EXPLORING SOMATIC AWARENESS IN DECISION MAKING

How intuition and somatic awareness together play a role in decision making among somatic practitioners – Faculty of Sport and Health Sciences

Kreetta Craycroft

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TIIVISTELMÄ

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Tutkimuksen tarkoituksena oli tutkia, kuinka somaattinen tietoisuus vaikuttaa päätöksentekoon somaattisilla harjoittelijoilla. Päätöksenteko toimi linssinä, jonka läpi somaattista tietoisuutta tutkittiin, jotta mielen ja kehon välistä yhteyttä voitaisiin paremmin ymmärtää. Ihmisen älykkyysjärjestelmä koostuu somaattisista kokemuksista sekä kognitiivisista prosesseista. Molemmat prosessit vaikuttavat päätöksentekoon eri määrin riippuen päätösten luonteesta. Somaattinen tietoisuus on mielen ja kehon prosessi, joka mahdollistaa somaattisten kokemusten tietoisen havainnoinnin ja ymmärtämisen. Päätöksenteko viittaa toimintatavan, tai uskomusten valitsemiseen. Somaattiset kokemukset voivat kuitenkin olla epäselviä ja intuitiivisia luonteeltaan. Intuitiolla on tällöin tärkeä rooli somaattisten kokemusten ymmärtämisessä ja siten se tukee somaattisen tietoisuuden hyödyntämisessä päätöksenteossa. Intuitio viittaa tiedostamattomiin prosesseihin ymmärtämisessä, ja se mahdollistaa pääsyn tietoon, jota ei muuten voisi saavuttaa. Lisäksi intuitiivinen tieto voi ilmetä somaattisina kokemuksina, mikä tekee somaattisesta tietoisuudesta väylän intuitiivisen ymmärtämiseen.

Somaattisen tietoisuuden roolia päätöksenteossa tutkittiin laadullisesti haastattelemalla somaattisten lajien harjoittelijoita ja heidän kokemuksiaan somaattisen tietoisuuden ymmärtämisestä ja hyödyntämisestä päätöksentekotilanteissa. Aineisto kerättiin puolistrukturoiduilla haastatteluilla ja analysoitiin käyttäen deduktiivisen ja induktiivisen teema-analyysin hybridi muotoista lähestymistapaa. Tutkimuskysymykset olivat seuraavat:
(i) Miten somaattiset harjoittelijat subjektiivisesti määrittelevät somaattisen tietoisuuden?
(ii) Kuinka somaattiset harjoittajat ymmärtävät henkilökohtaiset somaattiset kokemukset päätöksenteossa?
(iii) Kuinka somaattiset harjoittajat hyödyntävät somaattista tietoisuutta päätöksenteossa?

Ensimmäinen tutkimuskysymys paljasti, että somaattiset harjoittajat määrittelevät somaattisen tietoisuuden prosessina, jossa vastaanotetaan ja tulkitaan kehollista tietoa, mikä mahdollistaa vuorovaikutuksen itsen ja muiden kanssa. Lisäksi se sisältää intuitiivisen tavan tietää. Toinen tutkimuskysymys paljasti, että somaattiset kokemukset ymmärretään intuitiivisesti, kokemuksen ja oppimisen kautta sekä päättelyllä. Kolmas tutkimuskysymys ehdotti, että somaattinen tietoisuus helpottaa päätöksentekoa tarjoamalla pääsyn tietoon, toimimalla hälytysjärjestelmänä ja vahvistamalla päätöksiä. Lisäksi osallistujat ilmaisivat, etteivät he voineet erottaa somaattista tietoisuutta elämästä itsestään ja että somaattinen tietoisuus helpottaa mielen ja kehon yhteyttä sekä mahdollistaa toiminnan säätelyn. Kokonaisuudessaan tämä korostaa, että somaattinen tietoisuus on ratkaisevan tärkeä väline päätöksenteossa intuitiivisuuden ja somaattisten kokemusten tietoisuuden kautta. Nämä tutkimustulokset ovat tärkeä ottaa huomioon, sillä ne saattavat avustaa kehomieli yhteyden vahvistamista sekä päätöksenteon kehittämistä esimerkiksi urheilu- ja liikunta psykologiassa sekä suorituskyvyn kehittämisen aloilla.

Avainsanat: somaattinen tietoisuus, somaattiset kokemukset, päätöksenteko, intuitio

ABSTRACT

The purpose of this study was to investigate the how somatic awareness plays a role in decision making among somatic practitioners. Decision making was used as a lens through which somatic awareness was investigated to further understand the connection between the mind and body. The human intelligence system involves somatic experiences as well as cognitive processes. Both processes affect decision making in varying amounts depending on the nature of decisions. Somatic awareness is a mind-body process that allows an awareness and understanding of somatic experiences. Decision making refers to choosing a course of action, response, or a belief and this thesis focused specifically on personal decisions. However, somatic experiences can sometimes be ambiguous and intuitive in nature. The concept of intuition then plays an important role in understanding somatic experiences and thus, utilizing them in decision making. Intuition refers to unconscious processes of understanding and it allows access to information that cannot be otherwise acquired. In addition, intuitive knowing can manifest as somatic experiences, which then makes somatic awareness a pathway to understand intuition.

The role of somatic awareness in decision making was qualitatively explored by interviewing somatic practitioners about their experiences of understanding and utilizing somatic awareness in decision making. The data was gathered by semi-structured interviews and analysed using a hybrid approach of deductive and inductive thematic analysis. The research questions were as follow.

(i) How do somatic practitioners subjectively define somatic awareness?
(ii) How do somatic practitioners understand personal somatic experiences in decision making?
(iii) How do somatic practitioners utilize somatic awareness in decision making?

The first research question revealed that somatic practitioners define somatic awareness as a process of receiving and interpreting bodily information that allows interaction with the self and others. Additionally, it involves an intuitive way of knowing. The second research question revealed that somatic experiences are understood intuitively, through experience and learning, as well as through reasoning. The third research question proposed that somatic awareness facilitates decision making by providing access to information, serving as an alerting system, and confirming decisions. Additionally, participants expressed that they could not separate somatic awareness from life itself and that somatic awareness facilitates a mind-body connection as well as enables action control.

Overall, this emphasizes that somatic awareness plays a crucial role in decision making through intuition and through the awareness of somatic experiences. These findings are important to consider as this could potentially offer insight into enhancing the mind-body connection and decision making in fields such as sport and exercise psychology and performance enhancement.

Key words: somatic awareness, somatic experiences, decision making, intuition

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1 INTRODUCTION

The aim of this study is to better understand how the mind and body work together by investigating somatic practitioners' subjective experiences of how somatic awareness plays a role in decision making. This was studied by investigating how information from somatic experiences such as movement, feelings and internal sensations are understood and utilized in decision making. A qualitative research approach, using a hybrid model of deductive and inductive thematic analysis, was conducted to answer the following research questions:

(i) How do somatic practitioners subjectively define somatic awareness?
(ii) How do somatic practitioners understand personal somatic experiences in decision making?
(iii) How do somatic practitioners utilize somatic awareness in decision making?

It has been shown that the human intelligence system is comprised of the mind and body together, and neither one alone. Researchers emphasize that somatic intelligence is the most fundamental and important form of intelligence that serves as a foundation to other intelligence forms. (Anttila 2009; Claxton 2015; Hämäläinen 2007) Similarly, researchers studying decision making and intuition characterize sensory experiences and intuition as a primary, more creative mode of thought (Kahneman 2011, Raami 2015;2016; Sadler-Smith 2008). Hämäläinen (2007, 61-63) states that to be able to use this deepest form of intelligence, not only requires an awareness but an understanding of somatic information. Therefore, emotions, feelings, and other somatic experiences are an integral source of somatic information and understanding them requires active attention to how they are experienced (Rouhiainen 2007). Somatic responses may be intuitive or hard to understand even if they reach the level of consciousness. These intuitive responses can be brought to awareness and ambiguous, conscious signals can be articulated through bodily presence which can then lead to a better understanding of them (Anttila 2009; Gendling 2002; Rouhiainen 2007).

In addition, awareness of somatic responses allows a richer information base, as more information can be gathered through the senses and bodily experiences (Damasio 1999; Dijksterhuis et al. 2005). Intuition researchers emphasize somatic experiences to gain more insight and to enhance intuitive decision making (Bechara et al.1994; Sadler- Smith 2008; Dunn et al. 2010).

Bechara et al. (1994) first mention that being more aware of somatic signals during decision making, allows for more deliberate and informed decisions to be made. Sadler- Smith (2008) and Dunn et al. (2010) support this by stating that more intuitive decisions can be made when being more aware of bodily sensations, which can make decisions more effective. Therefore, both somatic awareness and intuition seem to contribute to effective decision making and they seem to be discussed in a similar manner. Throughout this thesis, these concepts are more closely defined, and it is discussed how they play a role in decision making. Intuition is explored from a somatic perspective and thus refers to the unconscious and ambiguous bodily experiences that are used in decision making, while in contrary, somatic awareness refers to the somatic experiences that can be consciously recognized and understood. The connection of somatic awareness and intuition is discussed in more detail at the end of this thesis.

Yet there is no clear recognition or discussion on the connection of intuition and somatic awareness even though they are often discussed as similar processes (Dunn et al. 2010; Glaxton 2015; Raami 2015; 2016; 2020). Better yet, how somatic experiences are understood and used as information is not clear. (Tsakiris & Critchley 2016; Mehling et al. 2018; Paulus et al. 2019; Quadt et al. 2018). Lastly, research that has explored the influence of somatic awareness on decision-making, has primarily focused on general effects rather than explored individual experiences and personal ways of understanding somatic experiences in decision-making situations. To address these gaps, the thesis approaches this mind-body phenomena from a qualitative perspective. This thesis studied somatic practitioners subjective and personal experiences by interviewing participants and later applying a hybrid model of deductive and inductive thematic analysis on the research data. This was done to find common emerging themes to describe how somatic information can be understood and utilized in decision making. Despite the limitation of non-generalizable data, this approach offers valuable insight into the subjective understanding and utilization of somatic intelligence.

This study examined individuals who engage in somatic practices, given that such practices emphasize the enhancement of somatic awareness. Investigating somatic practitioners is justified, as those unfamiliar with somatic awareness may lack deeper insight, given the depth of inquiry into understanding and utilizing somatic awareness. Somatic practitioners consisted of Pilates, yoga, Tai Chi, and dance practitioners.

The conduction this study consisted of multiple stages in addition to gathering research participants. Firstly, participants were instructed to bring awareness to their somatic states,

especially during decision making, for a period of two to three weeks preceding the interviews. This was done by giving the participants a list of in-depth questions regarding somatic awareness and decision making. Same questions were then asked in the interviews. This allowed for the participants to reflect on how they were already using somatic information but also to allow bringing awareness to any unconscious signals that might affect decision making. Following the observational period, interviews were conducted, the recorded sessions were transcribed, and a hybrid model of deductive and inductive coding was conducted to apply a thematic analysis to the gathered data.

Studying this concept is important because it can help understand the embodied processes of decision making. This could result in understanding how somatic responses can be used as a source of information to make more deliberate and informed decisions. This may, in turn, convert into making decisions more deliberately and according to one's own values and aspirations. It can also allow an understanding of bodily experiences and give meaning to them (Rouhiainen 2007; Anttila 2009). To gain a holistic understanding of the phenomenon, physiological, psychological, and philosophical approaches were used. A multidisciplinary approach appears important when attempting to understand and describe the nature of the mind-body connection and how this relationship can be used for effective decision making, which can profoundly impact health and well-being. Hence this thesis incorporates research from the field of sport and exercise psychology, but also philosophical and psychological literature have an important impact. Furthermore, investigating this relationship goes beyond supporting decision making processes. Research has demonstrated that there are mental and physical health benefits of having a healthy level of somatic awareness, for example, in stress management (Strehli et al. 2020), self-awareness (Damasio 1999; Craig 2002; Tsakiris & Critchley 2016). In addition, somatic practices are seen to be beneficial for physical health such as lower blood pressure and better sleep (Bornemann at al. 2015) as well as cardiovascular health (Liu et al. 2018). This makes studying the topic of the mind-body connection a valuable in sport and exercise psychology.

This thesis starts with presenting the theoretical background that defines the key concepts in detail and presents the human intelligence system to explain how the mind works in cognitive processes such as decision making. The following sections then delve into explaining different theories and concepts that present the concept of somatic awareness further and how it is involved in decision making. The last chapters of the theory section introduce the concept of

intuition and how it plays a role in somatic awareness and decision making and present the connection between intuition and somatic awareness in more detail. This is followed by the method section, which provides a detailed layout of the research procedures and data analysis. After this, the results are presented in a detailed manner and reflected on through a lens of prior literature. Following, is a discussion of the current study findings and limitations of the methods. Finally, the conclusion presents the main findings, limitations, and further implications.

2 THEORETICAL BACKGROUND

Somatic awareness brings together the awareness of and understanding of somatic experiences, which enables them to be consciously utilized in thinking and action (Anttila 2009; Garfinkel et al. 2015; Quadt et al. 2018), which, in turn, are necessary in decision making (Kahneman 2011).

This thesis uses the term somatic to describe concepts that refer to 'body' (Hanna 2004). Somatic awareness then, refers to the mindfulness and understanding of somatic experiences such as feelings, and emotions as well as gestures, movement, body language and posture. Somatic experiences refer to the bodily signals such as muscle tension and visceral sensations but also movement and gestures that an individual can later become aware of. (Craig 2002). This thesis uses the concept of somatic awareness when referring to being aware of and understanding information originating from or through the body such as senses as well as bodily experiences such as movement and gestures.

Decision making refers to the process of choosing a course of action, response, or a belief. (Frensch & Funke 1995) The focus is on decisions that require processing of choices, problem solving, and/or the evaluation of options. However, to some extent, every decision involves unconscious processes as well (Glöckner & Witteman 2010). Sadler Smith (2008) continues, that intuition can make decision making more effective on a personal and professional level. Therefore, the concept of brining unconscious processes into consciousness is also discussed regarding effective decision making.

Exploring how somatic experiences are used in decision making, quickly lead to the concept of intuition. Intuition is defined as a form of knowing that can manifest in bodily or mental ways (Sadler-Smith & Shefy 2004, p. 81) The focus in this thesis is on the bodily manifestation of intuition. Somatic practitioners frequently characterized somatic awareness as intuitive awareness of bodily sensations, but in turn, understanding those sensations was also an intuitive process. Due to this reciprocal role on intuition, it was investigated as a mediator between somatic awareness and decision making.

Overall, this thesis focused on individual experiences, which is why instead of focusing strictly on the type of decisions, the aim was to understand how the decision was made. Generally, an effective decision making can be seen as a decision which has a positive or favourable outcome. Researchers state that intuition can be superior to reasoning in decision making where there is an overabundance or lack of information. In addition, this type of intuitive knowing is often described to stem from somatic experiences such as gut feelings or knowing in the heart.

(Claxton 2015; Raami 2016; Sadler-Smith 2008). In addition, the vast amount of information that is received through somatic experiences speaks for the importance of the somatic intelligence system (Dijksterhuis et al. 2005). Somatic awareness can thus be utilized intuitively. Additionally, when coupled with reasoning, it can be used beyond unconscious processes (Raami 2016; Sadler-Smith 2008)

Lastly, Langer (2023) speaks about the body and mind as one intricate system and demonstrates that everything that is happening in the brain is necessarily happening in the body and vice versa. Therefore, it can be concluded that somatic information is a part of every decision and all mental processes. This is later explained by describing the intelligence interplay between system 1- intuition, and system 2- reasoning (Kahneman 2011). The following examples elucidate how intuition occurs and can affect decision making and how somatic awareness plays a role by providing information through the senses and somatic experiences such as internal signals.

In fast paces situations, such as in sports, intuitive decision making can be crucial. This type of decision making typically happens on an unconscious level, where intuition works (Sadler-Smith 2008). Sadler-Smith 2008 gives an example of a race car driver who had unexpectedly braked as he exited a tunnel. Braking at that point saved him from an accident that was ahead around the next corner. He could not explain why he had stopped until later he became aware that he had make an intuitive decision to stop the car. His unconscious peripheral vision caught a subtle change in the stand, indicating that something was different. The crowd was facing the accident around the corner instead of cars coming out of the tunnel. Although the driver was not consciously aware of this, his intuition guided him to break and avoid an accident. This example can help explain how intuition affects decision making on an unconscious level, to the extent to where it affects action. (Sadler-Smith 2008)

In other cases, where available information is insufficient or overabundant, intuition is irreplicable. Intuitive knowing can come from experience, instinct or even the so-called superconscious mind, that surpasses other mental processes (Kautz 2005; Raami 2015). The so called expert and instinctive intuitions can come from the unconscious mind retrieving learned information from experience or sensory input and appears as a “feeling” of knowing (Raami 2016). The superconscious does not come from memory or even sensing (Kautz 2005), furthermore the knowledge processes for this type of information is still unknown (Raami 2020).

However, somatic awareness can play a role in all types of intuitions as it can appear bodily. Even when not, the body can be used as a tool to confirm or evaluate the reliability of intuitions.

Raami (2020) has stated that individuals who utilize intuitive information, often evaluate the reliability of the intuition using the body's senses or feelings. Better yet, some describe utilizing the body to receive 'yes' or 'no' answers when closely tuning into bodily sensations. (Raami 2016) This can explain the role of somatic awareness in the intuitive process as it seems that intuition can appear somatically through bodily signals, whereas somatic awareness can then be a way to understand these intuitive signals.

Behind these processes is the human intelligence system. While decision making serves as a focal point of this thesis, it functions more as a lens through which to explore the dynamics of mental processes and somatic experiences. As decision making is a mental process, investigating somatic experiences involved in it may help clarify how the mind and body work together. Therefore, the emphasis is on describing how somatic experiences are understood and utilized in decision making.

2.1 The human intelligence system

Decision making encompasses various mental processes such as problem solving and creativity, which makes it a window into how thinking occurs. Therefore, this can reflect how individuals apply reasoning in decision making. (Kahneman 2011) Most often, effective decision making involves two modes of thinking. Moreover, Glöckner & Witteman (2010) add, that to some extent, every decision involves unconscious processes as well. Kahneman (2011) supports this and introduces two modes of thinking. System 2, a top-down deliberate and logical, but a slow mode of thinking. Additionally, system 1, is an unconscious, intuitive, and automatic, which makes it a faster form of thinking. These two systems are continuously working in cooperation, meaning that a thought process, such as decision making, always involves some degree of both systems. System 1 is associated with somatic awareness as thinking in this system relies on sensory experiences. Kahneman writes: "I describe System 1 as effortlessly originating impressions and feelings that are the main source of explicit beliefs and deliberate choices of system 2." (Kahneman 2011, 21) He continues to explain the interplay between these systems by stating: "The automatic operations of System 1 generate surprisingly complex patterns of ideas, but only the slower System 2 can construct thoughts in an orderly series of steps." (Kahneman 2011, 21). This can reflect how the intuitive system 1, is in the centre of more complex and creative thoughts and decisions but cannot reason them and bring into understanding without the more logical system 2. (Kahneman 2011)

In decision making, this interplay can be seen as the intuitive System 1 capturing information that the conscious and deliberate System 2 cannot, due to its slow and limited nature. In turn System 2 is needed to make sense of intuitive information received by system 1 as it is limited in its ability to reason. This cooperation of unconscious and conscious thought processes seems to be the key for reaching higher forms of thinking. (Kahneman 2011)

Glöckner & Witteman (2010) stated that often human decision making relies on processes that are outside of conscious awareness such as feelings and affections, which point to Kahneman's System 1 thinking process. This demonstrates the importance of investigating this intuitive form of thought. Larsson (2001) and Shavina (2009) also discuss about the usage of non-conscious and conscious thinking together by demonstrating that even Nobel laureates underline the usage of intuitive, system 1 thinking in the phase of discovery, but conscious reasoning is crucial to be able to form arguments. Thus, the unconscious is superior to the conscious mind in looking for options, creativity, and discovering new pathways of thinking, but the conscious mind is needed to make sense of it. (Larsson 2001; Shavina 2009)

In decision making, this can appear as system 1 receiving information that suggests that option A is the better choice. This can appear as a bodily signal indicating that A is a better choice than B by a positive feeling or emotional response towards A. System 2 conscious reasoning then makes the final decision towards A because it "felt right". Without the larger information processor, system1, the decision may be harder to make and without system 2, the choice will be hard to justify.

How these somatic experiences are understood is of focus in this thesis. Some of these somatic responses are unconscious and hard to articulate, which is why it is important to investigate how these could be brought into conscious awareness. Somatic awareness is then a key factor in being aware and understanding somatic experiences. Somatic awareness is discussed next in more detail.

2.2 Somatic awareness

The term 'somatic' originates from movement and bodywork studies and it was first introduced by Hanna (1988). The term 'soma' refers to the body or physical entity of an organism. Somatics emphasize the perception of internal physical experiences and it involves observing oneself from the inside out. Somatics highlight the connection of mind and body to enhance body awareness and well-being. (Hanna 1988)

Somatic awareness is a broad concept that encompasses the awareness and understanding of inner and external bodily perception. This includes the signals such as pain, sensory and emotional information, but also unconscious experiences such as changes is respiration or heartbeat, that can be brought to awareness. Given this, somatic awareness can be seen as an umbrella term that describes the awareness and understanding of inner and external bodily sensations and experiences, meaning it encompasses all bodily experiences. (Craig 2002) In this thesis, this vast concept is drawn together from physiological and philosophical concepts, interoception and embodied cognition. Interoception is the metacognitive awareness of internal bodily sensations (Garfinkel et al. 2015; Quadt et al. 2018) whereas philosophers recognize that the awareness of bodily responses reaches further than inner body experiences. Embodied cognition includes external bodily experiences along with its interaction with the external environment, to affect cognition and behavior. (Lakoff and Johnson 1999; Varela et al. 1992). The concept is deliberately broad, as the occurrence of somatic experiences can vary largely from one another. This does, create some limitations but is seen justified as the purpose is to study personal experiences.

Both internal and external somatic experiences play an important role in decision making as they provide valuable sensory information that can influences the decisions (Bechara et al. 1994; Dunn et al. 2010). This allows decisions to be done more intuitively which can positively effect decisions. It seems that somatic experiences are a valuable aspect of intuitive thinking and can play a role in cultivating it in decision making. (Sadler- Smith 2008) Sadler- Smith (2008) describes intuition as the cornerstone for creativity and making rapid decisions effectively while Raami (2020) describes intuition as a tool for solving unimaginable problems and superior asset in effective decision making in uncertain situations. Gaining deeper insight into how somatic awareness can be understood may thus support using intuitive thinking more effectively in decision making.

Considering this, intuition may have a cooperative function. By mindfully attending to somatic responses, this intuitive information can be understood, but Raami (2015, 226) has acknowledged that by using intuition we can reach somatic wisdom too. Other researchers have also identified the importance of intuitive information especially in decision making and describe intuition as the interplay of knowing and sensing (Sadler-Smith & Shefy 2004). This dynamic connection between intuition, the conscious mind and body is explained throughout the rest of this thesis.

2.3 How somatic practices affect somatic awareness

Somatic practices are a range of movement practices that emphasize the connection between the mind and body (Green 1999; Hanna 2004) while the skill of being aware and understanding bodily sensations is referred to as interoceptive awareness. Interoceptive awareness is the axis of the mind-body connection as it interacts with cognition and emotion while sensing internal bodily changes. (Garfinkel et al. 2015)

Somatic practices that are involved in this thesis are yoga, Pilates, various dance practices and Tai Chi. These somatic practices are all seen to support interoceptive abilities, the ability to sense internal bodily states, which is in the centre of somatic awareness. The common thread between these practices in addition to movement, is mindfulness, which is seen as an essential part of interoceptive awareness. (Gard et al 2014; Eddy 2009; Rouhiainen 2011; Wang et al. 2020) Therefore, interoceptive awareness is an essential factor in having a healthy mind-body connection. In turn somatic practices involve enhancing the internal and external bodily awareness, which is why practitioners from these practices are chosen in this study. In addition to somatic practices enhance the mind-body connection, as well as have beneficial effects on mental and physical health (Bornemann at al. 2015; Liu et al. 2018).

Most forms of yoga use a variety of breathing practices (pranayama), postures and movement patterns (asana) as well as meditations. The frequency and focus of the practices vary along different schools of yoga. However, all forms of yoga emphasize the mind-body connection by brining mindful focus on the body sensations during practices, focusing on exploring the perceptions of the body and learning to use the body more effectively. (Gothe et al. 2019) In this thesis, participants consisted of practitioners of Vinyasa, Hatha and Yin yoga.

Tai Chi is a holistic movement approach that can enhance somatic awareness by integrating mindfulness, movement and breathwork practices. These can allow a deeper understanding of oneself and the body. In Tai Chi movements are comprised of flowing, slow movements together with deep breathing and a focus on the present moment and relaxation. (Wang et al. 2020)

Pilates promotes a mindful approach to movement efficiency and precision. Pilates has positive effects on enhancing somatic awareness as the main target is improving overall functioning of the body with a deep mindful connection to the present moment and self. Pilates movements typically involves deep muscle work with engaging the whole body in a balanced manner. (Rouhiainen 2011)

Dance includes a wide range of styles and traditions that aim for expressive movement. This thesis included practitioners of ballet, modern dance, jazz, hip-hop and salsa. Dance can be a performing art but also a form of physical exercise. Dance can enhance somatic awareness by integrating movement, mindfulness, and self-expression with perceiving and striving to understand and bodily experiences and sensations. (Rouhiainen 2007)

Considering this, practitioners from these somatic practices were recruited as participants as it is seen that they understand the concept of somatic awareness well enough to provide reliable insight of the concept.

3 SOMATIC MARKERS IN DECISION MAKING

Damasio et al. (1991) developed a theory where emotional signaling guides action and in particular, decision making. This hypothesis explains the emotional aspect of somatic awareness. They state that emotions manifest as physiological responses in the body and these responses are seen to play a crucial role especially in uncertain and complicated settings. Damasio et al. (1991) describe the physiological responses that arise from emotions and feelings as 'somatic markers'. These somatic markers unconsciously and consciously inform the system about the experience at hand and can thus influence decision making. (Damasio et al. 1991). Somatic markers can be considered as somatic experiences as they involve bodily signals and reactions. The somatic marker hypothesis can explain how somatic awareness affects decision making by demonstrating how the physiological feeling of emotions influence thought. (Damasio et al. 1991) Claxton (2015) supports this by explaining that somatic markers rely on information that comes from within and to the body. This somatic information guides thought processes in various situations such as estimating risks, confidence, and values as the embodied feelings are "looped though" the prefrontal cortex and thus affect decision making (Claxton 2015, 98).

According to the somatic marker hypothesis the body can remember affective states when faced with a trigger from similar situations where the somatic marker was first formed. This memory is, in fact, a somatic marker of a past situation. How somatic markers influence the response to stimuli, plays out as one being pulled to situations or decisions that evoke positive affective states, and oppositely avoiding situations or decisions that produce a negative affective state. However, somatic markers can change over time by being exposed to new experiences. (Damasio et al 1991) This theory can explain how somatic sensations guide action and behavior. However, this mostly applies to unconscious behavior. Therefore, it cannot be unequivocally applied to decisions that require conscious processing of information or choices. However, emotions are meaningful, and even to some extent, crucial for making decisions. Moreover, this is an important hypothesis to explain unconscious choices or decisions that are made but cannot be explained why, in other words, intuitive decisions. (Damasio 2008; Dunn et al. 2010)

3.1 Sensing the right decision

Damasio (2008) mentions a clinical example of a patient who lost a part of this ventral medial prefrontal cortex due to a tumor. Following the surgery, he began to have difficulties with emotional responses to situations that he could, by reason, acknowledge that an emotional reaction should appear. Despite this, he could not feel the physiological response of an emotion. This led to difficulties in decision making, even simple choices such as choosing a preferred day for this doctor's appointment. Rational choices became difficult as he could not "feel" which choice was better than the other. Damasio described this as being able to know and reason but not to feel. (Damasio 2008) This example illustrates the sensation of intuitive understanding. It shows how interoception might underlie the intuitive sense, which in turn elucidates how intuitive knowledge can be perceived through somatic experiences. The concept of interoceptive awareness is explained in the next section.

Another example about how strongly feelings are used in decision making, is from a study that calculated how long it would take to make a decision to buy a house only based on logical reasoning. The results were an astonishing 4 years. (Dijksterhuis et al. 2005) These examples show how feelings, affect, and unconscious information are crucial in mundane as well as important decisions. To conclude, not only do emotions make decisions quicker, but also help us make them according to our values. This highlights the connection between feeling and rational thought in decision making, or what Kahneman (2011) would call the interplay between System 1 and System 2. Claxton (2015, 98) describes this discussion between brain and body as an orchestra that needs a conductor but also the choir. He refers the brain as the conductor and the body as the choir. He describes that as the brain coordinates, the body has an important role in exploring options. He refers that the options are explored by listening to somatic markers. By listening to them, it is possible to gather vital information that the brain alone cannot receive. (Claxton 2025, 98) This demonstrates how feelings can affect decision making by affecting rational thought. What is subjective then, is the awareness of somatic responses, how they are interpreted, and how much are they used to guide decision making.

3.2 Reliability of emotions in decision making

The somatic marker hypothesis does, however, have a point of caution. Emotions, especially if too strong, can bias decisions and lead to unfavourable choices (Barett 2017; Goleman 1996). The reliability of emotions is also debated in discussion of using intuitive thinking. Some researchers indicate that emotions profoundly differ from intuition (Simon 1987; Vaughan

1978) and others state that they disturb intuition and make it unreliable (Peirce 2013). This could be the case if emotions are generated from distorted thought patterns or fear, for example. However, as in the case of Damasio's patient, emotions could have been valuable information to guide decisions. Simon (1987) claims, that decisions that are primarily driven by emotion usually lack rationality, but in intuitive judgements, that are grounded in professional expertise, emotions play a significant role in learning and judgement. This could mean, that being critical of why certain emotions arise, can help distinguish weather or not they could be reliable. (Simon 1987) This also then highlights the importance of emotional intelligence in decision making (Barett 2017)

Additionally, some researchers do not focus on separating intuition and emotion but emphasize the overall importance of developing the skill of intuiting, to understand when to trust it and when not to (Sadler-Smith & Shefy 2004). For the following examples, intuitive experiences consider those intuitions that appear somatically, meaning, through a bodily feeling. Järvilehto (2015) emphasizes the need to train reasoning and conscious processes not to interfere with intuitive procedures. He highlights that an understanding of intuitions can be gained by focusing attention within experiences. Meaning that through experience, frameworks can be learnt, which aid in interpreting intuitions. With a framework it is possible to direct attention to the most important factors. (Järvilehto 2015). This is as how Raami (2020) summarizes practicing intuiting but without an emphasis on frame works. Instead, she states that what mostly needs practice is the conscious mind and not intuition. This means that the conscious mind, once it learnt a specific framework, can disturb the intuitive, creative mind that relies on somatic awareness. Either way, the cooperation of intuition and reasoning is yet again highlighted when striving for a reliable source of information.

The somatic marker hypothesis has also been criticized, that bodily responses appear because of mental and emotional processes, rather than cause it. Meaning that bodily responses emerge with a delay in the information processing process. (Dunn et al. 2010, 1835) Yet some researchers have proven that there are, in fact, some instances where the heart can know before the conscious mind. This has been proven in a study by McCraty et al. (2004), where certain effects from the signals in the heart were detected before they reached the conscious mind. Meaning, that the heart can pre-alert a person before a sufficiently threatening future event. The processing of information in the heart is more rapid than conscious thought processes. (McCraty et al. 2004; McCraty et al. 2009) It can therefore be suggested, that in situations where quick and rapid decisions need to be made, conscious processing might be too slow to reach the

optimal and most beneficial decision. This aligns with Damasio et al. (1991) statement of the importance of emotional signaling in uncertain and complicated settings. Baker (2021) also supports this perspective, as she refers to the accuracy of bodily signals as they are hard to manipulate. Raami (2020) further supports this perspective, as she asserts that intuition plays an essential role in circumstances that are characterized by either an excess or a deficiency of information. The next section draws upon interoception, an approach that discusses internal somatic signaling in more detail.

4 INTEROCEPTIVE AWARENESS

Interoceptive awareness is a sensory system in the body that interprets messages from the internal bodily state into conscious awareness. Interoceptive awareness only pertains internal sensations, which is why which is how it differs from the concept somatic awareness (Craig 2002; 2003). Some researchers simplify the concept of interoception by referring it to the sense of self (Quigley et al. 2021). Montoya-Hurtado (2023) further clarify interoceptive awareness as identifying internal sensations and being able to give them meaning. This summarizes how most researchers have begun to understand body-mind communication. Interoceptive awareness is still poorly recognized as an important sensory system regarding mental well-being and performance, although it has been demonstrated to support mental processes such as emotional awareness and regulation (Wielgosz et al. 2019, Quigley et al. 2021) as well as self-awareness (Craig 2002) in addition to decision making (Dunn et al. 2010). Interoceptive signals can appear as heartbeat, body temperature, touch, pressure, and visceral sensations, for example. These processes can be unconscious and guide behavior without awareness (Garfinkel et al. 2015; Quadt et al. 2018). However, in this thesis, the focus is mostly how these unconscious signals can be brought to conscious awareness, which is defined as metacognitive awareness of interoception, and how they might play a role in guiding decision making.

Metacognitive refers to the understanding of one's own cognitive processes, which means interoceptive awareness refers to the understanding of bodily signals. This metacognitive ability is seen to support the understanding of somatic signals by enhancing abilities to consciously interpret and integrate somatic responses. (Quadt et al. 2018) Mindfulness can enhance interoceptive awareness so that recognizing even subtle changes in the body, such as muscle tension, breathing patterns or heartbeat, becomes possible. Over time, increased interoceptive awareness can contribute to improved self-regulation, emotional understanding (Gard et al. 2014; Schure et al. 2008) which can potentially influence decision-making processes. On the other hand, so called hyperawareness can lead to being overly aware of bodily sensations experienced during strong emotions such as fear. Khalsa et al. (2018) have stated, that some individuals do have a heightened sense of interoceptive awareness, which has been associated with higher levels of stress and anxiety. This highlights the importance of a mindful, non-judgmental approach to bodily sensations, which is one of the key elements of somatic practices (Weber 2022).

4.1 Understanding interoception in health and decision making

Understanding somatic responses can allow a better understanding of embodied information in decision making, but also a greater understanding of self, which is an essential factor in well-being. (Craig 2002; 2003; Damasio 1999) Craig (2002; 2003) and Damasio (1999) have studied the role of interoception in decision-making and self-awareness. They have identified that awareness and understanding bodily responses to stimuli are crucial in developing self-awareness and making more deliberate and informed decisions. Tsakiris & Critchley (2016) confirm this by stating that interoception is fundamental to self-awareness and that it has a pervasive effect on decision-making. Furthermore, a study by Sugaware et al. (2020) stated that interocepive accuracy and rationality of decision making had a strong positive correlation. Interoceptive *accuracy* means to objectively detect bodily signals such as when a heartbeat occurs or if one has visceral reaction to a situation. This does not, however, include the metacognitive awareness of bodily signals, which means that the effect of interoceptive signals may stay on an unconscious level. (Garfinkel et al. 2015) Without conscious awareness it might not be possible to attend to and utilize interoceptive information. Which is why, in addition to being able to sense and feel interoceptive signals, it is important to bring mindful awareness to them. (Quadt at al. 2018) In other words, adaptively utilizing intuitive (sensing and feeling) and conscious processes (mindful awareness) together, can allow a full understanding of the decision or situation at hand. Researchers emphasize that only using cognitive ways to think through different outcomes and options for any situation can lead to overload, rumination, and anxiety (Craig 2002; 2003; Damasio 1999). This again, highlights the need for incorporating somatic and cognitive faculties together.

Furthermore, in a study conducted by Dunn et al. (2010) participants interoceptive accuracy affected the extent to how individuals used somatic markers in decision making, which supports Damasio's (1999) somatic marker hypothesis of bodily states affecting decisions. However, the results indicated that not always are the body's signals helpful. If the body's signals suggest that there is a danger or threat, it might even hinder effective decision making. (Dunn et al. 2010) This study measured interoceptive accuracy, which differs from interoceptive awareness as it only contributes to noticing somatic signals, not understanding them. (Garfinkel et al. 2015) Therefore, it clearly demonstrates that noticing bodily signals is not enough for one to effectively use them in decision making. Thus, understanding these signals may lead to utilizing them more adaptively in decisions. Quadt et al. (2018) have long ago highlighted the need for

further understanding the executive dimension of interoceptive awareness, which allows flexible utilization of interoceptive awareness.

This is one of the focus areas of this thesis, as the second and third research question of this thesis is aimed to further explore the understanding and utilization of somatic awareness. However, this thesis considers somatic experiences in a larger sense as it considers all somatic experiences rather than only internal somatic experiences such as interoception. This includes experiences such as movement, touch, and body language. The concept of embodied cognition is discussed on a larger sense in the next section, which explains the embodiment of information and how it can affect decision making.

5 EMBODIED COGNITION

The theory of embodied cognition sees the body and its interaction with the outer world as shaping cognition. Embodied cognition emphasizes that the brain alone is not responsible in forming mental processes but creates them based on how the body is experiencing the environment and moving through it. (Varela et al. 1992)

Lakoff and Johnson (1999) also emphasize the meaning of the lived experiences and the surrounding environment in forming consciousness. To grasp this thought more concretely Keinänen (2015) has demonstrated that some academics use walking as a tool for thinking. They report that "walking for thinking" is a unity process with the self, environment, and the thought process where the rhythm of walking is synchronized with the thought process, which in turn contributed to enhanced creativity and memory recall. (Keinänen 2015)

To go more deeply into the roots of embodied cognition, Varela et al. (1992) have been one of the first researchers to present a view on how human thinking is embodied. Through this perspective the body offers a unique and subjective view of the world, to which thinking, and the mind is built on. The mind and thinking are affected by how we move, perceive, and sense the world around us. Damasio (1999) explains how neuroscience supports this view, as he presents that the brain and nervous system affect the way information is directed and interpreted based on how we are situated and move though the world. Wilson & Golonka (2013) also support this by recognizing that mental processes can be shaped by motor activity and sensory experiences. This can partly demonstrate how the state of the nervous system can distort perceptions, but it could also point the mind in directions that it otherwise would not look into. For example, a stressed individual in a fight or flight nervous system state, might perceive their everyday environment and tasks as threatening, which may cause biased or irrational judgements. Whereas the same environment can be perceived as exciting and full of opportunities for engagement and enjoyment in a calm nervous system state.

To understand embodied cognition, it can be viewed as the basis of thinking and learning, given that it is the most primitive form of knowing (Anttila 2009; Claxton 2015; Lakoff & Johnson 1999; Varela et al. 1992) This primitive knowing includes intuitions for survival and connection such as reflexes and emotional responses (Claxton 2015). However, as the human species has evolved, not all primitive intuitions are accurate in today's world. This highlights the need to understand somatic experiences in order utilize them in a beneficial way.

The next chapter discloses different intelligence systems of the human mind, which is presented to demonstrate how some people can be more sensitive to somatic intelligence while others rely more on so called cognitive intelligences.

5.1 Seven intelligences

Gardner (1983) has originally proposed that human intelligence consists of seven different types of intelligences. He states that out of these seven intelligences, Logico- mathematical intelligence and linguistic intelligence are so called cognitive intelligences and the other five are rooted in embodied intelligence as information stem from exteroceptive, proprioceptive, and interoceptive senses. The other five intelligences are musical, spatial, bodily-kinesthetic, intrapersonal, and interpersonal intelligence. Bodily-kinesthetic intelligence involve proprioceptive abilities to understand and utilize information about the body in position or movement while intrapersonal and interpersonal intelligence requires interoceptive abilities to be able to recognize and utilize information coming from emotional processes among oneself and others. In addition, spatial and musical intelligence require exteroceptive abilities to identify and use sounds and sights from the surrounding world. Gardner (1983.) This demonstrates how strongly sensing influences various intelligence systems, as the body acts as a receiver for information but also a tool for processing information. Gardner proposes that individuals have varying degrees of the strength of each different intelligence. This could clarify why others are more sensitive in receiving and utilizing bodily signals than others. Although five out of seven intelligences are rooted in embodied intelligence, this does not mean the involvement of cognition is absent or irrelevant. Similarly, the embodied intelligences also play a role in conscious intelligences. Although interestingly, referring to what Dijksterhuis et al. (2005) presented about the senses being able to process multiple times more than the consciousness, highlights how much more information is taken in on a sensory level, rather than consciously. However, this type of sensory information might not be sufficient to be utilized in decision making if it stays under unconscious processes. This highlights the need for metacognitive awareness of somatic experiences, which was mentioned by Garfinkel et al. (2015) earlier. However, attuning to this metacognitive awareness and utilizing it is still an unclear topic. Therefore, this thesis focuses on discovering how this could be done. So far, this thesis has presented different pathways of how information can manifest in a physical form including interoceptive awareness, somatic markers, and embodied cognition. The next chapter

discusses how this information can be enhanced and understood in order to be utilized in a beneficial way.

6 CULTIVATING SOMATIC INTELLIGENCE

Although somatic awareness is an inherent ability, it is a skill that can be enhanced. Somatic practices are seen to improve somatic awareness to where even the most subtle cues can be further processed and understood (Eddy 2009; Rouhiainen 2007; Welsh 2022). This is similar with how highly intuitive people are described, to notice sensitive details in problems or situations. (Hardman 2021; Glöckner & Witteman 2009; Järvilehto 2015; Raami 2020). The body's importance to knowledge processes is also recognized in studies of mindfulness (Kabat-Zinn 1990; 2003) and phenomenology (Baker 2021; Welsh 2022). Furthermore, some researchers see somatic intelligence as the basis for thinking and learning (Anttila 2009, Klemola 2004 Claxton 2015), which makes it a valuable element in effective decision making. In the light of embodied cognition, the body is seen to play an integral role in forming information and understanding it**.** Considering decision making, including somatic perspectives can be helpful when striving to understand the whole essence of problems rather than only the surface. Raami (2020) describes this in an analogy that stresses the importance of using intuition and reasoning together. She explains that without understanding the essence of the problem is like trying to understand what an orange tastes like by only investigating the appearance of it. (Raami 2020, 186). This demonstrates how we can sometimes gain better understanding of problems by using all senses.

Conscious reasoning is necessary but limited. The unconscious and conscious mind are a cooperating system, that rely on the support of each other. (Hayles 2014) However, despite the great possibilities of intuitive thinking for decision making, it can be difficult to reach and understand given its unconscious nature. (Bastick 2003) Intuition is ultimately a natural form of knowing, but the amount and type of information it can reach, may make it seem unrealistic. Anttila (2009) and Rouhiainen (2007) state that those intuitions that operate outside of linguistic understanding such as senses and feelings can be brought in the realm of conscious understanding with bodily presence, which Eddy (2009) states, is often the essence of somatic practices. This means that with an open awareness of somatic cues and the thinking mind, it can be possible to make use of the strengths that both intelligence processes employ.

6.1 The connection between somatic intelligence and reasoning

Damasio (1999, 185) has early on declared that when conscious awareness is brought to somatic experiences, they can be translated into a linguistic form and therefore, understood. This

understanding can lead to a more informed decision making process and therefore be beneficial in choices regarding the ones mental and physical health. However, it is important to understand that not all bodily experiences can be brought into verbal form. For example, some intuitive insights are too complex to transform into language, such as implicit learning that builds with experience (Sadler-Smith & Shefy 2004, p.82). Therefore, the meaning of tuning in to and understanding these bodily experiences without bringing them into verbal form can be especially important in guiding decision making. Sadler-Smith & Shefy (2004) stressed the importance of "*learning to understand intuitions to effectively use them in decision making*". The same can apply to being able to use somatic awareness to support decision making. This could look like first mindfully listening to somatic cues, and then becoming aware of the consequence or answer it might be pointing to.

This brings to the next important factor in effective decision making, practicing intuiting. This step is also supported by Raami (2020) as she states that by enhancing the skill of intuiting, it is possible to reach seemingly impossible problems. She describes that the body can act as a tool to differentiate between reliable and unreliable intuitions. Differentiating is similarly an important aspect in the elements of effective decision making through intuition that Sadler-Smith & Shefy (2004) have emphasized. It can be suggested that the usage of the body in inspecting the reliability of intuitions would require some level of being able to be somatically aware. Perhaps this awareness itself could then be followed by an understanding given that awareness itself can lead to discoveries (Langer 2023). Meaning that simply noticing somatic cues that arise within decision making can lead to understand how they play a role in decisions when connecting these somatic cues to the outcome.

6.2 Philosophical views of somatic intelligence

The current literature that explores the concept of bodily intelligence, has acknowledged the importance of the mind-body connection in well-being (Mehling et al. 2011) but also higher mental processes such as decision making, problem solving, and creativity (Claxton 2015; Dunn et al. 2010). However, it may be difficult to understand how physical sensation and feeling can translate into a conscious understanding or carry information needed in decision making or problem solving. A deeper understanding of this abstract phenomena of somatic intelligence can be found through philosophical inquiries. Baker (2021) offers a view that can explain why the body is a reliable source of information.

Baker (2021) offers a perspective on somatic mindfulness, demonstrating the body's role as a reliable source of information. She emphasizes the significance of bodily presence and the non-conceptual nature of somatic sensations, which align with the fundamental principles of mindfulness (Kabat-Zinn 1990; 2003). She demonstrates the body's reliability if four ways. Firstly, as the body is a physical entity, it is always in the present moment. Therefore, somatic experiences are true when sensed in the present moment. Even the emotional responses that arise in the moment from worrying about the past or imagining the future are true in the moment but are caused by the conceptual thinking mind not being in the moment.

Secondly, the body is honest. Somatic experiences are hard to manipulate. The mind can create a story and a sensation can follow the story, but then again, the sensation arises from the imagination of the mind rather than the body's true present experience.

Thirdly, the body is grounded by gravity. The groundedness of the body can bring the mind in the present moment as somatic sensations always happen in the present moment. Lastly, the body speaks in the form of sensation rather than words and stories, which unlike the mind, cannot imagine sensations or experiences. The body is non-conceptual as it cannot think or imagine. The thinking mind has a limitless ability for imagination, whereas the body's truth appears in the form of present moment sensations. (Baker 2021) Consequently this highlights the importance of sensing somatic responses mindfully and without judgement. This allows bottom-up processing where perception is built on real-time sensory experience (Gibson, 1966).

Hämäläinen (2007) presents another philosophical view to view this bodily understanding. She states that, an understanding can be found without verbalizing bodily sensations, but rather by a mindful, focused attention to the experiences and thus deeper insight can be gained. This is rooted in the view of Gendlin (2002), who states that "The body senses the situation more encompassing than cognition" (Gendlin 2002, 234). He developed a method called "focusing", which is a way to gain access into the knowledge that the body holds. This method allows a bottom-up approach to form an understanding, rather than conscious rational mind forming a story first. This means allowing the story to emerge from the felt sense rather than the rational mind. (Gendlin 2002) Although not all somatic practices directly involve these methods, they can enhance somatic awareness through emphasizing a mindful approach to movement and arising signals from the body. (Eddy 2009; Hanna 2004)

The focusing method is a more holistic view, as it also values the insight of the thinking mind instead of setting it as opposite from somatic experiences such as in Baker's philosophy. This is a valuable viewpoint that is also supported by (Hämäläinen 2007), as she states that without

consciousness it is not possible to “feel”. Therefore, the core component of the focusing method involves having a dialogue with somatic experiences and giving meaning to them. The process of dialogue begins from the sensory experience and aims to verbalize the felt sense by carefully sensing and searching for a meaning for the sensation. Next the meaning of the sensation is reassured by being in dialogue with the body and asking if the meaning that first arose is correct. Gendlin (1982) describes the unclear and not yet verbalized sensations of the body as a “felt sense”. He distinguishes this from emotions and further describes it as the experience of the body that has not been consciously verbalized. This felt sense can be a form of insight into a problem and can thus serve as knowing without being able to verbalize it yet. The method of focusing allows the vague felt sense to be worked with by testing different words against the felt sense and sensing which word resonates with the felt sense. After verbalizing the felt sense, it is possible to gain new insight about the feeling and even indications for action. (Gendlin 1982; 2002)

Baker (2021, p.7) offers an interesting point by stating that perceptions, which do not reach the nervous system or body are not really experienced or lived. Additionally, Keski-Luopa (2001) states that feeling can offer a deeper experience if it is carefully explored and can lead to the edge of the unconscious. While Baker emphasizes the importance of involving the body experiences, Keski-Luopa stresses the importance of deeply exploring sensations.

Together these statements argue that a physical sensation is crucial for the experience of living and understanding oneself. It also indicates that letting the ‘body speak first’ can allow more authentic and unbiased insights to emerge. Similarly, this holistic process mirrors the nature of how intuitive thinking is practiced and characterizes how intuitive information can be understood.

Lastly, somatic information can also affect decisions through automatic, reflexive processes, which then stay below the conscious mind. These reflexive and automatic reactions are intuitive responses and decisions such as lifting the hand off a hot stove or split-second decisions in traffic. These reactions happen quickly without conscious processing thanks to the intuitive action process. (Sadler-Smith 2008) However, Raami (2015) states that intuition does not only work in one direction. It is also possible to gain information from the intuitive mind. This connects intuition to somatic awareness as the body can be a crucial pathway in receiving intuitive information but also in evaluating whether the intuitive information is reliable. To remind, the mind and body also work in a two-way system as the mind affects the body, and the body affects the mind (Langer 2023). Langer continues suggesting that where we direct

thought and the mind, the body will inevitably follow. The rest of the thesis will focus on explaining this mind-body connection by first explaining the concept of intuition and then unfolding the complex connection found with somatic awareness.

7 INTUITION

Investigating the role of somatic awareness in decision making quickly leads to concept of intuition. In fact, intuition and somatic awareness refer to strikingly similar processes when viewed from a decision making perspective. (Kahneman 2011, Raami 2020; Sadler-Smith & Shefy 2004) Intuition is a way of knowing that can be reached with a deeper perception and a more profound way of looking at problems. Sadler-Smith & Shefy (2004) define it by defining intuition as "*...a form of knowing that manifests itself as an awareness of thoughts, feelings, or bodily sense connected to a deeper perception, understanding, and way of making sense of the world that may not be achieved easily or at all by other means."* (Sadler-Smith & Shefy 2004, p. 81). This is in line with how Raami (2015) describes intuition to be a two-way street, as it can be a way or receiving and acquiring information. However, this thesis addresses intuition from a somatic perspective. Meaning that although intuitions appear in other forms rather than by somatic experiences, such as visions or mental processes, those intuitions are not in focus of this thesis.

Intuition can reach further than logical thinking, making it crucial in challenging or ambiguous decision making. (Hardman 2021; Raami 2020; Sadler-Smith 2008) This is since the sensory system can receive significantly more information compared to the logical mind (Dijskterhus 2005). This highlights the role of the human body in information processing and brings sensory information to the core of intuitive decision making. However, what is now identified among nearly all intuition researchers, is that together with logical thinking, intuitive decision making is most effective. (Bastick 2003; Kautz 2005; Sadler-Smith & Shefy 2004; Glöckner & Witteman, 2010) This is in line with what Kahneman (2011) has stated about the human thought process utilizing system 1 and 2. This can highlight why somatic awareness is as a key factor in being able to utilize somatic experiences in decision making. Somatic awareness can be seen to involve system 1 thinking in recognizing the somatic signal whereas system 2 in understanding what it means.

Hence, the rest of the thesis will focus on how somatic awareness and intuition are intertwined and together with logical thinking, play a role in decision making. This means viewing the intuition process from a somatic viewpoint, which can help understand the phenomena of intuition more deeply as the body is seen to play a crucial role in various processes of intuition (Claxton 2015; Dunn et al. 2010: Raami 2020; Sadler-Smith 2008). Most importantly, it can

help clarify how to understand and utilize somatic experiences as intuitive information. Therefore, the last section demonstrates the dynamic connection between intuition and somatic awareness, which can be a holistic way to acquire and attune into somatic information.

7.1 Intuition discovers and reasoning justifies

Sadler-Smith & Shefy (2004) state that the most effective way to understand the knowledge unity between somatic and conscious knowing, is to consider intuition and rational thought as two simultaneous knowledge systems. However, no matter how much this parallel system is highlighted, it seems that intuition is superior when it comes to complex cognitive operations such as decision making. (Järvilehto 2014, Raami 2020; Sadler-Smith 2008) Dijksterhuis et al. (2005) present an interesting result from the comparison of the conscious mind and human sensing, which demonstrated the astonishing difference between the capacity of the two. The capacity of consciousness at its maximum is 40-50 bits per second while the senses can process 11million bits per second. (Dijksterhuis et al. 2005) This underlines the enormous amount of information the unconscious mind can process. In addition, although the unconscious and conscious mind are a cooperating system, in some cases the conscious mind may block unconscious, intuitive information before it even enters the conscious mind (Raami 2015, 44). A good example of how the conscious thinking mind can limit noticing new and creative things are ambiguous pictures. Try looking at the photo below with an open and curious mind, actively noticing new things.

Pepperell, Robert. (2011)

You might have created your own interpretation of what the shapes in the picture might resemble until you discover that the picture is of a cow's face. The cow's face is slightly to the left lower corner of the picture. Even if you had not seen the cow before, it will now be

impossible not to see it once your mind learned to look at the picture with the cow in it. This small demonstration reveals how the mind acts when it is open to discoveries compared to how we might see things after they are labelled as something. When the mind is open to discoveries the intuitive, sensing mind is more active than the rational, logical mind. (Hardman 2021) A learning from this may also reveal how the mind is easily fooled and made to believe things based on things that have been learned. However, the body and information coming from the senses are almost impossible to bias and can provide a more pure and authentic view of things we look at. The next section will focus on describing the different forms of intuition and how to attune to information stemming from these different forms.

7.2 Three different forms of intuition

Different researchers have identified various types of intuitions and emphasize that it is important to clarify which type of intuition is being used, especially when estimating its reliability. (Glöckner & Witteman 2010; Monsay 1997; Sadler-Smith & Shefy (2004) However, this is challenging when looking at intuition from the perspective of somatic awareness, as many different types of intuitions can appear bodily. For example, perhaps the most recognized for of intuition- expertise-based intuition, can appear in the form of visceral feelings, heartbeat variations or other type of bodily sensations, which can be highly subjective (Glöckner & Witteman, 2010; Monsay 1997; Raami 2015; Sadler-Smith & Shefy 2004). Sadler-Smith & Shefy (2004) explain that expert intuition is built by noticing connections that are later reinforced by feedback. In the example above, expert intuition operates dynamically between insight, feedback, and somatic signals, where bodily signals can reinforce the understanding of the decision and contribute to making an effective decision.

Primitive or instinctive intuition is most often describes as stemming from the senses and can appear in bodily forms such as pain and hunger. These could also be more complex feelings that enforce behavior, such as social connection or the feeling of need for warmth. (Hari et al. 2015; Lipton 2005; Raami 2020, 118) Instinctive intuition is supported and further explained by Rauhala (2005) as pre-reflective experiences, which are formed before verbalizing emotions. Pre-reflexive experiences refer to non-verbal, unconscious signals that arise before the ability to articulate and communicate with others. (Rauhala 2005, p. 32).

The most complex form of intuition is related to direct knowing and only recognized by Raami (2020) as visionary intuition. However, Kautz describes intuition to originate from the superconscious, which is similar to Raami's visionary intuition. The superconscious can receive

information at an extensive capacity that does not originate from memory or even sensing (Kautz 2005). Furthermore, Dossey (2013) has defined direct knowing to be information that is highly specific and coming from outside of the field of expertise, which is how Raami (2020) describes visionary intuition. She states that this type of knowing can surpass personal intelligence. In addition, even though this type of intuition does not directly involve the body or somatic awareness, Raami (2020) describes that bodily sensations can play an essential role as they can underline the reliability and meaningfulness of these intuitions. This is an example of how the body is an important factor in "reading" intuition. (Raami 2020)

Further yet, Raami describes a third form of intuition, visionary intuition, that can appear as 'information coming together' or 'having access to boundless information'. (Raami 2020) She uses examples of inventors and highly intuitive individuals including Nicola Tesla and Leonardo Da Vinci, to describe this form of knowing. Visionary intuition seems to stem from subjective experiences but can reach radical innovations and creative breakthroughs. She emphasizes the skill of openly perceiving and making sensitive but accurate observations. In addition, it is crucial to investigate and perceive from various perspectives of the problem or decision (Raami 2020, p.129) Larsson supports this view as he explains that studies of Nobel laureates show, that there are some similarities in how intuitive individuals characterize reaching this type of radical understanding. He also emphasizes, looking at the issue from various point of views, by highlighting the ability to hold various dimensions in mind in addition to the skill of visualization, which is also supported by Sadler-Smith & Shefy (2004). Moreover, working with oneself rather than the problem itself is recognized as a key feature of making effective intuitive judgements, highlighting the importance of the subjective and personal development of intuition (Larsson 2001; Raami 2020; Sadler-Smith & Shefy 2004)
Visionary intuition is poorly recognized by other researchers as this form of intuition manifests in personal ways and there is no understanding of what knowledge bases are responsible for this type of knowing (Raami 2020, p. 129). There is a lack of research that focuses on personal and subjective experiences which limits the understanding of visionary intuition but also emphasizes the need for this type of research.

7.3 Noticing reliable intuitions

In all forms of intuitions emotions, wishful thinking or other biases of the thinking mind can easily get mixed with intuition, which is why Raami (2020, p.180) emphasizes the concept of

‘confirmations to intuitions’ that appear in individual ways. In addition, not all feelings or somatic experiences necessarily have a deeper meaning or carry useful information. Without being able to critically evaluate intuitions, any signal or experience could be mistaken as intuitive information. Therefore, an important skill to develop is to become aware of which somatic experiences are meaningful and can be used in mental processes such as decision making. This awareness requires to be able to differentiate the most meaningful signals from distortions such as imagination, wishful thinking or strong emotional bonds Raami (2016)

Confirmations are personal ways of differentiating between reliable and unreliable intuitions. It is not sufficient to only “feel” that an intuition is reliable, but it is important to evaluate the reliability between imagination and reliable intuition. This is where personal ways of confirming intuitions are important. These seem to appear in various bodily ways, which also demonstrates the significance of somatic awareness in analysing intuitive information. She explains that highly intuitive people have learned to use these confirmations to measure the reliability of intuitions. Though, not all confirmations appear bodily, but in forms such as words and visions or even other people’s thoughts or coincidental events. (Raami 2015, p.288-295). However, Hari et al. (2015) reminds that as intuition works at an unconscious level, which is why accessing certain intuition processes might not be possible with reasoning or other mental processes as they do not always ‘speak’ in verbal or visual forms, but rather manifest as somatic experiences. Somatic awareness is then an extremely helpful skill to begin to make sense of intuitive information as well as differentiating between meaningful and unreliable intuition, given that somatic signals are hard to manipulate (Baker 2021). However, this requires an open and sensitive mind to noticing signals, as well as willingness and effort to practice differentiating wishful or distorted thinking from reliable intuition (Raami 2016). She adds that in addition to practicing noticing meaningful signals, courage to look beyond what is possible is crucial. This is how creative thinking happens, where new solutions simply come from viewing a problem or decision from another perspective, which allows new information to emerge (Ritter & Mostert 2017).

Lastly, many intuitive individuals describe the importance of the bodily confirmations in differentiating reliable intuitions from other signals. Some even use the body to ask for answers to yes or no questions. The process starts with observing how your body indicates the answer ‘yes’ or ‘no’. For example, with careful somatic awareness one can become aware of the difference between how yes and no feel like, with asking simple questions like “Do I have green eyes?” or “Do I speak English?”. These individual signals of “yes” and “no” can vary from person to person, but the process of practicing is the same. However, it is important to form the

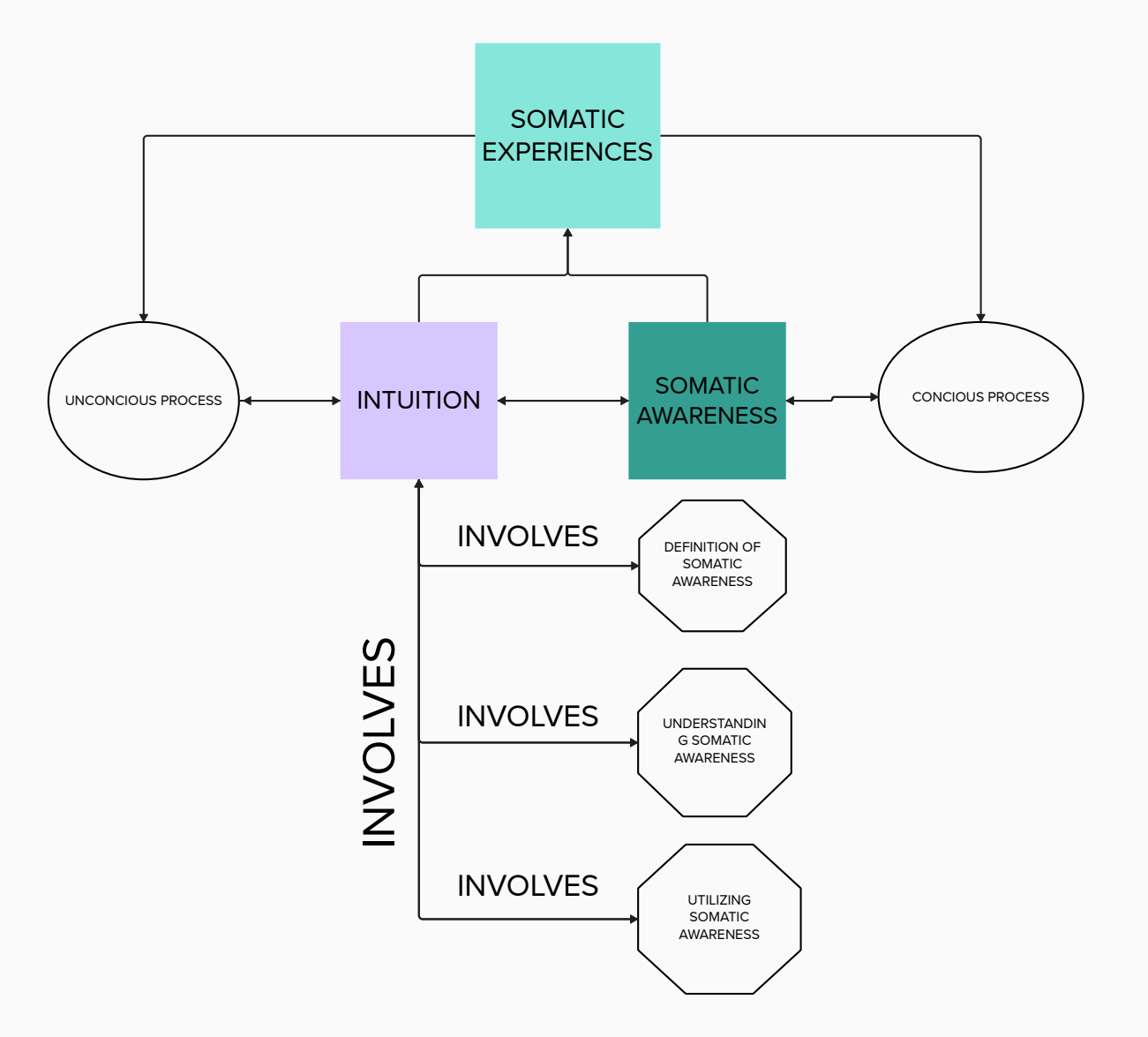
question in the right way so the answer can be received clearly as yes or no. If the body's signals indicate something in between, most likely the question is poorly formed. This is a simple way one can practice somatic awareness and how the body might indicate the right answers. (Raami 2016) Given this, Sadler-Smith & Shefy (2004), stated that practice making sense of intuition can lead to more effective decisions, which could mean, considering the example above, that practicing somatic awareness could lead to enhancing intuition. This demonstrates the usage of both logical, verbal thinking as well as somatic awareness when developing an understanding of intuitive information, which highlights the value of utilizing various forms of information in unity. The last chapter focuses on demonstrating the possible connection between intuition and somatic awareness.

8 THE CONNECTION BETWEEN SOMATIC AWARENESS AND INTUITION

The definition of somatic awareness and intuition have a striking overlap, as both as both involve recognizing and understanding somatic experiences. Despite a degree of overlap, somatic awareness and intuition are different concepts. Intuition differs from somatic awareness in the level of consciousness. Although some somatic responses, such as muscle tension or visceral sensations, may be unconscious understanding them is always a conscious process (Quadt et al. 2018). An understanding of the relationship between somatic awareness and intuition can be understood and tied to the context of decision making based on the following analogy. Intuition operates as a vast and complex system receiving and gathering information that is beyond the reach of the conscious mind. Some of this information can manifest as physical sensations and somatic cues such as gut feelings, whereas some come in other forms such as mental images or sounds for example. Intuitions that are in a somatic form could then be further understood with somatic awareness as it includes a conscious understanding of the felt experience. (Dunn et al. 2010) Without somatic awareness, the somatic experience might remain a vague feeling or a signal without meaning. This is valuable for effective decision making, as one has a larger information base to make decisions. However, to distinguish authentic somatic experiences from imagination or wishful thinking, the use of reasoning becomes crucial. (Raami 2016) Though, conscious reasoning is not always needed in order to still "know". Sadler-Smith & Shefy (2004) describe that "*Intuition is a capacity for attaining direct knowledge or understanding without the apparent intrusion of rational thought or logical inference."* (Sadler-Smith & Shefy 2004, p. 77).

This raises another, opposing but an equally as valuable aspect- how intuition can be better understood and utilized with somatic awareness. The connection of intuition and somatic awareness within decision making is extremely complex and not well studied. However, intuition and decision making are independently well-studied topics that often mention ways the body is involved in the process (Dunn et al. 2010; Glöckner & Witteman, 2010; Järvilehto 2015; Raami 2016; Sadler-Smith & Shefy 2004). Therefore, it could be possible that attuning into this direct knowledge or understanding through somatic processes, could provide a "knowing". However, very little is studied about the importance of somatic awareness in understanding intuitive processes. Raami (2016) highlights the importance of supporting and valuing individual inner knowing and has interviewed individuals about their intuitive experiences. Many of these experiences involve the body in a meaningful way and individuals

describe using intuition in creative processes, innovations but also in everyday situations such as social relationships. The interviews reveal that harnessing inner knowing involves learning to erase or dismiss any limiting beliefs and embrace being intuitive and innovative. She continues that somatic awareness is significant in this context as paying attention to bodily knowledge has been enlightening to many. (Raami 2016) Furthermore often confirmations come through senses such as seeing lights or even tasting or hearing meaningful insights, like clicks or snaps, but can also be mental confirmations. Some interviewees reported that multiple senses can be involved, and the intuition can then be experienced through the whole body. (Raami 2015, p.183) This means that there could be two-way path between somatic awareness and intuition. This is illustrated in the following figure that shows how both concepts involve somatic experiences, which can either be conscious or unconscious. Furthermore, the two-sided arrows demonstrate the bidirectional connection between the concepts.



All things considered, intuition and somatic awareness are complex phenomena, yet are interconnected and can create an understanding of one another. (Claxton 2015; Dunn et al. 2010; Raami 2016) The last chapter proposes a view on how intuitive thinking can plays a vital role in accessing somatic awareness and further presents the relationship between the concepts.

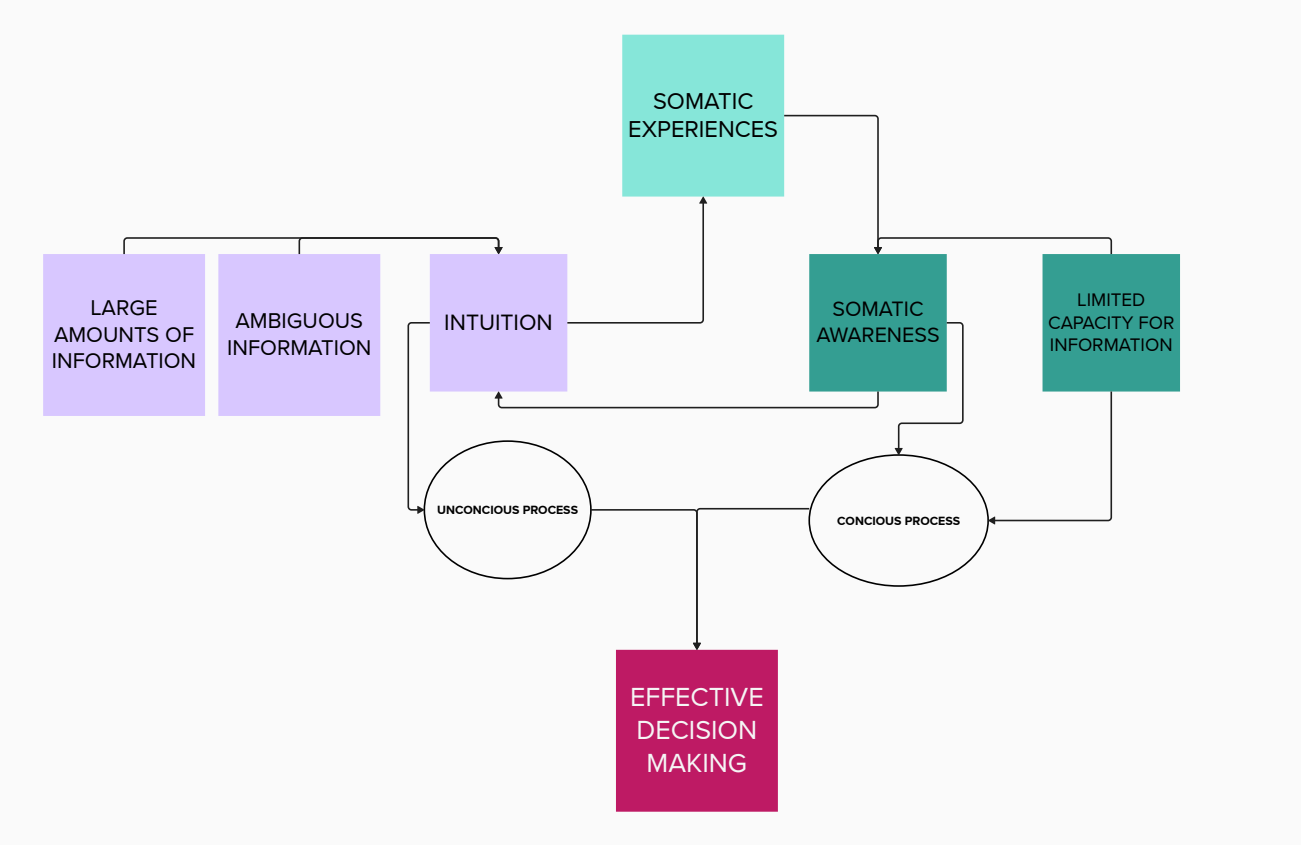
8.1 Understanding somatic awareness

There is no prior study that has studied the subjective experiences of how somatic experiences are understood and utilized in decision making. This means that the upcoming point of view is only one possible way to investigate somatic awareness and suggests a possible way to how it can be understood and utilized. This perspective discusses the possibility of understanding somatic awareness with a similar approach than how intuition can be understood, highlighting

a bidirectional relationship between these two. This view suggests that intuitive thinking serves as an important mechanism for understanding somatic awareness. This is suggested as there are many connections found in the literature that discuss somatic awareness and intuition within the same context. (Dunn et al 2010; McCraty 2009; Raami 2020). The most crucial elements in understanding intuition are open awareness and differentiating between unreliable and reliable signals and thinking patterns. (Raami 2016) Utilizing these same elements could enhance the ability to understand somatic awareness as well. The following research findings demonstrate that the body acquires and receives information independently from the conscious mind. This can help explain why an intuitive approach to "reading" information of the body is valuable.

A study of McCraty et al. (2004) has shown that the heart contains neurons that can process and store information independent from the procedures of the brain. Later, McCraty demonstrated that the heart can process information faster than the thinking mind (McCraty 2006). Considering this, the saying of knowing in the heart has a literal meaning. McCraty along with other researchers have demonstrated this by studying heart coherence and explains that this coherent state means a balance between organ communication and signal transfer within the body. They explain that activating a coherent state in the mind and body facilitates intuition as the heart can receive intuitive information as well as interpret it. (McCraty et al. 2009) In a coherent state the mind and body work more effectively together. To achieve a coherent state can be purposefully done by self-activating positive emotions such as compassion, love, and appreciation. (McCraty et al. 2009) This is in line with how Claxton (2015) explained mindfulness to improve the quality of information between and within the body's attentional subsystems.

This raises a further question; how can the heart interpret intuitive information? This could be explained by applying the same approaches of understanding intuitive thinking, which include open awareness of the signal to the heart, then differentiating whether the signal is an emotional reaction or simply a change in heartbeat. With emotional reactions it can be helpful to differentiate between a genuine response and one influenced by a narrative created by the thinking mind. This highlights the same crucial element in utilizing intuitive thinking- using it together with reasoning. Therefore, one way to enhance mind-body communication can be done practicing mind-body coherence to promote an intuitive understanding of somatic signals (McCraty et al. 2009) in addition to utilizing somatic and reasoning faculties in decision making. This can be further illustrated with another figure.



Firstly, this figure illustrates that intuition can be brought into consciousness through awareness of somatic experiences. This can lead to effective decision making, as it involves both conscious and unconscious information. Secondly, it suggests that somatic awareness, as it is a conscious process, has a limited capacity for reaching information. Therefore, combining it with intuition can allow access to unconscious information too. This allows a vast information base that in turn leads to effective decision making. However, this can be criticized as more information, does not always guarantee better decisions. In fact, an overload of information may cause rumination or losing focus of the most relevant information.

Overall, adopting a holistic and intuitive approach to interpreting bodily signals could lead to greater self-awareness and ultimately more effective decision making. Better yet, this approach can also benefit emotional intelligence, when learning to self-activate a state coherence using positive emotions, not to mention practicing differentiating between honest emotions or emotions stemming from distorted and created thoughts.

Regarding the significance of intuitive thinking in understanding somatic awareness, there is no direct research nor comprehensive evidence to demonstrate how this process unfolds. However, it can be suggested that an understanding of somatic awareness involves open awareness not only to notice internal cues and signals but the cause of those signals. Meaning,

that often the body is reacting or responding to events or signals from the outer world or the thinking mind. Therefore, open awareness to signals and the ability to differentiate along with reasoning can allow the most accurate information to be utilized.

All in all, intuition and somatic awareness are complex processes. Researching them in connection to each other requires more support from empirical findings rather than only support form anecdotal evidence. In addition, as these concepts are complex, they were viewed form a somatic viewpoint, which could lead to simplifying them. However, this can offer a nuanced understanding of such intricate concepts, which may help understand them and how they interact. In addition, anecdotal evidence does allow a more open and flexible view, which is important when discussing mental and physical experiences of individuals. The next sections focus on explaining the research process in detail.

9 METHODS

A qualitative study was conducted to explore somatic practitioners' experiences of the role of somatic awareness in decision making. This study focused on researching somatic practitioners personal understanding and experiences of what somatic awareness is, how the understanding of somatic experiences occurs, and how do somatic practitioners utilize somatic experiences in decision making. The study first consisted of recognizing the need for studying the concept of somatic awareness, focusing the research on somatic practitioners, and selecting appropriate methods and approaches to conduct the study. Secondly, participants were recruited by face-to-face contact or by approaching them by email. Participants were then informed about the study procedures and meaning of the study. Thirdly, data was collected via semi-structured interviews and the last parts of the study involved a hybrid model of inductive and deductive thematic analysis as well as reporting the data.

9.1 Participants

The participant selection for this study was initially done using a purposive sampling method that focused on individuals who have a background in, or currently engage in somatic practices such as yoga, Tai Chi, Pilates, and dancing. The study conductor approached participants in Pilates, dance, and yoga studios, informing them about the study and inviting them to participate in the research. Additionally, the study conductor contacted local yoga and dance studios to recruit class teachers, via email, to join the research. Both female and male participants were recruited. The participant selection later followed a subsequent snowball sampling method after the first participants were recruited.

The inclusion criteria were to have a background in, or actively engaging in somatic practices such as Pilates, yoga, TaiChi or any form of dance, for at least one year while practicing at least once a week. Participants from other exercise or sports backgrounds were not included in the study as the purpose was to study practitioners of somatic practices. Therefore, participants with no experience in somatic practices were not included in the study.

Consequently, the inclusion criteria for participants were deliberately broad to ensure a diverse participant pool and to gather a variety of somatic practitioners with different levels of experience. However, the selection criteria were narrowed to exclusively individuals from somatic practices, given that these practices are recognized for cultivating a heightened level of

somatic awareness. By focusing on this participant group, this study aimed to explore connections between somatic awareness and decision making.

The study comprised a total of 16 participants, with a gender distribution of 3 males and 13 females. The age distribution ranged from 33 to 67 years of age. The participants also had a varying amount of somatic practice ranging from 2 years to 64 years. As the study comprised from a broad spectrum of participants, it reflects a variety of perspectives and experiences, aming somatic practitioners.

9.2 Data collection and procedure

As the method for data collection, semi-structured interviews were chosen to ensure capturing participants own subjective experiences while still maintaining a clear structure for the interview. The initial step in the process of data collection was to develop an interview guide to ensure consistency in the interview structure with each participant. This was developed by reflecting on the research questions and relevant literature in the field of decision making, somatics and the mind-body connection. All interview questions were translated into Finnish as all participants were Finnish speaking. The interview guides are in both languages in the attachments. To allow flexibility and deeper insight into topics that arose during the interview, additional questions were asked by the interviewer to ensure a full understanding of the participants answer. Participants were given a list of the same interview questions that were included in the interview guide. The questions were given two to three weeks prior to the interview and the same questions were then later asked in the interview. Participants were given a chance to clarify any of the given questions at any point of the observational period. The definition of what is meant by decision making was also given prior to the interviews. However, the definition for somatic awareness was given during the interview, after the participants have stated their own definition of it, to ensure capturing their personal understanding of somatic awareness. The interview questions were given prior to the interview to allow a deep inspection into how participants experience somatic awareness in decision making. This allowed participants to reflect on the questions in everyday settings and day to day decision making. It was seen fit to choose this method given that the topic and questions are complex. Due to the holiday season and unfitting schedules 3 participants had over 5 weeks to observe the questions. This is considered in the limitations of the study.

The final steps of the data collection started with conducting the interviews. Interviews were carried out in a private and comfortable settings in face-to-face of via Zoom or Teams. Face-to-face meetings were at the local university library or at the participant's private office. Via video call, participants were encouraged to have a quiet and private place to encourage open and honest discussion. The average interview time was 54 minutes, and each interview was audio-recorded. Before each interview all participants gave informed consent, they were assured of confidentiality as well as anonymity and were informed of their right to stop the interview at any point if needed. Additionally, participants were encouraged to ask follow-up questions if at any point they did not understand the interview question. Participants were given a formal consent form, which is found in the attachments.

9.3 Data analysis

This data analysis process involved a combination of deductive and inductive thematic analysis. After transcribing 16 audio recorded interviews, the initial coding of the main themes involved a deductive approach. These codes were predetermined based on the interview questions presented in the interview. The predetermined codes were then applied to the data, which organized it into manageable segments for analysis. This was done to have a more clarified and rigorous approach to the large amount of data and to explain the most relevant experiences of participants that explained integrating somatic awareness. This hybrid approach of deductive and inductive analysis of the data allowed for both a structured analysis and an exploration of new insight. (Fereday & Muir-Cochrane 2006) The initial codes were pre-determined into the following main themes:

Pre-determined deductive themes	**Explanation of themes**
T1 Definition of somatic awareness	How somatic practitioners subjectively defined somatic awareness. Determined based on the interview question: "*How do you define somatic awareness?"*
T2 Understanding somatic experiences	How somatic practitioners subjectively reported to understand somatic experiences. Determined based on

	the interview question: *"How do you understand these somatic experiences in decision making?"*
T3 How is somatic awareness utilized in decision making	How somatic practitioners subjectively reported to utilize information received from somatic experiences. Determined based on the interview questions: "*Can you describe a recent situation where you had to make a significant decision? Was there specific sensations, feelings or emotions or specific bodily experiences such as gestures, movement, and posture that affected your decision?*" and "*In general, what type of decisions do you need/utilize somatic awareness in?"*
T4 The meaning of somatic awareness	How somatic practitioners subjectively reported to give meaning to somatic experiences. Determined based on the interview question: "*What does somatic awareness mean to you?"*

An inductive approach to coding the data was then applied to thematically analyse the content of the main themes. The inductive thematic analysis process followed the steps introduced by Braun & Clarke (2006). First, the data within each main category was systematically reviewed and generated into initial codes. These codes were then collated into potential sub themes. Potential themes were checked to sufficiently describe the codes generated from the data. These sub themes were then further illustrated by presenting direct quotes from interviewees. Finally, the sub themes were defined as follows:

Deductively developed main theme 1: Definition of somatic awareness

Inductively developed sub themes:

Perceiving bodily information from somatic experiences
A means for interaction with self and others
An intuitive way of knowing

Deductively developed main theme 2: Understanding somatic experiences

Inductively developed sub themes:

Intuitive understanding of somatic experiences
Understanding through experience and learning
Using reasoning

Deductively developed main theme 3: How is somatic awareness utilized in decision making

Inductively developed sub themes:

Facilitating decision making
Directing attention towards making a decision
Confirms decisions as right or wrong

Deductively developed main theme 4: The meaning of somatic awareness

Inductively developed sub theme:

A means of life
Facilitating mind-body connection

Enabling action control

Further explanations of themes are provided in the result section. Lastly, to conclude the results, a final report was produced in dialogue with the literature. This is provided in the discussion section of this thesis.

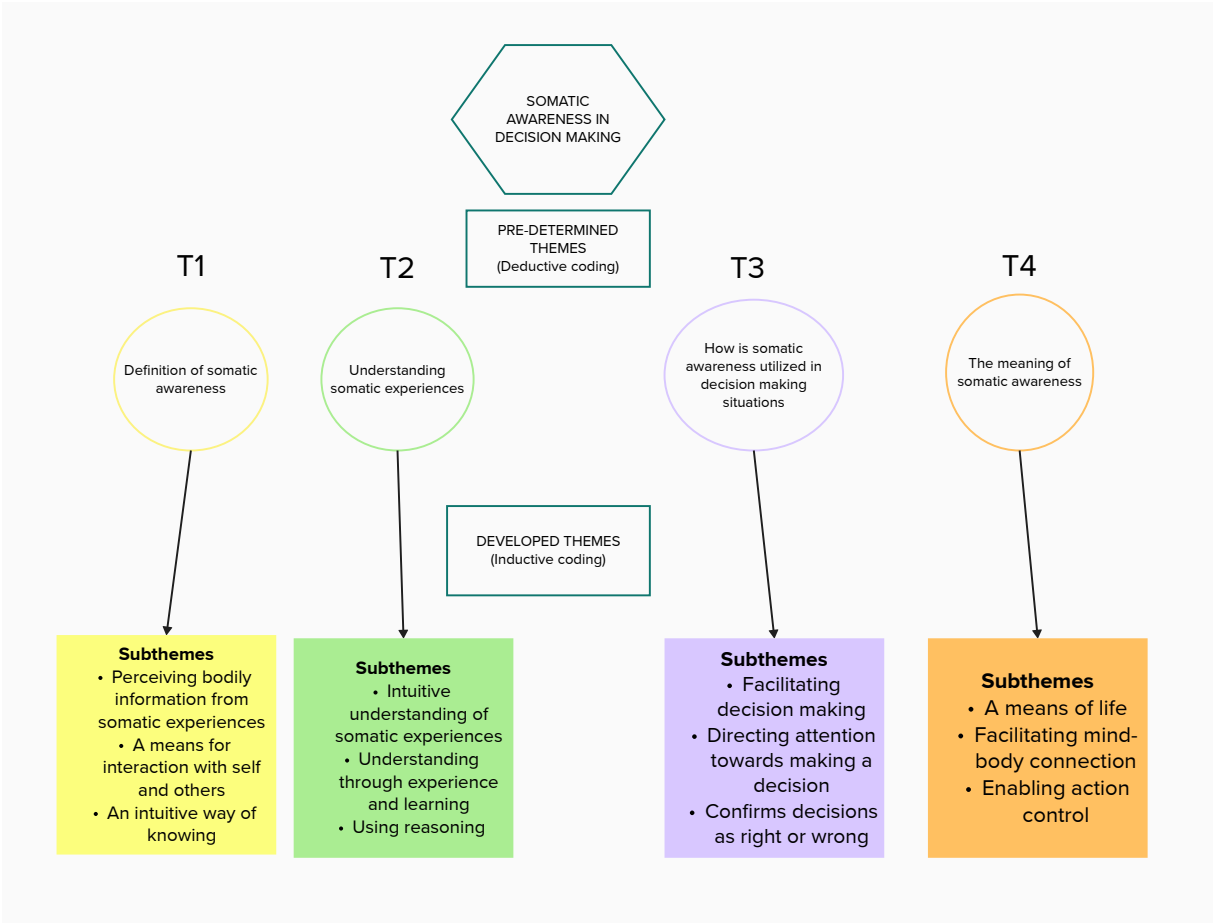
10 RESULTS

Firstly, to answer the first research question, *(i) How do somatic practitioners subjectively define somatic awareness?* produced the first deductively determined theme. Three sub themes were then inductively established to reflect somatic practitioners' subjective views on how they define somatic awareness. This was explored for a comprehensive understanding of how somatic awareness is understood.

Secondly, to understand the role of somatic awareness in decision making, the next section focused on the second research question *(ii) How do somatic practitioners understand personal somatic experiences in decision making?* This was the second deductively determined theme. Following this, three sub themes were inductively developed to elucidate how somatic practitioners described their understanding of somatic experiences.

Answering the last research question *(iii) How do somatic practitioners utilize somatic awareness in decision making?* aimed to gain an understanding of how somatic awareness can be utilized in decision making. This theme was first deductively determined and later, three separate sub themes were developed from the concrete ways participants stated to have utilized somatic awareness in decision making.

Lastly, to deepen the understanding of the process of utilizing and understanding somatic awareness in decision making, an additional question deductively determined. This theme explored; what is the meaning of somatic awareness to somatic practitioners. This was followed by inductively establishing three subthemes, to elucidate the meaning of somatic awareness. This was explored to further understand somatic awareness and the process of utilizing it. Below is a figure demonstrating a simplified summary of the findings, which are explained in more detail in the sections below.



10.1 Definition of somatic awareness

Somatic practitioners were asked to define somatic awareness before stating how somatic awareness is defined in this thesis. This is important to capture personal ways of understanding and utilizing somatic awareness. Most participants defined somatic awareness as it is defined in this thesis, but some presented additional views on how they define it. These additional views were further developed into separate sub themes. In the additional definitions, despite varying backgrounds and experience in somatic practices, participants described somatic awareness in similar ways. Three main themes to define somatic awareness were developed from participants answers.

Awareness of emotions was only mentioned by half of the participants but was then made clear by the interviewee that emotions also are a part of somatic awareness. It seems that emotions and feelings were discussed as similar terms and a clear distinction of them was not always made.

T1 Definition of somatic awareness

Sub themes	Explanation of theme
Perceiving bodily information from somatic experiences	• Perceiving bodily sensations and feeling emotional states. • Being present for oneself and others, while enabling a deeper connection to emotional experiences. • Gaining valuable information about one's own and others' conditions, which enhances emotional understanding.
A means for interaction with self and others	• A tool for communication and connection with both oneself and others. • Aids in understanding the emotional states of others, which contributes to social connection.
An intuitive way of knowing	• Perceived as an intuitive feeling or instinct. • Offers a means of intuitive information processing, aiding in problem-solving and decision-making processes. • Provides effortless insights into situations and guiding actions without conscious effort.

Most frequently, when being asked about what somatic awareness is, somatic practitioners referred to it as a way of perceiving bodily information from overall somatic experiences or emotional states. Interestingly, connection to others was frequently mentioned by over half of the participants. This is not specifically mentioned in the literature about somatic awareness.

Lastly, somatic awareness was described as an intuitive way of knowing. However, the intuitive nature of somatic experiences became more apparent when describing how somatic experiences affected decision making. These themes highlight that a general understanding can be found but defining somatic awareness can also be personal. Following statements were answers to the interview question "*How do you define somatic awareness?* "All interviews were conducted in Finnish, which is why all following statements have been translated into English.

Perceiving bodily information from somatic experiences

"It is a way to be present for oneself and others and also to be aware of one's own and others' states of being."

"For me it is a method to perceive one's own and others' emotional states."

"A means to gain valuable information about one's own and others' conditions."

"A way to be aware of my own and others' feelings"

This shows how somatic awareness is important in sensing one's own and others sate of being and emotional states. This somatic sensing can be seen as what Kahneman (2011) described as system 1 information processing. He stated that knowledge from this system stems from sensory experience. This type of information can allow access to more ambiguous and complex forms of information that cannot be otherwise gained. This aspect of somatic awareness being a way to perceive information, makes it crucial for decision making, as it allows a larger information base. However, not always is more information beneficial for decision making. Having too much information can negatively affect the decision by creating difficulties choosing between options or losing sense of the purpose of the decision. (Kahneman 2011) Additionally, as emotions arrive as somatic signals, these can also bias the decision and thus effect it negatively. Essentially, this is in line with Khalsa et al. (2018), as they stated that an overly sensitive interoceptive awareness can lead to a heightened awareness to emotional signals. This heightened awareness can mean an overload of bodily information and thus negatively affect decision making. This suggests the need for a healthy level of somatic awareness in order to be beneficial in decision making. However, this is not a well-studied area, and what is

questionable, is whether there can be such a thing as a healthy level of somatic awareness as it is a personal ability.

The next theme continues to highlight how this skill is not only important in sensing one's own states and experiences but explains that it can be used as a tool to become connected to how others feel or be informed about their somatic experiences.

A means for interaction with self and others

"It is a tool because it is a means to connect with others."

"It is also interaction with others."

"A tool in guiding one's own actions and communication."

These definitions show how somatic awareness is an important way to notice and sense the state of others as well as oneself. In addition, it is seen as a tool for communication and connection to others. This can be especially important in decision making where the effect goes beyond oneself but also to gain information from others states of being. However, this can reach beyond decision making. Barett (2017) and Goleman (1996) highlight that being in touch with others emotional or feeling states is an important factor in empathy and social connection. Furthermore, Damasio (1999), Craig (2002), and Tsakiris & Critchley (2016) all highlight that an accurate self-perception is crucial for self-awareness.

Somatic awareness reaching beyond the self is a crucial aspect, which the current literature does not yet fully recognize. This could suggest a larger meaning of somatic awareness for communication and social connections. However, this needs further, more rigorous research to be confirmed.

Lastly, some stated somatic awareness as intuitive information from the body. This could show that some see somatic awareness as a way to become aware of intuitive information and thus can act as a channel for intuition.

An intuitive way of knowing

"It is a gut feeling, a vague feeling of knowing. This makes problem solving easier. Small things don't need to be separately turned into problems to solve."

“it is an intuitive feeling”

“it is intuitive information”

It is possible, that when somatic experiences are vague or hard to articulate they work at an intuitive level. This is in line with how intuition researchers see intuitive information. Thus, all unconscious actions and feelings can be classified under intuition. (Bastick 2003; Järvilehto 2015; Raami 2020; Sadler-Smith & Shefy 2004) This can explain why some describe somatic awareness as intuition. The first statement even suggests that a gut feeling can make problem solving more effortless. Meaning that small decisions can be made automatically based on a feeling, without much conscious effort. This could demonstrate how somatic awareness could be a way that one becomes aware of intuitive information and acts as a channel for intuition. However, only three participants made this connection between somatic awareness and intuition. Although, more participants mentioned this connection when asking how somatic experiences could be understood. This is further described in the next chapter.

Somatic practitioners’ subjective definitions were generally in line with the current research literature. This included being aware of and understanding what somatic experiences mean. This means that somatic practitioners have a good general understanding of somatic awareness. This makes their experiences and views valuable for further understanding the role of somatic awareness in decision making. Additionally, these further definitions of somatic awareness allowed a more experiential grasp on the concept and provided a comprehension of the practical implications of somatic awareness in action and existence. The next chapter will explore in more detail, how somatic experiences are understood in decision making.

10.2 Understanding somatic experiences in decision making

After disclosing how somatic awareness is defined, participants were asked to explain how they understood somatic experiences in decision making to answer the second research question. This was asked to clarify how they could later make decisions based on this understanding. Three themes were developed from how participants described the process of understanding somatic experiences. Some described the understanding as intuitive while others referred to it being learnt and based on experience. Finally, some also further reported using reasoning to understand somatic experiences. This revealed that decision making involves somatic experiences that are meaningful for the decision.

How somatic participants understand somatic awareness is explained by giving examples of participants answers to the interview question *"How do you understand these somatic experiences in decision making?".* The following themes were developed:

T 2 Understanding somatic experiences

Sub themes	**Explanation of theme**
Intuitive understanding of somatic experiences	• Intuitive understanding of subtle bodily sensations to interpret situations. • Connection between bodily cues and intuitive understanding, which guides decision-making processes. • Understanding somatic experiences intuitively implies a subconscious recognition of bodily signals, influencing responses and decisions.
Understanding through experience and learning	• Understanding somatic experiences as a result of accumulated experience and learning.

	• Repetitive somatic sensations in similar situations contribute to learning what these signals mean over time. • External feedback and reflection on past experiences aid in interpreting somatic cues.
Using reasoning	• Employing conscious reasoning to make sense of somatic experiences by integrating logical thinking with somatic awareness. • Reasoning helps individuals articulate and understand bodily sensations, contributing to informed decision-making.

Intuitive understanding of somatic experiences

Firstly, understanding of somatic experiences was found to be intuitive. The intuitive understanding was described stemming from different somatic experiences.

"It feels like understanding is often intuitive. There can be a feeling of tightness in the chest, and it may be difficult to interpret what it signifies. Sometimes it feels like it's maybe difficult to interpret. Is it a mental state or physical injury or pain, or both? I can't say. Understanding comes intuitively."

"The body somehow communicates that now it's not going right, and sometimes it indicates that now it's going just as it should."

"It is somewhat subconscious. I don't really consciously think about them. They are subconscious messages that are constantly registered."

“Not a feeling of lacking something, but a very strong intuitive feeling that I need to give something to myself now.”

“I react strongly to my children's problems. I feel them in my body. I make those decisions more intuitively."

“I rely on trusting my intuition. When that feeling comes, there’s usually a reason for it.

These comments suggest that there is a deep connection between bodily sensations and intuitive understanding. What can be understood from participants comments, is that often the understanding may be difficult to explain but somatic experiences seem to serve as intuitive signals about given situation. Moreover, they suggest that this intuitive understanding is subconscious, as subtle messages from the body are constantly registered. In addition, there is also a recognition that these bodily cues guide decisions, by recognizing when something is not going right or understanding the need to prioritize self-care. This is emphasized in social relationships, such as with children. Therefore, intuitive somatic experiences play a significant role in decision making.

Understanding through experience and learning

Secondly, while some of the participants stated that an understanding of somatic experiences was intuitive, some explained it to stem from experience and learning. The following statements from participants are used to demonstrate this.

“I think of it as learned knowledge; it contains the experience of right and wrong. The body learns to recognize what is right and what is wrong. So it's a result of a lot of practice over time. By utilizing external feedback, you can change your own bodily responses - the body memory then learns. Then those things become automatic.”

”You learn to understand a little about what to act on immediately and what not to. It doesn't always work. But one success feeds the next. At least for me, certain feelings and bodily sensations are similar in similar situations. So when it becomes repetitive, you could already react to it. - They are subconscious messages that you constantly register.”

“There have been situations where I have gone against it or with it, so then based on that, I learn”

“They're always certain kinds of feelings. They're not anything so intense, but they're not pleasant either. “

“This is always the same feeling. That's why it was so reliable, that now again I have this same feeling.”

These statements demonstrate how somatic experiences are understood given that the same types of feelings seem to appear, which has resulted in them learning what they mean. This is in line with how Raami (2016;2020) states that the confirmations for intuition work and how individuals learn to trust intuition over time. Sadler-Smith & Shefy (2004) also highlight re-occurring experiences to enhance the understanding of intuitions over time. This suggests that it is important to become aware and start paying attention to somatic experiences in order for them to be later recognized as useful information. Furthermore, the first two statements suggests that they consciously pay attention and try to acknowledge these experiences in order to learn. The last two refer more to the experience of them appearing and learning more subconsciously. Either way this is valuable insight that can explain why paying attention to somatic experiences is important and useful to form an understanding of them. However, one participant stated that she does not think consciously about how she understands but knowing what the body is saying is somehow based on experience and requires awareness.

" I think it's quite spontaneous. It's habitual and directs attention. It's just a way of acting. I don't distinguish why it happens or why I understand." This points to a more intuitive understanding of somatic experiences but still suggests that understanding might be a result of learning and directing attention.

From the next statement it can be understood that experience is one factor that aids in understanding somatic awareness, but the importance of another person is also emphasized to be able to fully understand the somatic experience.

“Us humans are social creatures. Part of that decision making process is based on how you feel about it. From my experience, if another person is present, it strengthens somatic awareness. You might tell a close friend, for example, 'This is what I've been thinking of saying,' and then say it. Then, the reactions of that other person become part of your somatic awareness, and you can read them. And that other person can also express how they felt. This is an important part of, for example, coaching."

This is an interesting view that suggests that other individuals are important to be able to mirror and verify one’s own somatic experiences. In addition, although the statements in this section

similarly point to the understanding being learnt or stemming from experience, they also suggest that understanding is different between individuals and can be unique to everyone. However, this does highlight the importance of being aware of somatic experiences as it might result in learning what they mean.

Using reasoning

Somatic practitioners further described the process of understanding somatic experiences with consciously reasoning what somatic experiences mean. Essentially, this means they are aware of their somatic experiences and make sense of them using conscious reasoning, which can be seen as a purposeful attempt to make sense of what the experiences mean. The following statements demonstrate how participants describe how they utilize reasoning to understand somatic experiences.

”The conscious mind comes alongside it. That has come through experience.”

”I use language; it helps to articulate feelings aloud.”

”Some feedback comes through visual cues. Not all knowledge comes from the body.”

”I understand what the body feels like because I can apply logical thinking to it.”

”First, you become aware of bodily sensations, and then you can observe things. ”

However, some examples reveal that even though reasoning is crucial, it is not always the most reliable one.

“If I genuinely listen to my body, it's usually right, but if the mind interprets and leads astray, it's easy to recognize. For example, if there's a situation where the body signals something it doesn't want to do, then I pause again to listen if it's really the body's message. It doesn't always go right. But I've learned to trust that the body usually knows better. I've experienced so many times that when I've stopped to listen to what arises from my body, things have just gone right every time. That's where the trust has solidified. There are also experiences where the body communicates something strongly, and I haven't wanted to accept the message as it is.”

This statement takes into account the fact that the mind can create stories. It can be interpreted that she trusts that somatic experiencing usually carries the most accurate information. Therefore, for

example, some researchers advocate somatic experiences as the true and authentic message that can be more reliable than the thinking mind while not forgetting reasoning is how these experiences can be brought into understanding. (Anttila 2009, Damasio 1999; Rouhiainen 2007; Raami 2020; Sadler-Smith 2008).

In turn, the following passage provides an interesting example of why the body can be seen to be crucial in gathering information that the reasoning mind cannot, due to its limited capacity on consciously registering all available information.

"Even in bodily sensations, there's subconsciousness behind it. They're just weak signals, but they're based on something real. For example, if I've read somewhere that A is better than B, even if it has completely passed my eyes, it stays somewhere in the back of my mind. But then if I am asked would I pick A or B, I can say A, even though I can't necessarily explain why, but I know. This same information can come from, for example, the sense of balance or muscle memory as well, so it's not necessarily information that has come through the brain. What is actively registered must be only a fraction of what happens because so much happens. Similarly, internal communication within the body works, and there's a lot happening inside the body. The conscious mind can't keep up, so you just have to trust that bodily sensation."

This passage reveals how this participant experiences reasoning and somatic awareness working together. This could also explain how some individuals state to "just intuitively know" but not understanding why. Further on, he discusses that the "knowing why" can come through a bodily sensation, although he does not clearly explain the bodily feeling.

However, sometimes participants added, that not always somatic experiences are correct or even meaningful for decision making. This is important to remember to avoid over analyzing experiences or applying wishful thinking created from the minds created story to rationalize somatic experiences. These statements suggest, it is not always possible to receive clear messages or understand them in addition to acknowledging that not all experiences carry a deeper meaning to serve information to decisions. Participants emphasized this by stating the following.

"You can't always trust it. You can't always get a clear message from it. "

When explaining understanding somatic experiences*:" Perhaps through experience and guesswork. And also accepting that not everything needs to be understood, and not everything necessarily has a reason. "*

"You can't always know or understand everything based on the bodily feeling."

The second statement argues that not all somatic experiences have a reason. This can however be questioned. If somatic reactions do not have a meaning, why do they appear?

Moreover, strong emotions are seen to disturb sensing somatic signals. *"Sometimes, strong emotions can overpower that subtle bodily sensation. There can be conflict. If the emotion is too strong, it overrides the delicate intuition."* This is in line with how Peirce (2013) and Raami (2020) described strong emotions to bias intuitions. Moreover, as Barett (2017) and Goleman (1996) have stated, strong emotions can distort decisions, which lead to unfavorable choices.

Lastly, a participant acknowledged *"Whether strict analysis and logic are the foundation or only intuition or bodily awareness, neither tells you anything. So, neither extreme end is reliable. They are built on top of each other. You can approach abstract concepts through intuition."* This suggests that relying too much on either information pathways, rational thinking, or somatic awareness, does not provide reliable information.

Somatic experiences refer to bodily signals that participants described experiencing during decision making. Each participant reported personal somatic experiences, which points to them being highly subjective. Somatic experiences such as a knot in the heart, visceral tension, bubbly excitement, and sparks described can be seen as internal experiences, which are defined as interoceptive signals, which researchers describe as a sense of self (Quigley et al. 2021). However, most of somatic experiences were complex and ambiguous that seemed intuitive in nature. These involved the body in a holistic manner and occurred through the senses, internal or external somatic experiences. Very similar to how some intuitions are described (Sadler-Smith & Shefy 2004; Raami 2015; 2016). Additionally, how these somatic experiences affected decisions are next discussed when exploring how somatic awareness is utilized in decision making. Based on how somatic practitioners describe understanding somatic experiences it can be suggested that somatic awareness is partly an intuitive process but also includes an understanding form from experience, learning and consciously reasoning. This is important to notice when exploring the role of somatic awareness in cognitive processes such as decision making. However, this also demonstrates that perhaps decision making is not purely a conscious process but involves intuitive bodily experiences as well as the awareness of those experiences, which both influence decisions. Furthermore, participants answers suggest that not all somatic experiences are meaningful for decision making or for providing information.

In addition, strong emotions or relying only on bodily information is seen as unreliable as relying solely on reasoning.

In conclusion, somatic experiences are seen as a valuable and reliable source of information in decision making although the understanding might be intuitive. Experience and learning being one way to understand somatic experiences, reveals that somatic experiences are repetitive in nature and appear similarly in certain situations. This highlights the meaning of being aware of body experiences in decision making to start leaning what they mean. This is how intuition researchers describe learning to enhance intuition; by simply starting to be aware of signals (Raami 2020; Sadler- Smith & Shefy 2004). Finally, applying reasoning to understand somatic experiences, highlights what research on intuition as well as somatics have emphasized as a reliable way of knowing. (Anttila 2009; Bastick 2003; Damasio 1999; Raami 2020; Sadler-Smith& Shefy 2004). The next section focuses addressing the second research question by presenting how this understanding of somatic experiences- somatic awareness, is utilized in decision making.

10.3 How is somatic awareness utilized in decision making

The chapter above explored how somatic experiences are understood. To answer the second research question, this section explores how somatic awareness is utilized in decision making. This is demonstrated by first presenting the themes that were developed based on the nature of decisions. Secondly, anecdotes of how somatic practitioners describe somatic experiences in decision making are provided. Three separate themes were developed from the anecdotes to disclose different ways somatic awareness is utilized in decision making.

T3 Utilizing somatic awareness

Sub themes	**Explanation of theme**
Facilitating decision making	• Provides valuable information that complements logical thinking in decision making. • Facilitates decision making by offering clear and strong signals,

	sometimes even leading to a complete change in decisions. • Guiding actions and behaviors.
Directing attention towards making a decision	• Intuitive signals alerting individuals to decisions or actions that need attention. • Experiences like "gut feelings" or bodily discomfort, alert to become aware of decisions and make them. • Allows to heightened overall awareness and is crucial for making impactful decisions in various contexts.
Confirms decisions as right or wrong	• Ambiguous or intuitive senses that confirm the correctness of decisions. • Distinct somatic sensations that confirm whether a choice is right or wrong. • Somatic experiences such as heart arrhythmias or feelings of tranquility, confirm the correctness of decisions that are made intuitively or consciously.

Facilitating decision making

Somatic awareness can be seen to facilitate the decision making process by providing information that can be hard to reach through logical thinking alone. This can influence decisions that guide action and behavior. Facilitating decision making means that the somatic experience provides a

clear and strong answer to make the decision. In some cases, somatic awareness even provides information that leads to changing the decision completely. It seems that the somatic experience might even affect the decisions more than reasoning. The following anecdotes aim to provide examples of these processes. These examples provide an answer to the interview question: *In general, what type of decisions do you need/utilize somatic awareness in?*

The first example includes a description of how feeling of resistance or friction acted as the somatic experience.

"In workshops and coaching sessions, I interpret my own feelings and the presence of others to see if there's something blocking or if there's resistance. It's a kind of sensing, feeling if there's resistance, and that can't be evaluated with anything other than a 'feeling'. I spontaneously feel a sensation of resistance or friction."

He further explains the somatic experience by stating *"There's no actual wall there, but there's some kind of resistance, making it difficult to conceive on a thought level that one would move in that direction."*

This demonstrates how the somatic experience, that happens voluntarily, affects decisions about how to move forward in coaching sessions. It also highlights the importance of the feeling component of thoughts and decision making, as it is emphasized as the only way of reaching this type of information. However, in this example it is unclear if the somatic experience is sought out purposefully or if it appears involuntarily. The first part of the sentence would suggest it is purposefully acquired but the spontaneous appearance of the feeling suggests otherwise.

The next example explains how somatic experiences changed the decision completely.
"I remember when we bought the house, we went to see the place, and I remember on the way there was already such an experience that ahhh from the pit of my stomach to the brain came such a warm surge, a feeling of happiness. And when I got there, that feeling wasn't rational but it was a purely physical feeling of happiness. I felt it in my autonomic nervous system. My internal organs released a rush of good hormones, there's no feeling of pain but only a feeling of strength. Bodily experiences. I had already decided that no, but then purely that physical experience completely changed my mind."

A similar decision about buying a house was described in the following way. *”A year ago, we bought a house. I don’t like changes and moving felt challenging. Every time we found a house, every decision was always a small struggle; I couldn't say why not this one specifically. But it was always in my chest, if something wasn't right, it was a mysterious feeling. Knowing that this isn't good. It felt bad in my soul. But the house we bought, I had no negative feelings about it and I wouldn't have minded even if it had cost more. Even though there are things that aren't so optimal, but nothing bothered me then. I was excited, eager, and would have wanted to move our things in right away. There was no doubt even though I'm typically sceptical by nature. I felt relaxed. There was no negative feeling about it, so I thought it must be the one. And I remember thinking why this one when it's not what I had in mind beforehand. But it was just a feeling-based thing.”*

It seems that in these decisions, somatic experiences played an even stronger role than conscious thinking. In the first example the somatic experience even completely changed the decision whereas the other example demonstrated how the somatic experience provided a clear answer that pointed to the fact that the chosen house was the right one. In either decision, rational thinking had only little effect or even none. All three examples above emphasize and value to the somatic information in decision making. In addition, even in smaller decisions bodily senses are seen as important in facilitating choices. This was explained by a participant that stated:

” In smaller decisions, senses are incredibly important. For example, I know when it's a good time to make a purchase, like for a new winter coat.” Interestingly, these examples are characterized as being more involuntary in nature and appearing before the decision making happens.

In these next examples, it is explained how intuition played a role in decisions. The intuition was described as a somatic experience, and similar to the examples above, it provided a clear and strong decision.

"When the children were small, decisions related to breastfeeding, such as when to stop, were intuitive. I didn't have a clear plan of how long I wanted to breastfeed. But there were clear moments of when to stop. They came to me suddenly, and it was very clear. So now I'm doing it this way, and it's right for both of us. Now my body says no more.

Another instance I remember where there was a very strong bodily sensation was when the children were ill. For example, when they had ear infections. The moment when I needed to seek outside help, that feeling came into my body very strongly every time. I could be completely calm and think

I could take care of this baby at home. But then I would get a feeling that now I have to take them to the doctor, now I have such a strong sensation in my body that I have to take them to the doctor, now just taking care of them at home isn't enough. It brought about a really restless feeling, I couldn't be at peace in my own body."

In these examples, it is apparent that decisions were intuitive and the sense of how and when to make the decision appear intuitively by listening to the somatic experience. This ties together how intuitions can appear bodily and how intuitions can be seen as somatic experiences. Additionally, this next anecdote provides an example how a strong bodily reaction resulted in making a decision to communicate about felt emotions.

"There was a situation where I had a celebration and I had invited a friend there, but I didn't receive any response to my messages. Eventually, they said they would just come to the door. That triggered a bodily memory of a previous event, and I recognized that I was now being triggered by the past, feeling uncomfortable about it. With that feeling and upon recognizing the trigger, my decision at that moment was to communicate with them while in that state of hurt, explaining how I felt and possibly why. Making that decision felt unpleasant. I knew that I could move past that situation and feeling once I talked about it and communicated. Through such a strong bodily reaction, I made this decision."

This next anecdote provides an example of how a strong bodily feeling provided a clear answer to end a relationship even though the conscious mind and desire wanted another outcome.

"I had to make a decision regarding the relationship with another person. My bodily sensations had a strong influence on that. I noticed that before, during, and after the meeting, there was tension and stress in my body. It was a clear message that this couldn't continue. Even though I desired to stay connected, my body was saying something else. It was such a strong physical message that I couldn't ignore it. Although consciously the decision felt unpleasant, the signals from my body were clear. My desire and hope were in conflict. I wanted something different from what my body was saying, I didn't want that reaction from my body.

These examples above emphasize the nature of somatic experiences typically being strong and clear in nature. In addition, they seem to be valuable signs that guide participants choices and behaviors. Somatic experiences were talked about in a positive personal manner and given a lot of value. These anecdotes also support what Dijksterhuis et al. (2005) stated about how the senses can gain much

more information than the conscious thinking mind. Moreover, they provide examples of how intuitions can appear somatically, and that somatic experiences can be used to facilitate, guide, and even make decisions. These somatic signals are also characterized to stem from emotional experiences, which can demonstrate why somatic awareness is crucial in emotional intelligence and well-being in addition to having healthy social connections. This does not mean the conscious thinking mind is not needed, but rather highlights that not all decisions need a rational explanation to be made. This type of information can be important in ethical decisions, decisions regarding relationships or even ones or a loved one's health given that it allows one to be in touch with information that cannot necessarily be acquired rationally or with logic.

These anecdotes suggest that somatic awareness is purposefully utilized but it appears spontaneously. After the experience appears, it is used to facilitate decision making or even make the decision without rationalization. This points to the intuitive nature of somatic experiences. In addition, these experiences can be seen as authentic and reliable as they seem to appear without conscious effort.

Directing attention towards making a decision

The following decisions involve a sense of knowing to make a decision or act on a situation. In these following examples somatic experiences do not directly convert into making a decision, but rather alert one that there is a decision to be made, or something needs to be acted on. These are also described as intuitive experiences. A participant described how she relies on a specific somatic experience to make decisions about how to act in situations where she needs to be alert of dangers.

She described this as a "gut feeling" and further described it as: *"It's like that feeling when you've been sweaty, and you put on an itchy wool sweater. You know that uncomfortable sensation that's kind of hard to describe. It's kind of a cold and simultaneously unpleasant feeling. Like something isn't right here. And what always follows is that the intensity decreases and calms down, and then you try to sharpen all your senses to figure out what caused this bodily sensation. Like why I got this kind of feeling.*

Here, the participant gave a distinct description of the 'gut feeling', which can be seen as a very personal way of describing how this somatic experience acts an intuition to becoming alert about the situation. This can then lead to making a decision to act if there is a danger. Interestingly she described the feeling that followed the somatic experience made her more aware and alert. Almost

like her intuition acted as a way to become aware possible threats and to be more aware. Another participant gave an example of having an intuitive feeling about moving abroad.

”It was a strong moment of intuition. My intuition kept telling me not to go abroad, that something would happen there and I would get hurt. I kept waiting for a rational reason not to go, but none came. Only my intuition said not to go. Because logically, the most sensible thing to do was to go, so I went abroad. All along, I expected to get hurt, but I didn't get physically hurt, instead I hurt myself emotionally. Then I realized that my intuition was trying to say somehow that "I am going to be hurt. From this, I think about how the body can supposedly know beforehand. Maybe it was just a feeling, and I just fulfilled that feeling.”

From this example, it can be argued that her intuition was alerting her to make the decision not to move. Similar to the example above, the intuition made her become aware and even question if the decision was the right one. She does, however, question whether it was an intuition or just a bad emotional feeling that she started to fulfill unconsciously. This is a valid argument and demonstrates how somatic experiences might appear as uncertain and ambiguous. This can demonstrate why researchers emphasize the need to use rational thought and intuitive feelings together to be able to reach enough information to make the right decision (Kahneman 2011; Sadler-Smith & Shefy 2004) Another participant explained how uncomfortable feelings and sensations can directly be a sign for making a decision.

"In some decisions, it's possible that you've already developed physical problems. If you've already made yourself sick or unwell, that's a significant signal that you need to make a decision. Then, once you've made that decision, your physical condition will improve." This example points to having an illness or physical condition that communicates the need for a decision. However, the next example that demonstrates how somatic experiences may not always be accurate at first and can get confused with emotions. *”I had to make a decision to move even though it didn't feel good and it was filled with all negative emotions but at that moment it was just necessary to decide and act on it. The end result turned out to be good, and it was only there that the reward was.”*

Here, the participant described a situation where she had to move to another city even though “*it didn't feel good and it was filled with all negative emotions*”.

After deciding against the feeling, she described having the reward at the end, which meant that the decision was good after all. This could further support the need to evaluate somatic experiences and intuitions together with reasoning.

These examples suggest that somatic awareness could act as a means to alert one to be aware of a decision at hand or later on, that needs attention. This type of alertness to make decisions could also be crucial in split second decisions, such as in sports or decisions about one's own health or performance. As researchers have presented, even ambiguous or unique experiences may be a source of valuable information that can be articulated through bodily presence (Anttila 2009; Gendling 2002; Rouhiainen 2007). These anecdotes also propose that this type of information seems to appear involuntarily but after becoming aware of them they are more consciously attended to. This again points to the nature of somatic experiences being intuitive.

Confirmations of decisions

Lastly, other than facilitating and directing attention in decision making, some somatic experiences are described as ambiguous or intuitive senses that somehow confirm the individual about whether the decision is right or wrong. This means that somatic experiences can act as confirmations to decisions. Similar to how Raami (2016) described that some intuitive individuals use personal confirmations for intuitions. These confirmations to decisions were also highly individual and unique to each individual such as the confirmations to intuitions Raami described.

One participant described the feeling of knowing that a choice is wrong by distinctively describing the somatic experience as *"It's like pulling a fish from tail to head. You get this feeling inside that says no, but still, you make that decision. Then you just know that it won't lead to anything good."* Here, the distinct somatic experience signalled that the choice was not a good one. He described knowing, based on the feeling, what the outcome of the decision is going to be.

This other instance also involves a distinct confirmation about the right choice. A participant described interviewing people for a job position. Her colleague had pointed out that it was apparent that one of the interviewees 'has their heart in this job'. She had thought in that moment that *"I don't feel like my heart is in this work."* The next week she started experiencing heart arrythmias and explained that *"I connected it so that now even my physical, concrete heart tells me that I am no longer involved in this work with my whole heart."*

Here the participant pointed out how her heart arrythmias acted as a confirmation for her earlier intuitive feeling about 'not having her heart in the job anymore'. This is a rather intuitive but still distinct way of how somatic experiences can confirm the right decision. The participant acknowledged that stress was also a factor for causing the heart arrythmias, but she considered it as intuitive signal from her body to confirm her thought about not being whole-heartedly in the job position anymore.

This next example shows how somatic awareness was crucial in making the right decision about returning to work after a sick leave. *"My bodily response was so strong about my own well-being. I thought is there a reason to be absent from work and I got the answer by listening to my own condition. I asked myself how it would feel if I had to go to work tomorrow, and I felt this hollow trembling inside my body. It was a clear message about my condition. Even the mere thought of it made my body tired. It was a very clear bodily reaction that requested an extension of sick leave."* This provides an example of how somatic awareness can support decisions about one's own health and well-being. Interestingly, this decision was done by purposefully acquiring information from the body. This differs from the examples above and provides an example of the practice Raami (2016) described, where the body was used to provide a yes or no answer.

These decisions involve distinct somatic experiences that act as a signal to inform one about whether the decision is correct or not or it may act to directly provide a yes or no answer. This is similar to how Raami (2020) described highly intuitive individuals to utilize bodily signals as confirmations about the reliability of the intuition. Therefore, these somatic experiences may act similarly to the confirmations to intuitions, but further research is needed to confirm this. In addition, somatic experiences can be personal, which means they cannot be generalized as well as ambiguous, which make them challenging to verbalize. Finally, somatic experiences and emotional reactions are often intertwined. Therefore, the role of utilizing rational thought and somatic experiences seems important to make the beneficial decisions. All anecdotes provided, offer to explain how somatic awareness is crucial to cultivate a sense of knowing in certain situations, which is often intuitive in nature. This demonstrates how utilizing somatic awareness can offer a larger path to sense and observe a situation or others by allowing a more holistic, non-verbal form for interpreting information. In addition, it can allow to be more in tune with emotional experiences during decisions which not only enable a better connection with one's own values and desires but offers chance to enhance emotional intelligence (Barett 2017). This can be crucial for a more open and diverse approach to making decisions and is useful in various personal and professional

situations. Furthermore, these somatic experiences can be significant for individuals as they are an important part of decision making, especially regarding personal and meaningful decisions. Therefore, these experiences are important to normalize and to be considered as a valid method of making decisions. Not all decisions can be made with purely logic alone. This is supported by researchers studying decision making (Dijksterhuis et al. 2005), intuition (Bastick 2003; Järvilehto 2015; Raami 2020; Sadler-Smith & Shefy 2004), somatics and embodiment (Anttila 2009; Baker 2021; Rauhala 2005) as well as creative thinking (Hardman 2021). However, it needs to be noted that decisions based on a feeling or emotional experience might not be reliable. The next chapter presents an additional yet important experiences about the overall meaning of somatic awareness to participants. This was included as an additional sub-theme to further elucidate the concept of somatic awareness.

10.4 The meaning of somatic awareness

Exploring the meaning of somatic awareness clarifies why somatic awareness is important. It also provides further examples of how somatic practitioners utilize it. This had striking similarities across all participants and demonstrated the significance of somatic awareness to their mental and physical health as well as decision making. However, some personal meanings were also mentioned. To understand the meaning of somatic awareness three main themes were developed. Most somatic practitioners highlighted that somatic awareness gave deep meaning to life and is a crucial aspect of it. Answers were derived from the interview question "*What does somatic awareness mean to you?"*.

T4 The meaning of somatic awareness

Sub themes	**Explanation of theme**
A means of life	• Described as essential to existence and being alive. • A foundational aspect of how they live their lives, inseparable from their experience of existence. • A source of pleasure, that contributes positively to overall happiness and well-being.

	• Includes a deep meaning that extends beyond decision making which involves a holistic understanding of life itself.
Facilitating mind-body connection	• Facilitating a strong connection between the mind and body. • Viewed as crucial for enhancing self-awareness, emotional intelligence, and overall mental and physical health. • A mind-body connection is described to support and navigate various aspects of life, such as exercise, emotional regulation and communication.
Enabling action control	• A tool for guiding actions and influencing one's own being. • Allows an understanding for emotions, thoughts, and behavior. • Enables individuals to navigate life according to their individual needs and motivations.

Serves as a means of life

"Body awareness is a way of being."

"Being alive, existing in the world, and a source of pleasures."

"It is the foundation of how I live my life."

"I cannot separate body awareness from life."

“a way of existing”

"Understanding bodily sensations - I feel alive!"

One participant even stated that it positively impacts their being and happiness *"Body awareness has trained me to become a better and somewhat happier person."*

These views give a bigger meaning to somatic awareness that reaches beyond decision making. Interestingly this supports Baker’s (2021) statement about experiences that are not felt in the nervous system are not really lived or experiences. Additionally, this can explain what (Anttila 2009) emphasized about the somatic experiences being deeply meaningful for individuals. It can be argued that a having deep meaning from somatic experiences can translate into better mental and physical health.

The meaning of having somatic awareness was described to be valuable as it is seen to serve as a mind-body connection. This could be seen as the cornerstone of making sense of somatic experiences which allows for them to be used to guide behavior and action. This connection of mind and body was also described in terms of “action control”. This explained that being aware of one’s own somatic experiences lead to being able to understand but also guide and influence one’s own being.

Provides a mind-body connection

"The connection between mind and body. It may be that the body says now it's time to stop, then the mind is the one that actually makes the decision."

"A mind-body connection. Information can be sought, and it can be influenced bodily."

"it’s a mind-body connection, understanding bodily sensations."

"receiving information through the senses. A mind-body connection."

"a mind-body connection, recognition, and just conscious awareness and conscious thinking about things related to my body."

Here, the body and mind are seen as working in cooperation and having an impact on each other. The first statement suggests that the body states the need to stop, but the mind is what makes the final decision. The second statement proposes that information can be gathered from the body and the body also plays a role in affecting information. Others mention the mind-body connection when they describe somatic awareness to navigate and guide actions as well as become aware of emotional states. Therefore, somatic awareness can be crucial in supporting mental and physical health. Being more aware and being able to name emotions is an important aspect of self-awareness and emotional intelligence. Further on, somatic awareness is crucial for example sport and exercise settings to inform the individual of what and how much is safe to practice as well as when to practice or not. This can help in avoiding or preventing burnout or injuries.

The last theme that was developed from participants views about what somatic awareness mean to them was action control.

Allows action control

"It is important for action control and understanding emotions."

"the tool for guiding one's own actions and communication. It is conscious use of oneself." "it is an awareness of how I act and exist, but also the way to influence my own being."

"a way to guide one's own actions through emotions."

In this theme, emotions emerge as important in guiding one's actions, thoughts, and behavior. This demonstrates how the somatic and feeling component of emotions is crucial when guiding action and even thoughts. Understanding somatic experiences is a crucial in emotional intelligence (Barett 2017; Goleman 1996) but can be seen as a holistic way to utilize the somatic experiences in thought and action, which is in line with Damasio's (1999) somatic marker hypothesis. The meaning of somatic awareness to an individual is, of course personal. However, what is interesting is that there are similarities in why people value the concept of being aware and understanding somatic information. Based on participants views, it seems that somatic awareness is a way to connect to life itself but also to be able to navigate through it according to individual needs and motivations.

To conclude, these reported experiences demonstrate how somatic practitioners define, understand and utilize somatic awareness. Although common themes emerged, some individual differences and personal experiences can be recognized, especially in the examples of decisions. This can partly

demonstrate how each participant experiences and even understands somatic awareness in a personal way. Firstly, these experiences express that participants purposefully listen to somatic awareness, which demonstrates trust or reliance towards this knowledge process. Secondly, the answers reflect that they value somatic processes for gaining information for decisions, but it has a much larger meaning. It is used for social and emotional connections and as a way to live and feel alive. Lastly, the interest towards and knowledge about this topic was evident. However, even despite this, the most experienced practitioners faced challenges in articulating the reasons or deeper processes behind understanding and utilizing somatic awareness. This raises both a limitation and an opportunity. It's possible that studying somatics could benefit from methods that go beyond verbal explanation. For instance, a more comprehensive approach to studying this topic could involve combining observational and self-reporting measures to better understand the experience.

11 DISCUSSION

The first section explored somatic practitioners' definition of somatic awareness. This provided an answer for the first research question: *(i) How do somatic practitioners subjectively define somatic awareness?* The aim of exploring this research question, was to see if participants understood what the concept means and that it is line with the concept the interviewee was using. It confirmed that all participants were referring to the same concept as was discussed in this thesis. However, they also provided deeper and more personal definitions, which were developed into three subthemes. Firstly, somatic awareness emerged as a process for receiving and interpreting information but also as a mechanism to interact with the self and others. Furthermore, the third theme elucidated it as an intuitive way of knowing. These definitions can be seen to embrace intuition as a fundamental aspect of somatic awareness, as they clearly highlight the body as a pathway for information as well as communicating this received information. Bodily information can be proposed to be intuitive information as it speaks in feelings and senses rather than words that require conscious thinking.

This can be seen especially important in, for example, sport and exercise psychology as mind-body communication in this field is crucial to understand. For example, awareness of somatic experiences is crucial for top-level athletes in enhancing performance through guiding behavior, regulating emotions, and even providing meaning to the performance. Di Fronso et al. (2022) found that athletes with strong trust towards their bodies, were able to manage stress levels by increasing positive and decreasing negative stress. In addition, engaging in mindful body-related activities helped them reduce perceived stress and cope with challenging situations effectively. (Di Fronso et al. 2022) This demonstrates the significance of having a mindful connection to the body. Interestingly, many participants mentioned that through somatic awareness, they can be in connection and interact with others. This is an additional point that raised from the interviews but has not been mentioned in the literature. This provides and interesting new aspect to somatic awareness and could enable further research into exploring further, how somatic awareness may benefit social connections.

The second section focused on discovering how somatic practitioners understand somatic experiences to answer the second research question *(ii) How do somatic practitioners understand personal somatic experiences in decision making?* The focus is on somatic experiences rather than somatic awareness as somatic experiences serve as the foundation for understanding somatic awareness. Without somatic experiences, there would be nothing to be aware of. The aim of

exploring this research question, was to explore how participants knew what felt somatic experiences or signals meant in decision making. The ways somatic awareness was understood, were grouped into three sub themes. The results revealed that the understanding of somatic experiences is intuitive, stems from experience and learning and requires utilizing reasoning. The intuitive way to understand somatic experiences, again points to the unconscious and even automatic understanding of somatic experiences. This could mean that somatic awareness involves intuition to some extent. This could reveal a new viewpoint to investigate somatic awareness from, which could in turn lead to a more comprehensive way to understand and even develop the skill of somatic awareness. Moreover, this is in line with what was suggested in the literature; adopting intuitive approach to interpreting somatic experiences could lead to a better understanding of them (Raami 2016). The intuitive understanding was hard for participants to verbalize, which could demonstrate that although participants acknowledge the presence of intuition, how it works is unclear. Secondly, participants reported understanding somatic awareness through experience and learning as well as when applying reasoning. This brings the mind and body together, as somatic experiences can be understood by using conscious mental processes. This is similar to how many researchers describe using intuition most effectively, together with reasoning (Bastick 2003; Sadler-Smith & Shefy 2004; Glöckner & Witteman, 2010). This encourages paying attention to somatic experiences overall, so that they can be later used to recall experiences or information from similar situations. This connection is also meaningful in understanding the most effective and useful ways for utilizing decision making. Additionally, participants reminded that not always can the body be right or signal the right answers. This further emphasizes the need to utilize both knowledge processes together to fully understand somatic experiences.

Once the understanding of somatic experiences was explored, the focus shifted to comprehending how somatic awareness is utilized. This was done to answer the final research question *(iii) How do somatic practitioners utilize somatic awareness in decision making?* The aim of exploring this research question, was to further understand the concrete ways somatic practitioners utilize in personal decision making. The ways somatic awareness was utilized, were grouped into three sub themes. The first theme revealed that somatic awareness allows access to information required in decision making and even provides information that could not otherwise be received. Interestingly, researchers suggest that intuition also provides access to otherwise unreachable information. (Bastick 2003; Kautz 2005; Sadler-Smith & Shefy 2004; Raami 2020; Glöckner & Witteman, 2010) This also demonstrates not only that somatic awareness is a means for gaining information, but it is utilized to facilitate decisions by receiving information that could not be accessed through

reasoning or logic. In some cases, somatic awareness if directly used to make the decision without, or even against logic. Participants answers largely point to sensory or emotional information. Dijksterhuis et al. (2005) stated that senses alone can process nearly 300,000 times more information than the conscious mind. This explains how sensory information through the body, can be utilized to facilitate and even make the decision without conscious reasoning. Secondly, somatic awareness was utilized as an alerting system. It directed attention to relevant signals and informed that there is a decision to make. This was reported especially important in danger situations or when decisions needed to be quickly made. Intuition researchers support this and describe specifically somatic signals to be the initiator to the decision that can then be done more quickly because it does not have to go through the loop of consciousness (Sadler-Smith 2008; Raami 2020). Lastly, somatic awareness is utilized to confirm decisions. It can be used to indicate whether the decisions are helpful or not. Damasio (2008) presented an example of a patient who could make decisions with logic, but the final confirmation of the decision was impossible as he could not "feel" the right decision, which was similar to how participants described utilizing somatic awareness in their provided examples. This somatic marker hypothesis highlights the importance of emotions in decisions, but also advocates how the feeling part of the human existence is crucial. Moreover, the examples of these confirmations of choices played a similar role than in how Raami (2020) discusses confirmations of intuitions. This similarity further highlights the role of intuition once again in the somatic process of decision making.

For a further exploration of the topic, participants were interviewed about what somatic awareness means to them. This provided further valuable insights into how somatic awareness is understood and what meaning does it have in their life. Firstly, it revealed a deeper and even philosophical aspect of it. Most participants could not separate somatic awareness from life itself and it rose as a meaningful ability for happiness and well-being. This is not commonly mentioned in the literature that discusses somatic awareness directly, but researchers who discuss the meaning of the body in well-being and mental processes like learning and creativity, acknowledge this (Anttila 2009; Rouhiainen; 2007; Hardman 2021; Griffith 2021). Therefore, this finding could encourage future research to delve more into the benefits of somatic awareness to mental and physical well-being, as it is not yet well studied. Participants stated that somatic awareness also meant mind-body connection and a way to enable action control. This finding is highly important in terms of having the ability to regulate one's own behavior but also navigate through uncertain and ambiguous problems in decision making. Participants explained this by stating, that through somatic awareness they are more self-aware, have a better ability to navigate through the world as well as understand

and attend to their emotions. This has been confirmed in research as the importance of a mindful connection to the body can facilitate better self-awareness (Damasio 1999; Craig 2002; Tsakiris & Critchley 2016) and emotional intelligence (Barett 2017; Goleman 1996) which both can translate into better self-leadership, for example. This is important insight, especially to the field of sport and exercise psychology where emotional- and action control emerge as significant factors regarding performance. In addition, it can also be translated into other fields studying self-leadership and enhancing intelligence. In sciences like these, studying somatic awareness more closely, could provide further insight and a more holistic view into understanding behavior and how to influence it.

To conclude, intuition may assist the conscious mind to make sense of somatic experiences as well as provide information to complex information that it otherwise challenging to access and thus aid in decision making. Moreover, some even defined somatic awareness as intuition. However, this was challenging to articulate and was only recognized by a few participants. Therefore, it seems that the primary factor for elucidating how somatic awareness is involved in decision making is intuition, it is not the only one. The definition and meaning of somatic awareness, both raised themes that went beyond decision making or illustrating its advantages for cognitive and action improvement. They were illustrated as a means of life and connection to the self an others, which give an emotional and even philosophical meaning to somatic awareness. Therefore, somatic awareness can be seen as an important knowledge process in decision making, with the support of intuition, but it also serves a deeper meaning as a way to connect to life.

11.1 Limitations of analysis methods and research approach

These findings have provided a better understanding of the subjective involvement of somatic awareness in decision making in addition to a deeper, personal expression of what somatic awareness is. However, there are limitations to this study and the data analysis method. Firstly, the objective was to analyze personal and subjective experiences and views, which limits the possibility of generalizing the findings. Furthermore, the sample of participants only consisted of somatic practitioners engaging in yoga, Pilates, TaiChi, or some form of dance. This leaves out other somatic practices such as Qigong, Feldenkrais Method or Alexander Technique, for example. There was also a lot of variation withing the group of participants regarding their experience, age, and levels of training experience. Moreover, there was a lack of male participants, which limits having an equal distribution of men and women in this study. This means results are mostly based on the views of female somatic practitioners and they do not necessarily apply to male practitioners.

Nevertheless, as interviews were semi-structured, there was a lack of consistency with the way questions were posed and with the details discussed. However, this also gave richness to the gathered data and ensured capturing participants subjective experiences. Moreover, the themes developed from the data revealed that even though participants perspectives were subjective, some similarities could be found. As participants were given the interview questions in advance, it is possible that some gained additional information about the topic from outside sources, such as the internet, rather than their own experiences. In addition, three participants had over two weeks more time to study the questions, which could have affected their answers. Nevertheless, the aim was to give participants time to reflect on the questions, which is justified, as questions were complex and require time to observe personal somatic experiences.

The translation of participants answers to English could have influenced the formulation of the answers. However, the coding and thematical analysis was done in Finnish, which means that the translation was done after the analysis. This was done to minimize the effect of the translation to the answers. In addition, the first themes were developed through deductive coding, which involved pre-determining codes rather than letting them emerge from the data. This could have possibly limited personal and subjective codes to emerge, which could have revealed more subjective perspectives. However, this approach allowed an organized and clear view of the data that was aimed to focus on the relevant information as the amount of data was significant. The codes and themes that were developed in this study were produced by one person, and thus did not provide multiple perspectives. This means the results involve only one perspective of analysis.

Overall, the complexity and unfamiliarity of the connection of somatic awareness and decision making, could have placed some limitations for participants being able to provide clear and simple answers. Additionally, simplifying such a complex topic may limit grasping the full manifestation of somatic awareness. It is possible that verbalizing somatic experiences may not be sufficient in describing the full experience. Many participants mentioned that somatic awareness is a familiar topic, but they have never considered it in the process of decision making. However, due to limiting the scope of the research, many other valuable experiences, and subjective views on somatic awareness and even intuition were ruled out of the study to keep the focus clear. Overall, limiting the scope into studying somatic awareness from the perspective of decision making could have made it challenging to articulate as well as leave other valuable insights about it out. Lastly, participants did demonstrate a deep interest and a dedication of time into analyzing and giving thought to the interview questions. This provides value and validation to the given answerers.

12 CONCLUSION

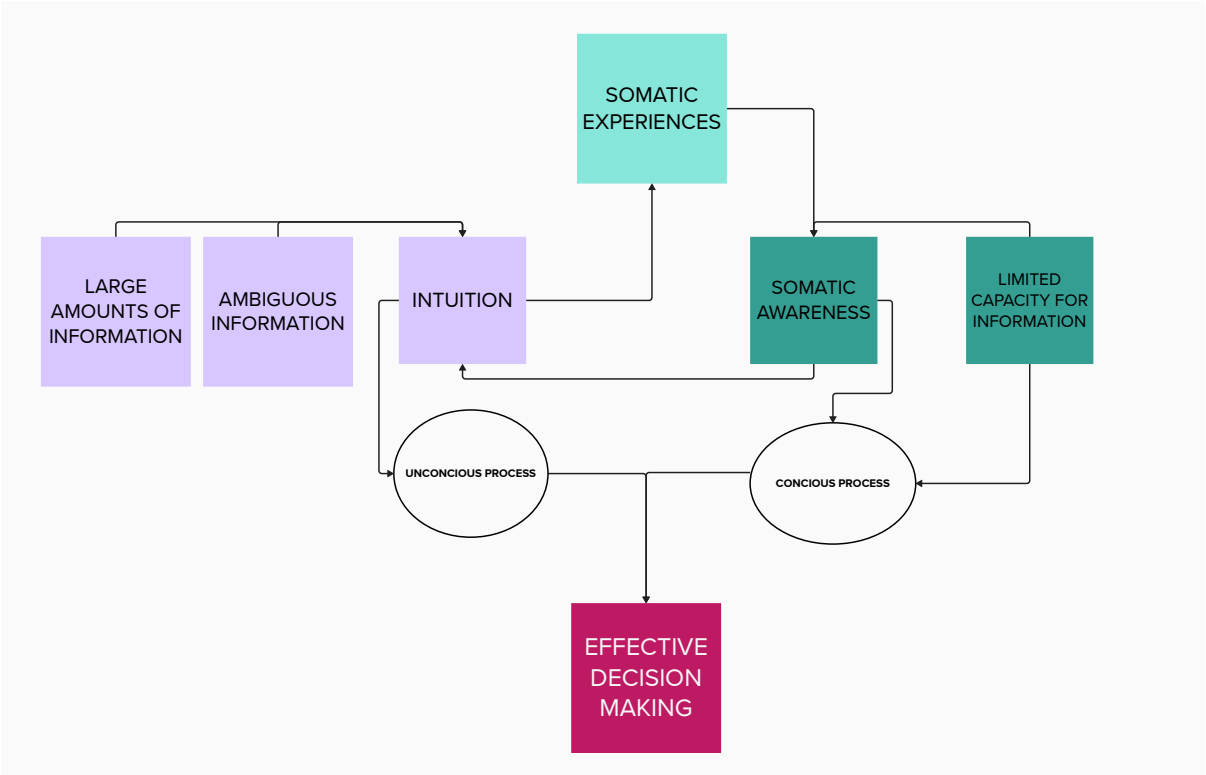
This thesis has delved into exploring how somatic practitioners define, understand, and utilize somatic awareness in decision making. The reason for investigating this phenomenon emerged from a deep curiosity of how our bodies can be involved and enhance conscious cognitive processes such as decision making. Decision making was chosen as a lens through which the connection of mind and body was studied. This was justified as decision making is seen to involve cognitive processes such as problem solving and even creativity (Frensch & Funke 1995). Furthermore, the involvement of the body is often mentioned in decision making by referring to as "listening to the heart or gut", which is commonly associated in intuitive decision making (Sadler-Smith 2008; Raami 2020). Thus, a deeper exploration into the topic of somatic awareness in decision making, revealed an involvement of intuition. This, in turn, raised another dimension into decision making but also revealed that intuition is involved in somatic awareness and vice versa.

Therefore, the aim of this thesis was to delve deeper into the science and experiences behind this intuitive, bodily decision making process by interviewing individuals who are familiar with the concept of somatic awareness to further understand the connection of the mind and body. Without doubt, this is a complex topic to research, which requires applying an interdisciplinary approach to exploring the science behind it. Therefore, this thesis involved psychological, physiological, and philosophical approaches in exploring the concept of somatic awareness and its involvement in decision making. The findings can offer a better understanding of the concept of somatic awareness, how it can be utilized in decision making and how intuition plays a role in the phenomenon of understanding and utilizing somatic intelligence.

The research suggests that the human intelligence system is comprised of the mind and body, but it highlights somatic intelligence as the most fundamental one. It suggests that somatic awareness serves as a foundation to other intelligence forms. This is explained by somatic awareness being a pathway to receive and reach information gained through the senses and bodily experiences such as emotions and feelings. This is why in mental processes, such as in decision making, somatic awareness is crucial. Yet, somatic experiences can also be unconscious, which highlights the role of intuition, especially in ambiguous or split second decisions. However, intuition is also crucial in decisions that involve personal meaning, values, social situations, and emotions because it allows access to the unconscious and ambiguous information that is hard to verbalize. Based on the previous research and the main findings of this current study, this thesis suggests that there is a connection between somatic awareness and intuition when exploring the effect of somatic

awareness in decision making. The section above discusses the results more extensively, but the following discussion will focus on the involvement of intuition in somatic awareness as it is seen as the most relevant considering the aim of this research.

Overall, the results suggest that intuition and somatic awareness are somewhat similar processes as some participants defined somatic awareness as intuitive knowing. Secondly, the understanding of somatic awareness is seen to involve intuition to some extent. Lastly, how somatic awareness is utilized, was also reported to be intuitive. Therefore, intuition can be seen to be involved in many ways of defining, understanding, and utilizing somatic awareness. Prior research does support this, but as has been presented, findings are quite vague. Not many researchers beyond Sadler-Smith (2008), Sadler-Smith & Shefy (2004) and Raami (2015; 2016; 2020) acknowledge the role of somatic awareness in the intuition process. Only one study clearly states the involvement of intuition in decision making through somatic awareness (Dunn et al. 2010). Furthermore, Raami has stated that through intuition we can gain access to the body's intelligence (Raami 2016). The lack of previous research regarding the involvement of somatic awareness in decision making, but also considering the involvement of intuition, raises a limitation.



This figure illustrates the suggestion that intuition manifests as somatic experiences that can then, through somatic awareness, become a part of consciousness. This reflects what the research

continuously advocates, utilizing intuition and reasoning together to reach superior thinking that can then be applied to make better decisions. Somatic awareness can be connected to reasoning as it is a conscious process. In turn, as somatic experiences may be ambiguous and difficult to understand, intuition can be a way to access the meaning of the experiences as it is seen as a superior way of reaching information and is has access to a larger information base than conscious processes such as somatic awareness.

Therefore, without further explanation, it can be said that the involvement of intuition is complex although present, when investigating how somatic awareness influences decision making. This proposes that future research can aim to clarify the connection between somatic awareness and intuition, for a more holistic understanding of both concepts as well as the connection between them. Future research could, for instance, study how can intuition allow access to the body's wisdom and what role does somatic awareness have in the intuition process. This is suggested as there is some evidence the concepts are connected, although there is no prior evidence of it.

Finally, reflecting on the results and prior research the following conclusions were made to answer the research questions.

(i) How do somatic practitioners subjectively define somatic awareness?

Somatic practitioners define somatic awareness as a process of receiving and interpreting bodily information that allows interaction with the self and others. Additionally, it involves and intuitive way of knowing, which emphasizes the body as a pathway for information and communication. This is aligned with the existing literature and highlights the importance of intuition in somatic awareness.

(ii) How do somatic practitioners understand personal somatic experiences in decision making?

Somatic experiences serve as the foundation for somatic awareness. Practitioners understand somatic experiences intuitively, through their experiences and learning, as well as through reasoning. Intuition plays a significant role in interpreting somatic signals, although articulating this was seen to be challenging. This aligns with research, as the integration of intuition and conscious mental processes enhances the understanding of somatic experiences.

(iii) How do somatic practitioners utilize somatic awareness in decision making?

Somatic awareness facilitates decision making by providing access to information, serving as an alerting system, and confirming decisions. Intuition, particularly through sensory and emotional information, plays a crucial role in utilizing somatic awareness for decision making. It enables participants to make decisions quickly and more effectively, which sometimes even passes conscious reasoning.

Additionally, somatic awareness extends beyond decision making, holding deeper philosophical and emotional meanings for practitioners. It is seen as life itself, and to facilitate a mind-body connection and enable action control. This broader perspective emphasizes somatic awareness as a vital aspect of well-being and self-leadership, with implications for various fields, including sport psychology and emotional regulation.

12.1 Limitations of the study

As with all scientific studies, this one also raises its own limitations. Firstly, the research topic was complex and specified, which required extensive prior knowledge about the topic from the researcher as well as participants. The main concepts can be highly subjective and are challenging to study under controlled conditions. The subjective experiences of the involvement of somatic awareness and decision making had not been previously studied, which proposed challenges on designing the study approach. This also led to relying heavily on a limited amount of research that had been conducted by the same researchers which narrows the scope of views considered. Moreover, the involvement of intuition was crucial, but caused more complexity into the research. All major concepts considered in this thesis (somatic awareness, intuition and decision making) are multifaceted on their own, so studying them in relation to each other may have led to oversimplifying them. This can cause important elements to be missed. Focusing solely on decision-making rather than cognitive processes more broadly, posed a limitation in terms of the range of scenarios through which somatic awareness could be explained. However, somatic awareness and decision making were both broadly defined, which in turn, could have posed limitations in terms of clarity and specificity. Moreover, while each interview followed the same interview guide, topics were discussed from a personal and subjective perspective. This resulted in many different experiences and situations to be discussed. This demonstrates the complexity of the topic and shows that the core concepts would have been beneficial to define more strictly. Lastly, as the research exclusively consisted of somatic practitioners, the findings cannot be generalized to a larger population.

12.2 Further implications

Further research is needed to explore the benefits and pathways of somatic awareness for decision making but also mental and physical well-being. Understanding somatic awareness more deeply can offer insights into behavior, cognitive processes, and interventions aimed at improving human performance and well-being. In the field of sports psychology, somatic awareness can be utilized to optimize athletes' and practitioners' performance and well-being as it can be seen to enhance action control as well as provide deeper meaning to life itself. In addition, having the ability to recognize and interpret bodily signals, can improve self-regulation, manage stress more effectively, and enhance their overall athletic performance. These skills can also be transferred into other fields beyond sport and exercise psychology, such as leadership and performance enhancement.

However, this thesis merely provides suggestions and further research is needed to explore the underlying mechanisms of somatic awareness and its implications for human cognition, behavior, and well-being. Future research could be expanded to include neurological and physiological measurements to explore somatic experiences more closely during decision making. Furthermore, researching intuition from a neurological and physiological perspective could provide further evidence of how it can manifest and aid in decision making. In addition, a more appropriate approach to interviews could be using standardized open-ended interviews for reducing researcher biases and to simplify the coding process. Overall, the implications of somatic awareness extend across various domains that can offer opportunities for enhancing individual performance and well-being. Recognizing the importance of the mind-body connection and integrating somatic practices into research, education, and practice can unlock the full potential of somatic intelligence to thrive in an increasingly complex world.

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APPENDIX 1. INTERVIEW GUIDE IN FINNISH AND IN ENGLISH

INTERVIEW GUIDE IN ENGLISH

- Age:
- What kinds of somatic practices do you engage in?
- How long have you been practicing this/these?

- How do you define somatic awareness? (Somatic meaning bodily)
- What does somatic awareness mean to you?

Definition for the interviewee: Somatic awareness refers to the mindfulness and understanding of somatic experiences such as sensations, feelings and emotions as well as bodily experiences such as gestures, movement, body language and posture.

- How would you describe your general level of awareness of somatic experiences in everyday life? Can you give examples of how somatic awareness occurs to you? You can think of a scale from 1-10 (1= not somatically aware at all). How do you become aware of somatic experiences?
- Can you describe a recent situation where you had to make a significant decision? Was there specific sensations, feelings or emotions or specific bodily experiences such as gestures, movement, and posture that affected your decision?
- How do you understand and utilize somatic awareness in decision making?
- In general, what type of decisions do you need/use somatic awareness in? How do you rely on somatic awareness then? Is this intentional?
- Have you had any significant life experiences that have affected your ability to be somatically aware in decision making?
- Do you enhance your somatic awareness in any way? Can you please describe this process?
- Are there certain types of decisions or situations in which you feel more reliant on somatic awareness, and others where you rely more on logical thinking? Can you explain why?
- Can you think of any challenges or limitations you face when trying to incorporate somatic awareness into your decision-making process?

- How does your culture or society view somatic awareness in decision making? How do you see that these play a role in how you utilize somatic awareness?

INTERVIEW GUIDE IN FINNISH

- Ikä
- Millaisia somaattisia lajeja harrastat?
- Kuinka kauan olet harrastanut tätä/näitä?

- Miten määrittelet omin sanoin, mitä kehotietoisuus tarkoittaa?
- Mitä kehotietoisuus merkitsee sinulle?

Määritelmä haastateltavalle: Kehotietoisuus (somaattinen tietoisuus) viittaa tietoisuuteen ja ymmärrykseen somaattisista kokemuksista, kuten aistimuksista, tunteista ja tuntemuksista, sekä kehollisista kokemuksista, kuten eleistä, liikkeestä, kehon kielestä ja asennosta.

- Miten kuvailisit sinun päivittäistä kehotietoisuuden tasoa? (1-10, josta 1=en ole kehotietoinen ollenkaan, 10=hyvin kehotietoinen) Osaatko kertoa esimerkkiä, miten kehotietoisuutesi ilmenee?
- Pystytkö kuvailemaan tilannetta, jossa olet lähiaikoina joutunut tekemään tärkeän päätöksen? Miten kehotietoisuutesi vaikutti päätökseen? (Mitä tunteita, kehollisia tuntemuksia, eleitä, liikkeitä, asentoja koit tässä tilanteessa?)
- Yleisesti, millaisissa päätöksissä tarvitset/käytät kehotietoisuutta? Miten tällöin luotat kehon viesteihin?
- Onko sinulla ollut joitain merkittäviä kokemuksia, jotka ovat vaikuttaneet kykyysi olla kehotietoinen päätöksenteon aikana?
- Kehitätkö kehotietoisuuttasi millään tavalla? Jos kyllä, kertoisitko miten?
- Kohtaatko päätöksenteko tilanteita, joissa tukeudut enemmän kehotietoisuuteen ja toisia, joissa tukeudut enemmän loogiseen ajatteluun? Selittäisitkö, miksi näin on?
- Miten ymmärrät kehollisia viestejä/ kehollista informaatiota?
- Kohtaatko vaikeuksia tai rajoituksia nojatessasi kehotietoisuuteen päätöksenteon aikana?
- Miten koet, että kulttuurissasi ja yhteiskunnassasi nähdään kehotietoisuus ja sen käyttö päätöksen teossa? Miten tämä näkyy omassa kehotietoisuutesi käyttämisessä?

These same interview questions were given to participants two to three weeks before the interview, excluding the definition of somatic awareness.

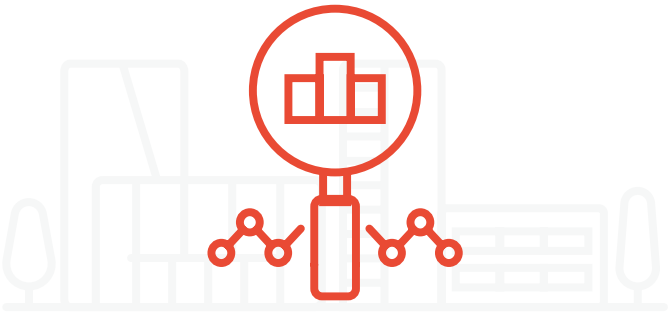
APPENDIX 2. CONSENT FORM FOR PARTICIPANTS

Tietoa tutkimukseen osallistuvalle

Hei!

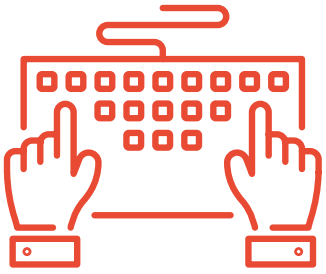
Tämän tutkimuksen toteuttaa Jyväskylän yliopisto ja siitä vastaa Kreetta Craycroft.

Tutkimuksen tarkoituksena on tutkia, miten yksilöt hyödyntävät kehotietoisuuttaan päätöksenteossa. Tutkimus toteutetaan haastatteluin joko videon välityksellä tai kasvotusten. Tutkimukseen osallistuttua haastateltavalla on mahdollisuus saada tietoa omasta kehotuntemuksestaan sekä päätöksentekoprosessista itsetutkiskelun kautta.



Jotta voin käsitellä henkilötietojasi tutkimuksen toteuttamiseksi, minulla on oltava siihen riittävä peruste. Tässä tutkimuksessa käsittelen tietojasi yleisen edun perusteella ja pyydän sinulta suostumuksen osallistua tutkimukseen. Tutkimuksen tulokset ovat kaikkien hyödynnettävissä.

Pyydän Sinua mukaan tutkimukseeni, koska pidän arvokkaana subjektiivista kokemustasi kehotietoisuudesta ja päätöksenteosta sekä koen jokaisen näkemyksen edesauttavan ymmärrystä kehollisesta tiedosta sekä olevan arvokasta tietoa tutkimukselle.



Vapaaehtoisuus ja tutkittavan oikeudet

Tutkimukseen osallistuminen on täysin vapaaehtoista. Voit kieltäytyä haastattelusta tai keskeyttää tutkimukseen osallistumisen. Sinun ei tarvitse kertoa minulle, miksi et halua osallistua. Jos sinulla on kysyttävää oikeuksistasi voit olla yhteydessä myös yliopiston tietosuojavastaavaan

tietosuoja(at)yu.fi, p. 040 805 3297].

Tietoa tutkimuksesta

Tulen haastattelemaan sinua (lokakuu 25-joulukuu 10. 2023 välisenä aikana) Haluan tietää Sinusta, millaisia kokemuksia sinulla on/on ollut kehollisen tiedon hyödyntämisessä päätöksenteko tilanteissa. Haastattelu kestää noin 1 tuntia. Jos annat luvan, äänitän keskustelumme.

Suojaan keräämäni henkilötiedot

- Keräämäni tiedot Sinusta: ikä ja harrastus tausta
- Käsittelen haastattelussa saadut tiedot luottamuksellisesti ja nimettömästi. Kukaan muu ei kuuntele äänitettä kuin minä. En kerro kennellekään niitä asioita, joita kerrot minulle. Olen käynyt yliopiston Tietosuoja ja tietoturvakoulutukset. Noudatann myös yliopiston ohjeita.
- EU/ETA siirrot ja niitä koskevat suojatoimet [Tietojasi käsitellään vain Suomessa, eikä niitä siirretä ulkomaille].

Tietojen arkistointi

Jos annat luvan, tallennan tarinasi nimettömästi ja pysyvästi Yhteiskunnalliseen tietoarkistoon myöhempää tutkimusta varten. Silloin muutkin tutkijat voivat lukea tarinasi, ja käyttää sitä tutkimuksessaan.

Tutkimuksen tulokset

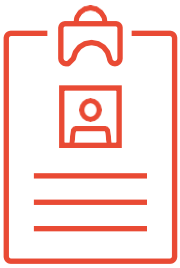
13 Tutkimuksesta valmistuu tieteellisiä julkaisuja, joiden kautta jaetaan uutta tietoa. Aiheesta pidetään myös esityksiä ja annetaan opetusta.

Tutkittavan oikeudet

Voit kysyä minulta mitä tahansa tutkimuksesta ennen haastattelua, haastattelun aikana tai sen jälkeen. Sinulla on oikeus tarkastaa tai oikaista antamasi tiedot, voit myös kertoa minulle, että et halua tietojasi käsiteltävän ja tehdä valitus henkilötietojesi käsittelystä.

Pyydän sinua allekirjoittamaan suostumuslomakkeen, kun teemme haastattelun. Lomakkeella voit antaa minulle luvan käsitellä niitä tietoja, joita minulle kerrot.

Lomake on tämän tiedoston viimeisellä sivulla.



Suostumus osallistua tutkimukseen

Minua on pyydetty osallistumaan tutkimukseen: Somatic awareness in decision making

Olen lukenut yllä olevat tiedot ja ymmärtänyt ne. Olen saanut tarpeeksi tietoa tutkimuksesta. Kreetta on kertonut minulle tutkimuksesta myös suullisesti, ja vastannut kaikkiin kysymyksiini tutkimuksesta.

Ymmärrän, että tähän tutkimukseen osallistuminen on vapaaehtoista. Minulla on oikeus, milloin tahansa tutkimuksen aikana keskeyttää tutkimukseen osallistuminen. Minun ei tarvitse ilmoittaa keskeyttämiseen eikä siitä aiheudu minulle mitään ikäviä seuraamuksia.

☐ Kyllä haluan osallistua tutkimukseen.

Päiväys

Tutkittavan allekirjoitus

Tutkittavan nimen selvennys

Tutkijan allekirjoitus

Kreetta Craycroft

Tutkijan nimen selvennys