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COPING STRATEGIES AS MEDIATORS OF THE RELATIONSHIP BETWEEN HIGH SENSORY PROCESSING SENSITIVITY AND COMPASSION FATIGUE

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Abstract

Highly sensitive people have stronger reactions to environmental stimuli (Aron & Aron, 1997) which can be experienced as a source of stress. They are more vulnerable to burnout (Bordarie & Mourtialon, 2023) and compassion fatigue (Pérez-Chacón et al., 2021), as are healthcare workers, a category of professionals particularly at risk. However, in response to anxiety-provoking situations, professionals can implement coping strategies to (attempt to) reduce the distress they cause. Coping can be defined as "evolving cognitive and behavioral efforts to manage specific external and internal demands that are perceived to tax or exceed the person's resources" (Lazarus & Folkman, 1984, p. 141). Problem-focused coping promotes greater satisfaction and can reduce burnout (Meyerson et al., 2020). Conversely, emotion-focused coping is correlated with higher levels of burnout (Gangloff & Malleh, 2017). The aim here is to study the relationship between sensory processing sensitivity, compassion fatigue and coping strategies among speech-language therapists, who are rarely the subject of scientific studies (Brito-Marcelino, 2020). The study involved interviewing 602 female speech-language therapists. They answered a questionnaire composed of French versions of three scales: the Highly Sensitive Person Scale (Bordarie et al., 2022), the Professional Quality of Life Scale (Stamm, 2009) and the Ways of Coping Checklist Revised (Cousson-Gélie et al., 1996). Linear regressions and a mediation analysis were performed with JASP (version 0.17.1). High sensory processing sensitivity increased compassion fatigue (p<.001). Emotion-focused strategy increased it as well (p<.001). On the contrary, problem-focused cop)ing strategy reduced compassion fatigue (p≤.001). The mediation analysis revealed the influence of sensory processing sensitivity on compassion fatigue disappeared when using problem-focused or social support-focused strategies as mediators but remained significant when using emotion-focused strategy as mediator (p<.001). This study is in line with the literature stating that high sensory processing sensitivity is a risk factor of compassion fatigue, as well as emotion-focused coping. More specifically, the relation between sensory processing sensitivity and compassion fatigue can be explained by coping strategies. Highly sensitive speech-language therapists using problem-focused strategy are less likely to express compassion fatigue. There are some possible applications, like to train highly sensitive therapists to develop this kind of strategy since it protects from burnout or compassion fatigue.

Keywords: *Sensory processing sensitivity, compassion fatigue, coping strategies, vulnerability, speech-language therapists.*

1. Introduction

High sensory processing sensitivity (HSPS) (Aron & Aron, 1997) concerns around 30% of the population (Lionetti et al., 2018). Highly sensitive individuals react more intensely than others to internal and external stimuli (Gere et al., 2009). It generally implies negative effects on mental health (e.g., Yano & Oishi, 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., Bordarie et al., 2021). At work, HSPS usually appears to be a vulnerability factor, favoring burnout (e.g., Pérez-Chacón et al., 2021), with consequences upon other variables such as satisfaction and compassion fatigue among carers (Meyerson et al., 2020).

Compassion satisfaction (CS) and compassion fatigue (CF) are real issues for healthcare professionals. CS refers to the pleasure experienced when helping others who are exposed to traumatic events and may be in distress (Stamm, 2009). It is essential to the well-being of carers and the quality of their care (García-Iglesias et al., 2020). Conversely, CF refers to a state of reduced capacity for compassion, resulting from exhaustion caused by contact with the suffering of others (Alharbi, Jackson & Usher, 2019). It corresponds to the psychological cost to the carer of providing therapeutic care, known as the "cost of caring" (Figley, 2002). It represents a negative aspect of the quality of professional life and is made up of two dimensions: burnout on the one hand, and secondary trauma on the other, which refers to the negative feelings induced by fear and work-related trauma.

In anxiety-provoking situations, professionals may experience a discrepancy between the stressful event and their perceptions of their own ability to cope with it (Gintrac, 2011). Stress can therefore be defined as a physiological and emotional reaction to a situation that exceeds the individual's personal resources (Maslach et al., 1997). In response, the individual may implement coping strategies to try to control the problematic situation and/or reduce the distress it causes. There are three categories depending on whether they are problem-focused, emotion-focused, or social support-focused. Their effectiveness depends, for example, on the duration of the stressful period and the controllability of the situation (Lazarus & Folkman, 1984). For instance, nurses experience greater job satisfaction when they mainly use problem-solving strategies (Welbourne et al., 2007). Social support is just as effective (Delicourt et al., 2013). Conversely, emotion-focused strategies are positively correlated with levels of burnout (Shin et al., 2014).

2. Objectives

We focus here on the relation between HSPS, coping strategies and compassion fatigue among speech-language therapists (SLTs). This population is exposed to burnout (Bordarie & Mourtialon, 2023), but particularly neglected in the literature (Brito-Marcelino, 2020). This study has two objectives:

- To investigate the influence of HSPS on coping strategies and CF
- To study the mediating role of coping strategies in the relationship between HSPS and CF.

3. Methods

3.1. Sample

Our sample consisted of 602 French-speaking SLTs, all females. They were divided into four age categories: 20-29 years old (N=137; 22,76%), 30-39 years old (N=205; 34,05%), 40-49 years old (N=155; 25,75%), 50 years old and over (N=105; 17,44%).

3.2. Measures

The questionnaire consisted of 74 items, excluding socio-demographic questions.

Sensory processing sensitivity was assessed using the HSPS-FR (Bordarie et al., 2022, adapted from Aron & Aron, 1997), a self-report questionnaire measuring four components). Answers modalities were given on a 7-point Likert scale ranging from "1=strongly disagree" to "7=strongly agree". The higher the score, the greater the sensitivity.

Coping strategies were measured using the French version of the Ways of Coping Checklist Revised (Cousson-Gélie et al., 1996). The scale focuses on three strategies: problem (PB), emotion (EM) and social support (SS). During the test, participants were asked to think about a recent event that had generated stress. On a 4-point Likert scale, the modalities were: no, rather no, rather yes, yes.

Compassion fatigue (CF) was assessed using the two subscales (burnout [CF-BO] and secondary traumatic stress [CF-STS]) of ProQOL 5th version (Stamm, 2009). Answers modalities were given on a 5-point Likert scale ranging from "1=never" to "5=very often". According to the ProQOL manual, on these subscales, a score strictly below 23 probably reflects positive feelings about one's ability to be effective at work, and a score strictly above 41 could reflect a potential problem at work.

3.3. Procedure

The questionnaire was created on a Google Form and distributed via social networks, on several SLTs Facebook pages and on a SLTs welfare page. It was also relayed through private SLTs 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. Responses to the Google Form were opened between 20 December 2021 and 28 February 2022. The estimated completion time was approximately 10-15 minutes.

3.4. 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 CF and HSPS. Second, we used Pearson's correlations to analyze the existence of a link between the scales. Third, linear regressions and a mediation analysis were performed to measure the effects of the variables on CF.

4. Results

4.1. Descriptive results and correlations

CF-BO scores came from 11 to 45 and mean score was 27.77 (SD=6.42) and CF-STS came from 10 to 46 and mean score was 26.18 (SD=6.71). Regarding the SPS scores, the minimum score was 63 and the maximum score was 186. Mean score was 134.329 (SD=26.95). Repartition of SPS is given according to Lionetti et al. (2018) (Table 1). Compassion fatigue scores (BO and STS) and HSPS scores were correlated with all other variables and subscales (p<.001), excepted on one hand AES and CF-BO and on the other hand SS and CF-STS which were not correlated.

Table 1. Repartition into three groups (low, average and high scores) according on the scores on compassion fatigue scale and sensory processing sensitivity scale.

	Compassion fatigue [CF-BO]	Compassion fatigue [CF-STS]	Sensory processing sensitivity
Low scores	22.59%	33.06%	22.92%
Average scores	77.08%	65.45%	26.58%
High scores	0.33%	1.49%	50.50%

4.2. Mediation analysis

The mediation analysis (Table 2) confirmed two positive direct effects of HSPS on CF-BO and CF-STS (p<.001), i.e., the higher the sensitivity, the greater the compassion fatigue.

Table 2. Results of mediation analysis of coping strategies between HSPS and both CF-BO and CF-STS.

			Estimate	Std. Error	z value	p	95% confidence interval Lower	Upper
Direct effects								
HSPS	**→**	**CF-BO**	**.051**	**.009**	**5.751**	**<.001**	**.033**	**.068**
HSPS	**→**	**CF-STS**	**.122**	**.009**	**14.256**	**<.001**	**.105**	**.138**
Indirect effects								
HSPS	→ PB	→ CF-BO	.001	.003	0.434	.665	-.004	.007
HSPS	**→ EM**	**→ CF-BO**	**.028**	**.004**	**6.395**	**<.001**	**.020**	**.037**
HSPS	→ SS	→ CF-BO	-.002	.001	-1.569	.117	-.004	4.736×10-4
HSPS	→ PB	→ CF-STS	4.836×10-4	.001	0.430	.667	-.002	.003
HSPS	**→ EM**	**→ CF-STS**	**.023**	**.004**	**5.689**	**<.001**	**.015**	**.031**
HSPS	→ SS	→ CF-STS	6.285×10-4	7.354×10-4	0.855	.393	-8.128×10-4	.002
Total effects								
HSPS	**→**	**CF-BO**	**.078**	**.009**	**8.527**	**<.001**	**.060**	**.096**
HSPS	**→**	**CF-STS**	**.146**	**.008**	**17.745**	**<.001**	**.130**	**.162**
Total indirect effects								
HSPS	**→**	**CF-BO**	**.028**	**.006**	**4.908**	**<.001**	**.017**	**.039**
HSPS	**→**	**CF-STS**	**.024**	**.004**	**5.684**	**<.001**	**.016**	**.033**

In both cases, these effects remained significant after the introduction of the mediator "emotion-focused strategy" (p<.001). However, they disappeared after the introduction of the

"problem-focused strategy" and the "social support-focused strategy" as mediators. In other words, these strategies (PB and SS) reduced the effect of HSPS on CF.

5. Discussion and limitations

This study looked at HSPS and compassion fatigue among speech-language therapists (SLTs). First, we investigated the prevalence of HSPS and compassion fatigue (CF) among SLTs. More than 50% of them reported HSPS which is higher than in the general population (Lionetti et al., 2018). And more than 77% of them reported a moderate to high CF-BO score and they were almost 67% for CF-STS. These scores confirm the results obtained with other populations. For instance, more than 80% of physicians and 66% of cancer nurses reported a moderate to high CF score (Zhang et al., 2022).

Secondly, the results highlighted the positive influence of sensory processing sensitivity on CF scores. Thus, the higher the level of sensitivity, the more likely SLTs were to develop CF (either on BO and STS subscales), confirming the vulnerabilising effect of HSPS, as for anxiety and depression (Liss et al., 2008) and burnout (Pérez-Chacón et al., 2021).

Thirdly, the negative effects of HSPS are enhanced when SLTs implement an emotion-focused strategy, resulting in higher levels of CF. This strategy acts as a vulnerability factor, like for nurse burnout (Shin et al., 2014). Conversely, these negative effects disappear when highly sensitive SLTs use a problem-focused strategy or a social support-focused strategy. In other words, highly sensitive SLTs may protect themselves by using these coping strategies that act as protectors against CF, confirming previous results (Delicourt et al., 2013; Halbesleben, 2006; Welbourne et al., 2007).

Nevertheless, it should be noted that our sample consisted entirely of women, which may have contributed to the particularly high scores we obtained. Indeed, burnout and compassion fatigue are favored by the fact of being a woman, as well as by depression, insomnia and anxiety (Lluch et al., 2022). Furthermore, the recruitment method may have generated a bias. It is possible that the SLTs present on the social network groups we used share certain characteristics (like being HSPS) and are more concerned by certain difficulties (like BO and CF) encountered in their profession.

6. Conclusions and perspectives

Despite its innate and a priori stable nature (Dunn, 2001), the negative effects of a high sensitivity can be corrected using specific strategies that can be acquired. This study focused on French-speaking female SLTs and as such our results cannot be generalize and further investigation must be conducted. Yet, we can understand that a high level of SPS can be a resource for people, provided that the type of sensitivity in question can be identified and appropriate strategies put in place. This study confirmed that coping strategies focused upon problem and social support are more appropriate.

At this stage, it might be interesting to go further by studying the involvement of HSPS components, since they play different role, either protective or vulnerable. It would then be interesting to investigate the role of aesthetic sensitivity, for example, or that of controlled harm avoidance in the face of burnout and compassion fatigue. This could help highly sensitive SLTs and carers in general to better protect themselves of the "cost of caring".

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