

INTUITION IN DECISION-MAKING IN THE CONTEXT OF HIGHLY SENSITIVE PERSONS

Kamila MALEWSKA^{1*}, Michał CHOMICKI², Patrycja NOWAK³

¹ Uniwersytet Ekonomiczny, Poznań; kamila.malewska@ue.poznan.pl, ORCID: 0000-0002-0365-6318

² Uniwersytet Ekonomiczny, Poznań; michal.chomicki@ue.poznan.pl, ORCID: 0000-0002-3918-7891

³ Uniwersytet Ekonomiczny, Poznań; patrycja.nowak@phd.ue.poznan.pl, ORCID: 0000-0002-0858-9740

* Correspondence author

Purpose: The aim of this article is to identify the relationship between the use of intuition in decision-making and the intensity of an individual's high sensitivity. This study aims to fill the research gap regarding the integration of the constructs of intuition in decision-making and the issue of highly sensitive persons.

Design/methodology/approach: In order to operationalise the constructs analysed in the theoretical part of the article, validated research tools developed in previous empirical studies conducted in this area were used. The intuition construct consisted of 14 items representing statements describing behavior typical of people who use intuition or rational analysis in the decision-making process. To measure an individual's level of sensitivity, the High Sensitivity Scale developed was used, which consists of 27 items (questions) relating to the characteristics of highly sensitive persons. Data collected from 338 respondents was analysed using a least-squares regression modelling approach.

Findings: The results show that a higher intensity of the positive aspects of high sensitivity decreases the level of use of intuition in decision-making processes. An inverse relationship was identified for the negative aspects of high sensitivity, i.e. a higher intensity of these characteristics translates into a higher level of the use of intuition. It has also been proven that highly sensitive managers tend to use intuition more frequently in their decision-making process than rational analysis. These results contribute to a better understanding of the phenomenon of the use of intuition in decision-making processes by HSPs.

Research limitations/implications: In terms of measuring both intuition and high sensitivity, the main problem was that the measurement was based on the respondent's self-assessment, which can lead to distortions due to personal bias or the desire to present oneself in a better light. Furthermore, the limitations of the research process are also associated with the sample size. A final limitation indicating directions for further research is the adoption of a quantitative approach. This involves a lack of control of external factors, and therefore the results may not be very accurate.

Originality/value: The value of the work comes from its potential to provide new insights into how personality traits can influence intuitive decision-making, which may have practical applications in psychology and management. This article makes an important contribution to the understanding of intuitive mechanisms in context of highly sensitive persons.

Keywords: intuition, decision-making, highly sensitive persons, sensitivity, management.

Category of the paper: scientific research.

1. Introduction

In recent years, increasing attention has been paid both by practitioners and management theorists to the issue of intuition in decision-making (Adam, Dempsey, 2020). This is proving crucial in an environment characterised by complexity, uncertainty and time pressure, where traditional analytical methods are not sufficient (Agor, 1998; Huang, Pearce, 2015; Klein, 2003; Lipshitz et al., 2001; Vincent, 2021). Attention is drawn to its particular importance at the strategic level (Akinci, Sadler-Smith 2019; Samba, Williams, Fuller, 2022; Szanto, 2022; Tabesh, Vera, 2020). However, despite the growing importance of intuition in the context of top management decision-making, the topic is still under-researched (Adinolfi, Loia, 2022). One group of decision-makers who are particularly predisposed to using intuition in decision-making processes are highly sensitive persons (HSPs), who represent around 20-30% of the population (Acevedo et al., 2014; Boyce, Ellis 2005; Ellis, Essex, Boyce, 2005; Lionetti et al., 2018; Pluess et al., 2018; Tillmann et al., 2021). Their tendency to use their intuition may be due to the characteristics they possess, such as deep processing of stimuli, high emotional reactivity and sensitivity to subtle signals (Gulla, 2021). These characteristics make them prone to intuitive information processing and, consequently, intuitive decision-making. Understanding the interplay between these constructs is important because it can provide insights into the phenomenon of the use of intuition in HSP decision-making. At the same time, it increases the chances of fully exploiting the potential of highly sensitive persons, who, due to their specific characteristics, are a valuable resource for every organisation.

Although there is a significant amount of research on intuition in decision-making (Akinci, Sadler-Smith, 2012) and on the characteristics of highly sensitive persons (Baryła-Matejczuk et al., 2022), there is a lack of analyses combining these two areas. This study aims to fill the research gap regarding the integration of the constructs of intuition in decision-making and the issue of highly sensitive persons.

Based on the above considerations, the aim is to identify the relationship between the use of intuition in decision-making and the intensity of an individual's high sensitivity.

The article consists of five sections. Section 2 provides the theoretical background to the constructs analysed. It presents the definitions and characteristics of intuition, covering both historical perspectives and modern interpretations. The theoretical aspects of high sensitivity present the characteristics and implications of this phenomenon, focusing on the cognitive and emotional processing styles of HSPs. Section 3 describes the research method, the tools used and the characteristics of the research sample. Section 4 presents the cognitive results, and the last part of the article contains conclusions, insights for management practitioners, directions for further research and research limitations.

2. Theoretical background

2.1. Intuition in decision-making

Intuition has been of interest to both management theorists and practitioners for years (Vincent, 2021). One of the first management researchers to draw attention to the importance of intuition in the decision-making process was Barnard (Barnard, 1938). He defined intuition as a rapid, illogical and complex decision-making process. The theme of intuition was taken up more extensively in the mid-20th century by Simon, within the framework of his formulated model of bounded rationality (Simon, 1957). He noted that with the increasing amount of information emerging in the environment, making optimal or even satisfactory decisions had become difficult. At the same time, the limited capacity of decision-makers to analyse this information meant that they were more likely to rely on intuition rather than rational analysis in their decision-making processes. Simon considered intuition to be the default method of decision making in a complex and dynamic environment.

However, it should be noted that not all researchers consider intuition to be a valuable way of making decisions. In their research, Kahneman and Tversky (Kahneman, Tversky, 1973; Tversky, Kahneman, 1983) perceive intuition as a mode of judgement subject to many errors. Its limitation is mainly due to three forms of bias, namely (Akinci, Sadler-Smith, 2013): 1) representativeness (referring to the similarity to previous situations), (2) availability (referring to solutions that are easily generated by the decision-maker), (3) anchoring (referring to the ideas that come first to the decision-maker's mind).

The naturalistic decision-making framework emerged in the 1980s. It views intuition in a more positive way, emphasising its usefulness especially in an unpredictable and turbulent environment (Klein, 1993; Klein et al., 1989; Lipshitz et al., 2001). It works especially well for unstructured tasks, under conditions of uncertainty, information gap or noise, time pressure or the inability to use analytical tools (Klein, Klingler, 1991). In such circumstances, expert intuition, which means having broad experience in a given area that enables one to recognise the right course of action without the need for deeper analysis, proves to be particularly valuable.

In recent years, researchers have attempted to study and better understand the use of intuition in strategic decision-making processes carried out by top managers (Akinci, Sadler-Smith, 2019; Dane, Pratt, 2007; Mikušková, 2017; Ozgen, Baron, 2007; Samba, Williams, Fuller, 2022; Szanto, 2022; Tabesh, Vera, 2020). It is emphasised that this is a particularly desirable capability that is used by middle and senior managers (Malewska, 2018). The conclusions of this research are not unequivocal. On the one hand, it is suggested that intuition can be used under conditions of risk and uncertainty and time pressure (Huang, Pearce, 2015). On the other hand, it is postulated that it is a decision-making tool that can generate many cognitive errors, translating into the wrong strategic decisions (Miller, Ireland, 2005).

One of the latest trends in the field of intuition research is the analysis of its use in the context of Industry 4.0 and 5.0, inextricably linked to the use of modern technologies, including artificial intelligence (Bullini, Orlandi, Pierce, 2020a). A decision-making model is proposed that integrates the use of intuition and artificial intelligence in decision-making processes combining the strengths of each method and addressing their weaknesses. The model identifies how and in which situations intuition and artificial intelligence should be combined for effective decision-making (Vincent, 2021).

In the management literature, there is no single, universal and generally applicable definition of intuition. The conceptualisation and operationalisation of intuition pose a major challenge for researchers. This is primarily due to its ambiguity, and the existence of too many interpretations of the concept, its components and the factors that influence an individual's ability to use it (Hodgkinson, Sadler-Smith, 2003). There are many aspects concerning intuition on which researchers do not agree, such as its characteristics, its extent, its homogeneity, the mechanisms by which it arises, the determination of its impact on the effectiveness of a decision, and the existence of a relationship between its level and the experience of the decision-maker (Malewska, 2018).

Analysing the definitions of intuition proposed in the literature, both numerous discrepancies and many similarities can be noted. The most controversial is the location of the intuitive process. Some researchers consider it to be a conscious process (Agor, 1998; Simon, 1987; Westcott, 1968), while others maintain that it is an unconscious thought process (Betsch, 2008; Khatri, Ng, 2000; Sinclair, Ashkanasy, 2005; Hogarth, 2010; Sadler-Smith, Shefy, 2004). An important trend in defining intuition is also one according to which intuition is a thought process based on one's stock of knowledge and years of experience (Klein, 2003; Simon, 1987; Sinclair, Ashkanasy, 2005).

Based on the analysis of the proposed definitions, the characteristics of intuition can be identified, that is: (1) intuition is a thought process that runs automatically, (2) this process is based on a body of knowledge (it is the ability to translate acquired experience and knowledge into ongoing action), (3) it operates, at least in part, within the subconscious, (4) its effects may be sensations, physiological reactions or interpretations. On this basis, it is possible to formulate a definition according to which intuition is a not always conscious thought process that results in understanding, cognition or acquisition of knowledge without the involvement of rational inference based on previous experiences and learning processes.

2.2. Highly sensitive persons in the organization

Nowadays, increasing attention is being paid to understanding the complexities of human psychological nature. One intriguing yet poorly understood phenomenon is high sensitivity, also known as the trait of high sensory sensitivity. Introduced by Aron in the 1990s (Aron, Aron, 1997), this concept has gained significance in the domains of both psychology and popular science.

Sensitivity, in its broadest sense, is defined as a specific threshold for responding to stimuli (Gulla, 2021). It refers to the ability to experience deep emotions and empathy (Jazukiewicz, 2020). Within the group of sensitive individuals, who constitute approximately 20-30% of the population (Acevedo et al., 2014; Boyce, Ellis, 2005; Ellis et al., 2005; Lionetti et al., 2018; Pluess et al., 2018; Tillmann et al., 2021), there are those who possess the personality trait of high sensitivity, characterized by deep processing of stimuli, susceptibility to overstimulation, emotional reactivity, and sensitivity to subtle stimuli (Gulla, 2021). High sensitivity is associated with more active brain regions responsible for processing emotional and sensory aspects (Baryła-Matejczuk et al., 2022).

A concept suitable for characterizing highly sensitive individuals is Sensory Processing Sensitivity (SPS), as it describes the way their brains process sensory input (Aron, Aron, 1997). Four aspects of Sensory Processing Sensitivity have been identified, described using the acronym DOES, which stands for:

- depth of processing – intensive and thorough analysis of information and potential event scenarios, as well as the ability to perceive connections between different stimuli (Baryła-Matejczuk, 2021);
- overstimulation – registering and analysing a greater number of stimuli, leading to faster mental exhaustion. The intensity of this analysis affects recovery time, which in turn impacts effectiveness in daily functioning (Aron et al., 2012);
- emotional reactivity and empathy – responding with intense emotions, high excitability, and a reduced level of task performance under stressful conditions (Miklewska, Miklewska, 2000);
- sensing the subtle – the ability to notice details and subtleties that are often not perceptible to others. These individuals are meticulous in analysing situations, tend to engage in deep reflection, exhibit considerable caution, and possess a well-developed intuition (Petitcollin, 2020).

Highly sensitive persons tend to engage in deep information processing, which means they pay attention to subtle nuances and causal relationships. This ability allows them to intuitively sense situations, emotions, and the potential outcomes of actions, which is a key aspect of their intuition (Acevedo, 2020). Highly sensitive individuals have increased activity in brain regions responsible for processing emotional stimuli (Acevedo et al., 2014), which may contribute to their intuitive recognition of other people's emotions. They are capable of sensing changes in the moods, intentions and feelings of others, often before these are verbally expressed.

High sensitivity is a personality trait with both positive and negative aspects. The positive traits include enhanced empathy, greater sensitivity to others, deep reflectiveness, and the ability to perceive subtle stimuli (Bürger et al., 2024; Bas et al., 2021). Highly sensitive individuals also derive greater benefits from positive environments (Aron, 2010). On the other hand, the negative aspects involve a tendency towards sensory overload and stress (Bürger et al., 2024), a strong emotional reaction to negative stimuli, and a propensity to avoid intense

sensory inputs (Baryła-Matejczuk, 2021). The key to healthy functioning lies in being aware of one's sensitivity, which can be both a challenge and an advantage, depending on the environment and support received by the highly sensitive individual.

Developing intuitive abilities through better perception and interpretation of stimuli is becoming increasingly valued (Audi, 2020). High sensitivity to environmental and sensory stimuli can be an important element in enhancing intuition. Individuals with this trait can detect subtle patterns and changes in their surroundings that are not noticeable to others, giving them the ability to form intuitive conclusions about the surrounding reality (Fischer, Kret, Broekens, 2018).

Physical reactions are linked to intuition (Tantia, 2014), and highly sensitive individuals often experience physical sensations related to their intuition (Gulla, Golonka, 2021). This can include, for example, accelerated heart rate or a feeling of tension in response to certain people or situations, which can serve as an additional signal of their intuition.

High sensitivity fosters the development of intuition because such individuals naturally engage in more complex processing of information and emotions. Their ability to perceive and interpret subtle signals allows them to intuitively understand complex life situations, which is a valuable skill in both personal and professional contexts.

2.3. Intuitive decision maker vs. highly sensitive person

Highly sensitive persons often use their intuition in their actions, sensing the emotions of others, the non-obvious details of decision-making situations or subtle changes in the environment, which enables them to anticipate the outcome of potential decisions and translates into their effectiveness (Acevedo, 2020). Analysing the characteristics of highly sensitive individuals and intuitive decision-makers, it can be seen that they largely converge (Table 1).

Table 1.

Summary of selected characteristics of intuitive decision-makers and highly sensitive persons

Characteristics	Intuitive decision-makers	Highly sensitive persons
Creativity	They offer an unconventional and unique approach to decision-making problems. The solutions they generate are not an extension or continuation of earlier ones.	Highly sensitive persons often show increased creativity due to their unique way of processing information and deep sensory processing.
Timing	They have a keen sense of the right moment to take action.	They perceive nuances, which enables a deeper analysis of the environment, influencing effective responses in urgent moments.
Ability to analyse and synthesise a large amount of information	They are able to filter a large amount of information, picking out the key information for decision-making.	They notice things that are not perceptible to others (details and differences) and tend to analyse and reflect carefully.
Communication skills	They are characterised by a high level of social skills.	Awareness of subtle non-verbal cues such as tone of voice, facial expressions and body language help HSPs interpret the intentions

		and feelings of others, which is key to effective communication.
Ability to identify opportunities in the environment	They see opportunities that other decision-makers are unable to recognise.	By perceiving details and phenomena that others may not see, they are able to identify certain patterns and opportunities in the environment.
Ability to fill an information gap in order to make a decision	They refer to their knowledge or previous experiences, translating them into effective action. They quickly recall and associate lessons learnt, enabling them to make automatic choices without a process of time-consuming analysis.	The deep information processing typical for HSPs involves long observation, searching for analogies, in-depth analysis, good memory and reflexes, and deep reflection. In this way, HSPs acquire the information they need to make decisions.
High emotional intelligence	They have the ability to identify and understand their own emotions and the emotions of others.	Highly sensitive persons can read and understand other people's needs and assimilate their emotions.

Source: Own study based on (Malewska, 2018; Pira, Etienne 2010; Woiceshyn, 2011; Baryła-Matejczuk, 2021; Gulla, Golonka, 2021; Petitcollin, 2020; Acevedo et al., 2014; Miklewska, Miklewska, 2000).

Based on the consideration of the characteristics of intuitive decision-makers and highly sensitive individuals, it can be concluded that due to the significant similarity in the characteristics of these two groups, highly sensitive persons will be inclined to act and make choices in a manner similar to intuitive decision-makers. Accordingly, the following hypothesis can be formulated:

H1: The greater the intensity of an individual's high sensitivity, the higher the level of the use of intuition in decision-making processes.

Considering also the previous discussion on the location of intuitive decision-makers in the organisational structure, according to which intuition is mainly used by upper and middle managers, another hypothesis can be proposed:

H2: Highly sensitives managers tend to use intuition more frequently in their decision-making process than rational analysis.

3. Measures, methods and sample

In order to operationalise the constructs analysed in the theoretical part of the article, validated research tools developed in previous empirical studies conducted in this area were used. The level of intuition was determined using a tool proposed by Malewska (Malewska, 2018). The tool adopted a dichotomous scale, and the analysed construct consisted of 14 items representing statements describing behaviours indicative of people using intuition or rational analysis in the decision-making process. Respondents were asked to select which behaviours were present in their case, which made it possible to determine the level of the use of intuition in decision-making processes. The value of the Kuder-Richardson statistic (KR20) for this scale was 0.5618, which allows it to be considered sufficiently reliable for the purposes of the study.

To measure an individual's level of sensitivity, the High Sensitivity Scale developed by Aron (Aron, Aron, 1997) was used, which consists of 27 items (questions) relating to the characteristics of highly sensitive persons. Based on a 7-point Likert scale, from 1 (strongly disagree) to 7 (strongly agree), the respondent rates their personal agreement with each statement. The scale measures three main aspects of sensitivity: depth of processing, ease of arousal, and sensitivity to subtle stimuli.

Factor analysis was conducted (promax rotation) and indicated the existence of two factors within the analysed scale, which corresponded to:

- 1) Positive aspects of having high sensitivity traits (e.g., awareness of nuances, determination in exploring interesting issues, complexity of inner life), and
- 2) Negatively perceived threats associated with high sensitivity (e.g., negative impact of various stimuli, time pressure or the feeling of being monitored, the need for solitude, difficulties in adapting to changes).

The remaining 7 items were excluded from further analysis due to low loadings (below the threshold of 0.25) and were thus deemed to not significantly contribute to either of the two factors. Following a discussion within the research team, it was decided to eliminate one item that initially indicated a negative aspect of high sensitivity but was assigned to the positive traits group based on factor analysis ("Disorder and chaos disturb me"). Consequently, the positive factor was described by 6 items (Cronbach's $\alpha = 0.6415$), and the negative factor by 13 items (Cronbach's $\alpha = 0.8769$). The Cronbach's alpha values for these subscales indicate a sufficient level of reliability for further analysis within the adopted framework. Additionally, the results of the Confirmatory Factor Analysis, while not showing a perfect model fit ($\chi^2/df = 2.3714$, CFI = 0.8852, RMSEA = 0.0638), support the acceptance of the scale's two-factor structure.

A total of 338 respondents participated in the study, comprising 207 women (61.24%) and 131 men (38.76%).

4. Results

For the purposes of the study, which aimed to analyse the nature of the influence between the previously mentioned constructs, regression analysis was used based on the Ordinary Least Squares (OLS) method. To address issues with the significance of coefficients due to heteroscedasticity and autocorrelation, the Newey-West (1987) estimator was utilized to estimate heteroscedasticity and autocorrelation-consistent (HAC) standard errors when such problems were detected.

The models describing the relationships between the use of intuition (dependent variable) and the intensity levels of the positive and negative aspects of high sensitivity showed no statistically significant relationships between the variables for the entire sample of respondents.

Statistically significant relationships were identified among individuals who perform managerial work. The relevant model and diagnostic data are presented in Table 2 below.

Table 2.

Relationship Model: Use of Intuition based on Positive and Negative Aspects of High Sensitivity among the Subset of Respondents performing managerial work

Dependent variable: intuition				
	Coefficient	Standard error	t statistics	p-value
Intercept	0.4838	0.146	3.321	0.002
Negative aspects of HSP	0.0738	0.036	2.06	0.047
Positive aspects of HSP	-0.0491	0.024	-2.043	0.048
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R2	0.151		Value	p-value
Adjusted R2	0.105	Jarque-Bera	0.9	0.64
F statistic	3.281	Breusch-Pagan	3.4	0.18
p-value	0.0488	Durbin -Watson	2.14	

Source: Own study.

Analysis of the above model confirms the statistical significance of the influence of both negative and positive aspects of high sensitivity on the use of intuition in decision-making by managers. It is important to note that this impact was observed in a relatively small subset ($n = 40$), although considering the two explanatory variables, the sample size can be deemed sufficient.

The explained variance of the dependent variable (measured by the coefficient of determination – R2 and its adjusted version) suggests a modest fit of the model, although within the realm of social sciences, these values are deemed adequate.

The nature of the identified relationships is not straightforward - according to the model, a higher intensity of negative aspects of high sensitivity correlates with increased use of intuition in decision-making, while conversely, a higher intensity of positive aspects of high sensitivity restricts the use of intuition.

5. Discussion

The results of the analysis partially confirm hypothesis H1, according to which the greater the intensity of an individual's high sensitivity, the higher the level of the use of intuition in decision-making processes. Factor analysis revealed the existence of two groups of factors within the scale measuring the level of high sensitivity, namely: (1) positive aspects of high sensitivity, such as: an awareness of nuance, determination to explore interesting issues or the

complexity of one's inner life, and (2) negative aspects associated with high sensitivity, for example: the negative impact of time pressure on well-being, the need for solitude, problems adapting to change, vulnerability to stress or stimulus overload.

Analysis of the model presented in the research section confirms the existence of a statistically significant relationship between the positive and negative aspects of high sensitivity and the level of the use of intuition. However, the relationship differs between the two groups of characteristics of highly sensitive persons. A correlation was found whereby a higher intensity of positive aspects of high sensitivity decreases the level of the use of intuition in decision-making processes. In seeking to justify this result, it is noted that the positive aspects associated with high sensitivity induce individuals to use rational analysis, a thought process considered to be the opposite of intuition. This process is characterised, among other things, by searching for solutions to decision-making problems by identifying the causes of disturbances using a deductive process so as to generate a solution, carefully calculating the costs and benefits of potential solutions to a problem, reducing risks and uncertainties as much as possible, relying on external information, avoiding subjective and emotional judgements, taking care to process information correctly, and carefully documenting the entire decision-making process (Bullini, Orlandi, Pierce, 2020b; Eisenhardt, Zbaracki, 1992; Elbanna, 2006; Erevelles et al., 2016; Levenson, 2018; Ortiz-Barrios, Alfaro-Saiz, 2020; Sukhov et al., 2021). Positive aspects of high sensitivity that reduce the use of intuition and move individuals towards rational analysis include:

- deep information processing (Miklewska, Miklewska, 2000) – HSPs tend to process information deeply, which facilitates accurate and rational analysis. This also enables them to think through different aspects of a decision-making situation and take into account multiple factors before making a decision;
- thoroughness and attention to detail (Aron et al., 2012) – high sensitivity involves noticing small details and nuances that may be overlooked by others. This trait helps in analysing situations accurately, and consequently leads to more prudent and thoughtful decisions;
- reflectiveness (Aron, 2010) – HSPs are inclined to reflect on their experiences, learning from their mistakes. They refer to previous experiences before making decisions, which encourages the application of rational analysis;
- empathy and understanding of others (Petitcollin, 2020) – these features allow the points of view of different sides to be understood and explored. This provides opportunities to acquire and analyse more information, which is characteristic of rational decision-making;
- caution and prevention of errors (Baryła-Matejczuk, 2021) – HSPs try to avoid mistakes and the negative consequences of their actions, and therefore rational analysis enables them to think carefully about the consequences of potential decisions and minimise risks;

- creativity and innovation (Bridges, Schendan, 2019) – HSPs often propose creative and innovative ideas, and rational analysis can help to make these ideas more realistic by increasing their chances of successful implementation.

An inverse relationship was identified for the negative aspects of high sensitivity, i.e. a higher intensity of these traits translates into higher levels of the use of intuition. This is not an obvious result, although it can be logically explained. It should be noted that the traits of high sensitivity considered as negative may induce individuals to use intuition as a kind of tool to help them cope with the challenges that high sensitivity generates. Among the negative aspects of high sensitivity determining the use of intuition in decision-making processes, we can point out:

- information overload (Ershova et al., 2018) – HSPs process information in great detail and depth, which can lead to information overload. Intuition helps to make decisions faster, without analysing every detail, which helps to avoid information overload and reduces stress for the decision-maker (Vincent, 2021);
- vulnerability to stress (Bakker, Moulding, 2012) – HSPs experience stronger emotional reactions in stressful situations. Intuition allows them to act instinctively and immediately, thus reducing the duration of stress or avoiding potentially harmful situations (Adinolfi, Loia, 2022; Tabesh, Vera, 2020);
- decision-making paralysis (Serafini et al., 2017) – deep processing and analysis of information can lead to decision paralysis. In this situation, intuition allows an individual to overcome this state by making a decision based on their first feeling or instinct (Elbanna, Fadol, 2016);
- overconfidence in one's own feelings (Baryła-Matejczuk, 2021) – HSPs are aware of their feelings and emotions, which coincides with an intuitive way of decision-making that is based on the decision-maker's trust in gut feelings (Hogarth, 2010).

The results of the analysis provide support for hypothesis H2, which assumed that highly sensitive managers tend to use intuition more frequently in their decision-making process than rational analysis. This is in line with research findings on the use of intuition in decision-making processes, which suggests that this mode of decision-making is more often used by senior decision-makers (Akinici, Sadler-Smith, 2019; Dane, Pratt, 2007; Malewska, 2018; Mikušková, 2017; Ozgen, Baron, 2007; Samba et al., 2022; Szanto, 2022; Tabesh, Vera, 2020). This result can be explained by the need to solve unique, complex and unstructured problems typical for higher levels of management. This translates into the need for unique, non-standard solutions emerging from the creative process. This process is specific to the intuitive approach (especially so-called creative intuition). This result is not so evident for highly sensitive individuals who prefer scientific and research work (Aron, Aron, 1997), therapeutic and helping professions (Acevedo et al., 2014), or technical and IT professions than a managerial job (Aron, 1998). However, it has also been postulated that HSPs feel comfortable doing work of a creative nature, and management work can largely be considered as such (Aron, Aron, 1997).

In addition, as shown in the theoretical part of the article, the characteristics of an intuitive decision maker and a highly sensitive person are largely consistent, which predisposes highly sensitive people to rely more often on intuition than rational analysis in their decision-making processes (Malewska, 2018; Pira, Etienne, 2010; Woiceshyn, 2011; Baryła-Matejczuk, 2021; Gulla, Golonka, 2021; Petitcollin, 2020; Acevedo et al., 2014; Miklewska, Miklewska, 2000).

6. Conclusions, further research directions and research limitations

The aim of this article was to identify the relationship between the use of intuition in decision-making and the intensity of an individual's high sensitivity. On the basis of the empirical research and statistical analyses, it was possible to partially confirm hypothesis H1, according to which the greater the intensity of an individual's high sensitivity, the higher the level of the use of intuition in decision-making processes. Partial verification of the hypothesis was due to the fact that, as a result of factor analysis, two groups of factors emerged on the scale measuring the level of high sensitivity: positive and negative aspects of high sensitivity. The study identified a statistically significant relationship between both positive and negative aspects of high sensitivity and the use of intuition in decision-making processes: (1) the higher the intensity of the positive aspects of an individual's high sensitivity, the lower the level of the use of intuition in decision-making processes, and (2) the higher the intensity of the negative aspects of high sensitivity, the higher the level of the use of intuition in decision-making processes. This means that, depending on the intensity of the positive or negative aspects of high sensitivity, individuals in this category may use intuition to a greater or lesser extent. Reducing intuition in favour of analytical processes in decision-making allows highly sensitive individuals to make better use of their natural abilities and characteristics, such as deep information processing, empathy, reflexivity or attention to detail. This enables them to make more conscious, thoughtful and, consequently, more effective decisions. In turn, intuition in decision-making processes provides highly sensitive persons with a tool to help them cope with challenges arising from their sensitivity, enabling them to function more sustainably and with less stress in both their professional and personal lives.

The research results also provided the basis for confirming hypothesis H2, according to which highly sensitive managers tend to use intuition more frequently in their decision-making process than rational analysis. This is consistent with research on intuitive decision-makers, who, according to researchers in this area, belong to management teams (Akinci, Sadler-Smith, 2019; Dane, Pratt, 2007; Mikušková, 2017; Ozgen, Baron, 2007; Samba, Williams, Fuller, 2022; Szanto, 2022; Tabesh, Vera, 2020). This result is not so obvious in the context of highly sensitive persons, who most often choose professions related to scientific research, therapeutic or IT-related work than a managerial job (Aron, Aron, 1997; Acevedo et al., 2014; Aron, 1998).

However, it should be emphasized, as presented in the theoretical part of the article, that the personality traits of highly sensitive persons predispose them to use intuition in decision-making processes.

The findings expand existing knowledge in the field of management regarding the issue of intuition in decision-making and highly sensitive persons. Both theoretical constructs are increasingly analysed by researchers (Adam, Dempsey, 2020; Adinolfi, Loia, 2022; Akgün, Keskin, 2021; Bullini, Orlandi, Pierce, 2020a; Elbanna, Fadol, 2016; Samba et al., 2022; Sukhov et al., 2021; Szanto, 2022; Tabesh, Vera, 2020; Vincent, 2021; Oomen-Welke et al., 2023; Pérez-Chacón et al., 2023; Jauk et al., 2023; Gulla, Golonka, 2021; Iimura, 2021; Goldberg, Scharf, 2020; Lionetti et al., 2018; Pluess et al., 2018), but still require in-depth exploration. The added value of the article is combining these two poorly explored theoretical constructs and proving the existence of a relationship between them. In addition, a new aspect of the research results obtained is the division of the construct of high sensitivity into two sub-constructs covering the positive and negative aspects of high sensitivity, since previous analyses in this area have considered it as a whole.

The conclusions of the research are also valuable for business practice as they apply to individuals doing managerial work. In addition, their value also derives from the fact that both intuitive decision-makers and highly sensitive persons are essential employees whose potential can be fully exploited by understanding their way of functioning and creating the right conditions for them. It is therefore important to better and more fully recognise the specific characteristics of these groups.

The conclusions formulated may be a contribution to further in-depth research, which may provide more complex conclusions on how different aspects of high sensitivity affect decision-making processes, including the use of intuition, and how these can be optimised. Of cognitive interest would be studies on different demographic groups to see if the identified relationships are similar across age, cultural and occupational groups. Of particular relevance is the cultural theme and the resulting differences in the perception of intuition and high sensitivity, as well as its impact on the relationship between these constructs. From the point of view of business practice, it would be desirable to analyse how different aspects of high sensitivity and the propensity for intuitive decision-making affect performance in different occupations and professional roles, and to develop and evaluate methods and tools to increase the effectiveness of the use of intuition by people with different levels of sensitivity.

The applied research procedure concerning the issue of the use of intuition in decision-making processes by highly sensitive persons is subject to certain limitations. In relation to the construct of intuition, these limitations are primarily due to the complexity of the issue of intuition. The multifaceted nature of intuition results in it being impossible to identify all the differentiating features of intuition and rational analysis that were the basis for determining the level of intuition use in decision-making processes. In addition, our survey was conducted among respondents from different sectors. The specific nature of the business may have

a significant impact on the level of the use of intuition in decision-making processes. Therefore, it would be useful to compare the relationships between the different variables in selected industries and sectors.

In terms of measuring both intuition and high sensitivity, the main problem was that the measurement was based on the respondent's self-assessment, which can lead to distortions due to personal bias or the desire to present oneself in a better light. Respondents may unconsciously give answers that they consider socially acceptable, rather than answers that truly reflect their experiences. Respondents may also be reluctant to openly acknowledge highly sensitive traits because of fear of being misunderstood by others, which may also affect their responses.

Furthermore, the limitations of the research process are also associated with the sample size. Although 338 respondents participated in the study, the results allow for general conclusions to be drawn. Due to the sample size required to obtain representative results, caution should be exercised when generalizing the conclusions.

A final limitation indicating directions for further research is the adoption of a quantitative approach. This involves a lack of control of external factors, and therefore the results may not be very accurate. The conclusions of the study show that a qualitative study would deepen the state of knowledge regarding the constructs analysed, which largely relate to psychological aspects, and could provide additional valuable observations and conclusions.

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