersensitive individuals may be more likely to disclose negative childhood experiences. Another limitation stems from the data collection method, which used a retrospective self-report questionnaire, which may not have been completely accurate.

In future research, longitudinal studies should be included to explore possible mediating factors in the relationship between hypersensitivity, childhood experiences, and well-being in adulthood, and their impact on internalized and externalized behaviors among children. In conclusion, no clear evidence of differential susceptibility was found when assessing how hypersensitivity moderates the relationship between childhood experiences and well-being. Thus, future research should further explore this construct, as hypersensitivity could be a valuable tool for assessing the risks of developing certain psychological disorders and for understanding the diversity of psychological traits.

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