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M. BARYŁA-MATEJCZUK

**Psychological aspects**  
of **HUMAN HIGH**  
**SENSITIVITY:**  
**CONCEPTS - IDENTIFICATION - SUPPORT**  
**ACADEMIC HANDBOOK**



**Psychological aspects  
of human high sensitivity:  
concepts - identification - support.**

**Academic handbook**

Edited by:  
Monika Baryła-Matejczuk

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# TABLE OF CONTENTS

<b>Introduction</b> .....	<b>6</b>
---------------------------	----------

## **Chapter 1**

<b>Environmental sensitivity: conceptualization and explanation of high sensitivity models</b> .....	<b>9</b>
--	----------

*Rosario Ferrer-Cascales, Nicolás Ruiz-Robledillo, Natalia Albaladejo-Blázquez, Borja Costa-López, Manuel Fernández-Alcántara, María Rubio-Aparicio, Manuel Lillo-Crespo*

Introduction .....	10
1.1 Environmental Sensitivity frameworks .....	12
1.1.1 Sensory Processing Sensitivity theory .....	15
1.1.2 Differential Susceptibility theory .....	19
1.1.3 Diathesis-Stress theory .....	20
1.1.4 Vantage Sensitivity theory .....	21
1.2 Biological Sensitivity to Context theory .....	22
1.2.1 Illustrative representation of the environmental sensitivity meta-framework .....	24
Remember .....	26
Summary .....	27
Revision questions .....	29
Bibliography .....	31

## **Chapter 2**

<b>Identifying high sensitivity</b> .....	<b>36</b>
---	-----------

*Monika Baryła-Matejczuk*

Introduction .....	37
2.1 Characteristics of highly sensitive people .....	38
2.1.1 Characteristics of highly sensitive people – sensitivity aspects understood as a temperamental trait .....	38
2.1.2 Characteristics of highly sensitive people – trait demonstration in the functioning spheres .....	40
2.2 Identifying highly sensitive children and adults .....	43
2.3 Sensitivity measurement tools .....	46
2.3.1 Highly Sensitive Person Scale .....	46
2.3.2 Highly Sensitive Child Scale for Parents .....	47
2.3.3 Highly Sensitive Person (Child) Scale – Child Short Form .....	48
2.3.4 High Sensitive Child Rating System .....	48

2.4 One or many sensitivity dimensions .....	50
2.5 High sensitivity and other personality and temperament traits .....	59
Summary .....	64
Revision questions .....	65
Bibliography .....	66

### **Chapter 3**

#### **Education and prevention in the context of highly sensitive people ..... 73**

##### **Wiesław Poleszak**

3.1 Compendium of knowledge on prevention – essence, models and impact strategies .....	74
3.1.1 Two approaches to the understanding of problem behaviour prevention .....	74
3.1.2 Types of prevention activities identified according to the recipients .....	76
3.1.3 Prevention strategies and types of prevention programmes .....	78
3.2 Need for support in the environment of highly sensitive people .....	81
3.2.1 Protection factors and risk factors – causes of development problems .....	82
3.2.2 High sensitivity versus selected functioning problems .....	85
3.3 Support for the implementation of development tasks at different stages of life .....	86
3.3.1 Personality traits of highly sensitive people and the need for support .....	86
3.3.2 Educational environment and the proper development of highly sensitive people .....	89
3.3.3 Prevention levels and the recommended content of prevention activities .....	91
Revision questions .....	95
Bibliography .....	96

### **Chapter 4**

#### **Effective methods to support highly sensitive children and adults ..... 99**

*Rosario Ferrer-Cascales, Nicolás Ruiz-Robledillo, Natalia Albaladejo-Blázquez,  
Borja Costa-López, Manuel Fernández-Alcántara, María Rubio-Aparicio,  
Manuel Lillo-Crespo*

Introduction .....	100
4.1 Psychological support methods for highly sensitive children and adults .....	101
4.1.1 Emotional strategies .....	102
4.1.2 Cognitive strategies .....	103
4.1.3 Interpersonal strategies .....	104
4.1.4 Resilience as a forerunner of psychological strength in highly sensitive individuals .....	106

*Table of contents*

---

4.2 Managing highly sensitive children at school .....	107
4.2.1 How to deal with highly sensitive children in the classroom: the role of the education professionals .....	107
4.2.2 School-based psychological intervention programs .....	109
4.3 Improvements of psychological well-being in highly sensitive children and adults through health and education supportive methods	111
Remember .....	115
Summary .....	116
Revision questions .....	118
Bibliography .....	120

# CHAPTER 4

## EFFECTIVE METHODS TO SUPPORT HIGHLY SENSITIVE CHILDREN AND ADULTS

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### **Abstract**

A significant number of studies have shown that highly sensitive individuals are predisposed to benefit more from psychological interventions. Additionally, a vast variety of individuals with high levels of sensory processing sensitivity tend to be easily stressed, apart from being disturbed in overstimulated environments.

Therefore, some interventions have taken that into consideration, and was developed with the aim to teach those individuals how to deal with their emotional disturbances. Interventions have made use of mindfulness and yoga techniques, or even school-based antibullying programs so far. Be that as it may, not only have researchers investigated the impact of interventions on highly sensitive children, but they have also put their mind to examining how adults high in sensory processing sensitivity may benefit from psychological interventions. It is of the utmost importance to fathom how those individuals may take advantage of psychological interventions, to utilize the most valuable aspects for them. The present chapter aimed to analyze the results of different psychological interventions received by highly sensitive individuals. Another goal of this chapter was to examine which type of interventions in health and education contexts were more beneficial to them so as to provide different useful methods with which to support them.

**Keywords:** sensory processing sensitivity, highly sensitive children, highly sensitive adults, health professionals, education professionals, intervention programs

**After reading this chapter:**

- you will discover the relevance of the application of the Vantage Sensitivity theory as a supportive model for working out with highly sensitive people.
- you will learn the emotional, interpersonal and cognitive strategies which can help highly sensitive people.
- you will understand some key points on how to adapt the school and work environment to benefit highly sensitive people.
- you will know the most important studies that have been conducted on the effectiveness of psychological interventions for highly sensitive people.

## **Introduction**

Without a shred of doubt, environmental sensitivity does not only make reference towards individuals' sensitivity to adverse environmental conditions, but it also alludes to being much more sensitive to the positive ones (Greven et al., 2019). This is, in fact, what the Vantage Sensitivity theory represents, that is, the tendency of highly sensitive individuals to benefit themselves because of the thriving environmental conditions (Lionetti et al., 2019; Pluess & Belsky, 2013). Moreover, this idea is related to a concept which has been formulated and utilized recently, which is known as the "bright side" of susceptibility to the environment (Iimura, 2021). Undoubtedly, this entails that there is a "dark side" as well, which is in line with the fact that there are two sides of the same coin when it comes to environmental sensitivity (Iimura, 2021). While some individuals tend to be more negatively affected by the environment, there is the possibility as well that they could be positively influenced by it and its prosperous conditions (Greven & Homberg, 2020).



Given that the Vantage Sensitivity model refers to a heightened sensitivity towards advantages, in thriving environments to which individuals are exposed, the focus ought to be on such advantages (Pluess & Belsky, 2013). These could take the form of attachment security as a consequence of sensitive parenting, academic achievement derived from childcare characterized by a high quality, life satisfaction resulting from positive and thriving life events, or even a sense of efficacy after being involved in a psychotherapy process or an intervention program (Greven et al., 2019; Pluess & Belsky, 2013).

In fact, it is that help provided by intervention programs that is relevant for this chapter. It has been demonstrated that the trait of sensory processing sensitivity (SPS), which represents one of the models included in the environmental sensitivity meta-framework, does moderate the impact of psychological programs on mental health and behavior (Greven & Homberg, 2020). The different programs, both aimed at intervention or prevention, will be addressed throughout this chapter. However, the results obtained thanks to those programs are consistent with vantage sensitivity models, because in some way highly sensitive individuals have benefited themselves considerably from such interventions (Greven & Homberg, 2020).

Therefore, the “bright side” of environmental sensitivity will be tackled in this chapter. Apart from explaining the different programs applied to highly sensitive individuals and the psychological aspects within them, the results obtained due to their application will be mentioned as well. Such interventions could take the form of school-based psychological programs aimed at children and adolescents. They might also be resources such as yoga, dispositional mindfulness or physical exercise, aimed at both children or adults with high levels of environmental sensitivity. Additionally, the successful and adequate way to manage highly sensitive children and adults and how to support them will also be explained.

## **4.1 Psychological support methods for highly sensitive children and adults**

It has been suggested by research that individuals who show high sensitivity to sensory stimuli are more likely to experience negative psychological symptoms, such as trait and state anxiety, depression and stress (Aron & Aron, 1997; Brindle et al., 2015). Despite this, highly sensitive individuals might not necessarily be predisposed to negative affect (Brindle et al., 2015). In other words, they are more likely to experience negative psychological symptoms in the context of a difficult home environment, in comparison to those individuals whose levels of sensory processing sensitivity are medium (Liss et al., 2005). For instance, one study found that stronger over-protection and low care from parents, and being highly sensitive were related to greater levels of anxiety and depression (Liss et al., 2005). From this investigation it was also found that highly sensitive children could be especially sensitive to uncaring parents.

Another study by Brindle et al. (2015) aimed to investigate whether there was a relationship between SPS, and negative affect mediated by emotional regulation processes. To do so, they used a sample of 157 adults (118 women) who responded to a questionnaire via internet. The results obtained showed a relationship between SPS and symptoms of depression, anxiety and stress. However, this relationship was partially mediated by an increased awareness of the emotion by the individual, the lack of access to emotional regulation strategies and the lack of acceptance towards the feeling of distress.

Therefore, from the Environmental Sensitivity approach, there is a susceptibility towards both positive and negative aspects in the environment (Pluess, 2015). That is the main reason why methods of support are of vital importance. What is more, from such a theoretical approach, despite highly sensitive individuals are likely to show negative outcomes when interacting to hostile environments, they can also benefit disproportionately from positive environmental conditions, which is why it makes a lot of sense to make use of several strategies in order to support children and adults (Greven & Homberg, 2020; Greven et al., 2019).

As for the support methods, it has not been examined whether any therapy can have a positive effect on highly sensitive people, since high sensitivity is not considered a disorder and each highly sensitive person is different and they may present different difficulties in their life experiences (Greven et al., 2019). Nevertheless, a meta-analysis found that cognitive-behavioral therapy (CBT) was associated with a significant reduction of externalizing symptoms in children who presented high levels of sensitivity (Battagliese et al., 2015). Moreover, that investigation also suggested that CBT could have a significant effect on social competence. Apart from that, CBT appeared to be also successful in order to improve the management of emotions in highly sensitive children (Beck et al., 2021).

Therefore, the following strategies which are addressed in the next subsections could be effective in supporting highly sensitive individuals. Their effectiveness has been demonstrated with other populations hence one might speculate that they are beneficial to them and to their well-being.

#### **4.1.1 Emotional strategies**

It must be noted that highly sensitive individuals perceive others' emotional expression more strongly, which entails that they are more empathetic to others' feelings and needs (Acevedo, 2020). In fact, those individuals are characterized by an increased emotional reactivity (Greven and Homberg, 2020). Specifically, they

are easily overstimulated because of having such a low sensory threshold (Aron et al., 2005; Iimura & Kibe, 2020).

Emotional regulation is a complex, interactive and multifaceted process which allows individuals to modify and monitor arousal and reactivity in order to engage in adaptive behavior (Beck et al., 2021).

One key aspect in order to regulate one's emotions is to achieve adequate emotion recognition and awareness (Beck et al., 2021). In order to do so, there are effective strategies which have been proved useful, such as utilizing numbers or colors on a feeling thermometer (Beck et al., 2021; Keluskar et al., 2021). By doing so, individuals are able to rate how intense their emotional experience is. Apart from rating the intensity of different emotions, individuals need to recognize them first. Therefore, a wheel's emotion can be used to achieve such an aim. To cite one example, the one proposed by Plutchik (2001) could benefit them when identifying which emotion they are feeling.

Moreover, individuals, but mostly children, have to be able to manage and control anger (Beck et al., 2021). It has been suggested that managing anger is possible and effective when making use of emotional regulation strategies (Piasecka et al., 2018). As for other ways to achieve that objective, "time out" from the positive reinforcement might be of use (Keluskar et al., 2021). This is related to the identification of those social situations which could elicit emotional difficulties (Beck et al., 2021). Once they have been identified, an adequate and structured problem-solving technique could be utilized in order to reduce their negative consequences.

In fact, problem-solving strategies are a cognitive component which is quite useful (Knouse & Safren, 2010; Weibel et al., 2020). The main objective of having a structured problem-solving plan is to be able to face any type of difficult situation, apart from knowing how to solve tricky problems without experiencing a great deal of psychological discomfort. As a matter of fact, there is a problem-solving technique which is formed by five phases: general orientation of the problem, definition of the problem, generation of alternatives, decision making, and verification. Firstly, adopting an attitude to tackle the problem is crucial, as well as defining it and making it operative and measurable. Then, a brainstorm could help in proposing as many solutions as possible. Afterwards, the consequences, both positive and negative, of such solutions have to be acknowledged before making the final decision and evaluating its results (García et al., 2017).

### **4.1.2 Cognitive strategies**

Undoubtedly, perceptions, expectations, interpretations, self-declarations, attributions, beliefs, assumptions and so on, could be mediators of problems. That is the reason why it is essential to take them into consideration (Olivares et al., 2013). Furthermore, highly sensitive individuals process sensory information in depth and more thoroughly (Aron et al., 2005; Greven & Homberg, 2020; Iimura & Kibe, 2020).

From the Cognitive Therapy perspective, it could be said that there are certain thoughts which contribute to maladaptive behavior, as well as intensifying emotions (Knouse & Safren, 2010). This entails that interventions ought to be aimed at teaching individuals to stop, reevaluate and modify such thoughts (Knouse & Safren, 2010). Apart from that, they should be taught about negative biases in thinking, as well as learning how to systematically monitor and reevaluate their thoughts (Knouse & Safren, 2010).

For instance, the Rational Emotive Behavior Therapy proposes something very similar (Ellis & Bernard, 1994). Specifically, it offers different steps when identifying and modifying automatic and intrusive thoughts. The first step is to acknowledge the actual event which has caused the individual to have that kind of thought. Afterwards, emotions elicited by such irrational thoughts need to be kept in mind. The next part of the process is to replace that thought with a rational one, and then analyze its consequences, which are bound to be rather positive. Regarding how to identify irrational thoughts, special attention needs to be paid to internal imperatives, such as messages formulated with “must” or “have to”, or even valuations expressed in absolute terms (Lega et al., 2017). Such absolute terms are as follows: everything, nothing, always, never, no one and so on.

It must not be forgotten that visual supports are of vital importance when working with children and adolescents, which is why they can be used to modify irrational thoughts (Keluskar et al., 2021). For instance, bearing in mind the child’s special interests, some cards could be created. There would be two types: the “extinction cards”, which would represent cognitive distortions, and the “evolution cards”, which would represent cognitive restructuring (Keluskar et al., 2021).

### **4.1.3 Interpersonal strategies**

It has already been established that highly sensitive individuals possess certain needs in the emotional and cognitive spheres (Acevedo, 2020; Greven & Homberg, 2020; Iimura & Kibe, 2020). However, they also tend to be easily overstimulated in novel situations mostly. That novelty is what causes them to need more time to observe and what discourages them from acting and getting involved (Aron et al., 2005; Chavez et al., 2021; Greven & Homberg, 2020). At practice, among the most frequent consulting reasons of the highly sensitive people, relationship problems, rejection fear, shame, and shyness have been found as the ones which have a high level of difficulties to get to know new people. Highly sensitive people show more likely difficulties in ending a relationship, dragging them out, and they seem to usually need help to see these problems, especially when they need to exercise their rights (Acevedo, 2020). In particular, seeking techniques to avoid overstimulation (e.g. getting a friend to join them to meet new people), and to reduce shyness or fear of rejection may help them to feel secure with themselves (Aron et al., 2005).

Thus, social skills training and practicing social situations are of vital importance (Beck et al., 2021). That training is a cognitive-behavioral strategy whose aim

is to systematically teach an individual abilities and skills socially effective. The final goal of the training is to improve interpersonal competence in social situations (Caballo, 2006). However, it must be highlighted that highly sensitive people can usually show high social competences, and the support should be therefore focused on boosting them (Acevedo et al., 2018).

Within social skills, the following can be found: assertive skills and communication abilities. The former makes reference to one's ability to express directly and adequately to express one's emotions and thoughts, whether they are pleasant or unpleasant, in social and interpersonal events (Caballo, 2006).

In line with the social relationships, it is essential that HSP need to communicate and show their features in work contexts, since they actually tend to show themselves as creative, loyal, empathetic and accurate (Acevedo, 2020). It is possible that their work could be considered undervalued, and doing so, HSP need to learn how to be promoted and boast because of their achievements (Iimura & Kibe, 2020). Regarding adverse and overstimulated work contexts, it is known that they could probably decrease their performance, they therefore need to inform about the changes of the environment and adaptations which are required. Also, as they appear to be conscientious and perfectionist with work, it may be highly probable that they overwork, neglecting other life habits (Greven et al., 2019). According to previous research, psychotherapy should be focused on treating decision-making and emotional management in work contexts (Acevedo, 2020).

Moreover, in the context of social skills training, and specifically assertiveness, the focus is on learning to express and accept pleasant feelings (e.g., affection, admiration, pleasure, etc.) and unpleasant ones (e.g., displeasure, anger, etc.). It is also expected to learn how to express and listen to personal opinions, both positive and negatives, as well as being able to make a request (e.g., asking for information, apologizing, refusing social pressure, etc.), and defending one's rights (Caballo, 2006). Especially, for highly sensitive people, the psychotherapist has to provide them with strategies to successfully solve problems related to social relationships without managing others' emotions (Olivares et al., 2013).

As for communication abilities, what is rather essential are its elements. They can be expressive, receptive and interactive. The expressive elements allude to the things that are being said, how they are being said and how is our body posture and facial gestures. Concerning the receptive components, they are related to the attention paid to the emisor. As for the last component, the interactive one, it involves speaking turns (Olivares et al., 2013).

In the social skills training, the educative phase, which involves the explanation of the interpersonal behavior and the aspects which facilitate social incompetence, precedes the training phase in the therapeutic context. In this last phase, there is a training in socially adequate behaviors. Firstly, a problem in a social context is suggested, and the person has to navigate that situation in the way they know. Then, the maladaptive thoughts or presence of anxiety are analyzed, so as to see how they influence the behavior. Afterwards, the person receives precise instructions to improve

their behavior and is provided with an accurate demonstration of the behavior, which the person has to try to reproduce. In this process, the person receives feedback and is praised if done correctly. In addition to this, the person will need to practice and train in natural contexts, in order to generalize social skills (Pedrero, 2021).

#### **4.1.4 Resilience as a forerunner of psychological strength in highly sensitive individuals**

First and foremost, resilience can be defined as the ability to recover or bounce back from stress (Iimura, 2022). Another definition of that concept could be the dynamic process which allows individuals to display positive and adaptive resources in spite of adverse experiences (Kibe et al., 2020). Apart from that, resilience is considered to be a protective factor against traumatic stress and adversity (Chen & Bonanno, 2020; Smith et al., 2008). In fact, intervention programs which are based on cognitive behavioral therapy tend to be referred to as “resilience programs” (Kibe et al., 2020). The reason is quite clear, their aim is to enhance and improve individual protective factors which can prevent negative consequences derived from life challenges (Kibe et al., 2020). For instance, it has been found that resilience-based interventions and programs are effective in alleviating mental health issues (Kibe et al., 2020).

Iimura’s (2022) research examined whether the relationship between COVID-19-related stress and the personality trait of environmental sensitivity was mediated by resilience, and whether the latter variable acted as a protective factor by buffering that relationship. For this purpose, a cross-sectional questionnaire was given to 441 older adolescents and young adults (53.7% female) living in Japan. The results obtained through mediation analysis showed that the influence on environmental sensitivity of stress related to COVID-19 was buffered by resilience. However, in that research, highly sensitive participants showed low levels of resilience. Thus, one of the main conclusions is the importance of enhancing resilience when considering what strategies might benefit highly sensitive individuals.

As for the question of whether resilience can be improved, the answer is that it definitely can (Iimura, 2022). There are different investigations which have demonstrated that enhancing resilience by utilizing training and psychoeducation is useful to decrease psychopathology (Kibe et al., 2020; Pluess & Boniwell, 2015). Such intervention studies and the SPARK resilience program in which they are based will be discussed in the next section.

## 4.2 Managing highly sensitive children at school

Highly sensitive children possess certain needs as a result of that heightened sensitivity which are particularly relevant in a school context (Acherman, 2013; Baryła-Matejczuk et al., 2020; Tillmann, 2016). Apart from that, one of the biggest issues is the fact that depressive disorders during childhood and adolescence are rising in Western societies (Pluess & Boniwell, 2015). As for the symptoms of depression, they range from academic, social, motivational and physical health difficulties, affecting the functioning as well in different areas (Kibe et al., 2020; Pluess & Boniwell, 2015). Moreover, what also poses a threat for young people in Western and Eastern countries are other mental health issues, such as anxiety, stress, loneliness, and so on and so forth (Amemiya et al., 2020). Given that depression is strongly related to low self-efficacy and low self-esteem, it seems quite obvious to enhance and cultivate positive self-regard to prevent mental health issues and their consequences in the long term (Kibe et al., 2020).

That is particularly relevant to highly sensitive individuals, and above all to highly sensitive children and adolescents, given that some investigations have found moderate correlations between sensory processing sensitivity and alexithymia, perceived stress and depressive symptoms, (Andresen et al., 2017; Brindle et al., 2015; Jacobson & Rigby, 2021).

Even if the family is able to provide a context for fostering positive children and adolescent self-regard, the context of school can offer an ideal social opportunity by means of implementing evidence-based socio-emotional programs (Kibe et al., 2020). In fact, through the implementation of programs at school which promote adaptive coping skills, the prevention of depression in childhood can be achieved (Pluess & Boniwell, 2015). Focusing on vantage sensitivity, it has been shown that adolescents seem to benefit more from cognitive and behavioral interventions (Jagiellowicz et al., 2020).

### 4.2.1 How to deal with highly sensitive children in the classroom: the role of the education professionals

A series of studies examined the plasticity of child growth under different special childhood intervention programs (Park & Mackey, 2022; Weikart, 1998). Specifically, it proved that high-quality programs do in fact have an effect on the growth and development of children and on adulthood (Weikart, 1998). In spite of this, models whose methods are characterized by being highly directive and controlling are not appropriate to the development of the child, since they do not help them become healthy adults (Weikart, 1998). Rather than such models, it is more convenient to make use of those which are based on activities generated by the child and around their individual interests, given that this will have a long-term positive impact on adult behavior (Weikart, 1998). Such results indicate that children and adolescents' growth and development, whether they are highly sensitive or not, are influenced by programs at school.

Apart from that, school counselors alongside the teachers have to design an adequate and thorough plan of transitions. The main reason for this is the findings of one investigation whose aim was to examine the impact of school transition on highly sensitive students (Iimura & Kibe, 2020). Its results supported the Vantage Sensitivity model, which suggested that highly sensitive adolescents did in fact benefit disproportionately from a positive school transition. This meant that this model best described students' socioemotional adjustment across school transition. Another relevant finding is the fact that highly sensitive adolescents reported a stronger increase in their well-being owing to their school transition, whereas their low sensitive peers did not show such well-being improvement (Iimura & Kibe, 2020).

As for the needs of highly sensitive individuals, the findings of investigations indicate that most of them are perfectionists and prefer to work in a quiet working environment, where they are given direct individual instructions by their teachers (Acherman, 2013; Baryła-Matejczuk et al., 2020; Tillmann, 2016). Therefore, it makes a great deal of sense that they prefer structured and repetitive lessons, where there are rules and rituals. What is more, they would rather work on their own. Nevertheless, if working in a group is compulsory for the task, they prefer to do so in a group whose members are known by the highly sensitive child (Acherman, 2013; Baryła-Matejczuk et al., 2020; Tillmann, 2016). This is similar to their close relationships, provided that they prefer a small circle of friends, rather than a larger group. Apart from that, the physical conditions in the environment also play a crucial role. Therefore, too much color, light or noise ought to be avoided, given that highly sensitive individuals might be overstimulated by those elements. Another aspect which makes them uncomfortable is novelty, that is, unknown and new situations are a nuisance for them (Acherman, 2013; Baryła-Matejczuk et al., 2020; Tillmann, 2016).

Furthermore, highly sensitive children tend to be easily disturbed when least expected, apart from having a sense of security quite fragile (Baryła-Matejczuk & Artymiak, 2021). Therefore, teachers should pay attention carefully to the children's behavior and notice any subtle change that might indicate that something has disturbed them. Additionally, it would be advisable to gradually introduce any kind of changes, rather than implementing them all of the sudden. By the same token, educators ought to be careful with surprises, given that highly sensitive children tend to feel uncomfortable when having been surprised (Baryła-Matejczuk & Artymiak, 2021). This is also related to feeling safe, in which teachers should recognize what gives a child a sense of security in order to ensure it. For instance, if a new situation is taking place, the fact of keeping an object, such as a toy, near the child can give him/her a sense of security. All of these measures are useful for highly sensitive children to know what is going to happen in the short term (Baryła-Matejczuk & Artymiak, 2021).

Other strategies which could benefit teachers in their work to manage and help children with high levels of environmental sensitivity is the fact of answering their questions, even if their content is not relevant (Baryła-Matejczuk & Artymiak, 2021).



In other words, teachers ought to be patient when those children are trying to lower their levels of anxiety by asking questions which are already clear, at least for educators (Baryła-Matejczuk & Artymiak, 2021). Another key element which needs to be taken into consideration are emotions. Basically, one thing to be avoided with such children is pushing them to do things for which they are not ready. Therefore, it is of the utmost importance to respect their feelings (Baryła-Matejczuk & Artymiak, 2021). Apart from treating their emotions carefully and respectfully, they should also be encouraged to take risks, provided that sensitivity and courage are not two opposite nor incompatible variables (Baryła-Matejczuk & Artymiak, 2021).

Undoubtedly, children are diverse and while all of them share some characteristics, they differ from each other as well (Baryła-Matejczuk & Artymiak, 2021). That is the reason why teachers ought to allow them to show that diversity. Apart from that, educators should respect children's emotions and decisions, that is, if they feel like refusing to participate in an activity, it is better to leave them to it (Baryła-Matejczuk & Artymiak, 2021). Needless to say, highly sensitive children should feel free to express themselves when it comes to their feelings, thoughts, opinions, doubts, and worries. This is in line with rewarding children's initiative, that is, if they volunteer to express themselves and open up to others, they should be praised (Baryła-Matejczuk & Artymiak, 2021).

In fact, it is quite essential to provide teachers with knowledge about environmental sensitivity and what it means to be highly sensitive (Baryła-Matejczuk et al., 2020). According to this, it is rather useful to help teachers understand how highly sensitive children function and how much they differ from other children. Specifically, it is crucial for them to know what those children's needs are to support them to the maximum (Baryła-Matejczuk et al., 2020; Ferrer-Cascales et al., 2021).

#### **4.2.2 School-based psychological intervention programs**

As it has been discussed throughout this chapter, highly sensitive individuals tend to benefit more from psychological interventions. Additionally, another aspect which has been mentioned is the fact that environmental sensitivity is associated with stress-related problems (Greven et al., 2019). Therefore, intervention programs are particularly crucial for highly sensitive individuals, given how much advantage can be taken from them (Greven et al., 2019). Specifically, there are three studies which examined the effects of different programs on individuals with high levels of environmental sensitivity (Kibe et al., 2020; Nocentini et al., 2018; Pluess & Boniwell, 2015).

The aim of such investigations was to examine whether the environmental sensitivity feature moderated the effects of the environmental KiVa antibullying program, which concerns the organization of work of the entire educational institution. Regarding the KiVa treatment, it could be said that it is a systematic school-based multicomponent antibullying program, which is aimed at the whole school, and as well as individual children (Nocentini et al., 2018). Specifically, the KiVA program

includes 10 sessions which are taught by teachers and are targeted to every single student throughout the whole school year. Concerning the moderation effects, results showed that environmental sensitivity and gender significantly moderated intervention effects on internalizing symptoms and victimization (Nocentini et al., 2018). Moreover, highly sensitive boys benefited significantly more than the low sensitive boys, since the former showed a significant reduction in victimization as a consequence of the intervention. As for the girls, victimization decreased significantly for those whose levels of sensitivity were medium and high (Nocentini et al., 2018). This may be due to the objective of the program activities, which was to learn to empathize with the victim, recognizing the characteristics of the bullying situation and learning more adaptive coping strategies. This would enable the acquisition of skills related to emotional intelligence (such as empathy or perception of positive changes) in school context (Nocentini et al., 2018).

The other two studies utilized the SPARK resilience program (Kibe et al., 2020; Pluess & Boniwell, 2015). It is a program based on cognitive-behavioral therapy (CBT) components and positive psychology concepts (e.g., post-traumatic growth, resilience), and incorporates findings derived from resilience studies. The aim is to foster protective factors (e.g., self-efficacy, self-regulation skills, self-esteem) in order to promote individual resilience and associated skills, as well as preventing depression (Kibe et al., 2020; Pluess & Boniwell, 2015). It must be pointed out that the program has 12 sessions, whose duration is 60 minutes, and are delivered throughout 3-4 months. Furthermore, the program is delivered by school teachers who previously have been trained thoroughly by psychologists, apart from having been provided with every required teaching material (e.g., DVDs with presentation slides and videos, workbooks to involve children, teacher's guidebook with information in detail for each session) (Kibe et al., 2020; Pluess & Boniwell, 2015).

One of the investigations made use of the SPARK resilience program aiming it at Japanese students ranging from 15 to 16 years old (Kibe et al., 2020). Its results indicated that thanks to the intervention, which was effective, students' overall self-efficacy was improved. Another finding was that highly sensitive students, who had scored significantly lower in well-being at baseline, responded more positively to the program. In fact, they had a greater promotion of self-esteem and reduction in depression (Kibe et al., 2020).

As for the other study which also utilized the SPARK resilience program, its aim was at students who were ethnically diverse, given that Asian, African/Caribbean, Caucasian, and Middle Eastern individuals were part of its sample (Pluess & Boniwell, 2015). Regarding the participants' age, the average was 11 years old. In addition to this, it must be noted that all participants were female and that the assessment was carried out at pre and post intervention, as well as 6 and 12 months afterwards (Pluess & Boniwell, 2015). As for its results, the intervention was significantly and positively effective in highly sensitive girls, whereas it did not have such an effect for low sensitive girls. Despite the fact that there was no difference between low and highly sensitive girls in their depression scores at baseline, the latter had significantly lower scores

on that measure at the 6- and 12-months follow-up assessments (Pluess & Boniwell, 2015). Apart from that, when comparing the low and high sensitivity groups to the control cohort at the 12-months follow-up evaluation, the highly sensitive group had significantly lower scores on depression than the control cohort. Nevertheless, the low sensitive group and the control cohort did not differ whatsoever in depression scores at the same time (Pluess & Boniwell, 2015). The effects of this program might be explained by the deep processing of people with high levels of sensitivity, since they are able to carry on processing what they learn during the intervention, even if they have finished it. Thanks to this, HSP could improve the way they internalize the coping strategies they have learnt (Pluess & Boniwell, 2015).

The effectivity of these programs may be because of the neurosensitivity of the highly sensitive people, which allows to manage cognitive and emotional processes deeply (Pluess & Belsky, 2013; 2015). Furthermore, as previous research studies have pointed out, depending on the level of sensitivity, it exists a great variety of responsivity to both adverse and supportive environments (Pluess, 2017). Thus, recent scientific articles have stated that highly sensitive people could take advantage of psychological contexts as they may be considered as supportive environments (de Villiers et al., 2018).

After reviewing the results of the studies described above, it can be stated that highly sensitive individuals are influenced by the environment, and they might benefit from psychological strategies. How do you think the understanding of this personality trait can be clinically relevance?



### 4.3 Improvements of psychological well-being in highly sensitive children and adults through health and education supportive methods

It goes without saying that the different school interventions in which highly sensitive people have taken part have been successful (Kibe et al., 2020; Pluess & Boniwell, 2015; Nocentini et al., 2018). To cite one example, both highly sensitive boys and girls who participated in the KiVa antibullying program showed a significant reduction in the levels of victimization (Nocentini et al., 2018). Moreover, highly sensitive adolescents who took part in the SPARK resilience program benefited as well from it, given that their levels of depression were reduced, and their self-esteem was promoted (Kibe et al., 2020). As for the highly sensitive girls who also received the same resilience program in another investigation, their levels of depression decreased significantly (Pluess & Boniwell, 2015).

Apart from school-based psychological programs, there are other types of interventions which will be addressed in this section. Those interventions were utilized in highly sensitive people, and range from yoga courses to mindfulness resources,

and even physical exercise (Amemiya et al., 2020; Bakker & Moulding, 2012; Soons et al., 2010; Takahashi et al., 2020; Yano & Oishi, 2018). Even though some studies have been conducted on mental health problems associated with SPS and their mediating factors, so far it is not clear how to support highly sensitive individuals (Amemiya et al., 2020). What the findings among research studies have consistently stated is that the strong impact of environmental conditions on highly sensitive people may explain why high SPS individuals could report different health and social outcomes (for better or for worse) (Belsky et al., 2007; Belsky & Pluess, 2009; Booth et al., 2015). It has been suggested that in order for them to be helped and supported, one way to do so could be making use of a behavioral and/or cognitive approach (Amemiya et al., 2020). Differences between prevention and intervention activities, and some examples and strategies, which have been carried out so far, are also explained in Chapter 3.

Since physical exercise can improve mental health and given that highly sensitive individuals could possess a higher risk of mental issues, one investigation examined the relationships between physical exercise, SPS and depression (Yano & Oishi, 2018). The results indicated that Ease of Excitation (EOE) and Low Sensory threshold (LST), were positively related to depressive tendencies, which were in fact moderated when increasing the frequency of physical exercise.

In other words, physical exercise could moderate the relationship between depressive symptoms and the dimensions of sensory processing sensitivity, such as LST and EOE. This finding may be the habituation to internal and external stimuli, since participants who practice physical exercise frequently can be exposed to strong stimuli (noises, physical contact, muscular tension and a high level of heart frequency) (Yano & Oishi, 2018). Aron (1996) suggested that environmental factors could decrease the level of SPS. Moreover, as previous studies have stated, it is known that individuals get used to adapt to environmental stimuli in which they live (Foa & Kozak, 1986). As a result, it is supposed that the frequent practice of physical activity raises the threshold of sensory processing due to the habituation (Yano & Oishi, 2018).

As for Aesthetic Sensitivity (AES), it was negatively related to depressive tendencies (Yano & Oishi, 2018). On the other hand, it has been suggested that AES represents a positive feature of SPS, since it seems not to be related to depressive symptoms. However, recent researchers have indicated the positive association of the AES with the coherence sense (Evers et al., 2008; Liss et al., 2008). Therefore, AES could imply low depressive tendencies (Yano & Oishi, 2018).

Moreover, it has been suggested that psychosomatic techniques, such as meditation or yoga, are effective for regulating mental health among highly sensitive individuals (Amemiya et al., 2020). Therefore, one article studied the impact of practicing yoga on attention control and mood states among highly sensitive graduate students, in the context of physical education (Amemiya et al., 2020). The participants purposefully chose a yoga course in physical education, which consisted of a pair of 2-hour lectures per week, every other week. As for its results, before

the course, highly sensitive participants had higher negative mood states and lower attention control (Amemiya et al., 2020). Despite having observed a significant improvement in scores, differences between the highly and low sensitive groups after the yoga course were not statistically significant. Having said that, there was a positive correlation between SPS and attention control, and a negative one between mood states and variation in attention control (Amemiya et al., 2020). Taking it all into consideration, from these results it could be implied that the yoga course promoted attention control and improved mood states for those whose levels of SPS were high (Amemiya et al., 2020).

The findings of this study could be explained by different reasons. First, presenting high levels of sensitivity may imply a greater likelihood related to the manifestations of mental health problems (Amemiva et al., 2020). Therefore, according to previous research studies, physical exercise may influence on the modulation of mental health (Amemiva et al., 2020). Second, it is known that yoga supposes an exercise of low intensity, which includes meditation and rest, and it appears to be also a self-regulation of the mood technique (Amimeva et al., 2020). Third, participants of this study, learnt how to apply these strategies of physical exercise and they carried on using on their own. This fact allowed them to practice being less affected by environmental factors (Amimeva et al., 2020).

Regarding other resources, mindfulness is a key element of the so-called “third-wave” therapies such as Acceptance and Commitment Therapy (ACT), and Dialectic Behavior Therapy (Bakker & Moulding, 2012). Currently, mindfulness is broadly referred to as an awareness of and enhanced attention to present experience, step by step, and in an accepting and opening way (Bakker & Moulding, 2012). Another definition of the same concept is the awareness that emerges thanks to paying attention purposefully, in the present moment, and without judging the experience which is taking place (Takahashi et al. 2019). As a matter of fact, dispositional mindfulness is correlated positively with well-being and negatively with depression, anxiety and psychosomatic symptoms (Takahashi et al. 2019).

One investigation examined the relationships between SPS, mindfulness and acceptance, and negative affect (Bakker & Moulding, 2012). Its results indicated that higher levels of SPS were associated with higher levels of anxiety, depression and stress. In spite of that, there was a moderation effect, provided that SPS only was associated with anxiety when levels of mindfulness and acceptance were low. In addition to this, such a relationship was not significant at all when levels of mindfulness and acceptance were high (Bakker & Moulding, 2012). The association between anxiety or stress and environmental stimuli may be explained by the perseverance of looking for a meaning around the environmental information. As a result, cognitive anxiety related to the past and the future could appear (Siegel, 2007). As mindfulness works changing this anxious tendency of rumination, the influence of SPS on anxiety would decrease through this technique (Brown & Ryan, 2003). Despite the results that previous research studies have stated about the benefits of mindfulness in highly sensitive people, reducing the levels of anxiety and stress, acceptance

strategies could be supportive to be aware of the environmental stimuli (Bakker & Moulding, 2012). The fact that acceptance techniques can tend to reduce the levels of anxiety in highly sensitive people, authors have suggested that experience avoidance may result in the disengagement of the anxious thoughts, feelings and sensations associated with the environment (Bakker & Moulding, 2012).

Another investigation, which had a similar aim to the aforementioned one, examined whether dispositional mindfulness could mediate the relationship between SPS and well-being, trait anxiety, and psychosomatic symptoms (Takahashi et al. 2019). Its results suggested that the four facets of mindfulness (non-judging, non-reactivity, acting with awareness, and describing) partially mediated the effect of two sub-factors of SPS (EOE, LST) on trait anxiety (Takahashi et al. 2019). Moreover, describing, acting with awareness, and non-reactivity partially mediated the effect of LST on well-being, and fully mediated the effect of EOE. As for other results, acting with awareness and non-judging partially mediated the effect of LST and EOE on psychosomatic symptoms (Takahashi et al. 2019). On the whole, it was proved that the improvement of dispositional mindfulness could be effective for the physical and psychological problems of highly sensitive people (Takahashi et al. 2019).

Giving an explanation for these results, EOE could be related to high levels of activation and arousal, since this dimension of the high sensitivity have presented positive correlations with anxiety (Ahadi & Basharpour, 2010; Liss et al., 2008). It is possible therefore that the enhanced arousal caused by EOE deprives people with high levels of EOE of mindfulness for awareness and describing experience with a nonreactive attitude, which in turn leads to low well-being (Takahashi et al. 2019).

Similar to the two above-mentioned articles, another investigation examined the impact from a psychological point of view of the Mindfulness-Based Stress Reduction program (MBSR) on a sample of highly sensitive individuals (Soons et al., 2010). Concerning that intervention, it must be noted that it consisted of eight sessions of two and a half hours, which were delivered throughout eight weeks. Apart from this, participants had to commit themselves to devote time, 45 minutes per day, for six days a week, in which they had to do the program exercises (Soons et al., 2010). The MBSR program aimed to teach participants to be mainly oriented to the present moment experience with an attention characterized by being open and non-judgmental. Right after the eight-week program, as well as four weeks later, highly sensitive participants suffered less from stress and appeared to have lower levels of social anxiety (Soons et al., 2010). Furthermore, their scores for personal growth initiative, mindfulness, emotional empathy, self-transcendence and self-acceptance were significantly higher. Broadly speaking, the MBSR program might be useful as an additional element in therapies for highly sensitive individuals (Soons et al., 2010). The effectiveness of other approaches in providing help, therapy and support cannot be ruled out. The approach related to Emotional Focused Therapy may also prove promising, however, currently there are no studies on the importance and effectiveness in the context of high sensitivity.



### Remember

- The Vantage Sensitivity concept makes reference to a strengthened sensitivity towards thriving conditions in the environment.
- Some methods of support, such as the Cognitive-Behavioral or the Rational Emotive Behavior therapies have suggested a positive impact on highly sensitive individuals.
- Emotional regulation, anger management and problem-solving strategies are emotional strategies which could help highly sensitive individuals.
- Identifying and modifying automatic and intrusive thoughts are cognitive strategies that might be of use for individuals high in environmental sensitivity.
- Interpersonal strategies, such as social skills training, may help highly sensitive individuals manage challenging social situations.
- Highly sensitive children prefer to work on their own in a quiet work environment, to be given direct instructions, and structured and repetitive lessons.
- Individuals with high levels of environmental sensitivity tend to benefit more from psychological interventions than their non-highly sensitive peers.
- The KiVa antibullying program and the SPARK resilience program could have a positive impact on self-esteem and self-efficacy, improving coping strategies and reducing victimization in highly sensitive children and adolescents.
- Mindfulness, meditation or yoga are also beneficial for people high in environmental sensitivity.

## Summary

Taking into consideration everything that has been mentioned throughout this chapter, it can be said that highly sensitive individuals are influenced by the environment due to their heightened sensitivity. Without a shred of doubt, there is a “bright side” of environmental sensitivity, provided that they tend to be more positively influenced by thriving conditions in the environment. That is the main reason why different strategies and interventions are of vital importance, because a great deal of advantage can be taken from them.

Needless to say, the different intervention programs aimed at students have been much more than successful. There is mounting evidence to support that statement. To cite one example, the SPARK resilience program managed to reduce levels of depression and increase self-esteem in a sample of highly sensitive children. In fact, such results were obtained thanks to their strengthened sensitivity, given that the low sensitive group did not show a significant reduction in depression scores (Kibe et al., 2020; Pluess & Boniwell, 2015). This suggests that they are more positively influenced by prosperous conditions.

It is important to understand High Sensitivity as a personality trait, since it can imply an increased likelihood for people to develop some psychological problems (especially if the person is brought up in an unfavorable environment), but also it allows them benefits in supportive contexts. Therefore, the goal of working with highly sensitive people should not be to eliminate or change this trait, but rather to understand it in order to learn how to better adapt to the environment and enhance the advantages it can provide.

Understanding this trait may be clinically relevant, since it would allow: 1) to perform a more accurate and adapted therapeutic process; 2) to make the person not feel “different from the rest”; 3) to reinforce the therapeutic relationship by making them feel more understood; and 4) to show the advantages of this personality trait and enhance their best qualities.

Following the recommendations of Aron et al. (2010), a step-by-step approach in therapy should be maintained in order to avoid overloading the patient cognitively and/or emotionally. In fact, sensitivity to criticism and low self-esteem are very often observed in highly sensitive people, so it is essential to work on shame in counseling, especially when dealing with their “failures”. It is therefore recommended to frequently emphasize the benefits of this trait, with the aim of helping them to face reality with confidence, to look for new opportunities and to make decisions based on their personal needs.

Previous literature has suggested that it is essential to carefully consider the rhythm of work in consultation with highly sensitive people in order to prevent them from feeling overwhelmed and reaching an optimal level of arousal. These people seem to tend to become overwhelmed more easily, so it is important for the therapist to teach how to manage these emotions and increase the regulation skills. Highly sensitive people appear to often spend a great deal of time thinking about



the sessions. In fact, if they have been very overwhelming, they may feel ashamed of their strong feelings. Thus, the practitioner should take advantage of this time to generate a climate of trust, to deal with it and with emotions (Aron et al, 2010).

Nevertheless, there is little evidence on the effect that cognitive-behavioral therapy can have on highly sensitive individuals. Thus, future research should make use of experimental and longitudinal studies in which that effect is examined. As a matter of fact, it ought to be studied as well how different strategies (e.g., emotional, cognitive, interpersonal) based on that type of therapy can positively influence highly sensitive individuals. It is of the utmost importance to have reliable information which has been obtained systematically on this issue. The main reason is that this information can help teachers in their work of managing children who can be categorized as highly sensitive. Not only will this broaden the knowledge that teachers have on the needs of such individuals, but it will also improve the way highly sensitive children are being educated at school.

In relation to the school context, transitions are a key element. In fact, the perceptions that students have of changes in the environment, such as the quality of the school environment or social support, tend to decrease. This entails that both academic and socioemotional adjustment are rather poor (Iimura & Kibe, 2020). Therefore, there are two aspects which need to be taken into account. The first one involves knowing the highly sensitive children's needs and requirements resulting from their heightened sensitivity, because this will help teachers in their work of education. The second one has to do with an adequate transition plan coordinated by both teachers and school counselors. These two elements are likely to improve highly sensitive children's experience at school.

Moreover, highly sensitive individuals' well-being does not only matter when they are young and attending school or high school. It is also crucial to pay attention to it throughout the entire life cycle. Given that they are more likely to suffer from depression, anxiety or stress under rough and severe environmental conditions, a series of methods of support need to be developed. The aim of those methods would be to improve their well-being and to prevent such negative consequences from happening. Additionally, the methods that already exist could be utilized, as long as their effects on highly sensitive people are tested in a randomized controlled trial. By doing so, empirical evidence can be obtained, hence it could be possible to improve their quality of life in the long term, as well as taking advantage from such high levels of environmental sensitivity.



## Revision questions

Read the following statements related to the chapter and guess if they are True or False. Then, justify your response if needed.

1. The environmental sensitivity only refers to sensitivity to adverse situations.
2. The overprotection and the scarce of parenting attention to highly sensitive children are related to high levels of anxiety and depression.
3. Cognitive-behavioral therapy has been associated with a significant reduction of externalizing symptoms in highly sensitive children.
4. Highly sensitive people present a decreased emotional reactivity, since they are easily overstimulated due to their high sensory threshold.
5. Highly sensitive individuals better perceive the intensity of the emotional expression of the others, becoming more empathetic with their feelings and needs.
6. From the Cognitive Therapy, interventions could be focused on teaching the thinking negative biases to learn how to control, evaluate and modify these thoughts.
7. Highly sensitive people tend to easily create relationships, since they do not identify themselves with shyness when getting to know people and they are not scared of the neglect. They rarely have social relationship problems.
8. Despite the opportunity to increase the resilience through the psychoeducation, it does not seem to be a useful strategy for dealing with psychopathology.
9. It has been observed a moderate relationship between sensory processing sensitivity,

alexithymia, perceived stress and depressive symptoms in children and adolescents.

10. We should provide highly sensitive children and adolescents with a disorganized environment, without rules, new activities and many tasks. They can therefore face to difficult situations and to get used to overstimulation.
11. Highly sensitive people appear to more likely benefit from psychological support since they carry on processing the information once it ends.
12. Mindfulness does not work as a psychological technique in highly sensitive people.



#### **Correct answers of the True/False exercise**

1. False. Environmental sensitivity refers both adverse and support environmental conditions.
2. True.
3. True.
4. False. Highly sensitive people present a decreased emotional reactivity, since they are easily overstimulated due to their high sensory threshold.
5. True.
6. True.
7. False. Highly sensitive people are different from each other, and they can therefore experience different problems when trying to bound social relationships. It usually depends on the environmental they are involved.
8. False. Resilience has demonstrated to be a protective factor for mental health issues.
9. True.
10. False. We should provide highly sensitive children and adolescents with organized and support environments.
11. True.
12. False. It has proved that the improvement of dispositional mindfulness could be effective for the physical and psychological problems of highly sensitive people.

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