

HIGHLY SENSITIVITY, JOB SATISFACTION AND WORK ENGAGEMENT AMONG SPEECH-LANGUAGE THERAPISTS

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Abstract

High sensory processing sensitivity (Aron & Aron, 1997) is a stable temperamental trait (Dunn, 2001) made up of three components (ease of excitation, low sensory threshold, and aesthetic sensitivity) (Smolewska et al., 2006) or four (to the three first is added controlled harm avoidance) (Bordarie et al., 2022). It is a factor of vulnerability regarding perceived stress (Andresen et al., 2018), burnout and compassion fatigue (Pérez-Chacón et al., 2021). This is true for health workers in general, and specifically for speech-language therapists as well (Bordarie & Mourtialon, 2023). However, health professionals are also known to be passionate, involved and they often express higher job satisfaction scores explaining higher level of compassion satisfaction (Kelly, Runge, & Spencer, 2015). The aim is to study the influence of sensory processing sensitivity and its components on the expression of job satisfaction and work engagement among speech-language therapists; a health workers category who needs more research (Brito-Marcelino et al., 2020). In this study, 396 speech-language therapists answered anonymously a questionnaire. We measured the four components of the French version of the highly sensitive person scale (Bordarie et al., 2022), the three components of Utrecht Work Engagement Scale (Zecca et al., 2015) and job satisfaction with a single item (Shimazu et al., 2015; Tavani et al., 2014). Statistical analyses were performed with JASP (version 0.17.1). Sensory processing sensitivity was not correlated with work engagement, but it was negatively correlated with job satisfaction ($r=-.159$; $p=.002$). The latter was positively correlated with work engagement ($r=.652$; $p<.001$). Overall, high sensitivity significantly decreased job satisfaction ($\beta=-.159$; $p=.002$). However, while the latter was negatively influenced by ease of excitation ($\beta=-.136$; $p=.007$) and low sensory threshold ($\beta=-.150$; $p=.002$), it was also positively influenced by aesthetic sensitivity ($\beta=.177$; $p<.001$) and controlled harm avoidance ($\beta=.801$; $p<.001$). The study confirms the dual conception of high sensory processing sensitivity and its paradoxical consequences (Bordarie et al., 2021). Highly sensitive speech-language therapists are less satisfied at work when their sensitivity is linked to the difficulty to manage the consequences of stimuli. This is in line with the literature stating that ease of excitation and low sensory threshold increase anxiety and depression for instance (Ahadi & Basharpour, 2010). Nonetheless, professionals who express a sensitivity linked to aesthetics and to the control of negative stimuli express higher job satisfaction scores. This confirms the protective role of these components (Bordarie et al., 2021).

Keywords: *Sensory processing sensitivity, job satisfaction, work engagement, vulnerability, speech-language therapists.*

1. Introduction

Highly sensitive people are known to react more intensely than others to internal and external stimuli (Gere et al., 2009). Highly sensory processing sensitivity (HSPS) (Aron & Aron, 1997) is a characteristic that concerns around 30% of the population (Lionetti et al., 2018). Sensory processing sensitivity (SPS) is a multidimensional construct, composed of three components (i.e., ease of excitation [EOE], low sensory threshold [LST], aesthetic sensitivity [AES] [Smolewska et al., 2006]) or four (to the previous ones is added controlled avoidance of nuisances, [Bordarie et al., 2022]). Each component then plays a different role, sometimes protective, sometimes vulnerabilising (e.g., Ahadi & Basharpour, 2010; Bordarie et al., 2021). Some studies highlight the positive effects of a HSPS: highly sensitive people are said to develop better interpersonal skills (e.g., Acevedo et al., 2018). However, it is generally presented in the literature as having particularly negative effects on health, notably at work. For instance, HSPS

appears to increase burnout (e.g., Pérez-Chacón et al., 2021), particularly among speech-language therapists (SLTs) (Bordarie & Mourtialon, 2023). And it also has consequences on self-efficacy, and it is correlated with need for recovery and work displeasure (Evers, Rasche & Schabracq, 2008).

On the contrary of work displeasure, job satisfaction in organizational research can be described as “a pleasant or positive emotional state resulting from the evaluation of one's work or work experiences” (Locke, 1976, p. 1304). SLTs usually report high levels of job satisfaction, and several predictors of SLTs' job satisfaction have been identified, such as workload, control, support, work environment and pay, and work-life balance (Ewen, 2021). Previous studies have also shown that job satisfaction depends, notably, on job engagement (e.g., Yandi & Bimaruci Hazrati Havidz, 2022). Work engagement can be defined as the extent to which employees identify with their work, actively participate in their work and perceive their work performance as more important for their own good. Employees who are more involved in their work experience greater job satisfaction (Fung et al., 2014).

The present study aims at determining the relationship between sensory processing sensitivity, work engagement and job satisfaction among speech-language therapists. According to the literature, we hypothesize that:

- A high SPS should be correlated to higher levels of job satisfaction (according to Evers et al., 2008),
- A high degree of work engagement should lead to higher levels of job satisfaction,
- Work engagement should play a mediating role in the relationship between SPS and job satisfaction.

2. Methods

2.1. Measures

The questionnaire consisted of 43 items.

Sensory processing sensitivity was assessed using the HSPS-FR (Bordarie et al., 2022, adapted from Aron & Aron, 1997) which is a self-report questionnaire measuring four components (ease of excitation [EOE], low sensory threshold [LST], aesthetic sensitivity [AES] and controlled harm avoidance [CHA]). The higher the score, the higher the sensitivity. Job satisfaction was assessed with a single item, measuring whether or not the participant was satisfied with her job (Shimazu et al., 2015). The item was scored on a four-point Likert scale ranging from “1=dissatisfied” to “4=satisfied”. Work engagement was assessed with the short version of the Utrecht Work Engagement Scale (UWES). The UWES includes three subscales composed of 3 items each, related to the three dimensions of work engagement: vigor, dedication and absorption. Answers modalities scored on a seven-point Likert scale ranging from “0=never” to “6=always”. Socio-demographic questions were asked such as gender, age category, country of graduation (France; Belgium), the number of years of study to obtain the certificate of competence in speech and language therapy, the number of years of practice, and the practice setting.

2.2. Sample

Our sample consisted of 396 female speech and language therapists. They were divided into four age categories: 20-29 years old (n=88, 22.22%), 30-39 years old (n=135, 34.10%), 40-49 years old (n=100, 25.25%), 50 years old and over (n=73, 18.43%). These speech and language therapists trained in France (n=333, 84.10%) and Belgium (n=63, 15.91%). Their initial speech and language therapy training lasted 3 years (n=66, 16.67%), 4 years (n=233, 58.84%) and 5 years (n=97, 24.49%). They have been practicing less than or equal to 5 years (n=101, 25.51%), between 6 and 10 years (n=86, 21.72%), between 11 and 15 years (n=65, 16.41%), between 16 and 20 years (n=41, 10.35%) and greater than or equal to 21 years (n=103, 26.01%). They worked in private practice (n=310, 78.28%), in medical and social institutions (n=16, 4.04%), in hospitals (n=32, 8.08%) and in mixed practices (n=38, 9.60%). Their number of patients per week was less than or equal to 50 (n=236, 59.60%), between 51 and 60 (n=114, 28.79%), 61 and more (n=46, 11.62%).

2.3. Procedure

The questionnaire was created on a Google Form and distributed via social networks, on several SLT Facebook pages and on a SLT welfare page from 2023, January 11th to February 17th. It was also relayed through private SLT networks and by word of mouth. Participants were invited to respond online and were informed that their responses were anonymous and confidential. Prior to completing the questionnaire, participants were informed of the objectives of the study and were explicitly asked for their consent to continue the study. To access the questionnaire, participants had to click on “accept and continue” after having read the consent form and consent to participate.

2.4. Analyses

Statistical analyses of the questionnaire were then carried out using JASP software (version 0.17.1., JASP Team, 2023). First, descriptive analyses were performed for SPS, job satisfaction and work engagement. Second, we performed Pearson's correlations to analyze the existence of a link between the scales and subscales. Third, a mediation analysis was performed to measure the effects of the variables on job satisfaction.

3. Results

3.1. Descriptive results and correlations

Results shows that job satisfaction mean score was 2.975 (SD=0.61) and work engagement was 38.285 (SD=8.70). SPS scores, the minimum score was 45 and the maximum score was 185. Mean score was 130.293 (SD=23.41). Job satisfaction was positively correlated with UWES (overall) and its three dimensions. It was negatively correlated with HSPS (overall) and EOE (Table 1).

Table 1. Pearson's correlations.

Variables	HSPS	EOE	LST	AES	CHA	UWES	VIG	DED	ABS
HSPS	—								
EOE	.912***	—							
LST	.894***	.725***	—						
AES	.630***	.400***	.465***	—					
CHA	.623***	.532***	.404***	.382***	—				
UWES	-.062	-.168***	-.082	.163***	.125*	—			
VIG	-.135**	-.235***	-.136**	.126*	.029	.892***	—		
DED	-.083	-.179***	-.091	.122*	.091	.914***	.764***	—	
ABS	.054	-.033	.009	.185***	.213***	.858***	.606***	.679***	—
SATIS	-.159**	-.264***	-.097	.078	-.096	.651***	.664***	.626***	.442***

*** $p \leq .001$; ** $p < .01$; * $p < .05$

HSPS=high sensory processing sensitivity (overall score); EOE=ease of excitation; LST=low sensory threshold; AES=aesthetic sensitivity; CHA=controlled harm avoidance; UWES=work engagement (overall score); VIG=vigor; DED=dedication; ABS=absorption; SATIS=job satisfaction

3.2. Linear regressions and mediation analysis

Job satisfaction was predicted by HSPS ($r^2=.025$; $t=-3.190$; $p=.002$). More specifically, job satisfaction was predicted by EOE ($\beta=-5.882$; $p<.001$) and AES ($t=3.412$; $p<.001$). It also was predicted by work engagement ($r^2=.423$; $t=-17.006$; $p<.001$). More precisely, vigor ($t=7.878$; $p<.001$) and dedication ($t=4.929$; $p<.001$) were found to be predictors ($r^2=.476$) when absorption was not. Work engagement was not predicted by the overall score of HSPS but it was predicted by EOE ($t=-5.187$; $p<.001$), AES ($\beta=4.135$; $p<.001$) and CHA ($\beta=4.315$; $p<.001$) ($r^2=.133$).

The mediation analysis (Table 2) confirms a negative direct effect of both EOE and CHA on job satisfaction. The effect remained significant for the EOE/job satisfaction relationship after the introduction of "vigor" and "dedication" as mediators. However, the effect became positive for the CHA/job satisfaction relationship with these two mediators, whereas the effect of LST disappeared. In addition, indirect effects also appeared between AES and job satisfaction after their introduction.

4. Discussion

This study looked at the job satisfaction among speech-language therapists (SLTs). More specifically, the aim was to investigate the role of sensory processing sensitivity (SPS) on this satisfaction through the mediation of work engagement. On the one hand, SLTs reported a fairly high job satisfaction score, confirming the literature for this population (e.g., Ewen, 2021). However, we refute our first hypothesis because HSPS played a negative role in job satisfaction, which is in contradiction with previous results (Evers et al., 2008). Nonetheless, this role depended on the scores obtained on the EOE and AES components. While high scores on the EOE component helped to reduce job satisfaction, high scores on the AES helped to increase it. The same conclusions can be drawn for work engagement, for which CHA also played a positive role. On the other hand, work engagement was found to be a predictor of job satisfaction, confirming the literature (see Yandi et al., 2022). Some components of work engagement (vigor and dedication) were also found to mediate the relationship between job satisfaction

and some components of HSPS (EOE, AES and CHA). The results confirmed the vulnerability role of EOE and the protective role of AES (Bordarie et al., 2021). SLTs with high EOE scores reported lower vigor and dedication scores, which has led to lower job satisfaction scores. While AES was not originally a predictor of job satisfaction, SLTs with high AES scores reported higher vigor, dedication and absorption scores, which led them to report higher job satisfaction scores. The role of CHA confirms the relevance of considering it since it had, surprisingly, a negative influence on job satisfaction. Though this study does not answer the question of whether it is a component or a consequence of SPS, such as a behavioral strategy (Bordarie, 2022).

Table 2. Results of mediation analysis of work engagement between SPS and job satisfaction (all relations have been tested - only significant results are presented).

				Estimate	Std. Error	z value	p	95% confidence interval		
								Lower	Upper	
Direct effects										
EOE	→	SATIS		-.100	.036	-2.808	.005	-.170	-.030	
LST	→	SATIS		.068	.027	2.513	.012	.015	.121	
CHA	→	SATIS		-.069	.026	-2.663	.008	-.119	-.018	
Indirect effects										
EOE	→	VIG	→	SATIS	-.102	.024	-4.354	<.001	-.149	-.056
EOE	→	DED	→	SATIS	-.069	.020	-3.517	<.001	-.107	-.031
AES	→	VIG	→	SATIS	.062	.017	3.692	<.001	.029	.095
AES	→	DED	→	SATIS	.036	.013	2.790	.005	.011	.061
CHA	→	VIG	→	SATIS	.039	.015	2.639	.008	.010	.068
CHA	→	DED	→	SATIS	.038	.013	2.998	.003	.013	.063
Total effects										
EOE	→	SATIS		-.271	.046	-5.920	<.001	-.361	-.182	
AES	→	SATIS		.121	.035	3.433	<.001	.052	.189	
Total indirect effects										
EOE	→	SATIS		-.171	.032	-5.361	<.001	-.234	-.109	
AES	→	SATIS		.097	.024	4.058	<.001	.050	.145	
CHA	→	SATIS		.077	.023	3.330	<.001	.032	.122	

5. Conclusions, limitations and perspectives

Despite its overall negative impact on job satisfaction and its lack of influence on work engagement, this study highlights the complex influence of HSPS. The components played either a direct vulnerabilising function (EOE and CHA) or a protective function mediated by the vigor and dedication of work engagement (AES and CHA). However, this study focused on French-speaking female SLTs and, as such, our results cannot be generalized and further investigation must be conducted. We can therefore understand that a high level of SPS can be a resource for people with good management tools. To do this, it is necessary to identify the type of sensitivity in question. For instance, the literature confirms that a problem-focused coping strategy is more appropriate and generally leads to higher levels of job satisfaction (Welbourne et al., 2007). By targeting part of the training at highly sensitive SLTs, through stress management, for example, or by identifying stimuli to be avoided to better control their consequences, the training of SLTs could prepare them for the reality of their professional lives.

References

- Acevedo, B., Aron, E., Pospos, S., & Jessen, D. (2018). The functional highly sensitive brain: a review of the brain circuits underlying sensory processing sensitivity and seemingly related disorders. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 373(1744), 20170161. doi: 10.1098/rstb.2017.0161
- Ahadi, B., & Basharpour, S. (2010). Relationship between sensory processing sensitivity, personality dimensions and mental health. *Journal of Applied Sciences*, 10(7), 570-574. doi: 10.3923/jas.2010.570.574

- Andresen, M., Goldmann, P., & Volodina, A. (2018). Do overwhelmed expatriates intend to leave? The effects of sensory processing sensitivity, stress, and social capital on expatriates' turnover intention. *European Management Review*, *15*(3), 315-328. doi: 10.1111/emre.12120
- Aron, A., & Aron, E. N. (1997). Self-expansion motivation and including other in the self. In S. Duck (Ed.), *Handbook of personal relationships: Theory, research and interventions* (pp. 251–270). John Wiley & Sons, Inc.
- Bordarie, J., Aguerre, C., & Bolteau, L. (2021). A longitudinal approach of lockdown effects on quality of life and the expression of anxiety-depressive disorders according to sensory processing sensitivity. *Psychology, Health & Medicine*, *27*(10), 2288-2299. doi: 10.1080/13548506.2021.1968012
- Bordarie, J., Aguerre, C. & Bolteau, L. (2022). Validation and study of psychometric properties of a French version of the Sensory-Processing Sensitivity scale (HSPS-FR). *European Review of Applied Psychology*, *72*(4), 100781. doi: 10.1016/j.erap.2022.100781
- Bordarie, J., & Mourtialon, C. (2023). Study of the Relationship between Sensory Processing Sensitivity and Burnout Syndrome among Speech and Language Therapists. *International Journal of Environmental Research and Public Health*, *20*(23), 7132. doi: 10.3390/ijerph20237132
- Brito-Marcelino, A., Oliva-Costa, E. F., Sarmiento, S. C. P., & Carvalho, A. A. (2020). Burnout syndrome in speech-language pathologists and audiologists: a review. *Revista Brasileira de Medicina do Trabalho*, *18*(2), 217-222. doi: 10.47626/1679-4435-2020-480
- Dunn, W. (2001). The sensations of everyday life: Empirical, theoretical, and pragmatic considerations. *The American Journal of Occupational Therapy*, *55*(6), 608-620. doi: 10.5014/ajot.55.6.608
- Evers, A., Rasche, J., & Schabracq, M. J. (2008). High sensory-processing sensitivity at work. *International Journal of Stress Management*, *15*(2), 189-198. doi: 10.1037/1072-5245.15.2.189
- Ewen, C. (2021). *The Occupational and Biopsychosocial Well-being of Speech and Language Therapists Practising Clinically in the United Kingdom* (Doctoral dissertation, Birmingham City University).
- Fung, N. S., Ahmad, A., & Omar, Z. (2014). Role of work-family enrichment in improving job satisfaction. *American Journal of Applied Sciences*, *11*(1). doi: 10.3844/ajassp.2014.96.104
- Gere, D. R., Capps, S. C., Mitchell, D. W., & Grubbs, E. (2009). Sensory sensitivities of gifted children. *American Journal of Occupational Therapy*, *63*(3), 288-295. doi: 10.5014/ajot.63.3.288
- Kelly, L., Runge, J., & Spencer, C. (2015). Predictors of compassion fatigue and compassion satisfaction in acute care nurses. *Journal of Nursing scholarship*, *47*(6), 522-528. doi: 10.1111/jnu.12162
- Lionetti, F., Aron, A., Aron, E. N., Burns, G. L., Jagiellowicz, J., & Pluess, M. (2018). Dandelions, tulips and orchids: evidence for the existence of low-sensitive, medium-sensitive and high-sensitive individuals. *Translational psychiatry*, *8*(1), 1-11. doi: 10.1038/s41398-017-0090-6
- Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunette (Ed.), *Handbook of industrial and organizational psychology* (Vol. 1, pp. 1297-1343). Chicago: RandMcNally.
- Pérez-Chacón, M., Chacón, A., Borda-Mas, M., & Avargues-Navarro, M. L. (2021). Sensory processing sensitivity and compassion satisfaction as risk/protective factors from burnout and compassion fatigue in healthcare and education professionals. *International Journal of Environmental Research and Public Health*, *18*(2), 611. doi: 10.3390/ijerph18020611
- Shimazu, A., Schaufeli, W. B., Kamiyama, K., & Kawakami, N. (2015). Workaholism vs. work engagement: The two different predictors of future well-being and performance. *International journal of behavioral medicine*, *22*(1), 18-23. doi: 10.1007/s12529-014-9410-x
- Smolewska, K. A., McCabe, S. B., & Woody, E. Z. (2006). A psychometric evaluation of the Highly Sensitive Person Scale: The components of sensory-processing sensitivity and their relation to the BIS/BAS and “Big Five”. *Personality and Individual Differences*, *40*(6), 1269-1279. doi: 10.1016/j.paid.2005.09.022
- Tavani, J. L., Monaco, G. L., Hoffmann-Hervé, L., Botella, M., & Collange, J. (2014). La qualité de vie au travail: objectif à poursuivre ou concept à évaluer? Quality of life at work: A goal to pursue or a concept to be assessed?. *Archives des Maladies Professionnelles et de l'Environnement*, *75*, 160-170. doi: 10.1016/j.admp.2014.01.002
- Welbourne, T. M. (2007). *Employee engagement: Beyond the fad and into the executive suite*. Online access: https://deepblue.lib.umich.edu/bitstream/handle/2027.42/55966/231_ftp.pdf?sequence=1
- Yandi, A., & Havidz, H. B. H. (2022). Employee performance model: Work engagement through job satisfaction and organizational commitment (A study of human resource management literature study). *Dinasti International Journal of Management Science*, *3*(3), 547-565. doi: 10.31933/dijms.v3i3
- Zecca, G., Györkös, C., Becker, J., Massoudi, K., de Bruin, G. P., & Rossier, J. (2015). Validation of the French Utrecht Work Engagement Scale and its relationship with personality traits and impulsivity. *European Review of Applied Psychology*, *65*(1), 19-28. doi: 10.1016/j.erap.2014.10.003