

Sensitivity to the (educational) environment: self-management of high demand in university students and professionals

*Sensibilidad al ambiente (educativo):
autogestión de la alta demanda en
estudiantes y profesionales universitarios*

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ABSTRACT

Currently, the educational sector echoes the knowledge contributed by Psychology, understanding within the context of its social responsibility that it must facilitate the integral development of individuals by enhancing the acquisition of competencies in an environment that promotes physical, mental, and emotional well-being. It is well known that personality traits influence this well-being and the expression of individual potential. Scientific literature has evidenced that the personality trait characterized by high Sensory Processing Sensitivity (SPS), present in approximately 30% of the population, makes the so-called highly sensitive person much more sensitive to environmental influences. Thus, high SPS can lead to greater benefits from positive environments but also pose a risk for developing physical and mental health problems in unfavorable environments. Despite its social impact, few studies have been conducted on these individuals in the university context, especially among professionals. In response to this need, this study aims to: 1) analyze, based on the perceptions of university students and professionals, with and without the high SPS trait, the difficulties and strengths present in daily management when facing highly demanding situations, and 2) comparatively analyze the differential aspects exhibited by highly sensitive individuals. A qualitative methodology was followed, using focus groups as the source of information, in which 10 students and 17 professionals participated. Content analysis reveals five common themes (trait visibility, health, personality, strategies, and difficulties). All groups display strengths but also difficulties in daily coping, with particularities among the highly sensitive group. The results are discussed, including a training proposal focused on SPS, but applicable and beneficial for the entire university community..

Keywords: sensory processing sensitivity, university students and professionals, daily coping, well-being, university training program, higher education

RESUMEN

Actualmente el sector educativo se hace eco del conocimiento aportado por la Psicología, pues comprende en el contexto de su responsabilidad social, que debe facilitar el desarrollo integral de las personas, potenciando la adquisición de competencias en un ambiente que promueva el bienestar físico, mental y emocional. Es bien sabido que características de personalidad influyen en dicho bienestar y en la expresión de la máxima potencialidad individual. La literatura científica ha evidenciado que el rasgo de personalidad caracterizado por una alta Sensibilidad del Procesamiento Sensorial (SPS), presente en aproximadamente el 30% de la población, hace a la denominada persona altamente sensible, mucho más sensible a las influencias del ambiente. De este modo, una alta SPS puede conducir a un mayor beneficio de ambientes positivos, pero ser también factor de riesgo para desarrollar problemas de salud física y mental en ambientes desfavorables. Pese a su impacto social, escasos estudios se han llevado a cabo sobre estas personas en el contexto universitario, y en especial, sobre profesionales. En respuesta a esta necesidad, este estudio pretende: 1) a partir de las percepciones de estudiantes y profesionales universitarios, con y

sin rasgo de alta SPS, analizar las dificultades y fortalezas presentes en la gestión diaria al enfrentarse a situaciones altamente demandantes y, 2) analizar comparativamente los aspectos diferenciales que muestran las personas altamente sensibles. Se siguió una metodología cualitativa con focus groups como fuente de información, en los que participaron 10 estudiantes y 17 profesionales. El análisis de contenido evidencia cinco temas comunes (visibilidad del rasgo, salud, personalidad, estrategias y dificultades). Todos los grupos muestran fortalezas, pero también dificultades en el afrontamiento diario, con particularidades en el colectivo altamente sensible. Se discuten los resultados incluyendo una propuesta formativa con foco en la SPS, pero de aplicación y beneficio para toda la comunidad universitaria.

Palabras clave: sensibilidad del procesamiento sensorial, estudiantes y profesores universitarios, afrontamiento diario, bienestar, programa formativo universitario, educación superior

INTRODUCTION

Environmental sensitivity is a skill found in most organisms to record, process, and respond to external factors (Pluess & Boniwell, 2015). Individuals differ in this sensitivity, with some being much more sensitive to environmental influences than others (Lionetti et al., 2018). The term 'environment' should be understood in a broad sense:

Any salient conditioned or unconditioned internal or external stimuli, including physical environments (e.g. food, caffeine intake), social environments (e.g. childhood experiences, other people's moods, crowds), sensory environments (e.g. auditory, visual, tactile, olfactory), and internal events (e.g. thoughts, feelings, bodily sensations such as hunger, pain) (Greven et al., 2019, p. 289).

It has been found that approximately 20-35% of the population possesses increased environmental sensitivity (Aron & Aron, 1997; Lionetti et al., 2018) termed High Sensitivity or Sensory Processing Sensitivity (SPS), which is described as a personality trait with a genetic basis and environmental modulation (Greven et al., 2019). SPS, Differential Susceptibility, and Biological Sensitivity to Context constitute the three theories under the framework of Environmental Sensitivity. All of them describe individual differences in sensitivity to positive and negative environments (Greven et al., 2019). In particular, SPS encompasses a phenotypic trait characterised by deeper information processing, greater emotional reactivity and empathy, greater awareness of environmental subtleties and a greater facility for overstimulation (Aron et al., 2012).

Studies in adults and children link high SPS with clinical aspects such as anxiety, depression, stress, and physical symptoms (Bakker & Moulding, 2012). Conversely,

highly sensitive persons (HSPs) are also more sensitive (even advantageously) to positive environmental experiences. Pluess y Boniwell (2015) explored this 'vantage sensitivity' in response to a school-based depression prevention intervention. Only those who scored high in SPS saw a reduction. Kibe et al. (2020), in a resilience education programme for secondary school students, showed that highly sensitive students had lower well-being but responded better to the intervention, with greater reductions in depression and improvements in self-esteem.

Numerous studies reveal that the family environment, early experiences, or the social and educational environment are key to how highly sensitive individuals can develop, as well as their health and social competencies in adulthood (Greven et al., 2019). Nevertheless, many people become aware of their trait after years of academic and relational difficulties or health problems. In the context of education, studies such as Pluess y Boniwell (2015) o Kibe et al. (2020) show how highly sensitive individuals can benefit from appropriate educational environments, where the atmosphere is emotionally positive and the incorporation of diversity is effective and suited to their needs.

Highly sensitive people in university environments

The university environment can be highly demanding for students on cognitive, emotional, and social levels, often leading to elevated stress and anxiety levels (Amanvermez et al., 2023). Young adults entering university deal not only with the developmental changes typical of their age but also with stressors such as moving to a new city, changing peer groups, and/or academic pressures (Dyson & Renk, 2006). Although these factors could have a greater impact on highly sensitive students, few studies have investigated this. In a recent work, Mac et al. (2024) reviewed the impact of SPS on mental health in university students, showing that higher SPS levels were associated with greater communication apprehension and perceived university stress (most notably academic stress) (Gearhart & Bodie, 2012) and lower attention control and higher negative mood states (Amemiya et al., 2020). May y Pitman (2023) examined differences in university adaptation between students with high and low SPS. Highly sensitive students showed poorer adaptation, possibly due to a propensity towards negative affectivity. However, "the ability of high SPS individuals to carefully and deeply process stimulation served to partially offset adjustment difficulties" (May & Pitman, 2023, p. 7938). Interestingly, effective coping strategies employed by university students seem to depend on the level of SPS (Yano, Endo, et al., 2021). Thus, highly sensitive students with better mental health tend to use strategies such as positive thinking, emotional expression and regulation, and seeking emotional support from others. Conversely, highly sensitive students with poorer mental

health tend to use coping strategies such as temporary avoidance, resistance, cause analysis, and information gathering. Life skills, such as emotional coping, negatively correlate with depressive tendencies in highly sensitive students (Yano, Kase, et al., 2021). Cater (2017) , in a mixed-methods study, examined the self-awareness and knowledge of the SPS trait among highly sensitive students, who perceived it as useful for managing their lives and studies. Saglietti et al. (2024) qualitatively explored academic socialisation in highly sensitive university students. While most were satisfied with their academic achievements and rated their relationships with peers and professors positively, they also reported difficulties in relationships and anxious behaviours in various socio-academic and technological aspects.

Thus, some authors highlight the importance of developing support methods for highly sensitive students and the need for studies exploring SPS in university students (Mac et al., 2024).

Another fundamental part of the university community is the professionals. Although the roles of academic and non-academic professionals are different (typically teaching/management/research and administration/services, respectively), for both groups the university environment can entail considerable demands on cognitive resources, emotional regulation and stress management, as well as interpersonal relationships, among others. Additionally, during the COVID-19 pandemic, the prevalence of anxiety, depression, and stress among academic professionals increased (Silva et al., 2021) as they had to adapt quickly and flexibly to the needs of different teaching methods without sufficient support and emotional backing. Even after returning to pre-pandemic conditions, the impact on mental health persists, establishing a multifactorial origin in the prevalence of burnout among university faculty (Cao et al., 2024). These findings have driven the use of resources such as 'mindfulness' to reduce anxiety and stress levels among university professionals (Gherardi-Donato et al., 2023). Among the stressors, work-life conflicts are also prominent, being higher among academic professionals compared to non-academic professionals, especially post-pandemic (Garraio et al., 2022).

On the other hand, a recent review (Harrold et al., 2024) evidenced that all jobs in the education sector related SPS to higher stress levels. Additionally, it has been associated with poorer professional quality of life, especially burnout and compassion fatigue, in work environments such as education and administration/management (Chacón et al., 2023; Pérez-Chacón et al., 2021). However, as far as we know, there is no additional research that delves into the aspects of SPS in the university professional context.

Thus, based on the outlined framework, and with the aim of providing a clearer direction for our research, we propose the following hypotheses:

1. Given that university students and professionals are commonly at different stages of development and are subjected to different levels and types of life responsibilities, we hypothesise that these groups will exhibit different aspects in the self-management of high demands, possibly with more pronounced differences among highly sensitive groups.
2. Given the high demands of the university environment and framed within the Environmental Sensitivity Theory, we hypothesise that the university context will manifest as an unfavourable or risky environment for the mental health of its members, with a greater impact on the highly sensitive group..

This study is part of a broader research project, which included nearly 10,000 participants, on the trait of high sensitivity and its relationship with psychological and contextual variables in the Spanish population¹. However, the present work follows a qualitative approach focused on the university community with the following *objectives*:

1. To analyse, through an integrative analytical approach that includes students and professionals, with and without the trait of high sensitivity, the difficulties and strengths present in day-to-day management when facing highly demanding situations.
2. To investigate in depth the differential aspects exhibited by highly sensitive individuals.

METHOD

Design

The research follows the methodological paradigm of a comprehensive descriptive qualitative study. Focus group interviews were used as the source of information collection, according to the methodology described by Krueger et al. (2001) y Patton y Cochran (2002). This methodology was the most suitable for addressing our objectives, as few studies have provided knowledge about SPS from a qualitative perspective, and specifically, *focus groups* allow us to delve deeper into how people think, feel, or behave in the university context through open but focused topics.

Focus groups were conducted separately with: i) students with the trait of high sensitivity (S-HSP); ii) students without the trait of high sensitivity (S-Non-HSP); iii) professionals with the trait of high sensitivity (PR-HSP); and iv) professionals without

¹ "Study of the Trait of High Sensitivity and its Relationship with Psychological and Contextual Variables in Adults and Young Adults in Spain" (CIP121300645, PI: María de la Luz Morales Botello). This project involved 9447 participants residing in Spain.

the trait of high sensitivity (PR-Non-HSP). Numerical parity was sought between participants with and without high sensitivity trait across both groups (students and professionals). The latter group comprised both academic professionals (AP) and non-academic professionals (non-AP). Due to unequal representation across these groups, all professional participants were analysed together under the 'professionals' category (PR).

Participants

Participants included students from various university degrees, and academic and non-academic professionals from a Spanish university. Selection was carried out through non-probabilistic convenience sampling. A total of 27 participants were recruited: 10 students aged between 18 and 29 years (HSP: 2 men and 3 women; Non-HSP: 4 men and 1 woman) and 17 professionals aged between 36 and 53 years (HSP: 3 men and 6 women; Non-HSP: 4 men and 4 women). Among the HSP professionals, 7 were academic professionals (2 men and 5 women) and 2 were non-academic professionals (1 man and 1 woman), and among the Non-HSP professionals, 7 were academic professionals (4 men and 3 women) and 1 was non-academic professional (woman).

Procedure

Participant recruitment was initially conducted by contacting all students and professionals at the study university who had previously completed questionnaires for the broader research project and had expressed interest in focus group participation. To enhance recruitment, direct invitations were subsequently issued to workers and students through multiple channels (emails and in-person encounters). Following confirmation of participation, individuals completed the HSPS-S questionnaire to determine appropriate focus group allocation.

Prior to each focus group, participants were provided with an information sheet and required to sign an informed consent form. The focus groups had one or two moderators, were audio-recorded, lasted approximately 60 minutes, and were conducted in classrooms with environmental conditions that ensured the comfort of all participants. To preserve anonymity, each participant was assigned a numerical identifier for use before each intervention. The dates of the focus groups were scheduled according to the availability of participants and moderators. After each focus group, participants were given gifts in gratitude for their involvement in the research.

This study received ethical approval from the Ethics Committee of the institution where it was conducted.

Instruments

- *Sensory Processing Sensitivity*: it was assessed using the HSPS-S (Chacón et al., 2021), a Spanish adaptation and validation of the original “Highly Sensitive Person Scale” (Aron & Aron, 1997), which showed good internal consistency (α de Cronbach = 0.92). It is a 27-item instrument, each measured on a Likert scale with 1 = strongly disagree and 7 = strongly agree. Participants with an HSPS-S score at the percentile $P \geq 67$ were considered HSP (Chacón et al., 2021, p. 1046).
- *Topic guide for focus group*: it was developed ad hoc by the research team and structured around three themes (regulation of response to stimuli, coping with high-demand situations, and strategies used to improve academic/work performance). The discussions began by addressing the participants’ level of knowledge about the trait and its implications for daily functioning. They were given the freedom to express themselves, and if any participant had not contributed to a topic, they were carefully and explicitly asked.

Data analysis

A literal transcription of the recordings from the five *focus groups* was carried out, from which a content analysis was performed using Nvivo 12 software (QSR International Pty Ltd., 2018). A classic deductive procedure was followed using triangulation with three researchers. After several successive readings of the transcribed material, the researchers independently coded units of meaning, extracted categories, and subsequently grouped them into themes until content saturation was reached. Four meetings were held where information was shared, and initial discrepancies in the naming of final categories and dimensions were discussed until consensus was reached. Table 1A (Annex) shows examples of the coding of evidence into categories based on the analysis of units of meaning.

The content analysis enabled the extraction of frequencies for each dimension and category, both overall and stratified by group (S-HSP, PR-HSP, S-Non-HSP, PR-Non-HSP), as well as textual passages that exemplified each thematic category.

RESULTS

Perception of students and professionals with and without the High Sensitivity trait

The qualitative analysis yielded 11 categories of information, which were grouped into five dimensions: visibility, personality/self-concept, health, difficulties, and strategies (Table 1).

Table 1
Dimensions, definitions and categories resulting from the focus groups

| Dimension | Definition | Categories |
|--------------------------|---|--|
| Visibility | The extent to which the trait can be seen and recognized. This dimension includes appreciation for creating spaces to raise awareness and conduct research on the trait. | |
| Personality/Self-concept | A relatively stable organization of structural and functional characteristics that make up personality. | Behaviours Thoughts Emotions and Feelings HSP Trait |
| Health | A complete state of physical, mental, and social well-being, not merely the absence of disease or infirmity (WHO). Manifested through symptoms such as sleep disturbances, headaches, etc. | Diagnoses Symptoms |
| Strategies | Ways of reacting or behaving in difficult, stressful or painful situations. In this context, when faced with very demanding situations that generate stress or in order to be more effective at work or at school. | Coping Avoidance and Escape |
| Difficulties | Situations, circumstances, or obstacles that are difficult to overcome. In this case, due to the presence of stressors (external or internal), labels/diagnoses (accurate or not), and lack of support (including familial, professional, informational, and personal resources). | Stressors Lack of support Labels |

The categories within each dimension are described below, with supporting evidence provided by participants. These are coded as follows: i) students with the trait of high sensitivity (S-HSP); ii) students without the trait of high sensitivity (S-Non-HSP); iii) professionals with the trait of high sensitivity (PR-HSP); and iv) professionals without the trait of high sensitivity (PR-Non-HSP). After the previous codes an identification number is added.

Figure 1
Coded evidences by category for student groups

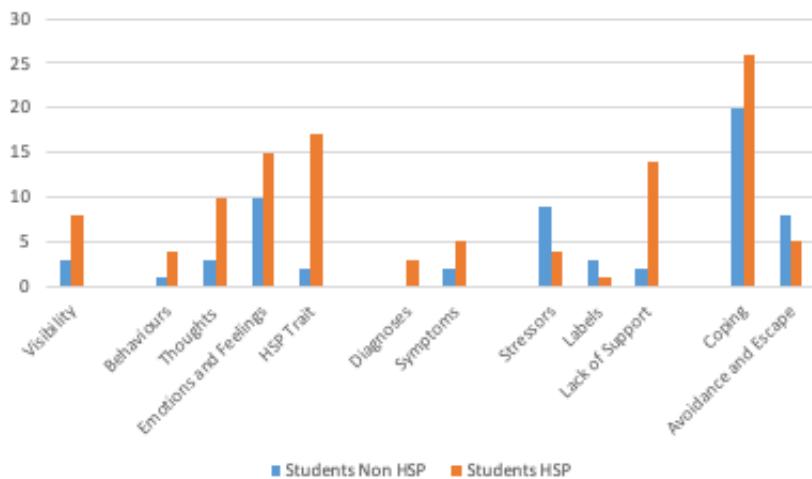
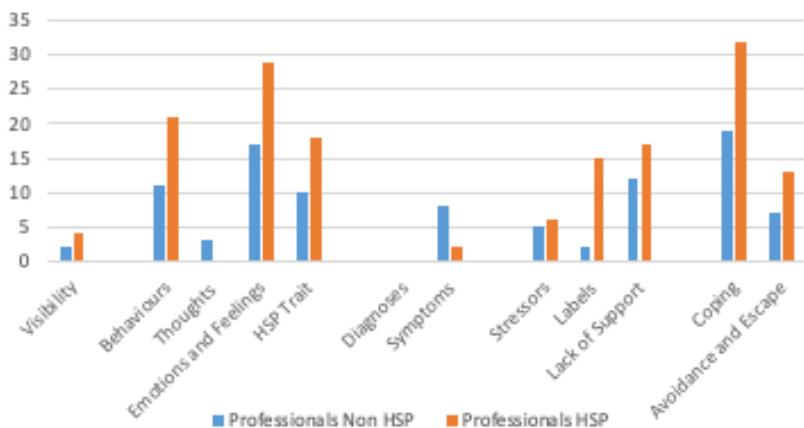


Figure 2
Coded evidences by category for professional groups



Visibility of high sensitivity trait

This dimension includes evidence highlighting the need to raise awareness of this trait in society to promote the acceptance of diversity: "I wanted to help

people discover it earlier, before they reached my age" [S-HSP-4]. According to participants, the trait holds potential when it is understood. In response to whether they experience it as something positive or negative, one participant shared: "I think if I weighed it on a scale, and if I had had better tools earlier on, it would have been quite positive" [S-HSP-6]. Knowledge of the trait appears to facilitate greater self-acceptance and reduce discomfort or difficulties associated with it. One participant emphasized the importance of discussing the trait with their children, noting that understanding that others may feel the same way can be helpful: "It calms them down, and little by little they begin to find tools and accept it" [PR-HSP-8]. Participants also expressed appreciation for the creation of spaces where they can speak openly about the trait and connect with others who share similar challenges and strengths:

Just as learning about it helped me to accept and work through many things, it might help others too. I find it remarkable—it's surprising to have been here for 15 years and that this hasn't been discussed until now. I think it's great" [PR-HSP-5].

Personality/Self-concept

This dimension includes evidence related to the participant's personality. There are four categories of behaviors, thoughts, emotions and feelings, and trait of High Sensibility.

Behaviors. Participants refer to behaviors they perform when they are under too much stress or too many stimuli: "I'm protesting all day long" [PR-Non-HSP-4], or "I tried to enter the teachers' room, there was noise, a student coming out, another person talking, another one telling a joke... and there was a moment when I said to myself - get out of here" [PR-Non-HSP-5]. They also mention actions in relation to their children: a participant talking about his way of managing the trait in his son said "at first you try to make him the typical tough guy, that he is not a softie. And all you do is put him in front of something that he is not... teaching your children (how to manage the trait) is very complicated" [PR-PAS-8]. Students with the trait name coping behaviors: "I study here at the university, alone, being in an environment where I see other people studying motivates me to study" [S-HSP-3].

Thoughts. This category includes the ideas people have about themselves and others. Most of the evidence includes self-labels or value judgements about one's own personality, regardless of whether one has the trait: "I have a very creative mind. Too creative. I would spend hours and hours looking at the same spot without doing anything, imagining anything" [S-Non-HSP-3] or "I think I'm the weird one" [S-Non-HSP-3] or "I become dependent, and I need someone to sit with me (talking about getting down to study)" [E-HSP-4]. Psychological diagnostic terms are used

as a label: "Because of my anxiety, I am sad-anxious... very explosive" [S-HSP-3]. Judgement also appears: "At my age I'm a bit old for bullshit. No disrespect to anyone, but just enough nonsense" [PR-Non-HSP-4].

Emotions and feelings. This is one of the most numerous categories. All the groups mention difficulties in emotional regulation: "I feel unhappy, there are many things to manage, and it is a feeling that I don't like, I feel stressed, anxious and I don't rest. It is a bit unpleasant" [S-HSP-1]. Also, the importance of the context and the family environment in the management of emotions: "Since I was a child, I have been very emotional, I think it is due to the environment in which you grow up. My mother always expressed her emotions a lot. My father, well, from time to time he would explode with joy or sadness" [S-Non-HSP-2].

High Sensitivity trait. The evidence shows the different aspects that define the trait of high sensitivity. Some students had difficulty maintaining eye contact during the focus group. Depth of thought is evidenced at different times: "The truth is that things affect me more because I think about them a lot" [PR-HSP-9] or "I manage to have a very cool mind, when people get stuck and don't know what to do, I work faster, I analyze the situation very well and solve problems very calmly" [S-HSP-4]. Emotional breadth and intensity are illustrated by all participants with high sensitivity:

My personal relationships have been complicated because of the number of feelings, because you feel so high and so low that it is difficult for the other person to be with someone who is from here to here (making an up-down gesture) [S-HSP-4].

I feel everything intensively, when I have certain reactions people around me don't understand why I feel that way and they make me feel that I exaggerate [S-HSP-3].

The perception of the fine details of the environment: "I notice quite small things that for people go unnoticed" [S-HSP-1] or talking about a child with the trait: "He smells what nobody else smells and vomits because he can't stand it" [PR-Non-HSP-2]. Taste for aesthetics and creativity: "I play the piano, the cello, I like theatre, cinema" [PR-HSP-3]. Overstimulation and overload:

I live quite overwhelmed, and I need to go for a walk on solitude and connect with nature. It's the way I feel better again, but if I have the same level of life as my peers, I feel that I become bitter, that I can't cope with everything [S-HSP-1].

Health

This dimension comprises two categories: symptoms and diagnoses.

Symptoms. This category includes evidence of alterations in the organism that generate discomfort or discomfort: "I have not been able to meditate as much as I would like to and manage all the stress that is generated throughout the day, I have

somatised it into headaches" [S-HSP-6] or "I always have headaches. It causes me anxiety, shortness of breath, discomfort" [PR-Non-HSP-6].

Diagnoses. This includes evidence where the person reports having been diagnosed by a professional, e.g. "I am diagnosed with anxiety" [S-HSP-3].

Strategies

This dimension, together with personality/self-concept, is the one that gathers the most evidence. It includes two categories: coping and avoidance.

Coping. We consider a coping strategy when the person has a regular and sustained pattern of behaviour that allows responding to difficult, stressful and painful situations. The HSP groups provide more evidence under this category (Figures 1 and 2). Participants use resources such as prioritising tasks, writing, meditation, physical exercise, nature or finding spaces of intimacy and solitude: "I have a writing technique, I have learned to carry something to write down... and unload my head a little" [S-HSP-6], or "I need to walk in solitude and connect with nature" [S-HSP-1].

Avoidance. On other occasions, the person uses an escape behaviour to avoid the situation that generates discomfort, in some cases, resorting to food, "I eat a lot when I am stressed" [S-HSP-5] or keeping silent, "I prefer to swallow it... and the moment will pass" [S-Non-HSP-2].

Difficulties

This dimension includes three categories related to circumstances or situations that are difficult to overcome: stressors, lack of support and labels.

Stressors. Sometimes, difficulties arise from stressors mainly related to studies (students) or to work and family situation (professionals): "All the children sick, communions, parties, work... so many things pile up on me" [PR-Non-HSP-2] or "The simple fact of getting up on the stage (referring to a classroom presentation)" [S-Non-HSP-4].

Lack of support. This category refers to the lack of support from family and professionals, lack of adequate and accurate information, and lack of internal resources to cope with difficult situations. Professionals who have children with the trait mention the difficulty in finding quality information and specialised professionals: "I have visited so many psychologists with my children" [PR-Non-HSP-2]. It is noteworthy in this case that people with the trait of high sensitivity show learning in their search for external resources as well as in their own:

Over time you get older, you mature, and you learn to manage yourself a bit better... Then also, knowing that I have the HSP trait, I have already managed to say –okay, this is something of mine–, try to put it aside and move on. I've learnt to manage it, but it's true that I still find a lot of things difficult [S-HSP-4].

Label. This category includes those self-diagnoses without a professional assessment or those definitions that the person gives him/herself and that condition his/her behaviour: "I have had episodes of depression because bad things affect you more" [S-HSP-6] or "I don't know how to distinguish between the thousand things I have, I don't know which one is this one, I think I am strange in many aspects and this is one of them" [PR-HSP-3].

Comparative HSP - Non HSP

The number of overall evidence coded was higher for HSP participants (269) compared to Non-HSP participants (159). This was true for both students (112 vs. 63) and professionals (157 vs. 96). In particular, the HSP groups provided more evidence for all categories except for stressors, labels and diagnoses, avoidance and escape in the case of students, and symptoms and thoughts in the case of professionals.

HSP students provided more evidence in the categories of traits, lack of support, thoughts, coping, emotions and feelings (Figure 1) and HSP professionals in labels, coping, emotions and feelings and behaviours (Figure 2).

DISCUSSION AND CONCLUSIONS

Although more than 600 studies on Sensory Processing Sensitivity have been published since its conceptualization (Aron & Aron, 1997), research in the university context remains limited and has predominantly focused on students (Cater, 2017; Gearhart & Bodie, 2012; May & Pitman, 2023; Saglietti et al., 2024; Yano, Kase, et al., 2021), with scarce attention given to academic and non-academic professionals. The present study aims to address this gap in the university scientific corpus through a qualitative investigation exploring the trait of high sensitivity in university groups (students and professionals), both with and without the trait.

Five common themes emerged from the focus group analysis: visibility of high sensitivity, health, personality/self-concept, strategies, and difficulties. Among these, *coping strategies* was the category that gathered the most evidence across all groups, followed by *emotions and feelings*. This could be explained by the thematic focus of the groups and the relationship between coping strategies and emotions (Valdivieso-León et al., 2020). While this study focuses on students, this result was

evidenced for our study across all groups (university students and professionals, HSP and Non-HSP). Additionally, all groups mentioned stress, regardless of its origin, and employed coping strategies. On the other hand, the use of “labels” was particularly prominent in the group of highly sensitive professionals (PR-HSP), with notable differences compared to other groups. Meanwhile, lack of support was frequently referenced by both highly sensitive and non-highly sensitive professionals, as well as by highly sensitive students.

One of the more points out themes was the visibility of the SPS trait. Evidence from HSP participants suggests that awareness of the trait appears to mediate greater acceptance of it and a decrease in the discomfort or difficulties it may entail. Evidence from HSP participants suggests that awareness of the trait appears to mediate greater acceptance of it and a decrease in the discomfort or difficulties it may entail. Students emphasized helping others to also know about the trait and research it, framing their interventions with a positive perspective of personal growth and contribution to society. Professionals emphasized self-management and acceptance of their characteristics for greater well-being. Overall, both groups pointed to the importance of the visibility of the trait. This is consistent with previous research such as that by Bas et al. (2021), who, through qualitative research with adults, showed that 50% of participants reported an improvement in their well-being after learning they were highly sensitive. Similarly, Cater (2017) demonstrated how students (aged 18 to 53) valued the knowledge of the SPS trait as an empowering element in managing their lives and studies. A different perspective is offered by Saglietti et al. (2024), in their qualitative study with university students, who describe and suggest that teachers should be more aware of SPS as a favorable condition. Our students did not specifically mention the visibility of SPS among teachers, but rather in general, perhaps because they were implicitly referring to this issue or due to different approaches between the two studies. Lindsay (2017)), in a qualitative study with highly sensitive teachers, found that participation in interviews and workshops on SPS contributed to an immediate and heightened self-awareness, which provided greater clarity regarding their classroom experiences, accompanied by a shift in cognitive appraisal. In comparison, our academic participants focused more on the importance of the visibility of high sensitivity towards its impact on their well-being, perhaps due to increased work pressures and work-life balance challenges faced by university faculty. Thus, our study provides a comprehensive view of two groups (students and professionals) with and without high sensitivity in the university context.

Differential Aspects in Highly Sensitive University Students and Professionals

Highly sensitive university students and professionals contributed more evidence than their counterparts without high SPS. This result is consistent with the

characteristics of high sensitivity, such as deeper processing of stimuli, including greater reflection on lived experiences (Aron et al., 2012). Thus, compared to the Non-HSP groups, highly sensitive university students stood out with a greater amount of evidence in the categories *Traits, Lack of Support, Thoughts, Coping, and Emotions and Feelings*; the latter two categories, along with *Labels and Behaviors*, were the most prominent among highly sensitive professionals. This suggests that lack of self-awareness and support, as well as excessive thoughts, could contribute to the establishment of negative labels and behaviors in adulthood, although this should be interpreted with caution given our experimental conditions. Although, numerous studies such as that by Karaca Dinç et al. (2021) have evidenced the impact of early experiences on physical/mental health in adulthood.

In the aforementioned categories, the analyses also revealed interesting differences between HSP students and professionals. These professionals differed from Non-HSP professionals similarly across all categories, whereas students differed more in *Trait* and *Lack of Support*. This difference could be explained by age differences themselves or by the different impact of SPS with age (Licht et al., 2020). Nevertheless, it is an important result in the university context, as it reflects a clear need among highly sensitive students. On the other hand, both students and professionals provided more evidence in *Coping Strategies*, but also in *Difficulties*. This result is consistent with the quantitative study by May y Pitman (2023), which indicated that the characteristics of HSP students allowed them to partially compensate for difficulties in university adaptation. Additionally, preliminary quantitative results from ongoing research lend robustness to our qualitative findings. Specifically, higher SPS levels are associated with greater coping strategies but also with poorer overall health.

Among the aspects that most differentiate highly sensitive students from non-highly sensitive students are the barriers they encounter before undertaking tasks such as studying, sometimes feeling dependent on others to overcome them, and rumination on various issues, which leads to greater mental and emotional burden. These aspects could be indicators of poor mental health, as described by Yano, Endo, et al. (2021) in their study on effective coping strategies employed by students with different levels of SPS (low, medium, and high). This highlights the importance of providing support to students to improve their coping strategies. From a positive perspective, they exhibit greater self-awareness and reflection on themselves, although they do not always find resources for positive self-management. They express a wide variety of coping strategies, including rationalization of experiences, writing, anticipation, physical exercise, learning and acceptance, planning, and order. They also refer to aesthetics as a source of calm and well-being.

Finally, a commonly employed resource is the avoidance of stimuli or isolation as a way out of overload. This may be considered an inappropriate strategy for the

general population, but for highly sensitive individuals, it can sometimes be a useful resource to reduce the overstimulation that the environment can lead to. Regarding their emotions and feelings, they often feel different from others, experience emotional contrasts, intense feelings, moments of clarity, and intense appreciation and enjoyment of subtleties in their environment (such as perceiving small positive changes in others' behaviors). They also struggle to manage their emotions. Empathy, which is seen positively as facilitating interpersonal relationships, but also negatively, because they are frequently demanded and consequently, becoming drain for others' emotions. Some of these findings are similar to qualitative studies in the general adult population (Bas et al., 2021) and in university students (Saglietti et al., 2024). Fundamentally, those related to aspects typically attributed to high sensitivity. However, there are specific aspects such as anxiety due to technological reasons highlighted in the latter study, which was not mentioned *per se* by our students, possibly because Saglietti et al. (2024) focused more on this aspect, or due to the different profiles of students and their technological experiences in the academic context. In parallel, the aspects that most differentiate highly sensitive professionals are the greater presence of self-imposed labels, which condition their behavior and personal growth. They also stand out for the variety of coping strategies they use, like those employed by students, although with a greater emphasis on seeking knowledge and personal development, as well as using therapies to facilitate this. In this regard, Bas et al. (2021) showed that HSPs (aged 18 to 50) used strategies to improve their well-being such as reducing sensory stimulation, sharing experiences with others, or modulating their mental state to promote positive thoughts and reduce negative ones. In comparison to this study, our research provides a more in-depth analysis of the strategies employed, while specifically contextualizing them within the university context and differentiating between distinct participant groups. In terms of emotions and feelings in HSP professionals versus non-HSP, the formers highlight emotional saturation and overload, difficulty in social relationships (romantic or friendships), empathy with its positive and negative implications, and difficulty in team management, despite having the skill for it, due to a mix of sensations and feelings. Conversely, they also show greater appreciation and enjoyment of subtleties in the environment such as art, nature, or people, as well as a desire to learn more about SPS. While they describe general aspects of high sensitivity, others such as the difficulty in managing teams emerge from the university professional context.

Thus, our findings show that the highly sensitive university community, in addition to exhibiting characteristics typical of high sensitivity (Aron et al., 2012), also manifest negative outcomes commonly associated with the trait in unfavorable environments (Greven et al., 2019). This highlights the need for institutional actions that impact the well-being of these individuals, and in line with what Gil-Galván

et al. (2021) suggested in the context of university students, an enhancement of educational models focused on intellectual, personal, and emotional development.

Theoretical and practical implications

From a theoretical perspective, this article contributes to enhancing the knowledge of the theoretical framework of Environmental Sensitivity in the university context, as few studies have explored SPS in this setting (Bas et al., 2021; Saglietti et al., 2024). Moreover, this study is the first to incorporate a qualitative methodological approach that includes an analysis of the perceptions of both students and professionals. Our results suggest that the university context may be a risk factor, especially for highly sensitive individuals, thus highlighting the need for further research in this field. The coherence between our qualitative and quantitative results strengthens the scientific and practical value of employing qualitative studies to explore specific aspects of high sensitivity in greater depth.

Another theoretical implication of our results, supported by quantitative findings, is that under the paradigm of high-demand self-management analysis, high sensitive individuals exhibit behaviours consistent with the theoretical model of differential susceptibility (Greven et al., 2019), with a greater positive response (coping) as well as a negative one (health impact).

This work also entails numerous practical implications. First, based on our findings and previous literature, we propose a training program aimed at the entire university community, which includes: i) Scientific information about the trait, its impact on health, and self-identification of the HSP group; ii) Awareness of individual differences and affective and inclusive environments; iii) Enhancement of life skills within the framework of the World Health Organization's proposal (emotional, social, and cognitive skills), tailored to the needs identified in each group.

Institutional actions in this direction also align with relevant areas in higher education, such as sensitive pedagogy, inclusive education and affective classroom, emotional intelligence, or the impact of personality in the educational context (Santos Álvarez & Garrido Samaniego, 2015). Furthermore, universities should facilitate improvements in the university environment in a broad sense, enabling the full development of all individuals, within their social university responsibility (Ali et al., 2021).

In line with the practical implications of our study, it is worth mentioning that there are strategies and interventions that have proven effective in other contexts and could be adapted to the university environment. In this regard, some reference studies demonstrate the suitability of incorporating specific programs into the educational setting to increase self-awareness, regulate stress and anxiety, and provide resources for adequate emotional management. Proposals such as mindfulness (González-

Martín et al., 2023) or yoga (Yumei et al., 2023), which have proven effective in reducing stress and improving the mental health of student, are easily applicable to highly sensitive individuals.

Additionally, the enhanced perceptual sensitivity and emotional receptivity of HSP make them ideal candidates for multimodal artistic interventions (Arriaga et al., 2024). Accordingly, programs incorporating embodied cognition through creative movement and dance (Rodríguez-Jiménez et al., 2022) have shown significant improvements in the mental health of university students and faculty. These benefits include enhanced self-awareness, stress reduction, and the acquisition of self-care strategies and interpersonal skills. Such interventions would be particularly suitable for highly sensitive individuals, given their inherent characteristics, and could be readily adapted for this population.

Limitations and future research

This study presents some limitations that we describe below, along with the research areas that require more attention and possible methodological approaches to address the limitations of our findings: (i) Sample size: although 27 participants constitute a significant sample in qualitative studies, this may limit the generalizability of findings to the broader target population; (ii) Sampling procedure: the use of convenience probability sampling may introduce significant biases such as self-selection. Individuals with greater interest in or personal connection to the study topic may have been more inclined to participate, potentially introducing selection bias and compromising external validity. Furthermore, the use of self-administered questionnaires risks social desirability bias and participant misinterpretation. However, the consistency between our findings and existing quantitative data suggests these limitations may have limited impact; (iii) Low representation of the non-teaching professional group, making it impossible to investigate possible specific aspects of this group. We suggest that future studies investigate this group in greater depth, given its scarce representation in the higher education literature.

To enhance the generalizability of findings, future studies should employ random sampling techniques or more systematic recruitment strategies to ensure greater sample heterogeneity and size, as well as replicate the study in different sociocultural contexts or geographical regions. Additionally, since cross-sectional studies do not allow for the establishment of causal relationships between the evaluated variables, only observing associations, the authors recommend conducting longitudinal studies to assess the evolution of the observed effects and establish causal relationships. Such studies might investigate potential moderating or mediating variables through more sophisticated analyses to elucidate the mechanisms underlying our observations. This would advance understanding

of environmental impacts and inform effective interventions for highly sensitive persons (HSPs) across clinical psychology, mental health, and higher education settings.

In conclusion, this investigation constitutes a descriptive study examining university students' and professionals' perceptions regarding self-management of high demands, incorporating environmental sensitivity perspectives. Our findings provide theoretically relevant insights, evidencing through qualitative analysis supported by robust quantitative results that highly sensitive individuals exhibit behaviors aligned with negative environment responses. This highlights the university context as a potential risk factor for the physical, mental, and emotional wellbeing of the highly sensitive academic community. Our results can drive educational policies that promote the integral well-being of individuals through specific training actions to increase knowledge of SPS, self-awareness, regulate stress and anxiety, and provide resources for adequate emotional management. Similarly, structural or educational management changes that lead to strategies or learning or working environments that avoid sensory and emotional overload could benefit the entire university community, but especially highly sensitive individuals, ultimately building a more inclusive university.

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APPENDIX

Table 1A

Examples of participant quotes and their corresponding coding categories

| Quote | Category |
|---|-----------------------|
| “I would like to share something I experience and have never had the chance to express.” [S-HSP] | Visibility |
| “But of course, managing it is not easy, and for someone who’s not HSP, it’s really hard to understand you and why you suddenly do certain things. Now, you have to be, you know, in this way, and with kids it’s really complex. And also, when they see that you’re going through it because you’ve experienced it, because I share a lot with them, and you tell them, well, this and that happened to me too, and they say ‘It happened to you too? Oh my God.’ Then they feel more at ease, you know, and little by little they start finding tools and accept it, and they say, ‘Dad, I’m grown now, I’m 17 and I know it seems weird, but I love it and I even say it myself — I’m weird, do you like it? If not, that’s your problem.’ So it’s great. That change also makes you see that all the work is worth it.” [PR-HSP] | |
| “I go from zero to a hundred really quickly.” [PR-Non-HSP] | Behaviours |
| “Like, even eating sometimes, if someone next to me is making noise, it’s hard, I just get up and leave.” [PR-HSP] | |
| “It’s an apparently neutral trait, but depending on the tools you’re given, it can go toward the negative or the positive. In my case, as you grow up, you develop certain defences. For me, for example, having high reactivity, sensitivity, depth in things and everything that comes with it led to emotional isolation — not wanting to experience what was really going on in my body. So, learning that an emotion has to be felt and that afterward you go through your process of rationalizing it, understanding that and learning that, helped me to live everything much better.” [S-HSP] | Thoughts |
| “The problem is that I don’t have a problem.” [PR-Non-HSP] | |
| “It depends on my mood. I’m... If I’m in better mood, more active and all that, I can produce more than on days when I’m more depressed. Because on those days, even if I try to study for just two hours, it’s not productive. So, on those days, I just watch videos or do other things. And when my mood improves, that’s when I start to get more done.” [S-Non-HSP] | Emotions and Feelings |
| “The social demand, in my case, is quite high, I notice it quite a lot.... because people demand you, above all because they also see you as the figure, in my case of course, as the one who listens, as the zen person they can turn to and of course, above all in demanding times, in times of academic demand, that in the end also generates a kind of feeling of guilt, because you try to give yourself to your friends but you can’t and you have to accept that in order to help others. You also have to recharge yourself and you have to be well, otherwise you won’t be able to listen to them to the full” [S-HSP]. | |

| Cita | Categorías |
|--|------------|
| "I can read people very quickly. I can sense how I can relate to each person because I can identify what each one needs. Even when I meet someone new, I can tell if something's off without really knowing them. So, I figured it must be something strange or really personal (laughs), because I'd say to someone 'Hey, don't you think something's wrong with so-and-so?' and they'd say 'No, I don't see anything.' And it was super obvious (laughs). What I saw, hardly anyone else saw, and I'd be like, 'But it's so obvious, this or that.' I could even tell when people were becoming a couple way before anyone else. I don't know... I perceive people really well." [S-HSP] | HSP trait |
| "It brings out your own creativity." [PR-HSP] | |
| "Well, a bit of my story... I had heard about the trait... I was diagnosed as gifted and was told that high sensitivity is one of its features... so I was encouraged to learn more about it." [S-HSP] | Diagnoses |
| "Yes, I had heard of the trait, and since I've also been diagnosed with anxiety, I wanted to see if there's a connection between the two, if they." [S-HSP] | |
| "Last week there was a lot of stress around me at home, and I felt some anxiety — chest pain, shortness of breath... It really blocks me when there's a lot of visible stress around. "[S-HSP] | Symptoms |
| "Even if I'm not aware of being super stressed, my body gives me signals. My body is telling me to take better care of myself." [PR-Non-HSP] | |
| "I can spend all day staring at the to-do list waiting for it to do itself, I don't know (laughs), because I feel so overwhelmed. Even if I see the order, I don't know where to start because I want to do everything at once, and getting out of that... it's like I trap myself in my own head. So yeah, stress tends to really block me." [S-HSP] | Stressors |
| "I know there are things in my head that aren't letting me rest." [PR-Non-HSP] | |
| "Over the years I'd heard about it on social media, online... I even took the test once, but I wasn't convinced that I belonged to any particular category." [PR-HSP] | Labels |
| "But it's not normal to feel this uncomfortable all the time." [PR-Non-HSP] | |
| "When I found out what it was, I said, now a lot of things make sense — I could have avoided a lot of suffering." [PR-HSP] | |
| "My social life becomes overwhelming when I have a lot of tasks. Social life stops existing for me and I just focus on what I have to do. But when I have a lot of tasks, I struggle to get started. There's so much mental noise that I can spend two hours just trying to sit down. It's like I want to do everything at once, but I can't, so I freeze. Then once I manage to sit down, I start to get things done." [S-HSP] | |

| Cita | Categorías |
|---|----------------------|
| "Over time, I've learned that the only way to solve problems is by accepting them and doing my best to move forward. At first, I used to get more frustrated because I didn't know how to handle situations, but dealing with them has taught me how I need to behave in order to overcome them." [S-HSP] | Coping |
| "Well, you just go through it however you have to. And that's it. But I don't fall into a hole or anything like that." [PR-Non-HSP] | |
| "The moment I have to start studying overwhelms me so much that I find excuses to clean the kitchen or tidy up the room." [S-HSP]" | Avoidance and escape |
| "And there was a moment when I just said, 'I'm out of here.'" [PR-HSP] | |

