

## Body awareness in healthy subjects – a qualitative study

Gunhild Kjölstad , Amanda Lundvik Gyllensten & Gunvor Gard

To cite this article: Gunhild Kjölstad , Amanda Lundvik Gyllensten & Gunvor Gard (2020): Body awareness in healthy subjects – a qualitative study, European Journal of Physiotherapy, DOI: [10.1080/21679169.2020.1845792](https://doi.org/10.1080/21679169.2020.1845792)

To link to this article: <https://doi.org/10.1080/21679169.2020.1845792>



© 2020 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

---



Published online: 16 Nov 2020.

---



Submit your article to this journal [↗](#)

---



View related articles [↗](#)

---



View Crossmark data [↗](#)

---

## Body awareness in healthy subjects – a qualitative study

Gunhild Kjölstad\*, Amanda Lundvik Gyllensten and Gunvor Gard

Department of Health Sciences, Lund University, Lund, Sweden

### ABSTRACT

**Background:** Qualitative research concerning body awareness has focused on how patients with different diagnosis experience body awareness. No earlier study has focused on healthy adults' experiences of body awareness.

**Aim:** The aim of this study was to explore and describe healthy adults' experiences of body awareness.

**Methods:** Fifteen healthy informants were interviewed individually, and the transcripts were analysed according to qualitative content analysis.

**Results:** Three themes describing experiences of body awareness among healthy adults: A bodily grounding and identity forming process throughout life, Interpersonal relationships through the body, and To be visible and exposed in society.

**Conclusions:** Body awareness among healthy adults was experienced as a bodily and identity forming process throughout life. In this process interpersonal relationships were developed through the awareness of the body. Body awareness was also experienced as being visible and exposed in society. Body awareness was not only related to individuals experiences and affects our relations and behaviours from inside and out but was also related to group norms and societal norms. This is important for health promotion in different contexts in society.

### ARTICLE HISTORY

Received 29 June 2020

Revised 23 October 2020

Accepted 29 October 2020

Published online 13 November 2020

### KEYWORDS

Body awareness; self-awareness; healthy subjects; body image; adulthood

## Background

Awareness of one's body has been subject to research in several disciplines, for example psychology, medicine and physiotherapy. In psychological research body awareness is described as basic for the experience of the self and identity and develops early in life [1,2]. Awareness that the self is connected to one's body is a result of both exteroception (input from the body surface) and interoception (perception of the body from within) Tajadura-Jiménez and Tsakiris [3]. To experience the body as one's own is a prerequisite for almost every cognitive function and it shapes individual psychological identity [4]. In relation to social interaction, Gao et al. claim that they 'provide evidence that the body influences one's social cognition through interoception' [5]. They also 'suggest that improving the sensitivity or accuracy of interoception can enhance one's ability to understand the mental state of others, thereby enabling better social communication' [5]. In sociology, an increased interest in body awareness as a social force towards change has been shown [6].

In medical research, body awareness has been defined in different ways, often with focus on interoception and its role in relation to different conditions/diagnoses. It has been described as an 'attentional focus on and awareness of internal body sensations' [7] where both the sensations and how these sensations are understood is included [8]. The

brain continuously gets information from the body, throughout life [9]. Movements and behaviours are the results of a combination of both impulses from the outer world as well as from internal reflexes and bodily sensations, at the same time new sensory and emotional experiences are created [10]. Increased body awareness can be beneficial as it gives the opportunity to make behavioural changes before symptoms of i.e. pain become hindering [7].

In physiotherapeutic research as well as clinical practice, body awareness is described to be an important part of self-awareness, since both the awareness and development of the self and experiencing an identity is so closely connected to the body [6,8]. Treatment approaches like yoga, Tai Chi, Body-Oriented psychotherapy, Basic Body Awareness Therapy, mindfulness-based interventions, Alexander Method, Feldenkrais, and Norwegian Psychomotor Therapy, are described as enhancing body awareness in a beneficial way [6,11,12]. Body awareness research has often focussed on increasing body awareness in chronic pain or mental health conditions. [4,10,13–17].

Embodiment means that it is possible to experience the body parallel with experiencing the outside world [18]. When we face some kind of disturbance in our relationship to the world, an outer physical disturbance or a change within our body, this will affect our communication with and relation to the world [19]. We can understand this as a disharmony

**CONTACT** Gunhild Kjölstad  [gunhild.kjolstad@skane.se](mailto:gunhild.kjolstad@skane.se)  Department of Health Sciences, Lund University, Lund, Sweden

\*Psychiatry Skane, Child and Adolescent Psychiatry, Eating Disorders Centre, Lund, Sweden

© 2020 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

between ourselves, our intentions, and the surrounding world [20]. A model of embodied identity has been identified in recent qualitative research [21] which also have shown the importance of relations between the body and the outer world. The model included two themes: living in the body and living in relation to others and in society.

There is no qualitative research so far focussing on healthy informants' descriptions of body awareness. It is important for mental health promotion in different contexts in society to study how healthy people understand body awareness. The results of this study can also be a basis for a deeper understanding of body awareness in patients with pain and mental health conditions. So this study is important both in mental health promotion in general as well as for physiotherapy and clinical practice.

## Aim

The aim of this study was to explore and describe healthy adults' experiences of body awareness.

## Methods

### Study design

A qualitative design with semi-structured qualitative interviews was chosen to answer the aim of the study. A qualitative method allows the collected data to be analysed on different levels of abstraction. The method used was qualitative content analysis as described by Graneheim and Lundman [22].

### Informants

Healthy subjects were recruited by billposting in public buildings such as libraries, shops, non-profit organisations and sports centres. Inclusion criteria were that one should consider oneself as healthy, be 18–65 years old and speak adequate Swedish. Sixteen persons who wanted to participate contacted the first author by e-mail or text message. Fifteen of these considered themselves completely healthy and were included in the study, one was excluded due to pain. No medical examination was carried out. The participants varied in gender and age. Characteristics of the informants are presented in Table 1.

### Ethical considerations

The study was conducted in accordance with the World Medical Association Declaration of Helsinki [23]. The participants were informed about the study in written and orally, before signing a written consent to participate. They were informed that they participated voluntarily and that they could withdraw at any time without giving any explanation. The interviewer was prepared to guide the informants to adequate health care in case the interview caused a negative reaction. In a few of the interviews the interviewer gave a short supporting comment as feedback on the participants' reflections about difficult feelings and situations. The data

**Table 1.** Characteristics of the informants.

N = 15	Men	Women	Total
Sex	6	9	15
Age			
18–25	1	1	2
26–35	1	3	4
36–45	3	3	6
46–55		1	1
56–65	1	1	2
Birth country			
Sweden	5	9	14
Other European country	1		1
Education level			
Secondary school	2	1	3
University	4	8	12

was made confidential so that no personal information that could make an informant recognisable was included. The transcriptions and tapes were kept in a locked space. The study was approved by the Ethics committee at the Department of Health studies at Lund University (VEN 92-14). No compensation was offered.

### Interview procedure

The informants were interviewed individually. Each interview lasted 30-70 min, depending on the informant's descriptions. The informants chose time and place for the interview. Some informants were interviewed at their workplace, some at the interviewer's workplace (a psychiatric outpatient clinic) and some of the interviews took place in a neutral room that was rented for the occasion. All interviews took place in a town in southern Sweden. The interviews were conducted in December 2014 to January 2017.

A semi-structured interview guide with open-ended questions was developed (Table 2). The interview guide contained questions focusing on the perception of body awareness as a concept, the relationship to their body in general and if and how their awareness of the body influenced the relation to other people and society in general. A pilot-interview was conducted, and the questions were adjusted to be comprehensible to someone without any professional experience of body awareness. The pilot-interview was not included in the study. Each participant could talk freely in the interview. The interviews were performed by the first author who also tape recorded and transcribed the interviews.

### The qualitative analysis

The data was analysed using qualitative content analysis according to Graneheim and Lundman [22]. The analysis was performed in the following steps: First, the transcriptions were read by the first researcher several times to get an overview and sense of the whole. Thereafter, all content that responded to the aim was identified as meaning units across all interviews by the first author in a manifest content analysis. Then the material was coded and condensed, and the content was sorted in categories (the latent part of the analysis) (Table 3).

The categories were then grouped into three themes. All the interview material was included in the same analytic process. The analysis was discussed between the three researchers,

**Table 2.** Interview guide.

Interview guide
How would you describe body awareness, what does body awareness mean to you?
Could you describe a special occasion or period in your life when your body was particularly important to you?
What happens with your body awareness when you are in social situations or in other people's company?
Can you describe an example of non-verbal communication and how non-verbal communication influences relations?
Do you think that society today underlines experiencing the body and body awareness?
Can you describe how you think that body awareness influences participation in society?

**Table 3.** Example of the analysis process from meaning unit to theme.

Meaning unit	Code	Category	Theme
<i>People who are not comfortable in their own body ... , for example very fat people, people easily look down on them and often they push themselves down too. It becomes obvious when they meet other people.</i>	Being uncomfortable	Experiencing norms about physical appearance	
<i>At my work we had a health-care-program with competitions etc. /.../ It is something you are really supposed to do. If you do not exercise, you are by definition a bad person. I think this affects many people.</i>	human dignity questioned	Experiencing norms about staying healthy	To be visible and exposed as a body in society
<i>If you have a positive view on your body, you will be able to do what you want to do. That you in different situations will not experience your body as a hindrance.</i>	Do what you want	Experiencing the body in society	
<i>... people in my profession are, especially in my generation, a group, that is not very focussed on the body. /.../ At work I don't think about my body at all, I am just being in my natural condition.</i>	Being natural	To "fit in" bodily	

**Table 4.** The results consist of three themes and each theme of a number of categories. These are not listed in hierarchical order.

Categories	Themes
Being aware of the body and self – A process of identity building	A bodily grounding and identity forming process throughout life
Being dependent on the body	
Body language and bodily communication	Experiencing the body in social relationships
Distance and closeness in relations through the body	
Being aware of the body in the presence of others	
Experiencing norms about physical appearance	To be visible and exposed as a body in society
Experiencing norms about staying healthy	
Experiencing the body in society	
To "fit in" bodily	

and revisions were made, until a common understanding was reached. Representative quotations from the interviews were chosen to illustrate the result and the informants were numbered, for example (Inf 8). All researchers were familiar with clinical use of body awareness methods and two of the researchers had previous experience of qualitative methodology in research. The first researcher had previous experience of working with patients with disturbed body awareness.

## Results

Three themes emerged from the qualitative analysis: A bodily grounding and identity forming process throughout life. Interpersonal relationships through the body, and To be visible and exposed in society. The total result in terms of categories and themes is described in Table 4.

In the following the themes will be described, together with its categories and illustrating quotations.

### **A bodily grounding and identity forming process throughout life**

The first theme contained two categories: *Being aware of the body and self - A process of identity building* and *Being dependent on the body*.

### ***Being aware of the body and self - A process of identity building***

Body awareness was experienced to be a process of being aware of the body and self, and forming the identity during life. They experienced their identity as being grounded in the body. The awareness of the body formed their experiences of themselves. The body was described as a help to identify different emotions. Through the body they discovered feelings of e.g. being insecure, nervous, or stressed. Different bodily characteristics and what the body performed affected who they considered themselves to be. To be comfortable in their own bodies affected their feelings, body language and communication with others.

*When I think about body awareness/.../I think it is about how it is in everyday life, how the body feels, and being aware of feelings, noticing if you are tense or relaxed,/.../and to be able to concretize for yourself how you feel, right now... (Inf 8)*

*When you are focused mentally the body performs, so to speak. You know... that means, when it goes well, you don't know if it was because you were strong or if it was because you were mentally focused. It becomes the same thing. (Inf 1)*

The informants described that awareness of one's own body began during childhood and developed from childhood until adulthood. Some had positive experiences from childhood of playing or doing sports, feeling strong and able

to do things and having fun with family and friends. Others were criticised for being weak or fat or feeling insufficient or uncomfortable. A few informants experienced difficulties in the relation to their body growing up, related to not fulfilling expectations in sports, or feeling less skilled than peers. They described feelings of sadness and inadequacy in these situations. Adolescence was perceived as the period when the body and appearance became more important than during childhood. When growing up as an adult with an own identity, the body's appearance was less in focus.

*As a child you don't reflect so much about the appearance, you don't give the body so much thinking. (Inf 2)*

### **Being dependent on the body**

In this category the informants described how the bodily function played a role in their daily lives. When the body was functioning well and was healthy - it was often not noticed. When the body was changing or failing in some aspect the informants became more aware of how dependent they were on the body. Changes in body functions were by some informants used to better understand and pay attention to their health. Sometimes the body had the role of communicating that life changes were needed. Sometimes the informants became aware of the body as a source of joy, showing that the informant was a strong person who could do what he/she wanted, and this created a general feeling of self-confidence.

*When I couldn't keep the same pace as my friends I felt I should be able to do that. A little pathetic not to be able to do that. (Inf 1)*

*I had a period during my studies when I often had palpitations. The first times I felt scared but then I realized it was caused by stress. Since then I know what stress feels like and that it is not dangerous. Or it is dangerous in the way that it is telling me I have to 'cool down'. (Inf 2)*

### **Experiencing the body in social relationships**

The second theme concerned interpersonal relationships through the body. It described how the informants experienced their body in different interpersonal relationships and from different perspectives. This theme contained three categories, *Body language and bodily communication*, *Distance and closeness in relations through the body* and *Being aware of the body in the presence of others*.

#### **Body language and bodily communication**

The informants described how they found bodily communication to be important in different ways in all kinds of personal relations, professional and private. Most informants described how they were troubled by people coming too close or staring too much in their eyes, or the other way around avoided eye-contact. Some compared to situations in other cultural contexts where they had experienced too intensive eye-contact and how distracting, and even scaring, they experienced this to be. Informants also described being

aware of their own body language e.g. in professional situations, how they deliberately handled situations where they needed to demonstrate, for example self-confidence by changing the position or trying to breathe calmly. They also described how they reacted to other people's bodily signals and used their own reactions to other's body language to modify their own behaviour.

*It is so personal, if someone looks into your eyes./.../It can become too intense, and you need to take a break. Perhaps you look in another direction, things like that. Perhaps you think better when you don't look at the person you are talking to, I believe. (Inf 10)*

*If you have an unsteady eye-contact you may seem uncertain of yourself. I think it affects relations to other people a lot; how you sit, how you open up, so to speak. I really believe you can read many emotions by looking at people's body language. And I have noticed that sometimes when I go into the office of some colleagues at work who I respect, I may stand like this, protecting myself. (Showing arms crossed and looking a bit down to the floor.) (Inf 4)*

#### **Distance and closeness in relations through the body**

This category contains reflections about how the informants used their bodies in terms of creating a personal space by deliberately balancing between physical distance and closeness, and how this has an importance for personal relations, with e.g. family, friends and in professional relations. Many informants have experienced the importance of mutuality in physical distance and closeness in interpersonal relations. This was experienced in situations when the need for personal space was not respected by the person they spoke to, which led to feelings of being 'captured'. Distance was especially important in formal relations and with people whose company made the informants feel insecure. The need for distance could change when they got to know people better. The expression to be close to someone seemed to mirror not only a symbolic level of a relationship but also a physical. Some informants described situations when bodily closeness led to emotional closeness, while others stressed that it is the feeling of intimacy that leads to more physical contact/closeness. At the same time some informants described how their attitudes to body contact and the need for personal space changed according to their own mood. Some of the informants believed the need for space to be a part of the Swedish culture, and that people in other cultures generally create closer physical bonds more quickly.

*To people I don't know very well I prefer a certain physical distance. So perhaps it is the same thing to let someone come close to you both physically and mentally. (Inf 3)*

*When you feel good you take more initiatives to physical contact, you are more relaxed, compared to when something is weighing on your mind or... is wrong in the relationship you're in, then you withdraw, or at least I do. (Inf 8)*

#### **Being aware of the body in the presence of others**

Some of the informants experienced that other people's presence made them more aware of their own body. They started to e.g. think about their appearance, discovered



bodily sensations or automatically changed position, muscular tension or mood. The presence of other people strengthened their experience of the body, positively or negatively. They could focus on both talking to someone and experiencing their own bodily reactions at the same time. They also described an ability to observe the body language of others and to adapt their own behaviour to the situation. Some informants described that other people's company had influenced their body awareness to a greater extent earlier in life, especially during adolescence, compared to today.

*You pay more attention and you are more aware when you are with other people./.../You straighten up your posture and things like that, you think about how you appear in the situation you are in/.../That also coheres with the status you have in the group, how well you know others in the group and which relation you have to them. If you have a certain position from your profession or level of education. (Inf 6)*

Some informants experienced that being in close relations affected their awareness of the body mostly in a positive way by making them feel more comfortable with their body. Some expressed difficulties with talking about the physical part of a close relationship but considered it important.

*I believe the relationship with my partner has meant a great deal for my body awareness, he has made me feel comfortable with both myself in general and with how I look. Somehow that has made me a calmer person. (Inf 11)*

### **To be visible and exposed as a body in society**

The third theme contained experiences of being visible and exposed as a body in society. Here four categories were developed: *Experiencing norms about physical appearance, experiencing norms about staying healthy, experiencing the body in society and to 'fit in' bodily.*

#### **Experiencing norms about physical appearance**

Almost all informants described societal norms for what was considered good or bad in appearance, and the consequences when someone failed to reach these norms. Especially prominent in the interviews was the norm to be slim. The informants described the norm of being thin and showing a spotless surface as negative for their wellbeing. These norms, they believed, put people under pressure. Some described negative social consequences for overweight people. At the same time the informants described that also their own focus was on their physical appearance, and they found themselves trying to adapt more to the general norm than they would like to. The female subjects more often described negative feelings related to not fulfilling the norms of physical appearance. When the informants talked about these norms, they mentioned the norms about physical appearance in a generalising way. The informants talked mostly about their own feelings and opinions, but also how they believed other people may think and feel. The informants did not explain how these norms reached them or if they tried to change them, they were taken for granted. Still the

informants wished these norms could influence their lives to a lesser extent.

*People who are not comfortable in their own body..., for example very fat people, people easily look down on them and often they push themselves down too. It becomes obvious when they meet other people. (Inf 12)*

*To want to change things surgically or other ways... I think people put themselves through too much, and that is not good. The value, or dignity, of being a human being..., that value is shifted. We need to talk about repairing this. (Inf 8)*

#### **Experiencing norms about staying healthy**

The informants described how norms in society both included aspects of taking care of the own body in order to feel good, and to be fit and healthy. These two were often considered to be related e.g. 'when you exercise you will feel better in general'. Norms about health were experienced both as something positive that helped people to give their needs priority, and as a progress from a society only having norms about how the body should look. Norms about health had contributed to the fact that it is easier to find activities that aim to improve health. Others experienced these norms as forming a 'duty to be healthy' - rather to be a productive citizen or employee, than to be a happy, content person. According to the informants, our society also linked a physically active lifestyle to individual moral values - to be physically active meant to be a responsible person. The body, they believed, could be used to communicate personal qualities and characters, according to the informants.

Some informants also mentioned that norms about staying healthy put a pressure on the individual and that people who do not try enough to be fit and stay healthy may risk to be disliked. There was also a risk that the norms of the individual's responsibility to stay healthy could create guilt in people who become ill.

Some of the informants took the analysis of norms of health and appearance to a higher level. These informants described the experience of a society where people have the responsibility to take care of themselves. Health as well as appearance. The informants experienced these norms as more or less impossible to fulfil, at least at the same time as fulfilling other societal norms, like to work full time, spend time with your family, exercise leisure activities, and have a well-organised life. The norm to actively stay healthy seemed to contradict other societal norms. Newspapers and advertisements, insurance companies, other media - including social media - as well as employers and friends, contributed to this pressure which they experienced risk resulting in a feeling of failure and frustration.

Regarding these norms, the informants expressed a sorrow participating in and contributing to a societal stress concerning the body, both the ideal of thinness (above) and of being healthy, which they wanted to distance themselves from.

*At my work we had a health-care-program with competitions etc. The 'step-counting-competition' I think was the clearest example./.../For colleagues who did not move so much it sent a signal, and*

they believed" I am clearly less worth than everyone else, who exercise more than me."/.../It is something you are really supposed to do. If you do not exercise, you are by definition a bad person. I think this affects many people. (Inf 15)

To me there is a contradiction in the norms; one should listen to one's own needs and take care of oneself but at the same time the professional life requires something else. Many people have difficult working tasks, and demanding employers. That situation makes it a whole lot more difficult to 'fulfill oneself', don't you think? (Inf 7)

### Experiencing the body in society

The informants experienced that their awareness the body influenced different aspects of life in society and the quality of life. Some were convinced that awareness of and a good relation to the body could facilitate life, and stressed the link between body awareness and self-confidence in general. Most informants' thought a lacking body awareness could lead to difficulties. They linked body awareness to both professional, societal, and personal relations.

If you have a positive view on your body, you will be able to do what you want to do. That you in different situations will not experience your body as a hindrance. (Inf 10)

Writing a job application nowadays you write if you have run a marathon or this and that... That means, there is a tremendous fixation on bodily accomplishments, and this must be caused by a fixation at the body, and that this is the basis of how people value themselves. (Inf 7)

### To 'fit in' bodily

Some of the informants described how the body could play a role in the feeling of belonging to a group. At the same time this mechanism could exclude others, whose bodies did not look or perform what the context presupposed. Most often the informants perceived these demands of fitting in within more or less homogeneous groups, e.g. with peers of their acquaintance or in professional situations. Focus could be on the physical appearance or on demonstrating a physically active lifestyle. Sometimes this group was perceived to be the family – with demands on e.g. eating healthy food and having an active lifestyle. Not fitting in bodily meant to risk being excluded from the group.

The group could on the other hand be experienced as helpful. To collectively use the body to express a lifestyle that was experienced as tolerant and including, was described to create a special form of positive connection within the group.

Informants also gave examples of situations when a sense of community was created by not focussing on the body, at least not on the physical appearance.

...people in my profession are, especially in my generation, a group, that is not very focused on the body./.../At work I don't think about my body at all, I am just being in my natural condition. (Inf 7)

I felt I belonged to the group of thin and popular girls. I felt better than before after losing weight./.../Although I was ideologically

feminist-aware already at the time, I could not renounce the feeling, of wanting to look a certain way. (Inf 8)

## Discussion

### Discussion of method

In qualitative studies trustworthiness in terms of credibility, dependability, and transferability is important to consider [22]. Concerning credibility, the researcher's ability to capture the reality, the question is if we have understood the informants well enough. The first author who collected the data is using body awareness methods in her daily clinical work and is familiar with the concept and let the informants talk freely about the concept to cover all aspects of it. In addition, the first author performed the qualitative analysis close to the text and the analysis was discussed and confirmed by the other researchers, who were experienced qualitative researchers with a long-term understanding of body awareness as a concept and method. The researchers had a pre-understanding of the concept, which in a way influenced how the questions were formulated, and the analytic process. The qualitative results were well grounded in the collected data as the analysis was close to the text.

The recruitment method implied that we recruited persons interested in the concept and willing to talk about their experiences of it. This was important for the credibility [24]. The selected informants varied in terms of gender and age. Many of the informants mentioned that after deciding to volunteer for the study they had paid more attention to their bodies than usually, which may have increased their body awareness and interest to talk about this topic and resulted in more rich and varied data.

In this study we relied on the informant's own confirmation that they were healthy. No one expressed a need of support in connection with or after the interviews.

Dependability as defined by Graneheim and Lundman [22] was considered in the present study. The data collection lasted for 26 months, which included a great variety of experiences of the topic, an advantage of the present study. All informants answered the same questions, but with to some extent different follow-up questions. The 'ability of the researcher to be flexible and change perspective in accordance with the emerging process' is seen as an advantage in qualitative research [25].

Concerning transferability, the knowledge obtained from this study may be transferable to similar contexts, which means healthy adults with a comparatively high level of education in western countries [24]. Some informants believed that some cultural norms concerning for example eye contact and physical distance may differ between cultures.

### Discussion of results

The main result of this study showed that body awareness among healthy adults was experienced as a bodily and identity forming process throughout life. In this process interpersonal relationships were affected by the awareness of the

body. Body awareness was also experienced as being visible and exposed in society.

The first theme was *Body awareness was experienced as a bodily and identity forming process throughout life*. Such a connection between the body and the forming of the identity is confirmed by earlier quantitative psychological and neurological research [1,2], but has not until now been confirmed in qualitative research. The informants in the present study clearly stated different aspects of the body as a part of their identity, the appearance, physical characteristics as well as physical function in different situations. They seemed sure of their body experiences and expressed how they interpreted and used bodily signals in their day-to-day life. Body awareness was also a way of clarifying the unity mind-body. A quantitative study by Bekker et al. [26] confirmed that healthy subjects could be aware of their appearance and pay attention to inner bodily signals at the same time. This was performed as a two-way communication, first thoughts about the body influenced what they did in different situations, and then the body and behaviours influenced thoughts and feelings.

The informants in the present study described that experiences during childhood and adolescence had changed their body awareness and influenced them as adults. They could handle different signals from the body in a nuanced way and were aware of how and when they felt dissatisfied with their body, so the body did not harm them in social life. Such thoughts have to some extent been described by Kyselo [27] who suggested an integration of theories describing the self as 'an isolated bodily individual with an individual as a participant in society' [27].

The results showed that three informants reported body dissatisfaction, e.g. feeling too fat, when they grew up. The impact of comments from peers and family members about the body seemed to enhance negative feelings compared to informants reporting that they had felt they were less skilled in i.e. sports or physical activities than peers. In the interview situation these memories still seemed very vivid. The impact of negative comments about the body in childhood has earlier been described by Eli et al. [28]. Even though many parents believed that the family had a primary influence on children's body image, they did not know how to influence their child's body image in a positive way [29].

The second theme concerned *Experiencing the body in social relationships*. Here, body language and bodily communication were important. The informants experienced distance and closeness in their relations through the body. They also became aware of their body in the presence of others. No qualitative study has earlier studied the relation between interpersonal relationships and body awareness. One earlier quantitative study has been performed showing that individuals with a more positive body image tend to perceive higher quality in romantic relationships [30]. Close relationships were in the present study experienced as a unique situation to feel confirmed. When the body was truly accepted by someone else, the person felt totally accepted as a person.

The third theme concerned *To be visible and exposed as a body in society*. In summary the informants experienced

norms about physical appearance, norms about staying healthy, they experienced the body in a societal context and experienced how to 'fit in' bodily.

The informants experienced norms about physical appearance. However, when describing feelings of dissatisfaction with their body appearance, they rather seldom referred to objective body attributes. They seemed aware that their opinion not necessarily represented reality. Their descriptions were similar to Cash's descriptions about the role of body image. He claims that the 'individuals' own experiences of their appearance are often more psychosocially powerful than the objective or social 'reality of their appearance' [31].

The informants described a flexibility regarding internal sensations from the body, sometimes feeling tense and warm, sometimes being more concentrated on physical appearance. The societal ideal to be thin - mentioned by almost all informants - seemed to be internalised to a higher extent in female participants, as they expressed more dissatisfaction with their bodies. This has been confirmed in an earlier study [32].

The informants experienced norms about staying healthy. Ideals which were experienced to contribute to good health and well-being to someone, could be understood as demanding and putting a pressure on the individual by someone else. The informants were influenced by different perspectives. Ideals and demands influenced their own life, lives of others and processes on a societal level. Health involves a dynamic balance between individuals and their environment, including all individuals' capacity to live and achieve their potential. Health can be promoted by processes in society ensuring empowerment, equality, partnership, participation and self-determination [33]. To be healthy was in the present study to a high extent experienced as to be physically active, which meant to be a responsible person. A change of norm in society from traditional disease prevention to a variety of other economic and social rationales can be seen according to Piggitt [34]. He considers physical activity as increasingly loaded with values in policies to shape conceptions of how citizens should be and act physically [34]. The World Health Organisation (WHO) recently stated that a change in social norms and attitudes including increased physical activity is important to achieve [35]. WHO recommends all possible partners, as the state, education system, health care, nongovernmental organisations to collaborate in a 'partnership for action' to promote physical activity [35].

The informants experienced their body in a societal context. They described their body awareness in relation to group-norms and verbalised as well as non-verbalised societal norms in general. This is an interesting new finding. This deepens and expands the model 'Embodied identity' [21], where personal and societal relations were connected, but without deeper knowledge about how. Here it was shown that just as body awareness affects our relations and behaviours from inside and out, also the society as an environment has a great influence on us.

No earlier qualitative study has been performed to explore and describe healthy adults' experiences of body awareness. The present result is promising as it shows that



body awareness is not only related to individuals' experiences but also to group norms and societal norms. This is important for health promotion in different contexts in society. As body awareness is important for health, further studies also including interventions on group and societal level may be recommended for the future. The present result has also relevance for physical therapy when assisting patients to improve their body awareness to not only focus on experiencing the body from within but also include aspects on interpersonal and societal level.

## Conclusions

Body awareness among healthy adults was experienced as a bodily and identity forming process throughout life. In this process interpersonal relationships were developed through the awareness of the body. Body awareness was also experienced as being visible and exposed in society.

Body awareness is not only related to individuals' experiences and affects our relations and behaviours from inside and out, but is also related to group norms and societal norms. This is important for health promotion in different contexts in society.

## Disclosure statement

No potential conflict of interest was reported by the authors.

## References

- [1] Brownell C, Zerwas S, Ramani GB. So big" The development of Body Self-awareness in Toddlers. *Child Dev.* 2007;78(5):1426–1440.
- [2] Tsakiris M. The multisensory basis of the self: from body to identity to others. *Quart J Exp Psychol.* 2017;70(4):597–609.
- [3] Tajadura-Jiménez A, Tsakiris M. Balancing the "inner" and the "outer" self: interoceptive sensitivity modulates self-other boundaries. *J Exp Psychol General.* 2014;143(2):736–744.
- [4] Pia L, Garbarini F, Fossataro C, et al. Pain and body awareness: evidence from brain-damaged patients with delusional body ownership. *Front Hum Neurosci.* 2013;7:298.
- [5] Gao Q, Ping X, Chen W. Body influences on social cognition through interoception. *Front Psychol.* 2019;10:2066.
- [6] Mehling WE, Wrubel J, Daubenmier J, et al. Body awareness: a phenomenological inquiry into the common ground of mind-body therapies. *Philos Ethics Humanit Med.* 2011;6:6.
- [7] Mehling WE, Gopisetty V, Daubenmier J, et al. Body awareness: construct and self-report measures. *PLoS One.* 2009;4(5):e 5614.
- [8] Bekker MHJ, Croon M, van Balkom EGA, et al. Predicting individual differences in autonomy-connectedness: the role of body awareness, alexithymia, and assertiveness. *J Clin Psychol.* 2008; 64(6):747–765.
- [9] Damasio A. Mental self: The person within. *Nature.* 2003; 423(6937):227.
- [10] Thörnborg U, Mattsson M. Rating body awareness in persons suffering from eating disorders – A cross-sectional study. *Adv Physiother.* 2010;12(1):24–34.
- [11] Ekerholt K, Gretland A. 2018. Norwegian Psychomotor Physiotherapy, a brief introduction. In: Probst M, Helvik Skjaerven L, editors. *Physiotherapy in mental health and psychiatry. A scientific and clinical based approach.* Poland: Elsevier. p. 51–58.
- [12] Ruiter MD, Gamble A, Gueron LP, et al. 2018. Physiotherapy with Survivors of Torture and Trauma. In: Probst M, Skjaerven Helvik L, editors. *Physiotherapy in mental health and psychiatry – a scientific and clinically based approach.* Poland: Elsevier. p. 206–224.
- [13] Gard G. Body awareness therapy for patients with fibromyalgia and chronic pain. *Disabil Rehabil.* 2005;27(12):725–728.
- [14] Gyllensten AL, Ekdahl C, Hansson L. Long-term effectiveness of Basic Body Awareness Therapy in psychiatric outpatient care. A randomized controlled study. *Advances in Physiotherapy.* 2009; 11(1):2–12.
- [15] Mannerkorpi K, Gard G. Hinders for continued work among persons with fibromyalgia. *BMC Musculoskelet Disord.* 2012;13:96.
- [16] Råsmark G, Richt B, Rudebeck CE. Touch and relate: body experience among staff in habilitation services. *Int J Qual Stud Health Well-Being.* 2014;9:21901.
- [17] Skjaerven HL, Kristoffersen K, Gard G. How can movement quality be promoted in clinical practice? A phenomenological study of physical therapist experts. *Phys Ther.* 2010;90(10):1479–1492.
- [18] Merleau-Ponty M. 1962. *The phenomenology of perception.* London, Great Britain: Routledge.
- [19] Danielsson L. 2015. *Moved by movement: A person-centered approach to physical therapy in the treatment of major depression.* Doctoral dissertation, University of Gothenburg. Sahlgrenska Academy.
- [20] Bullington J. 2007. *Psychosomatics. Body, mind and the creation of meaning.* (Swedish: Psykosomatik. Om kropp, själ och meningsskapande). Lund, Sweden: Studentlitteratur.
- [21] Gyllensten AL, Skär L, Miller M, et al. Embodied identity—A deeper understanding of body awareness. *Physiother Theory Pract.* 2010;26(7):439–446.
- [22] Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today.* 2004;24(2):105–112.
- [23] World Medical Association Declaration of Helsinki – Ethical principles for medical research involving human subjects. Fortaleza: World Medical Association General Assembly; 2013. <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>
- [24] Graneheim UH, Lindgren BM, Lundman B. Methodological challenges in qualitative content analysis. *Nurse Educ Today.* 2017;56: 29–34.
- [25] Öhman A. Qualitative methodology for rehabilitation research. *J Rehabil Med.* 2005;37(5):273–280.
- [26] Bekker M, Croon MA, Vermaas S. Inner body and outward appearance – the relationship between orientation toward outward appearance, body awareness and symptom perception. *Personal Individual Diff.* 2002;33(2):213–225.
- [27] Kyselo M. The body social: an enactive approach to the self. *Front Psychol.* 2014;5:986.
- [28] Eli K, Howell K, Fisher PA, et al. Those comments last forever": Parents and grandparents of preschoolers recount how they became aware of their own body weights as children. *PLoS One.* 2014;9(11):e111974.
- [29] Liechty JM, Clarke S, Birky JP, et al. Perceptions of early body image socialization in families: Exploring knowledge, beliefs, and strategies among mothers of preschoolers. *Body Image.* 2016;19: 68–78.
- [30] Van den Brink F, Vollmann M, Smeets M, et al. Relationships between body image, sexual satisfaction, and relationship quality in romantic couples. *J Fam Psychol.* 2018;32(4):466–474.
- [31] Cash T. Body image: past, present and future. *Body Image.* 2004; 1(1):1–5.
- [32] Emanuelson L, Drew R, Köteles F. Interoceptive sensitivity, body image dissatisfaction, and body awareness in healthy individuals. *Scand J Psychol.* 2015;56(2):167–174.
- [33] Shain M, Kramer DM. Health promotion in the workplace: framing the concept, reviewing the evidence. *Occup Environ Med.* 2004; 61(7):643–648.
- [34] Piggitt J. Designed to move? Physical activity lobbying and the politics of productivity. *Health Education Journal.* 2015;74(1):16–27.
- [35] World Health Organization. Global action plan on physical activity 2018–2030: more active people for a healthier world. 2018. <http://apps.who.int/iris/bitstream/handle/10665/272722/9789241514187-eng.pdf?ua=1>.