'It's like feeling and experiencing everything in HD': An interpretative phenomenological analysis of sensory processing sensitivity

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Abstract

This study explored the lived experience and emotional wellbeing of individuals who self-identify as being highly sensitive persons (HSP), otherwise termed sensory processing sensitivity (SPS). Face-to-face semi-structured interviews were conducted with a purposive sample of eleven participants who self-identify as being HSP. There were eight females and three males. Most participants were recruited from HSP Meetup groups which are meetings that focus on supporting HSPs and promoting awareness of the trait. Information about the research was distributed via members' mailing lists and potential participants were asked to contact the researcher if they would be willing to take part in an interview. All participants scored above the cut-off for being classed as highly sensitive on the Highly Sensitive Person Scale (Aron, 1997). Interviews were audio-recorded and transcribed, and the data were analysed using interpretative phenomenological analysis (IPA). Three themes were identified from participants' accounts in relation to wellbeing which were labelled using in vivo coding: 'We can have these extreme emotions', 'Empathy: A blessing and a curse', and 'You have to learn to manage it'. Participants had experienced intense emotions that led them to question their mental health. Empathy was identified as a defining feature of SPS that can have both positive and negative implications. Participants had found ways to manage their heightened sensitivity including personal development, therapy, and self-care coping strategies. Findings are discussed in the context of previous literature and suggestions are made for future lines of investigation.

Keywords: empathy, highly sensitive person, sensory processing sensitivity, personality trait, psychological wellbeing, interpretative phenomenological analysis, qualitative

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phenomenological analysis of sensory processing sensitivity

Sensory Processing Sensitivity (SPS) is defined as a genetically determined temperament trait identified by deeper processing of information, being easily overwhelmed by stimulation, having greater empathy and emotional reactivity, and being able to sense subtleties in the environment (Aron & Aron, 1997). As a theoretical framework, SPS is part of a cluster of theories, alongside *Differential Susceptibility* and *Biological Sensitivity to Context*, that encompass the broader concept of *Environmental Sensitivity*; a theoretical model that explains differences in how individuals respond to environmental stimuli (discussed elsewhere by Greven et al., 2019; see also a review by Jawer, 2005). It is suggested that these individual differences may have evolved in a minority of the species to serve an adaptive and protective function in terms of greater awareness to opportunities (e.g., food, mates) and threats (e.g., predators) (Aron, Aron, & Jagiellowicz, 2012). As such, it is argued that SPS has an evolutionary advantage and that more sensitive individuals experience stronger effects to both negative and positive environments (Pluess & Belsky, 2013), with some research emerging that people are more receptive to the benefits of psychological intervention due to being highly sensitive (de Villiers et al., 2018).

Aron and Aron (1997) devised a 27-item self-report questionnaire called the *Highly Sensitive Person Scale* (HSPS) to measure high sensitivity that is based upon interviews with 40 participants. The Highly Sensitive Person (HSP) is sometimes used to describe an individual who experiences Sensory Processing Sensitivity (SPS), particularly by those who identify with the trait, and the terms are often used interchangeably in the literature. The HSPS has been validated in several research studies and has shown good psychometric properties (see Greven et al., 2019 for an overview). It consists of both a general sensitivity construct as well as three individual subscales: Low Sensory Threshold (LST), which includes

individuals experiencing unpleasant sensory arousal to external stimuli (e.g. reaction to bright lights and loud noises); Ease of Excitation (EOE), which is identified by individuals being easily overwhelmed by external and internal stimuli (e.g. negative response to 'having a lot going on at once'); and Aesthetic Sensitivity (AES), which is characterised by individuals being deeply moved by arts and music, having a rich, complex inner life, noticing subtleties in the environment, attention to detail, and being open to new experiences (Smolewska et al., 2006).

SPS also seems to share similar features with other personality variables that are identified, in part, by heightened sensitivity. Thalbourne and Delin (1999) proposed that certain individuals are highly transliminal and show a hypersensitivity to psychological material originating in the unconscious and/or external environment. Highly transliminal people are susceptible to the occurrence of large amounts of imagery, thought, and emotion and tend to pay more attention to their inner processes, which resonates strongly with the characteristics of SPS. There is also a strong connection to hyperesthesia (heightened sensitivity to sensory experiences), suggesting that transliminality may be closely related to SPS, specifically the LST subscale of the HSPS which includes individuals experiencing unpleasant sensory arousal to stimuli. Another concept that seems related to SPS is Hartmann's (1991) personality dimension 'boundary thinness', which is characterised by sensitivity, greater recall of dreams, openness, and ease of entering an altered state of consciousness. The interrelatedness of these constructs is being investigated elsewhere in a study exploring personality and anomalous experiences.

Lionetti et al. (2018) propose that sensitivity is a continuous and normally distributed trait, but that people fall into three distinct sensitive groups along a continuum. They define low-sensitive individuals as Dandelions (30% of the population), medium-sensitive individuals as Tulips (40%), and highly sensitive individuals as Orchids (30%). In this study,

differences between the sensitivity groups on the Big Five personality traits and emotional reactivity were also investigated and Orchids scored significantly higher on emotional reactivity and neuroticism and lower on extroversion than the other two groups.

Similar groupings can also be observed in the literature on healthy versus less healthy schizotypy; a multifactorial personality construct that is considered to be on a continuum with psychosis (Claridge, 1997). Positive schizotypy has been associated with intense levels of altered perceptual experiences and visual imagery, openness to experience, magical thinking, and paranormal belief and experiences; negative schizotypy has been associated social and physical anhedonia; and disorganised schizotypy has been associated with social anxiety, difficulties with cognitive thinking such as decision-making, attention, concentration, and difficulties regulating emotion (Mohr & Claridge, 2015; Ödéhn & Goulding, 2018). These aspects of schizotypy have been linked with pathology and associated with reduced quality of life and subjective wellbeing. However, the notion of 'healthy' schizotypy has been supported in several studies with some dimensions of schizotypy considered to have adaptive advantages and being associated with better life satisfaction, resilience, and creativity (Mohr & Claridge, 2015; Schofield & Claridge, 2007; Simmonds-Moore et al., 2019). Most recently, Polner et al. (2021), in a study of 643 students, identified four clusters of schizotypy identified by overall low schizotypy (N = 392, 61%); overall high schizotypy (N = 58, 9%); low positive, high disorganised and intermediate interpersonal schizotypy (N = 131, 20%); and high positive and intermediate disorganised schizotypy, but low interpersonal schizotypy (N = 62, 10%). When comparing these clusters on measures of resilience, absorption, self-esteem, and self-concept clarity, the positive schizotypy group had the highest resilience score, even when compared to the overall low schizotypy group. The positive schizotypy group also had higher self-esteem than the overall high schizotypy and disorganised groups, but not the overall low schizotypy group, and had high levels of absorption which is believed to

contribute to creativity. It has been proposed in several studies that individuals rated high on positive schizotypy and low on negative schizotypy and cognitive disorganisation appraise their experiences differently and are able to find meaning for their unusual and potentially distressing experiences (Farias et al., 2005; Mohr & Claridge, 2015; Schofield & Claridge, 2007).

Whilst SPS is not considered to be pathological in and of itself, several studies, correlating the HSPS with other psychological variables, have found it to be associated with mental 'disorders' and/or negative clinical outcomes, including social phobia (Neal et al., 2002), avoidant personality disorder (Meyer & Carver, 2000), autism, alexithymia, anxiety and depression (Liss et al., 2008; Yano & Oishi, 2018), perceived stress and ill-health (Benham, 2006), agoraphobic avoidance (Hofmann & Bitran, 2007), work stress (Evers et al., 2008), nightmares and vivid dreams (Carr & Nielsen, 2017), lower levels of life satisfaction and subjective happiness (Sobocko & Zelenski, 2015), and neuroticism and behavioural inhibition (Ahadi & Basharpoor, 2010; Lionetti, et al., 2018). In addition, the three subscales of the HSPS have been found to be differentially related to positive and negative aspects of SPS. EOE and LST appear to represent the adverse aspects of SPS as both have been related to depression (EOE, $r = .27$; LST, $r = .20$) and anxiety (EOE, $r = .42$; LST, $r = .33$), as well as poorer social (EOE, $r = .24$; LST $r = .27$) and communication (EOE, $r = .15$; LST, $r = .21$) skills (Liss et al., 2008), however, with the exception of anxiety, these correlations would be classed as having a weak relationship. LST and EOE have also been related to autism on account of sensitivity to physical stimuli and greater attention to detail but differentiated from autism in terms of the emotionally sensitive aspect of SPS and being attuned to subtleties (Liss et al., 2008). On the other hand, AES correlates more positively with openness to experience ($r = .47$) and wellbeing ($r = .25$) as measured by the Positive and Negative Affect

Scale (Sobocko & Zelenski, 2015) and has been related to anxiety ($r = .24$) but not depression ($r = .08$) (Liss et al, 2018).

It has been suggested that individuals who are rated higher on AES may have learned to nurture their sensitivity, but that greater depth of processing of stimuli and increased time spent in reflection contributes to greater anxiety (Sobocko & Zelenski, 2015). Additionally, it has been proposed that individuals may cope with being overwhelmed by sensory experience by withdrawing from social settings (Liss et al., 2008), which might explain why SPS is associated with avoidance of social contact, avoidant personality disorder and lower extraversion. Similar findings have been reported in a phenomenological study by individuals identifying as having deep empathic sensitivity (Hart & Ingle, 2019). In this study, participants described their empathy as an intuitive knowing which led to deeper understanding or sensing, but also discussed the need to employ various strategies to cope with picking up feelings of others and sensing another's suffering, such as distancing themselves from others, spending nourishing time in nature, engaging in therapy, and numbing emotions with alcohol or drugs. In one of the only qualitative studies, to the author's knowledge, to explore SPS specifically, Black and Kern (2020) investigated how 12 participants ($N = 1$ male, 11 females), who all scored high on the HSPS and a wellbeing measure, experience and cultivate wellbeing. The sample was a subset of a larger Wellbeing and Highly Sensitive Person study involving 430 participants. Participants reported strategies which enabled them to experience positive wellbeing, such as solitude, connecting with nature, engaging in contemplative practices, reframing their internal dialogue, and self-awareness, self-acceptance, and self-compassion. In terms of challenges to wellbeing, they reported physical health issues, finding it hard to say no to others, and strong emotional responses.

The growing body of research accumulated over the past two decades has been very informative about SPS and its relationship to psychological wellbeing, but studies to date have mainly prioritised quantitative research and have used the HSPS as an outcome measure rather than including individuals who identify with the trait in their studies (for a comprehensive overview see Greven et al. 2019). It is argued that individuals who self-identify with the trait can provide meaningful insights about the experiential aspects of SPS, including how emotions are experienced and the impact that this trait has on psychological wellbeing. Greven et al. have argued that there is a need to educate individuals about SPS and to provide psychoeducation programmes to help highly sensitive individuals thrive and manage any negative consequences associated with experiencing SPS. Likewise, in the field of education, Cater (2016) found that 80 students out of a sample of 134 (59%) would be classed as highly sensitive on the HSPS and argued that training and resources about SPS should be available to teaching staff. However, to do this, it is argued that there is a need for more information about the lived experience of being highly sensitive.

There has been no previous qualitative study, to the author's knowledge, that has explored the phenomenology of individuals who *self-identify* as being highly sensitive persons. Whilst Black and Kern (2020) reported that they used interpretative phenomenological analysis (IPA) to explore SPS, their participant sample consisted of participants that scored high on the HSPS rather than as identifying with the trait per se, as for most participants, "their first awareness of SPS was through participation in the broader study" (p. 7). Likewise, Hart and Ingle (2019) explored empathic sensitivity rather than SPS in their phenomenological study. Therefore, the current study aims to explore the lived experience of individuals who self-identify as being highly sensitive persons using IPA. This will enable us to explore the trait in more detail in terms of the following research questions: how individuals make sense of being highly sensitive, how emotions are experienced by

highly sensitive persons, and what impact SPS has had on their wellbeing, identity, and relationships. Findings may have implications for humanistic psychotherapists and practitioners working with people who are highly sensitive.

Method

Theoretical and epistemological underpinnings of IPA

Interpretative phenomenological analysis (IPA) was used to address the research aims given its emphasis on lived experience and how individuals make sense of their subjective experiences (for a detailed overview of IPA and its theoretical roots see Smith et al., 2009). IPA is often referred to as a 'dual-facet' approach as it "draws inspiration from phenomenological philosophy and hermeneutic theory" (Eatough & Smith, 2017, p. 31). Phenomenological inquiry was developed by the philosopher Husserl (1971/1927), who famously argued that phenomenologists should "go back to the things themselves" to get at the *essence* of phenomena. The phenomenological method involves the suspension of assumptions, biases and preconceptions about how we make sense of the world so that we can focus our lens on the experiential content of ourselves, others, and the world; phenomenological reduction, whereby the researcher describes the phenomenon and considers its essential qualities so we become aware of what makes the experience what it is; and imaginative variation, which examines how this experience is made possible, and identifies what conditions are required for its existence (Willig, 2021). IPA is influenced by phenomenological philosophy as its focus is on how individuals make sense of their personal world and describe it in their own terms.

However, IPA is also influenced by hermeneutics, the analysis of text, and the philosopher Heidegger (1962/1927), who argued that things have visible *and* hidden meaning, and that access to phenomenology is through interpretative activity. IPA accepts that it is impossible to 'bracket out' or suspend presuppositions and acknowledges the role of

the researcher in gaining access to individuals' life worlds and making sense of their experiences. As Smith et al., (2009, p.37) have stated, "without the phenomenology, there would be nothing to interpret; without the hermeneutics, the phenomenon would not be seen". To help the phenomenon be seen, the analytical process in IPA thus involves a combination of *hermeneutics of empathy,* which involves understanding the experience in its own terms, adopting an insider's perspective, and remaining close to the participant's sense-making, and *hermeneutics of suspicion*, which involves sustained immersion in the data, being critical, asking questions, probing for meaning, and looking at things from different perspectives. The researcher is thus considered the "primary analytical instrument" (Fade, 2004, p. 2) and "is mining the material for possible meanings which allow the phenomenon of interest to 'shine forth'" (Smith et al., 2009, p, 35). Smith (2011b) has discussed the concept of the 'gem' as an additional level of interpretative activity for IPA, which is typically a single word or small extract that jumps out at the researcher and illuminates our understanding of the phenomenon. Firstly, the 'shining gem' literally shines with meaning and requires less probing to figure out its meaning, secondly, the 'suggestive gem' necessitates the researcher probing and delving a little deeper to discover it, and thirdly, the 'secret gem', which only reveals itself through a close engagement with the text.

This interpretative aspect connects IPA to symbolic interactionism, which argues that meanings individuals ascribe to events are negotiated within a cultural context and are a result of social interaction and their embodied position in the world (Shinebourne, 2011). IPA is also related to the social cognition paradigm (Fiske & Taylor, 1991) that proposes human speech and behaviour can reflect differences in meaning. For this to be possible, IPA adopts a broad realist ontology by accepting that what people say conveys their understanding of the world.

Participants

IPA aims to gain insights from participants who can offer a meaningful perspective on the phenomena of interest (Smith et al., 2009). In IPA studies, small sample sizes are better in order to conduct a nuanced analysis (Hefferon & Gil-Rodriguez, 2011; Smith, 2004). Therefore, purposive sampling was used to recruit eleven participants who all self-identified as being HSP. This was considered an acceptable number to work with given sample sizes in previous IPA studies have ranged from one to thirty (Brocki & Wearden, 2006). There were eight females and three males, with ages ranging from 31 to 56 years ($M = 45$). All participants scored above the cut-off (14 or above out of 27 items) for being classified as highly sensitive on the Highly Sensitive Person Scale (Aron, 1997), with scores ranging from 18 to 27 ($M = 22$).

Ethics

The study was approved by <insert ethics committee and university> and adhered to the British Psychological Society Code of Ethics and Conduct (2009). Participants gave informed consent to take part in the research and for extracts from their interview transcripts to be used in dissemination of the findings on the condition that their identity would remain anonymous. Participants have been assigned a pseudonym to protect their confidentiality and any potentially identifiable information has been changed or removed.

Data Collection

Most participants were recruited from HSP Meetup groups. One participant was recruited via word of mouth. Meetup is an online platform that is used to organise groups for people with similar interests who then meet up in person in the community (Toledano, 2017). HSP Meetup groups focus on supporting HSPs and promoting awareness of the trait. The researcher contacted the organiser of two Meetup groups in the UK and asked if they could distribute information about the research to their members. A participant information sheet

describing the study aims and ethical considerations was shared with potential participants via the mailing lists of the Meetup groups. It was explained that the study aimed to explore the lived experience of individuals who self-identify as being highly sensitive (HSP), otherwise termed sensory processing sensitivity (SPS), and that this would enable us to explore the concept in more detail in terms of how they came to identify with being HSP or having SPS, alongside the impact that this trait has had on their identity, wellbeing, and relationships. Interested participants contacted the researcher by email and a face-to-face interview was arranged at a convenient time and location for participants, which consisted of their home, a university room or a regular room used for Meetup group activities (average length of interview was 61 minutes).

The interviews were semi-structured, giving participants the opportunity to talk about the meaning of being HSP in-depth, and enabling the researcher to probe into new, interesting areas that arose by virtue of what the participant was saying (Kvale, 1996). The researcher was interested in how participants came to identify as being HSP, the positive and negative aspects of the trait, and any impact being HSP has had on their wellbeing. In accordance with IPA methodological guidelines (Smith et al., 2009), a set of interview questions were developed that were open and expansive and helped to answer the study research questions. Participants were informed that they could be sent a copy of the interview schedule before they decided whether to take part in the study, but that due to the semi-structured nature of the interviews, the schedule would be used as a guide not a strict set of questions, and that additional probing questions may be asked in response to unexpected content and issues raised by participants. Participants were treated as 'experiential experts' (Smith & Osborn, 2003) and were reassured that there were no right or wrong answers to the interview questions and that I was interested purely in their experiences, views and opinions. The interview schedule (see Table 1) was pilot tested, but no changes were deemed necessary.

Interviews were digitally recorded and transcribed for data analysis. Participants had the opportunity to receive a copy of their transcript and a summary of findings; one participant requested their transcript.

<insert Table 1>

Reflexivity

It is considered good practice in qualitative studies to offer a reflexive account so readers have a better understanding of how the researcher may have influenced the research process (Yardley, 2000). "Reflexivity requires an awareness of the researcher's contribution to the construction of meanings throughout the research process, and an acknowledgment of the impossibility of remaining 'outside of' one's subject matter while conducting research" (Nightingale & Cromby, 1999, p. 228). Although some qualitative research does talk about 'bracketing off' our influences, more recently there has been a movement towards using ourselves as a tool within the research process as opposed to something that taints it (see Etherington, 2004). This aligns with the hermeneutic underpinnings of IPA where the researcher draws upon their own knowledge and experience to help make sense of the data.

Participants knew my professional identity as a lecturer, psychologist, and counsellor, and that I identified as being HSP. I had no previous relationships with participants. I am aware that I was both an outsider (as an academic) and an insider (as part of the HSP community). I feel this could have influenced the research in terms of me being more empathic to the research situation and building rapport with participants so that they felt able to share their personal accounts. I made a conscious effort to make the interview situation a comfortable experience for participants and paid close attention to body language. I also disclosed some of my own experiences of being HSP which I believe helped break down some of the power dynamics that can exist in interviews. I was also aware that I might not hear some things and that I might dilute the negative aspects of being HSP in wanting the

topic to be seen in a positive light. I believe my experience as a counsellor helped me to focus on participants and listen to *their* story in the interviews. To achieve 'respondent validation' (Henwood & Pidgeon, 1999), I was conscious to check my interpretation and understanding of participants' accounts during interviews. In relation to trustworthiness of the data analysis, I was mindful of having a close engagement with the text, being open to alternate explanations, and grounding any themes in the data (Smith et al., 2009).

Data Analysis

The interview transcripts were analysed using the flexible guidelines to IPA as outlined in Smith et al. (2009). Whilst IPA has an idiographic focus and is committed to exploring how particular experiential phenomena have been understood from the perspective of particular people (Larkin & Thompson, 2012), when working with larger samples, Smith et al., (2009, p. 106) have stated that "almost inevitably the analysis of each case cannot be so detailed. In this case, the emphasis may shift more to assessing what were the key emergent themes for the whole group". This involved the researcher reading the first transcript several times to immerse themselves in the data and enter the experiential world of the participant. A close line by line analysis was undertaken by making notes on the left margin of the transcript in relation to descriptive comments (e.g., what mattered to the participant, what it might mean to identify as being HSP, and their emotional responses), linguistic comments (e.g., language used, metaphors), and conceptual comments (e.g., how an interpretation of the text might be understood in the context of psychological knowledge). Ideas for potential themes were noted on the right margin of the transcript. Analysis of the remaining transcripts then continued paying attention to the individual's unique experience but also looking for similarities and differences across the cases. This reflects the iterative nature of analysis and the 'hermeneutic circle' where there is a shifting back and forth between cases and within individual transcripts by examining the part in relation to the whole and vice versa (for example, the single word in

the context of the sentence or the interview in the context of the research project). A list of potential themes was then made for each participant, and these were examined for any similarities, looking for patterns across cases, to see if themes could be clustered or grouped together. A final list of potential themes was derived by going back through the transcripts highlighting extracts that represented the meaning of the theme, which resulted in some themes being dropped as they were poorly evidenced or did not relate to the research aims. A theme was considered as recurrent if it appeared in over half the cases, as suggested in Smith (2011a).

Findings

Three key themes were derived from participants' data which reflect the lived experience of being highly sensitive in relation to psychological wellbeing: 'We can have these extreme emotions', 'Empathy: A blessing and a curse', and 'You have to learn to manage it'. Quotes were selected to illustrate the essence of the theme and in accordance with quality guidelines for IPA studies, which recommend extracts from three to four participants per theme for larger sample sizes (Smith, 2011a). Table 2 (see Appendix A) indicates the prevalence of each theme and illustrates how the theme was present for each participant in most cases.

Theme 1: 'We Can Have These Extreme Emotions'

Most participants ($N = 9$) said that they had struggled to process very intense, sometimes extreme, emotions which had led them to think that they were flawed in some way or that something was inherently 'wrong' with them. This is exemplified in the case of Zoe who said, "we can have these extreme emotions can't we, that's the thing, and that was another thing that I used to think was wrong about me because that's what people say is wrong about you". She described how the word sensitive had come to be associated with reprimand and as a pejorative term as she reflected on how she had been told she was

sensitive throughout her life and that it was "like a stick across my back or a smack across my face". Participants mentioned that they had always felt different to other people and reflected on how they felt their emotional responses were "possibly wonky compared to a lot of people" (Caroline) because they were so heightened and fluctuating. Naomi queried whether she had borderline personality disorder when searching for an explanation as to why she had experienced anxiety and depression:

> I came across things like borderline personality disorder and things like that…so
> I thought that must be it, that's what is wrong with me and sets me apart from
> most of my other friends and family, that's what makes me feel quite
> fundamentally different to how other people seem to feel.

However, whilst in counselling, she came across literature on the highly sensitive person and her experiences started to make sense for her within a normative framework (as features of a personality trait) rather than a pathological one (as symptoms of a personality disorder). Likewise, Laura reflected on how she had self-harmed to cope with very intense emotions and had spent 16 years in and out of the mental health system, being labelled with various disorders, until she came across a therapist familiar with the trait. In saying they "couldn't fit me in the boxes", there is the sense that she felt her experiences did not fit with current categorisations of mental health and that diagnostic systems were quite restrictive:

> I'd been through quite a difficult mental health journey and labelled this that and
> the other…they thought I might have personality this and then one thing was the
> bipolar thing, they kept thinking I was bipolar and I never quite fitted and they
> couldn't fit me in the boxes.

Jason similarly talked about having extreme emotions, although he does not question a mental health disorder, "I have a rich emotional life for the good and bad if that's makes sense, you know, sometimes I'm elated and sometimes I'm right down…I definitely think I'm at the

extreme of things". Use of the phrase "rich emotional life" also gives the impression that his emotions are not just extreme, but also intense and varied, and that he has reflected on his emotions and tried to make sense of them.

Theme 2: Empathy – The Blessing and The Curse

This was a theme that applied to all participants. What was particularly noticeable was how participants viewed their empathic nature as a "double-edged sword" (Colin and Luke) or a "blessing and a curse" (Zoe) with positive and negative aspects. Positive aspects of empathy consisted of having a natural ability to empathise and anticipate the needs of others, a depth of connection with others, and being able to pick up on others' body language, emotions and moods. Chloe said that she picks up "on people's moods very, very quickly" and is often the only one to observe the feelings of others, "I'll quite often say to somebody 'did you notice how such and such was, you know the look on their faces?', quite often they don't, they haven't noticed, but I'm very in tune with people around me". Caroline also mentioned being aware of body language and "watching and observing and processing everything all at once", and how this helped in her job as a nurse to be aware of when someone, perhaps a family member of a patient, wasn't having the opportunity to express their voice. Lucy also felt that she could read other people's moods, body language, and facial expressions, and that this gave her the ability to tell if someone was being dishonest:

> I think I read faces quite well and it's in the face and it tells you that this isn't saying
> the same thing as this... but again nobody else sees it, "well that's not what they said,
> they seemed very authentic", and I just think "Noooo"

Participants mentioned that a drawback of empathy was being depleted by providing others with emotional support and being acutely affected by suffering. There was also a sense that some participants had disconnected from their own emotional responses or put up barriers in an attempt at self-preservation due to absorbing the pain and emotions of others.

This is exemplified in the extract by Zoe who talks about other people as 'energy vampires', which gives the impression that her life force is being sapped by others taking advantage of her empathic nature:

> I mean there are a lot of buzz words around, but you end up with energy vampires because you are an empath, people see you as open and they're sucking on you all the time so that's where it becomes really important for a highly sensitive person to retreat

Naomi reflects on how proud she is of her empathic nature, but that she has had to put boundaries in place. It is apparent that a process of adaptation and personal growth has taken place in relation to the level of support that she now provides to others in comparison to the past:

> I really like how empathetic I can be with other people and stuff, but I think over the years, and it's not so much now, but over the years there's been a downside to that because a lot of people have used me for the emotional support… so I've tried to become a little more boundaried in the support that I offer

Likewise, Emma talked about being the person in work that colleagues would 'offload' to and refers to herself as being like a 'receptacle'. This gives the impression that she would be the container or holder for other people's emotional troubles, which benefited others as they were able to unburden themselves but was at the detriment to her own wellbeing. Lucy mentioned being bullied at school but that others would 'offload' to her and treat her like a 'counsellor'. In contrast to being seen as the compassionate and understanding counsellor when younger, she states that she now presents as 'cold and callous':

> When something had gone wrong with their best friend or something or other, who was the person they would go and offload to, who was the counsellor …I think as I've gotten older, although I can pick up on people's feelings and I very easily can absorb

negativity I seem to have developed a bit of a thicker skin around that, whereas now I

come across as cold and callous.

In Lucy's case, although there has been no change in the capacity to pick up on people's feelings, there is an evident change in her self-presentation, and a sense that she has put up barriers to protect herself from absorbing the negative emotions of others, perhaps signalling diminished sensitivity.

Theme 3: 'You Have to Learn to Manage it'

Most participants had learnt ways to adapt and cope with being highly sensitive and stressed the need to manage it, "I think it has to be managed" (Caroline), "I control it by managing, managing my life" (Jason), "It takes tremendous amounts of resources to actually manage it" (Colin). This consisted of various self-care strategies such as taking care of basic needs, "I spend a lot more time with my feet up and watching things I like, or spending longer in the bath, planning my food more meticulously" (Laura), spending time alone, "I suppose for myself I can go into hermit mode, I just need to be away from everything, people might not hear from me for a few weeks, you know" (Luke), and being in nature, "If I need some head space and go and calm down, I'll be out in the woods, lying in a hammock listening to the birds" (Jason). Some participants had also engaged in therapy and emphasised the importance of developing self-awareness, such as Naomi who states:

When it is managed it is a gift and when it is unmanaged it can possibly cause

anxiety and depression because it is untrained and when you feel things to the

depth that you do it can end up spiralling into anxious thoughts and feelings and

then if that continues the cycle can make you fall into a pit of depression…I spent

three and a half bloody years in therapy to come out at a point where I was like,

yeah, everything is managed now and everything complements one and other

She talks about sensitivity being a 'gift' on one hand, referring to positive aspects of the trait, such as feeling on a deeper level and connecting with others, but then discusses how it can have a negative impact on psychological wellbeing if coping strategies, such as self-care are not put in place. She later reflected on what things would have been like if she had not been through a period of self-development and wonders whether people might attempt to numb their emotions with unhealthy habits, such as substance misuse or excessive exercising. We get a real sense of the intensity of feelings and of the potential to descend into a dark place of despair when she mentions 'spiralling into anxious thoughts and feelings' and a 'pit of depression'. Ava also talked about the importance of developing self-awareness, self-care, and compassion and how this had helped her to manage her anxiety. Ava's use of the word 'equilibrium' suggests that managing aspects of sensitivity for her is also about being or feeling balanced as it is presented as signifying an improvement in her health:

> I think understanding more about HSP and why I am sensitive and how to look after myself and be a bit more compassionate has helped me with finding a better sense of myself and my own general health really and the anxiety levels trying to manage those has been quite tricky and so being nice to myself has reduced those a bit, on the anxiety side, and beginning to find a better equilibrium

Participants seemed to be at different stages of coming to terms with their sensitivity, which affected how they managed and coped with the overwhelm that accompanied feeling things so deeply and having a rich inner life. To some extent this seemed to depend on development of self-awareness, acceptance of the trait and how valuable they had found therapeutic support. Naomi had really benefitted from years of therapy since searching for an explanation for her anxiety and depression and later identifying with the trait and had reached a point in her life where she felt comfortable and at ease with her sensitivity and was able to allow her "HSP-

ness to flourish". She reflected on how she had previously felt so overwhelmed by being around other people and constantly over-thinking and feeling anxious, but that now she had developed more self-awareness and was able to notice when she needed to put boundaries in place or needed more space. This was also evident for Jason who had similarly experienced anxiety and depression. To get to know himself more and understand where the ups and downs came from, he had undertaken quite a lot of reflective work and read about mindfulness, psychology, and Buddhism. He described having "fairly significant breakthrough moments" and learning a lot about where his fears and traits came from in meditation, talking therapy and visiting other states of consciousness with experimental drugs. As with Naomi, he felt that he was not as emotionally reactive now, whereas in the past he would be affected by other people's moods and emulate what they were feeling. In contrast, Lucy, who also discussed having a tendency towards depression and had been in counselling, did not mention managing her sensitivity. She seemed to be in a state of transition and was trying to find her place in the world: "I find the world hard to live in, just living I find difficult and then I have massive guilt around that because I've no reason to, all my needs are met". When discussing the challenging aspects of being HSP, she described "always, always feeling the odd one out", feeling worthless, not fitting in, and being in a "massive existential crisis" after recently quitting her job.

Discussion

This was the first qualitative study to use a phenomenological method of inquiry to understand the lived experienced of identifying as a highly sensitive person. Findings increase our understanding of the relationship between SPS and psychological wellbeing and complement the growing body of quantitative research that has been undertaken thus far. Three themes were derived from the analysis: 'We can have these extreme emotions', 'Empathy: The blessing and curse', and 'We have to learn to manage it'.

In the first theme, it was evident that participants felt they were different or flawed because they experienced intense emotions. Some participants said that their emotions were 'extreme' or 'up and down' and had experienced depression and anxiety or had self-harmed to cope with the intensity of emotions. Anxiety seemed to stem from feeling as though there was something 'wrong with them' or that their emotional responses were 'wonky', rumination accompanied by over-thinking and over-analysing, and the overwhelm associated with picking up on others' emotions. This confirms previous research which has shown that greater anxiety was associated with significantly higher scores on all three subscales of the HSPS and that greater depression was associated higher scores on the EOS and LST, albeit with weak but significant correlations (Liss et al., 2008). It also suggests that a fruitful line of investigation for future SPS research may be emotional regulation, which Koole (2009) defines as the "management of all emotionally charged states, including discrete emotions, mood, stress, and affect" (p. 7), in terms of whether there are any differences between individuals who score high on the HSPS compared to those who score low (or in relation to the three subscales or sensitivity groups) in relation to the strategies used to manage emotions and how this links with wellbeing. In a study that correlated the HSPS with The *Difficulties in Emotional Regulation Scale* (DERS) and *The Distress Tolerance Scale* (DTS), Brindle et al. (2015) found a positive relationship between SPS and symptoms of depression, which was partially mediated by an individual's lack of access to emotional regulation strategies and a lack of acceptance towards feeling distressed. Hughes et al. (2020) have highlighted the lack of research that explores the relationship between personality traits and regulatory strategies and recommend that future research should explore personality-driven differences in *why* people regulate as well as *how* they regulate so future research could also investigate this aspect of emotion regulation in relation to SPS. Some participants in this study often found it helpful to have time alone or to be in nature, suggesting individuals with SPS may avoid

emotion-eliciting situations or adapt the environment to achieve periods of solitude. This finding was also reported by participants in Black and Kern's (2020) qualitative study with individuals who scored high on SPS and wellbeing as they also emphasised the importance of connecting with nature and spending time in solitude, and by participants in Hart and Ingle's (2019) study with individuals who experienced deep empathic sensitivity who mentioned distancing themselves from others and spending nourishing time in nature to cope with picking up others' emotions.

One participant had been in and out of the mental health system where the diagnosis of Bipolar Disorder had been queried, and another participant had questioned whether she would meet the diagnosis for Borderline Personality Disorder after searching for an explanation for why she experienced such intense emotions. In a case series of three patients with a diagnosis of Bipolar Disorder, presented at the 25th European Congress of Psychiatry, Ioannou et al. (2017) report that individuals find the highly sensitive person concept a validating explanatory model for their mental health issues and argue for a more person-centred approach in psychiatry. This highlights the importance of acknowledging alternative frameworks for psychological distress to that of the medical model. Moreover, although there are limitations in making generalisations from such a small sample size, it raises the question of how SPS is distinguished from mental health disorders and whether some individuals who are diagnosed with mental health disorders are highly sensitive. Future research could compare clinical and non-clinical populations using the HSPS. Practitioners may also find it helpful to discuss high sensitivity in their assessment process if clients exhibit some of the features of SPS that are identified in this study and the prevailing literature[1]. This may help

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[1] In terms of disseminating information about the trait, the interested reader is signposted to Dr Elaine Aron's website https://hsperson.com/ which contains links to books, films, podcasts, and research etc. https://sensitivityresearch.com/ is also a website run by researchers dedicated to sharing reliable information on the human trait of sensitivity.

practitioners to identify SPS in individuals with a mental health disorder where this might be an additional hitherto unidentified aspect of their existing difficulties or where SPS has potentially been misdiagnosed as a mental disorder. For example, Greven et al. (2019) have argued that "it is conceivable that children with high SPS are misdiagnosed for ASD, for instance when they are exposed to negative environmental factors that precipitate social withdrawal" (p. 301). Likewise, it could be the case that adults with high SPS are misdiagnosed with a range of disorders, if, for instance, they socially withdraw as a protection against environmental stimuli or to seek solitude.

In the second theme, the finding that participants felt able to pick up on others' emotional states is consistent with neuroimaging research that has found a greater neural response to both sad and happy emotional states of others in individuals who score high on the HSPS, with increased activity in brain regions involved in empathy, awareness, and integration of sensory information (Acevedo, 2020). It also confirms previous qualitative research on empathic sensitivity which found that participants picked up on the emotions of others and described their empathy as an intuitive knowing which led to deeper understanding or sensing (Hart & Ingle, 2019). However, an area yet to be investigated is whether SPS is associated differentially to the affective or cognitive components of empathy. Participants also mentioned being able to read body language and the facial expressions of others, so it would also be interesting to explore whether individuals who score high on the HSPS are more likely to detect relevant emotion cues (bodily, facial, vocal) and are more accurate in making inferences about the emotional/mental states of others using tests such as the *Reading the Mind in the Eyes Test* (Baron-Cohen et al., 2001). In addition, participants also said that they felt a deep connection to others and one participant stated that she was seen as the 'counsellor', so another area for future research is whether mental health

practitioners or therapists are more likely to score higher on the HSPS and/or identify as being HSP.

Another potential area of investigation is embodied social communication (Groot, Smeets, Kaldewai, & Duijndam, 2012). A recent meta-analysis found a small to moderate effect size for the human capacity to communicate and sense emotions, particularly fear, anxiety and stress, through chemosignals (see de Groot & Smeets, 2017). Given the sensory nature of SPS and the ability to pick up on others' emotions, it may be that those who score high on the HSPS are more able to detect these chemosignals, especially as both fear and SPS are believed to serve an adaptive survival function.

There was however a downside to empathy as participants mentioned that they could experience exhaustion from providing emotional support to others and that they had detached their own emotions or 'developed a thicker skin' to cope with absorbing others' negative feelings. This not only has implications for the wellbeing of highly sensitive individuals in general, but also highly sensitive individuals who are working in caring professions in terms of how they manage empathy and burnout. A further qualitative study is planned by the author to explore individuals' experiences of being both highly sensitive and a therapist and how the trait impacts their work with clients. It is also interesting to note in relation to this finding that the most commonly checked item on the HSPS that was answered in the affirmative in Cater's (2016) study with students was "Do other people's moods affect you?". Cater stated that "this would indicate that a tutor's demeanour and the overall harmony of the classroom plays a significant role in the comfort level of HSP students" (p. 29). Therefore, it would seem pertinent to explore, with further research in an educational setting, what impact SPS might have on academic performance, engagement, and student retention.

Some participants mentioned that therapy had helped them to gain a greater understanding of what being highly sensitive meant to them, which had contributed to an

increased ability to cope with some of the extreme emotions. They had developed coping strategies and self-care techniques which enabled them to manage and constrain their sensitivity. Participants emphasised the importance of personal growth and self-acceptance in helping them understand their high sensitivity and frame it in a positive way, which are well documented concepts in the literature on psychological wellbeing (e.g. Ryff & Singer, 2008). Individuals scoring high on SPS and wellbeing have also described reframing their own internal dialogue as a strategy to enable better wellbeing (Hart & Ingle, 2019), and reframing of potentially distressing experiences has been noted in individuals scoring high on positive schizotypy and better resilience (Farias et al., 2005; Mohr & Claridge, 2015; Polner et al., 2021; Schofield & Claridge, 2007). This suggests that the intensity of SPS is not static and it can change depending on one's appraisal system and cognitive framework, and that the positive aspects of SPS can be harnessed with appropriate support and development and the negative aspects can be managed and balanced. It would be interesting to explore how this process unravels throughout life using a longitudinal study or a biographical approach such as narrative analysis (Murray, 2003) or autoethnography (Ellis & Bochner, 2000). It might also be promising for researchers to consider how character strengths and flourishing relate to SPS within the field of positive psychology.

Future research could also explore whether highly sensitive individuals respond better to particular types of intervention. The finding that participants could have anxious thoughts and feelings that could affect mood if not managed, links to the theory that cognitive reactivity in the form of rumination and maladaptive thought processes might contribute to the psychological distress experienced by highly sensitive individuals and that Mindfulness Based Cognitive Therapy (MBCT) might be an appropriate therapeutic intervention (Wyller et al., 2017). Bakler and Moulding (2012) support this notion as they found that higher SPS corresponded with lower dispositional mindfulness, psychological flexibility and acceptance.

Likewise, Brindle et al. (2015) suggest interventions for highly sensitive individuals should focus on self-efficacy in relation to managing emotions, mindfulness, and acceptance-based approaches. Interestingly, Pluess and Boniwell (2015) have found that children scoring high on the HSPS do better in psychological interventions aimed at reducing depression symptoms that foster emotional resilience and propose that this highlights a need for personalised individual interventions that consider SPS.

In terms of limitations, it is acknowledged that the participants in this study had attended a Meetup group specifically for HSP individuals and/or had undertaken therapy sessions. Therefore, it is possible that their experiences had been normalised and validated within a supportive context and they had been through a period of adjustment. This might explain why most participants had identified various coping strategies to manage their high sensitivity and how some had found self-acceptance and personal development to be helpful. Additionally, supportive group contexts may be more likely to attract individuals who have mental health issues. As such, the lived experience and wellbeing of individuals who identify with being highly sensitive might be different for others who have not had access to this type of support. Furthermore, most participants seemed to have identified with the trait for some time. Further qualitative research should be conducted with a wider range of individuals, such as, those who have only recently identified with the trait, minority populations, individuals who have been diagnosed with a mental health disorder who identify as being highly sensitive, and homogeneous samples from different populations. For example, it is acknowledged that there were more females ($N = 8$) than males ($N = 3$) that took part in this study. Whilst it was beyond the scope of this study to explore biological sex or gender and SPS specifically, when male participants were asked if there were any challenges of being male and HSP, Colin mentioned being validated in a meet-up group and stated "it was a relief to hear, particularly from a woman, from a woman's perspective they saw it as ten times

tougher as a male to be highly sensitive, I've felt it but not been able to voice it to anybody",
therefore, it seems pertinent for future research to explore SPS from the particular perspective
of males/men.

Conclusion

This study focused on the lived experience of individuals who identify as being highly
sensitive persons. Participants reported experiencing very intense and sometimes extreme
emotions, which may suggest that individuals seeking support for intense/extreme emotions
and/or who experience high levels of empathy may be highly sensitive or view their
experiences as SPS. Negative aspects of SPS can be managed with personal development,
therapy, and self-care coping strategies, which allows positive aspects, such as empathy and a
greater sense of connection to others to be fostered. It is important for practitioners to be able
to distinguish between SPS and mental health disorders and further research is needed in this
area. SPS is an alternative explanatory framework for psychological distress to that of the
medical model. Practitioners could screen for SPS in their assessment process and adjust
interventions accordingly. Interventions that focus on compassionate and acceptance-based
approaches, development of self-awareness, and management of emotions may be of
particular benefit to individuals with SPS.

References

Acevedo, B. P. (Ed.) (2020). *The highly sensitive brain: Research, assessment, and treatment of sensory processing sensitivity*. Academic Press.

Ahadi, B., & Basharpoor, S. (2010). Relationship between sensory processing sensitivity, personality dimensions and mental health. *Journal of Applied Sciences, 10* (7), 570-574.

Aron, E. N., & Aron, A. (1997). Sensory-processing sensitivity and its relation to introversion and emotionality. *Journal of Personality and Social Psychology, 73* (2), 345-368.

Aron, E. N., Aron, A., & Jagiellowicz, J. (2012). Sensory processing sensitivity: A review in the light of the evolution of biological responsivity. *Personality and Social Psychology Review, 16* (3), 262-282. doi:10.1177/1088868311434213.

Baron-Cohen, S.,Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The "Reading the mind in the eyes" Test revised version: A study with normal adults, adults with Asperger syndrome or high-functioning autism. *Journal of Child Psychology and Psychiatry, 42* (2), 241–251. https://doi.org/10.1111/1469-7610.00715

Benham, G. (2006). The highly sensitive person: Stress and physical symptom reports. *Personality and Individual Differences, 40* (7), 1433-1440.

Black, B. A., & Kern, M. L. (2020). A qualitative exploration of individual differences in wellbeing for highly sensitive individuals. *Palgrave Communication 6*, 103. https://doi.org/10.1057/s41599-020-0482-8

Brindle, K., Moulding, R., Bakker, K., & Nedeljkovic, M. (2015). Is the relationship between sensory-processing sensitivity and negative affect mediated by emotional regulation? *Australian Journal of Psychology, 67*, 214–221. doi: 10.1111/ajpy.12084

British Psychological Society (2009). *Code of ethics and conduct.* Author.

Brocki, J. M., & Wearden, A. J. (2006). A critical evaluation of the use of interpretative phenomenological analysis (IPA) in health psychology. *Psychology and Health, 21* (1), 87-108.

Carr, M., & Nielsen, T. (2017). A novel Differential Susceptibility framework for the study of nightmares: Evidence for trait sensory processing sensitivity. *Clinical Psychology Review,* 58, 86-96. doi: 10.1016/j.cpr.2017.10.002

Cater, K. (2016). Small shifts, big changes: Changing the story for students with Sensory Processing Sensitivity (SPS). *International Journal for Transformative Research, 3,* 24-31.

Claridge, G. (Ed.). (1997). *Schizotypy: Implications for illness and health.* Oxford University Press. https://doi.org/10.1093/med:psych/9780198523536.001.0001

Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology, 10*, 85.

de Villiers, B., Lionetti, F., & Pluess, (2018). Vantage sensitivity: A framework for individual differences in response to psychological intervention. *Social Psychiatry and Psychiatric Epidemiology, 53* (6), 545-554.

Ellis, C., & Bochner, A. P. (2000). Autoethnography, personal narrative, reflexivity. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp.733-768). Sage.

Etherington, K. (2004). *Becoming a reflexive researcher: Using our selves in research.* Jessica Kingsley.

Evers, A., Rasche, J., & Schabracq, M. J. (2008). High sensory processing sensitivity at work. *International Journal of Stress Management, 15* (2), 189 - 198.

Fade, S. (2004), Using interpretative phenomenological analysis for public health nutrition and dietic research. A practical guide. *Proceedings of Nutrition Society, 63*, 647-653.

Farias, M., Claridge, G., & Lalljee, M. (2005). Personality and cognitive predictors of New
Age practices and beliefs. *Personality and Individual Differences, 39*, 979-989.

Fiske, S. T., & Taylor, S. E. (1991). *Social cognition* (2nd ed.). Mcgraw-Hill Book Company

Greven, C. U., Lionetti, F., Booth, C., Aron, E., Fox, E., Schendan, H. E., Pluess, M.,
Bruining, H., Acevedo, B., Bijttebier,P., & Homberg, J. (2019). Sensory processing
sensitivity in the context of environmental sensitivity: A critical review and
development of research agenda. *Neuroscience and Biobehavioral Reviews, 98*, 287-
305.

Groot, J. H. B., & Smeets, M. A. M. (2017). Human fear chemosignaling: Evidence from a
meta-analysis. Chem Senses, 42 (8), 663-673. doi: 10.1093/chemse/bjx049.

Groot, J. H. B., Smeets, M. A. M., Kaldewaij, A., & Duijndam, M. J. A. (2012).
Chemosignals communicate human fear. *Psychological Science, 23* (11), 1417-24.
doi: 10.1177/0956797612445317.

Hart, T., & Ingle, M. (2019). The (deep) end of empathy. *Journal of Humanistic Psychology*
1–21. https:/doi.org/10.1177/0022167819853107

Hartmann, E. (1991). *Boundaries in the mind: A new psychology of personality*. Basic
Books.

Hefferon, K., & Gil-Rodriguez, E. (2011). Interpretative phenomenological analysis:
Reflecting on the rise in popularity of interpretive phenomenological analysis. *The
Psychologist, 24*, 756–759.

Heidegger, M. (1962/1927). *Being and time.* Blackwell.

Henwood, K., & Pidgeon, N. (1992). Qualitative research and psychological theorizing.
British Journal of Psychology, 83, 97-111. http://dx.doi.org/10.1111/j.2044
8295.1992.tb02426.x

Hofmann, S. G., & Bitran, S. (2007). Sensory-processing sensitivity in social anxiety

disorder: Relationship to harm avoidance and diagnostic subtypes. *Journal of Anxiety Disorders, 21* (7), 944–954. https://doi.org/10.1016/j.janxdis.2006.12.003

Hughes, D. J., Kratsiotis, I. K., Niven, K., & Holman, D. (2020). Personality traits and emotion regulation: A targeted review and recommendations. *Emotion, 20* (1), 63–67.

Husserl, E. (1971/1927). Phenomenology. For Encyclopaedia Britannica (R. Palmer, New complete translation). *Journal of the British Society for Phenomenology, 2* (2), 77-90, DOI: 10.1080/00071773.1971.11006182

Ioannou, M., Dellepiane, M., Olsson, S., & Steingrimsson, S. (2017). Understanding the cultural concept of "highly sensitive person" among bipolar patients. Abstract of the 25th European Congress of Psychiatry *European Psychiatry, 41*, S514. https://doi.org/10.1016/j.eurpsy.2017.01.668

Jawer, M. (2005). Environmental sensitivity: A neurobiological phenomenon? *Seminars in Integrative Medicine, 3,* 104-109.

Koole, S. L. (2009). The psychology of emotion regulation: An integrative review. *Cognition and Emotion, 21* (1), 4-41. doi.org/10.1080/02699930802619031

Kvale, S. (1996). *Interviews*. Sage

Larkin, M., & Thompson, A. (2012). Interpretative phenomenological analysis. In A. Thompson, & D. Harper (Eds.), *Qualitative research methods in mental health and psychotherapy: a guide for students and practitioners* (pp. 99-116). John Wiley & Sons. https://doi.org/10.1002/9781119973249

Lionetti, F., Aron, A., Aron, E. N., Burns, L. G., 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* (24), 1-11. doi:10.1038/s41398-017-0090-6

Liss, M., Mailloux, J., & Erchull, M. J. (2008). The relationships between sensory processing sensitivity, alexithymia, autism, depression, and anxiety. *Personality and Individual Differences, 45* (3), 255-259.

Meyer, B. & Carver, C., S. (2000). Negative childhood accounts, sensitivity, and pessimism: A study of avoidant personality disorder features in college students. *Journal of Personality Disorders, 14* (3), 233-48.

Mohr, C., & Claridge, G. (2015). Schizotypy—Do not worry, it is not all worrisome. *Schizophrenia Bulletin, 41* (2), S436–S443. doi:10.1093/schbul/sbu185

Murray, M. (2003). Narrative psychology and narrative analysis. In P. M. Camic, J. E. Rhodes, & L. Yardley (Eds.), *Qualitative research in psychology: Expanding perspectives in methodology and design* (p. 95–112). American Psychological Association. https://doi.org/10.1037/10595-006

Neal, J., Edelmann, R. J., & Glachan, M. (2002). Behavioral inhibition and symptoms of anxiety and depression: Is there a specific relationship with social phobia? *British Journal of Clinical Psychology, 41*, 361–374

Nightingale, D. J., & Cromby, J. (1999). *Social constructionist psychology: A critical analysis of theory and practice*. Open University Press.

Ödéhn, N., & Goulding, A. (2018). Schizotypy and mental health in women and men from the general population. *Nordic Psychology, 70* (3), 198-208. DOI: 10.1080/19012276.2017.1410072

Pluess, M., & Boniwell, I. (2015). Sensory-Processing Sensitivity predicts treatment response to a school-based depression prevention program: Evidence of Vantage Sensitivity. *Personality and Individual Differences, 82*, 40-45. http://dx.doi.org/10.1016/j.paid.2015.03.011

Polner, B., Hupuczi, E., Kéri, S., & Kállai, J. (2021). Adaptive and maladaptive features of

    schizotypy clusters in a community sample. *Scientific Reports, 11,* 16653.

    https://doi.org/10.1038/s41598-021-95945-0

Ryff, C. D., & Singer, B. H. (2008). Know thyself and become what you are: A eudaimonic

    approach to psychological well-being. *Journal of Happiness Studies: An*

    Interdisciplinary Forum on Subjective Well-Being, 9 (1), 13–39.

    https://doi.org/10.1007/s10902-006-9019-0

Schofield, K., & Claridge, G. (2007). Paranormal experiences and mental health: Schizotypy

    as an underlying factor. *Personality and Individual Differences, 43*, 1908-1916.

Shinebourne, P. (2011). The theoretical underpinnings of Interpretative Phenomenological

    Analysis (IPA). *Existential Analysis, 22* (1), 16-31.

Simmonds-Moore, C., Alvarado, C., & Zingrone, N. (2019). A survey exploring synesthetic

    experiences: Exceptional experiences, schizotypy, and psychological well-being.

    Psychology of Consciousness: Theory, Research, and Practice, 6 (1), 99–121.

    https://doi.org/10.1037/cns0000165

Smith, J. A. (2004). Reflecting on the development of interpretative phenomenological

    analysis and its contribution to qualitative research in psychology. *Qualitative*

    Research in Psychology, 1, 39-54.

Smith, J. A. (2011a). Evaluating the contribution of interpretative phenomenological analysis.

    Health Psychology Review, 5, 9–27. doi:10.1080/17437199.2010.510659

Smith, J. A. (2011b). "We could be diving for pearls": The value of the gem in experiential

    qualitative psychology. *Qualitative Methods in Psychology Bulletin, 12,* 6-15.

Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis.*

    Theory, method, and research. Sage.

Smith, J. A., & Osborn, M. (2003) Interpretative phenomenological analysis. In J. A. Smith (Ed,), *Qualitative psychology: A practical guide to research methods.* Sage.

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. https://doi.org/10.1016/j.paid.2005.09.022.

Sobocko, K., & Zelenski, J. M. (2015). Trait sensory-processing sensitivity and subjective well-being: Distinctive associations for different aspects of sensitivity. *Personality and Individual Differences, 83*, 44-49.

Thalbourne, M. A., & Delin, P. S. (1999) Transliminality: Its relation to dream life, religiosity, and mystical experience. *The International Journal for the Psychology of Religion, 9* (1), 45-61.

Thompson, N. M., Uusberg, A., Gross, J. J. & Chakrabati, B. (2019). Empathy and emotional regulation: An integrative review. *Progress in Brain Research, 247*, 273-304. doi.org/10.1016/bs.pbr.2019.03.024

Toledano, M. (2017). Emergent methods: Using netnography in public relations research. *Public Relations Review, 43* (3), 597-604.

Willig, C. (2021). *Introducing qualitative research in psychology* (4th ed.). Open University Press.

Wyller, H. B., Wyller, V. B. B., Crane, C., & Gjelsvik, B. (2017). The relationship between sensory processing sensitivity and psychological distress: A model of underpinning mechanisms and an analysis of therapeutic possibilities. *Scandinavian Psychologist, 4*, e15. https://doi.org/10.15714/scandpsychol.4.e15

Yano, K. & Oishi, K. (2018). The relationships among daily exercise, sensory-processing

   sensitivity, and depressive tendency in Japanese university students. *Personality and

   Individual Differences, 127*, 49-53. doi.org/10.1016/j.paid.2018.01.047

Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology and Health, 15* (2),

   215-228. doi.org/10.1080/08870440008400302