The Body in Persons With an Amputation

Ana I. Sousa, Rui Corredeira, and Ana L. Pereira
University of Porto, Portugal

This study reports on a comparison of how two different groups of people with an amputation view their bodies and perceive how others view them. One group has a history of sport participation, while the other has not. The analysis is based on 14 semistructured interviews with people with amputations: 7 were engaged in sport and 7 were not. The following themes emerged: Body, Prosthesis, Independence, Human Person, and Social Barriers. One could conclude that participation in sport influences how people with an amputation perceive their body as they live with their body in a more positive way and they better accept their new body condition and their being-in-the-world. The social barriers that people with an amputation have to face daily were evident, and one of the most significant ideas was the importance of being recognized and treated as a person and not as a person with a disability.

In Western Cultures, dominant discourses concerning body image are based on physical attractiveness, youth, and the absence of physical defect or deformity. This emphasis on “beautiful body” can overshadow other personal attributes (Taub, Blinde, & Greer, 1999). It is likely that the importance given to the body has a negative impact on people with an amputation, particularly in their body perception. Indeed, there is evidence suggesting that attitudes toward people with physical disabilities are generally negative, simplistic, and discriminative (Arbour, Latimer, Ginis, & Jung, 2007). Such attitudes are the other staring that Sartre (1976) called “le regard.” For Sartre, the other is the one who makes me present, and who keeps me under his oppressive gaze. One potential way to diminish these constraints and enhance individuals with physical disability self-perceptions is through participation in sport (Blinde & McClung, 1997).

Sport for people with disabilities has been described as an element aiding the development of the self-concept and autonomy, facilitating social inclusion and body perception (Taub et al., 1999). Hence, it is likely that people with amputation(s) have these benefits when engaged in sport. Considering the impact sport participation has on the way people with disabilities experience their bodies and on the perceptions of their physical characteristics (Blinde & McClung, 1997), this study analyses how two different groups of people with amputation(s) view their bodies, and perceive how others view them. One of the groups has a history...
of sport participation and the other group has not. First, however, it would be useful to look into the wider theoretical context of this approach.

**The Body of the Person With an Amputation**

**The Body as the Being-in-the-World**

In German there is a distinction between a living body, *Leib*, and an inanimate or dead body, *Körper*. It is from the former that we find the origin of the term *lived body*, which states that the body of a living being has an essential structure of its own that cannot be captured by the language and concepts used to explain inanimate nature. This conception plays a central role within twentieth-century phenomenological thought and embraces the notion that the lived body is an “intending” entity. This means that it is bound up with, and directed toward, an experienced world (Leder, 1998).

Merleau-Ponty (1996) was one of the philosophers who has developed the conception of the lived body. For him, the world perceived through the body is the ground level of all knowledge, for it is through the body people gain access to the world. Moreover, our perception of everyday reality depends upon a lived body, i.e., a body that simultaneously experiences and creates the world. Merleau-Ponty links the concept of the lived body to the subject body of perception, rich in experiences throughout the context and in the relations that it establishes with the others and with the world that surrounds it. Thus, perception of everyday reality depends upon a lived-body, being the human body, the materialization of a certain way of being-in-the-world and our point of view on the world. As a body-subject, the body acts and by its actions constructs a world of social, intersubjective relations. In addition, Merleau-Ponty argues that we can only feel or otherwise experience ourselves in terms of these categories insofar as we come to see ourselves through the eyes of others. That is, we must step out of the particularity that is the primary state of our conscious being-in-the-world and take a good look at ourselves to try to understand what others see. In this way, one’s body is, in a sense, all that one knows of bodily life and it can only seem to have a deficiency by comparison, i.e., if one assumes the other’s view (Crossley, 2001). The interaction with others affords an outside perspective on ourselves, such that we can become objects for us and can experience ourselves as something or other, e.g., tall, small, fat, etc. (Merleau-Ponty, 1996).

It is likely that the person with an acquired amputation feels some differences in the perception of reality and in the vision of the world. Indeed, permanent disability is portrayed not only as a bodily change that impacts function, but a fundamental being-in-the-world change that impacts personhood (Goodwin, Thurmeier, & Gustafson, 2004). As Leder (1998) argues, just as our physical structure lays the underground for our mode of being-in-the-world, so our interactions with this world fold back to reshape our body in ways conductive to health or illness. Thus, it is likely that some body changes, as a loss of a limb, will influence people’s form of being-in-the-world and will oblige people to relearn and to reformulate their way of feeling and living their own lives. This passage frequently provokes a sentiment of having a “second category” body (Barsby, Ham, Lumley, &
Roberts, 1995). It is important to highlight that this experience, somehow of corporeal deception, is possible only because the lived body, through its perceptual and symbolic powers, is an open horizon of further disclosure and truth (Leder, 1990).

The lived-body is also associated to the phantom limb (PL) issue. For Merleau-Ponty, the PL is a memory of the limb; it is not its representation, but an ambivalent presence of a limb. In some cases of PL after amputation, people appear to be unaware of the mutilation and rely on their PL as they would on a real one, since they try to walk with their phantom leg and are not discouraged even by a fall. To feel the PL is to keep opened to all the actions that the missing limb was able to carry out (Merleau-Ponty, 1996). In addition, in current literature PL sensation is described as the feeling that all or part of the amputated limb is still present.

The Body as a Social Vehicle

Body image is embedded within social, cultural, and historical settings as well as responsive to everyday embodied experience. The term body image has been used to denote the ways the lived experience of the body is brought together with sociocultural meaning in the ways we think about and imagine our bodies. Thus, dominant discourses circulating within sociocultural context are important for the construction of body image (Lupton, 2000). As we accept the body as a social construct, we must also consider disability within the social world that produces it; it does not exist outside the social structures where it is located and it is not independent of the meanings given to it. In other words, disability is socially produced and it is very much situational and contextual. Industrial societies have produced disability first as a medical problem requiring medical intervention and second as a social problem requiring social provision (Oliver, 1986). The medical concept isolates people with disabilities as a consequence of their impairment and refuses to recognize how social attitudes to disability are formative to the identity of people with disabilities. In contrast, the social model seeks to understand disability as a socially generated category and related series of experiences external to the body (Oliver, 1986).

The Importance of Body Aesthetics

There is an evident relationship between body and aesthetics. There is no doubt that we live in a society dominated by the sense of vision, which has as a direct consequence the staring optics of humankind acting as the final arbiters of truth, beauty, desire, and goodness (Jenks, 1995). As Hughes (1999) argues, for people with disabilities, the challenge to the eye that constitutes the “tyranny of perfection” relies in the recognition of the social constitution of perfection as an aesthetic that arises from the view of nondisablement. In accordance, Sartre said that the look freezes the object of its vision. And the gaze of the others can be oppressive. The oppressiveness of what Sartre called “le regard” (the gaze) is part, for sure, of the experience of disability but it is also constitutive of it. The gaze for Sartre is a constituent power, i.e., the power to fix an identity or to condemn an
individual to an identity. In Sartre’s pessimistic project, to be seen is to be objectified and victimized.

The Functional Body

In today’s society the idea of being productive is very prominent and prevailing. In fact, expectations of performance are assumed in the social organization and physical structure of a society, both of which create disability. Western societies tend to be physically constructed and socially organized with unacknowledged assumptions that everyone is healthy, nondisabled, young but adult, shaped according to cultural ideals (Wendell, 1996), expecting everyone to work long hours and always very productively. Thus, the body is also noticed as a means for being productive, which points out its practical and instrumental value to achieve something and highlights the notion of functional body, i.e., a conception of the body as an instrument and mechanism, presenting an approach within Cartesian vision. It is a conception related to income and efficiency notions and intimately related with a working situation. The risk of loss of work productivity and earning potential following such an injury is of concern from an individual and societal point of view (Hebert & Ashworth, 2006). Employment is important to the well-being of people and in enlarging their social environment. Actually, people with chronic disabilities have emphasized the importance of work for self-respect, giving meaning to life, and providing a stable income (Schoppen et al., 2001). Nevertheless, those who acquire chronic illness often have to fight to continue working at a slower pace or fewer hours (Wendell, 1996). But the worst is that “given the choice between the impossible (working full-time) and the undesirable (being on full disability leave), surely many people are forced to stop working altogether” (Wendell, 1996, p. 48).

The Meaning of Prosthesis

A prosthesis is an artificial extension that replaces a missing body part and it is used to maintain or to substitute the lost function. Prosthesis seems to reduce the challenges of the person with an amputation, supplying a capable limb to overcome and to respond to daily life needs. A given prosthesis may represent a restoration of independence and embody ability for some people because of what it enables them to do and become part of them. This can be described as prosthetic embodiment (Gallagher & MacLachlan, 1999).

The prosthesis importance can be divided in three dimensions: as a functional, as aesthetic, and as a social tool. Considering the consequences of an amputation regarding employment or occupation, and the need to feel productive and to feel capable of doing tasks in an independent way, the functional dimension is fundamental for the understanding of the prosthesis’ meaning. In addition, the prosthesis may acquire an aesthetic meaning, allowing one to get close to the “socially valued” body image. The prosthesis can also be understood as a social mediator, as it facilitates the relationships, helping people with an amputation to get close to that body conception promoted by society (Horgan & MacLachlan, 2004).
The Importance of Independence

The notion of independence for persons with an amputation can be divided in two related dimensions: freedom/autonomy and mobility. Regarding the first, it is important to consider the notion of freedom established in Kant’s (1786) ethical conception. Kant links freedom with the independence to decide within the sensitive world, and it is a key conception to reach autonomy. For Kant, autonomy is the foundation of human nature’s dignity, and it is the concept that allows the rational human being to be the universal legislator of all her or his will. The concept of autonomy results from the need for freedom that one has. And freedom, as Merleau-Ponty argues, recalls the notion of choice, given that no choice would amount to random indeterminacy. In fact, freedom of choice is, for Sartre, the most important quality of an individual and it is the defining feature of an individual’s essence. True freedom entails that by acting, we commit ourselves, transforming both ourselves and our circumstances in relatively durable ways that cannot be simply erased or undone (Crossley, 2001).

Mobility is a basic physical need, thus it is essential to undergo a rehabilitation process that maximizes the patient’s improvement. Walking ability for people with an amputation is of major importance for social mobility and enables a simple and directly available means of transportation. Improved mobility can foster functional independence of people with lower-limb amputation in all activities of personal care and daily living (Franchignoni, Orlandini, Ferriero, & Moscato, 2004).

Focusing on this theoretical model, we intended to comprehend how people with amputation(s) view their bodies and perceive how others view them. Even so, there were other important issues that come up from our data, which will be discussed later.

Method

To understand and interpret the meaning of experiences of people with amputation, an approach was required that allowed to attend to that meaning as it was expressed in words and actions. Hermeneutics, a philosophy of human understanding and interpretation (Ricoeur, 1981), offered such an approach. Hermeneutic interpretation allows attention to be directed toward the social and symbolic context of amputation as a disability and life event and leads to the understanding of the world of the person with an amputation. Interpretation brings out, and refines the meanings that can be shifted from a text, or a “slice” of experience, or its representation. As such, we followed Patton (2002), and we developed an analysis with a phenomenological approach, which seeks to grasp and elucidate the meaning, structure, and essence of the lived experience of a phenomenon for a person or group of people. Moreover, since part of our theoretical model is related with the “lived-body,” a phenomenological approach was preferred.

Participants

Potential participants for this study were contacted on the basis of 2 criteria: half of them had to be engaged in sport, and all of the participants had to be active
The Body in Persons With Amputation

Users/wearers of prosthetics. A total of 14 people were interviewed (10 men and 4 women; all Caucasians; age ranged from 17 to 42 years old). Seven were engaged in sport, and the other 7 were not (see Table 1 for the description of group’s study). This study was conducted in Porto, Portugal.

Data Collection

The sources of data were semistructured interviews with open-ended questions. The purpose of qualitative interviewing is to capture how those being interviewed view their world, to learn their terminology and judgments, and to capture the complexities of their individual perceptions and experiences (Patton, 2002). To obtain information about the experiences of all the participants, an interview guide was developed with open-ended questions. The open interview guide lists the questions or issues that are to be explored in the course of an interview, and it is prepared to ensure that the same basic lines of inquiry are pursued with each interviewed. With an interview guide, the interviewer remains free to build a conversation within a particular subject area, to word questions spontaneously, and to establish a conversational style, but with the focus on a particular topic (Patton, 2002). The interview guide was first applied to some people with an amputation. This pilot study allowed us to add and to redefine the interview guide. A final version of the interview guide was defined with the following questions: Can you tell if there was any kind of changes in your life after you took up in sport? What were the causes of the amputation? What kind of changes did you feel in your body and in your everyday life after the amputation? What are the most difficulties you feel regarding your amputation? Do you think the others treat you and look at you in a different way? Can you describe these experiences? Considering that media depicts a certain ideal body, what sort of influence did you feel in your behavior? Regarding your prosthesis, what kind of importance do you give it in your everyday life? How closely do you have to attend to what you are doing with your prosthesis?

All participants were interviewed by one of the authors (always the same one). Face-to-face interviews were conducted at an agreed place (interviewees’ workplace or the institution responsible for their prosthetic-related services), lasting an average of 25 min. All the interviews were audio taped and transcribed verbatim.

Data Analysis

The texts were prepared, formatted for the software QSR Nvivo, version 2.0., which is used in the documents’ codification and in qualitative analysis (Weitzman, 2000). Even though qualitative software programs facilitate data storage, coding, retrieval, comparing, and linking, the analysis is a product of the researchers. Indeed, the human being, not the software, must decide how to frame a case study, how much and what to include, and how to tell the story. To identify common core meanings within the data, an inductive analytic thematic analysis was conducted (Patton, 2002). The first reading through data aimed at developing the coding categories or classification system. Then a new reading was done to actually start the formal coding in a systematic way. Each interview was coded
<table>
<thead>
<tr>
<th>Sport (time of practice)</th>
<th>Name</th>
<th>Age</th>
<th>Gender</th>
<th>Cause and Time After the Amputation</th>
<th>Type of Amputation</th>
<th>Profession/Occupation / and Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basketball in wheelchair (6 years)</td>
<td>Abel</td>
<td>33</td>
<td>Man</td>
<td>Congenital</td>
<td>Transfemoral Amputations (above knee amputation)—biamputation</td>
<td>Solicitor/ bachelor</td>
</tr>
<tr>
<td>Basketball in wheelchair (2 years)</td>
<td>António</td>
<td>42</td>
<td>Man</td>
<td>Acquired: surgical ± 9 years</td>
<td>Transtibial Amputation (below the knee amputation)</td>
<td>Locksmith/ elementary school</td>
</tr>
<tr>
<td>Swimming, cycling, and resistance training (3 years)</td>
<td>Bruno</td>
<td>29</td>
<td>Man</td>
<td>Acquired: traumatic ± 14 years</td>
<td>Transtibial Amputation</td>
<td>Office employee/ bachelor</td>
</tr>
<tr>
<td>Basketball in wheelchair (3 years)</td>
<td>Cândido</td>
<td>33</td>
<td>Man</td>
<td>Acquired: traumatic ± 28 years</td>
<td>Transfemoral Amputation</td>
<td>Security guard/ elementary school</td>
</tr>
<tr>
<td>Swimming (1 year)</td>
<td>João</td>
<td>17</td>
<td>Man</td>
<td>Congenital</td>
<td>Transtibial Amputation and Transradial (below elbow amputation)—biamputation</td>
<td>Student/ college student</td>
</tr>
<tr>
<td>Swimming (7 years)</td>
<td>Sandro</td>
<td>32</td>
<td>Man</td>
<td>Acquired: traumatic ± 19 years</td>
<td>Transtibial Amputation</td>
<td>Office employee/ bachelor</td>
</tr>
<tr>
<td>Athletics and resistance training (9 months)</td>
<td>Carlos</td>
<td>21</td>
<td>Woman</td>
<td>Acquired: traumatic ± 11 months</td>
<td>Transtibial Amputation</td>
<td>Unemployed (ex-football professional player)/ elementary School</td>
</tr>
<tr>
<td>Not engaged in sport</td>
<td>Eva</td>
<td>29</td>
<td>Woman</td>
<td>Congenital</td>
<td>Transfemoral Amputations—biamputation</td>
<td>Psychologist/ master</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Sport (time of practice)</th>
<th>Name</th>
<th>Age</th>
<th>Gender</th>
<th>Cause and Time After the Amputation</th>
<th>Type of Amputation</th>
<th>Profession/Occupation / and Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not engaged in sport</td>
<td>Glória</td>
<td>24</td>
<td>Woman</td>
<td>Acquired: cancer ± 6 years</td>
<td>Transfemoral Amputation</td>
<td>Unemployed/elementary school</td>
</tr>
<tr>
<td>Not engaged in sport</td>
<td>Joana</td>
<td>28</td>
<td>Woman</td>
<td>Acquired traumatic ± 4 years</td>
<td>Transhumeral (above elbow amputation)</td>
<td>Office employee/bachelor</td>
</tr>
<tr>
<td>Not engaged in sport</td>
<td>Madalena</td>
<td>31</td>
<td>Woman</td>
<td>Acquired: traumatic ± 14 years</td>
<td>Transfemoral Amputation</td>
<td>Accountant/bachelor</td>
</tr>
<tr>
<td>Not engaged in sport</td>
<td>Manuel</td>
<td>31</td>
<td>Man</td>
<td>Congenital</td>
<td>Transtibial Amputation and Transhumeral – biamputation</td>
<td>Primary teacher/bachelor</td>
</tr>
<tr>
<td>Not engaged in sport</td>
<td>Rui</td>
<td>32</td>
<td>Man</td>
<td>Acquired: traumatic ± 15 years</td>
<td>Transradial</td>
<td>Unemployed/elementary school</td>
</tr>
<tr>
<td>Not engaged in sport</td>
<td>Tiago</td>
<td>29</td>
<td>Man</td>
<td>Acquired: traumatic ± 6 years</td>
<td>Transfemoral Amputations (in right limb) and Transtibial Amputation (in left knee); and Transradial—triamputation</td>
<td>Unemployed/elementary school</td>
</tr>
</tbody>
</table>
twice by the three analysts/authors independently, who then compared and discussed similarities and differences. Each individual code, including redundancies, was entered into the qualitative analysis database so that we could retrieve all passages on any subject included in the classification scheme, with brief descriptions of the content of those passages. To enhance the validity of dependability of the findings, three data-coders/authors were employed. The codes and labels were verified between the authors, and the themes that emerged were collaboratively determined. When all analysts agreed, one had consensual validation of the substantive significance of the findings.

Considering that quotations illustrate the power of qualitative data to illustrate the themes (Patton, 2002), we achieved the suitability of the findings beyond the experiences described by the participants using quotes from their interviews. A widely used method for describing themes is the presentation of direct quotes from respondents. Researchers choose segments of text—verbatim quotes from respondents—as exemplars of concepts and of theories (Ryan & Bernard, 2000).

Results

Analysis of the research data identified the following themes: (a) Body, which was divided in 4 subthemes: lived-body, social-body, aesthetic-body, and functional-body; (b) Prosthesis, divided in 3 subthemes: functional-prosthesis, aesthetic-prosthesis and social-prosthesis; (c) Independence, divided in 2 subthemes: freedom/autonomy and mobility; (d) Human Person; and (e) Social Barriers, divided in 2 subthemes: stereotypes/prejudices and physical and architectural barriers.

Body

Lived-Body. The obvious change in the subject of perception (the body) results in a different perception of what surrounds the person with an amputation; however, this was only mentioned by those with acquired amputation. For instance, Joana (not engaged in sport—NES), 28 years old, has an acquired amputation since 2002. She had a car accident and lost her right arm because of a serious infection. When we asked about the differences Joana felt in her body, she responded:

My biggest problem was to look myself in the mirror. It was shocking to look in the mirror and see myself; to see a different person. I used to think how ugly I was and that no one would look at me as an attractive person. I felt disturbed and very, very sad, as something was stolen from me. I’ve learned to live with this new body and learned to like it again as it is. I knew that unless I would be able to accept it I would not be able to move on with my life.

Glória (NES) is 24 years old and has an acquired amputation since 2000. The doctors amputated her leg because of cancer. After that,

I felt a lot of differences, of course. Firstly, I felt differences in my relationship with my husband. Even though my husband is great, he always supported me, he was always very understanding. In the beginning it was very
different. I felt some kind of unawareness and differences about myself. But it was important for me that my husband didn’t act different and he didn’t show different feelings towards me. Otherwise it would have been far more complicated for me. Even so, it was obviously very hard in the beginning. It was a difficult step to get over and not to be constantly thinking about my body.

António, 42 years old, plays wheelchair basketball. He is a Locksmith and has an acquired amputation since 1999. His amputation is classified as transtibial amputation.

This happened while I was working, I had an accident. Because of my stupidity, this really got ugly and turned into a serious infection. Then the doctors had to amputate my leg. Afterwards, it was very difficult to adapt to sport again. First of all, I was not able to show myself to others. Seeing me without a part of my leg was very hard. It was very difficult to accept in the beginning, and I even needed some support from a psychologist. Now I’m already used to it. I don’t feel different anymore. When this happened, it was obviously very difficult. For instance, whenever I took a shower in the morning, seeing my body in the mirror was something very weird; part of leg had disappeared.

When the amputation is congenital the person’s experience of the perceived world has always been the same, as she or he never had a different body condition. João is a student and he is a swimmer; he is 17 years old and has a congenital amputation. His mother had some problems during her pregnancy, and he was born with a transradial amputation and a transtibial amputation.

Since I swim, I feel less stressed and healthier. Being engaged in sports is something good and makes me feel better. It’s not because of amputations that I have to be still! I always try to keep myself engaged in physical activity. I never felt big differences in my life because of the amputations. I’ve always been wobbly and I really enjoy physical activity. I play football and basketball with my friends and I always participate in physical education.

For people with an acquired amputation, the loss of a limb is perceived as a loss of part of them, i.e., as a loss in their lived-body. This is something present in the two groups’ accounts (one group is engaged in sport participation, while the other is not), and it is reinforced by the transformed perception that others have about them. For example, Cândido, 33 years old, plays wheelchair basketball, and he is a security guard. Cândido lost his leg when he was 5 years old. While he was playing soccer with his friends, the ball was thrown under a working machine that injured his leg. His amputation is classified as a transfemoral amputation. When we asked about the differences Cândido felt in his body, he responded:

That was a long time ago. It was 28 years ago, so I had to adjust myself to my new condition and my new body from a very young age. I don’t remember many differences. What I really remember is the shape of my body when I compared myself with my colleagues and when, because of my amputation, I couldn’t join them in certain activities.
We asked our participants if they felt anything related with the PL. Madalena (NES), 31 years old, is an accountant and she has an acquired amputation since 1992. She was run over on a zebra crossing by a bus, and as a consequence, one leg and both feet were amputated. Her biamputation is classified as transfemoral amputations. She told us,

I always felt that sensation; the doctors used to call it the PL pains. For a long time after the amputation I was in pain. It is funny, because sometimes I really feel my lost limbs and it’s a very strange sensation. It seems that my feet are still there, and it seems I move them. I also feel as if I have an itch, like I have to scratch where my feet used to be, but they are not there. And I used to move my PL to one side whenever someone would walk close to me, so they would not knock my feet. That sensation has never disappeared.

**Social-Body.** The type of glances people with an amputation face from those who surround them, and with whom they interact in daily life, seems to continually remind them of their condition. This fact was mentioned by both groups. Eva, a 29-year-old psychologist (NES), was born without lower limbs after her mother hemorrhaged during her pregnancy. Eva mentioned this subject very often.

The most difficult thing to accept is the way people look at me and the kind of approach they make. People don’t know me from anywhere and keep asking what my problem is, and why I don’t have legs. Then they leave me, they don’t know my name and they don’t want to know it. But, the way people look at us. . . . It is because of these situations that I realize that nothing has changed. . . . The worst is to face the other’s questions and the other’s stares.

Nevertheless, it is among the participants in sport that we observe less discomfort in showing their body. Abel, 33 years old, is a solicitor and he was also born without his lower limbs because of medicine his mother took during her pregnancy. His biamputation is classified as transfemoral amputations. Abel has played wheelchair basketball for about 14 years and he swims: “I used to run distance and even marathons. But for now, I only participate in wheelchair basketball competitions. I was part of the Portuguese team.” He also mentioned that people look at him in a different way. Nevertheless, because his amputations are not perceptible, he says,

I live my life normally with my prosthesis. A lot of people cannot perceive that I have both legs amputated. I’ve never felt many difficulties regarding integration into society. When I was a child I used to go to school in my wheelchair, but I don’t remember having problems with that. In the beginning it was very complicated, especially because my first prostheses were in wood, which was a big shock. It was a very hard thing to accept that my legs would never be equal to the other children.

Abel also told us he does not feel any constraints in the dressing rooms:

I don’t feel different. Well, I do have the sensation of being different whenever I have public commitments and I have to go to the dressing rooms with
“normal people.” But what I feel is like a sensation of being unique, especially by the way people look at me. They are all “up there” and I am “down here” when I take my prosthesis off. I feel the need make others comfortable; it’s me who is the different one. Anyway, I can say I have an advantage, since I live this transformation everyday. I can be tall, and I can be small.

Sandro, 32 years old, is a swimmer and is an office employee. He had an acquired transtibial amputation since he was 13 years old as a result of a train accident. He also notices the others’ looks:

Of course people look at us. Some are more discrete, and others aren’t so discrete. But in competitions we are all equal. Everyone has an amputation and we all feel comfortable with each other. Even if I have to share the dressing rooms with “normal people,” I don’t feel any constraint. I’m already used to the stares but in the pool I’ll be just like everyone.

Carlos, 21 years old, is unemployed. He has had an acquired transtibial amputation for about one year. He used to be a professional soccer player and broke his leg during a match. It was so serious that the doctors thought it would be better for him to amputate his leg below the knee. His career as a professional soccer player ended that day, but he continues to be engaged in sport. For now, he goes to a gym for resistance training, but he intends to engage in adapted triathlon. Regarding the others staring whenever he goes to the gym, he states,

I used to notice those stares in the beginning, now I try to ignore them. . . . When I go to the gym, I probably do it on purpose, but I want people to see how I am. I don’t have problems in showing my body. When I go to the gym I don’t wear pants but shorts and everybody can see my leg is artificial. I feel good in shorts.

On the contrary, those who are not engaged in sport show a tendency for isolation. Manuel is a primary teacher and he is 31 years old and has congenital amputations (one arm and one leg). His mother had also some complications during her pregnancy, and he was born with some limb complications. His amputations are classified as transradial and transtibial amputations.

I usually never wear the kind of clothes that turn these parts of my body visible. For instances, I never wear shorts or t-shirts; only at home, or in a familiar environment. If I have to be without a t-shirt, for example, I take off my prosthesis, but I confess I avoid this situation. That it’s why I don’t go very often to the beach, and when I go, I try to find a place with few people. I don’t feel comfortable in this kind of situation.

Aesthetic-Body. Both groups recognize the power of media concerning the promotion and spreading images of a stylized body; however, the group engaged in sport underlines that they are not influenced by that power in their daily life. Bruno, 29 years old, is an office employee, and he lost his leg in a motorcycle accident when he was 15 years old. He is engaged in cycling, and he also goes to
a gym where he swims and does resistance training. When we asked about the influence of the media and glossy pictures of beautiful bodies, Bruno responded:

As a matter of fact I frequently go to the gym, but I do it for my well-being, because I want to improve my physical condition. I think whenever one person feels good and fit, it is almost obvious that one will feel much better. But I’m not looking for a perfect body. What I really want is to feel in shape for the reason that it will be easier to walk with my prosthesis. In the beginning, that issue used to bother me, but I’ve already adapted to my own body and now that is not a problem for me.

Abel, a wheelchair basketball player, comments,

The glossy pictures are an influence for the others, not for me. I’m already very used and comfortable with myself and my body, and besides I’m not concerned about my body; the important thing is feeling good about me. Yes it is true that media promote a certain ideal of body image and beauty, but I think that society is also constructed for it, for instance, disability and everyone “apparently different” is ignored.

Those who are not engaged in sport, even though they think they cannot achieve the perfect body, attempt to get as close as they can to it by other means. This idea was repeated over and over. Eva (NES) told us,

This issue was much more complicated when I was a teenager. At that time, as most teenagers, I wanted to be someone with an ideal body, as we were and still are bombarded by the perfect body via the media. But then times passes by, and we know it’s not possible to reach that ideal. Now, I don’t think about that kind of stuff. However, regarding clothes, I care about the way I dress. I try to wear whatever fits me well and whatever makes me feel good. Of course, it’s much better when my prosthesis is unnoticed.

**Functional-Body.** After the amputation, one is faced with a loss of body’s functionality due to the lack of a limb. Thus, one needs some adjustment, which is something apparent in both groups’ texts. It is among the participants engaged in sport we identify a positive meaning in one’s amputation and perceive greater control over one’s impairment. Sandro told us that being engaged in sport was good:

It was a very good thing because it made me feel better. I used to feel much more rigid, and I don’t feel that any more. I feel my muscles are good and aren’t atrophied. If I didn’t swim, I’m sure that I wouldn’t feel physically well. I also feel I’m much freer, since I feel my body is much more able physically, and able to carry on with my life without depending on others.
Prosthesis

**Functional-Prosthesis.** Our data suggest that a huge importance is given to a prosthesis in functional terms. When we asked what the most important meaning of prosthesis was, Glória (NES) responded,

Since I cannot even go out without it, my prosthesis has a very significant meaning as a functional tool. When I’m at home I can do everything without it, but as I’ve to go out, I have to wear it, so the functional aspect is the most important. Nevertheless, I’m obviously concerned about my appearance, so in this way, the aesthetic aspect is also very important. . . . I’m extremely happy, because I’m getting better very fast, especially since I started to wear the prosthesis. When I changed my knee [the prosthesis] it was a drastic but good change.

Regarding the advantages of wearing a prosthesis, António, a wheelchair basketball player, told us,

I feel a lot of advantages wearing my prosthesis in almost everything I do. I’m completely dependent on it. If I didn’t have I couldn’t walk; I’d have to be in a wheelchair. I need my prosthesis for everything. So, the functional aspect is the most important for me. I can do everything on my own; I don’t depend on others, since I can walk by myself. The aesthetic aspect isn’t that important, since no one can see my prosthesis. The prosthesis is so important to my life that I feel it as part of myself. I cannot conceive my life without it.

**Aesthetic-Prosthesis.** The aesthetic meaning conferred to the prosthesis is mostly observed in those with upper limb amputation, or among those that could not recover their lost functionality by its use. Joana (NES) has a transhumeral amputation (above elbow), and when we asked what the most important meaning of prosthesis was, she responded,

Obviously the aesthetic and the social aspects are the most important. I’m not able to do almost anything that I used to. Thus, I cannot consider my prosthesis very functional. I’m only able to hold light things. Our hands have very complex movements and the prosthesis couldn’t recover them. This is why I say that aesthetics is the most important thing in my prosthesis. I’ve painted nails because I want to turn my amputation as imperceptible as I can, and make it the most natural as I can. Moreover, I really like to have painted nails, and of course it’s preferable to have both hands done, otherwise it would be more noticeable.

**Social-Prosthesis.** For those whose prostheses do not allow them to overcome the loss of functions inherent to amputation, the social aspects, directly related with the aesthetics ones, become prominent regarding social mediation in social relations and friendship, through the possibility of getting close to the “normal” body image. In this way, it was not between groups that we found differences, but in accordance with the level and type of amputation (see Table 1).
Independence

**Freedom/Autonomy.** Being capable to use a prosthesis represents freedom and autonomy. This constitutes an essential feature in both groups’ lives, since people with an amputation do not depend on others and reach autonomy in their everyday lives. This fact was explicit in the texts from those to whom the prosthesis has the functionality as the foremost significance. João, a swimmer, told us that

... with my prosthesis I only depend on myself. Without them I couldn’t go to school or come here [the centre of physiotherapy]. ... I couldn’t do anything. Being able to walk by myself I can be with my friends, go out with them all by myself. ... I achieved my freedom with my prosthesis, since I don’t depend on others.

**Mobility.** This issue is intimately related with the previous one, since it is through the accomplished mobility provided by a prosthesis that people with an amputation get the feeling of independence, autonomy, and freedom. As in the previous theme, this issue does not seem to be related with being engaged in sport, even if we observed more quotations in the group engaged in sport.

Human Person

This theme was included only afterward, since we found very pertinent quotes related to this theme. This issue highlights the fact that the person with a disability, more than a person with a disability is a Human Person. This is a concept that focuses on the idea of the person as a total and multidimensional being (Vaz, 2000), and the person’s category expresses the inner-self of the human being as an absolute and unique singularity. The human condition foundation is not a certain physical condition, mental or sensorial, but the condition of being a person. It was among the group engaged in sport that we perceived more concern. Nevertheless, the majority of the participants, e.g., Cândido (a wheelchair basketball player), reinforced this idea.

It’s not because I don’t have an arm that I’m diminished as a human being. But this is something very hard to comprehend for most people. A lot of them seem to see only the physical dimension and they evaluate us according with that criterion. They forget there is a lot more beyond the body, which is also very important. It’s not because I have an amputation I’m different! What’s the difference of having an amputation? I usually don’t make comparisons, because everyone is distinct but we are all the same.

Social Barriers

**Stereotypes/Prejudices.** This theme was not foreseen in the beginning; however, as we were analyzing the interviews, the number of quotes become very relevant. It shows that people with disabilities have to face a strong stigmatization and a physical environment very far from being inclusive. The concept of stereotypes can be understood as mental representations that act as schema, directing
mental resources, guiding the encoding and retrieving information, and are both a cause and a consequence of prejudice (Augoustinos & Walker, 1995). As stereotypes “label,” they become an inhibiting factor and barrier for the normal course of social relations. It was when we asked our participants if they felt that people treat them differently because of their amputation, that this issue became outstanding. For instances, Joana (NES) told us,

Of course people look at us in a different way, but I suppose I’m already over it. People staring used to bother me a lot. People look at us with pity, as disabled, because there is a big prejudice regarding disability. People staring used to bother me so much I just couldn’t go out. I stayed at home, because it was difficult for me to me to deal with them. In the beginning and even if it was very hot, I’d wear a raincoat and gloves so no one would notice my problem. Basically, it’s the way people look at us and the way they deviate that look and then they look again, just like they’re making an evaluation. Sometimes I want to hide myself from everyone, so no one can see me. People don’t know how to be discrete and they even are able to ask incredible questions like “Isn’t this arm yours?” I think this is incredible.

**Physical and Architectural Barriers.** Physical and architectural barriers are a form of “disability discrimination” and can take at least three forms: physical barriers to movement for people with disabilities, including broken surfaces on thoroughfares (streets, guttering, paving), which reduce or annul the effectiveness of mobility aids (such as wheelchairs, walking frames); building architecture that excludes the entry of anyone unable to use stairs and use door handles; and public transport modes, which assume that passengers have a common level of ambulence (Gleeson, 2001). This problem was raised by people with lower limb amputations, because they might be affected by mobility difficulties. For the participants, the fact that most of the public places are inaccessible results in feelings of exclusion, social rejection, and incapacity. As Glória (NES) refers,

There are a lot of places where it’s very difficult to walk such as unstable terrain, slippery surfaces, or slopes. I think this kind of constraints might be something that inhibits people with any kind of mobility problem to feel secure when walking by themselves.

**Discussion**

Because the body is our form of being-in-the-world, people with an amputation, particularly those with acquired amputation, have their own way to perceive the world and to live with their body. The lived-body discussed by Merleau-Ponty was evident in the experiences of the participants. It is through the lived-body that we achieve the capacity for reflective and reflexive thought by way of an incorporation of the role or perspective of the other within our own *habitus* (Bourdieu, 1980). The others, according to this argument, provide an important “mirror” for us, reflecting aspects of ourselves that we do not or cannot perceive. Likewise, the majority of the participants, whether engaged in sport or not, perceive their body
comparing themselves with others. In addition, as reported in other studies (e.g., Sjodahl et al., 2004), when returning home for the first time after the amputation, the participants were feeling as if they had become a different person.

People with acquired amputations lived their lives like members of the social “norm,” and their bodily functions were taken for granted, thus they have to build a new concept of self around the new limitations. Moreover, some participants have a feeling of a “stolen” lived-body, i.e., they feel as part of their body has disappeared without their consent. Ultimately, the person who has acquired a disability has to learn to live with the altered self (Horgan & MacLachlan, 2004). As referred to other studies (e.g., Halligan, 2002), the capacity of adjustment and acceptance of a changed body usually depends on (a) individual’s age, (b) level of amputation, (c) cause of amputation, and (d) time since amputation. The data from our study hold more arguments regarding the last two points. Indeed, when the amputation is congenital, people have had their lived-body since they were born, and thus have had the opportunity to perceive and live their world in the same way. In addition, as time passes by, people with an amputation discover how well they can manage with limitations.

It is important to highlight that after the amputation, the person has to adapt to an image of herself or himself without the amputated limb while reconciling three images of her or his body: before the amputation, without a prosthesis, and with a prosthesis. This is an external element to the person with which one has to learn to live and incorporate, to be capable to accept her or his body condition and perceive herself or himself in a positive way (Horgan & MacLachlan, 2004). This embodiment process by the lived-body is distinct among the participants, as for some the prosthesis is totally embodied. We can argue that the lived-body of people with an amputation is a result of all their experiences in the world. For this reason, even though we divided the body and the prosthesis in different themes, we need to perceive them all together. In fact, the referred adjustment process seems to be also associated with the prosthesis embodiment. For some the prosthesis becomes totally embodied, ensuing as a part of the lived-body. As Merleau-Ponty would say, the prereflexive sense or grasp on the person with acquired amputation’s environment is evident by one’s capacity to move around in and use the space without having to think of doing so. The prosthesis has been incorporated within the person’s corporeal schema and thereby becomes an extension of her or his body. As the adaptation to prosthesis enhances, turning it part of the lived-body, everyday practices become incorporated.

Assuming the connection between the themes, Sartre’s point of view is very helpful for the argument that we become ourselves “through the eyes of others.” Taking into account that le regard invoked by Sartre can be very oppressive, we can infer that the other’s gazes and stares are very often difficult to deal with. Thus, it is not difficult to perceive that some of these people with amputation(s) feel as if they have a subordinate body. It is important, however, to underline that the experiences of those engaged in sport are perceived as important spaces of action in diminishing the impact of having an amputation. Moreover, as time has passed and the adjustment process has evolved, some persons engaged in sport have a feeling of living a normal life. Indeed, being engaged in sport seems to stimulate a positive attitude toward the body, as when the person with an amputation participates in competitions and deals with other athletes where a body condi-
tion is not noticeable. The visibility of the amputation seems to make them more aware of their body condition, learning to perceive their body in a positive way. This can be transferred to other domains of social interaction in daily life and might be an element that facilitates social inclusion. In fact, sport is a privileged place of social inclusion since it allows the interaction among social groups with similar interests allowing sharing experiences (Taub et al., 1999).

From our results, we can say that perception of the body is distinct between those who are engaged in sport and those who are not. The former one revealed more satisfaction and better acceptance of their body condition. In addition, Blinde and McClung (1997) found that the participation in individual sports impacted the physical self of women and men with physical disabilities in 4 ways: (a) they experienced their bodies in new ways, (b) perceptions of their physical characteristics were improved, (c) participation redefined their physical capabilities, and (d) it increased their confidence about participating in new physical activities. Our results emphasize these points, since the participants engaged in sport revealed more satisfaction and better acceptance of their body condition. In this way, sport might be very helpful to the person’s body perception, increasing self-esteem, and thus facilitate better acceptance of the disability.

As suggested by Melzack (1999), the PL phenomenon was only mentioned by the people with acquired amputation. These sensations and perceptions are identified with different kinds of pain, pressure, and feelings of warmth and coldness. As described by Halligan (2002), people with an amputation also feel as if the limb is being tickled or is sweaty or prickly. All the participants with acquired amputation have these sensations and for some it is perceived as something funny and strange. It is likely that these strange sensations remind them of all the actions that the missing limb was able to carry out (Merleau-Ponty, 1996).

The body as a social dimension is intimately related with the stereotypes. Indeed, whenever one has a different body, it is treated uncritically as an empirical given and deviance derived from it. As Hughes (1999, p. 158) affirms, “the primacy of (albeit situational) conformity—that which is seen to generally characterize social relationships—automatically confers discredited status or otherness.” Consequently, people with an amputation perceive themselves as being disabled and incapable; moreover, the disability itself can become the dominant social identity in others’ perceptions. In the eyes of the others, the person with an amputation may appear disabled and members of a stigmatized group (Horgan & MacLachlan, 2004). As in Sartre writings, when people with an amputation are alone, they are not ashamed of themselves. They might be ashamed when others appear, and with others’ presence they reduce themselves to an object. Therefore, following the amputation, people not only have to adapt themselves to physical change and social functioning and incorporate these changes, they also have to endure the impact of returning to a society that is incapable of giving proper answers to many problems. As in the study of Sjodahl et al. (2004), the participants in our study felt stigmatized when judged and valued by the staring eyes of strangers. This was experienced as most unpleasant. The constant allusion to situations of social exclusion and prejudice by the participants ratifies a generalized and incorrect social representation concerning disability, which frequently leads the person with an amputation to social exclusion or privation of the same type of opportunities the able ones have. For some participants not engaged in sport, this
is a reason for not being engaged, since placing themselves in a sporting context is very likely to exacerbate the visibility of their amputation, which leads to this kind of feelings and perceptions. On the other hand, just like reported before (see Goodwin et al., 2004), the participants engaged in sport stated that sport is a physical activity context in which disability is not experienced as negative. Moreover, those involved in adapted sport competitions feel that context as an environment whereas everyone is equal and have the opportunity to share experiences and common disability biographies. The mentoring and role modeling provided by the physically active members of the disability community provided the potential for support, inspiration, role modeling, shared problem solving, and friendship (Goodwin et al., 2004). From our results we can add arguments to reinforce that sport and physical activity participation is an involvement that can reaffirm ability rather than disability and serve as a means to affirm one’s bodily competence (Taub et al., 1999).

Further, the amputation is often seen as a disability only in certain contexts and not when engaging in adapted sport. For this reason, we also link this issue to the Human Person’s theme, as many times people with an amputation are evaluated by their differences, forgetting what is beyond the body. As in the study of Sjodahl et al. (2004), our respondents described the importance of being recognized and treated as a person and not by one’s disability. They highlight the idea of being a person facing up to the distinct body condition, emphasizing the importance of their character. Despite this similarity in both groups, when one underlines the issue of being different, the group engaged in sport is more unequivocal when asserting that they do not feel different. For them, it is not the fact of having and being “less body” that will make them less as a person, for being a person is what symbolizes all humanity, whatever one’s body condition.

Regarding the aesthetics dimension, it was among those who are not engaged in sport and women in particular that we found more concerns. The importance of the appearance of the limb in establishing a positive self-image was also highlighted. This can be explained by the fact that the group engaged in sport was constituted only by men and the other group was mostly constituted by women. Nevertheless, we still live in a society where women are primarily judged in terms of their looks. In fact, women with a disability must contend with Westernized gender roles and beauty ideals that are constantly imposed upon them and are thus faced with a “double impediment” (Arbour et al., 2007). Thus, after the amputation, most women are concerned with creating an illusion of an intact body surface, whereas most men are concerned with the effective restoration of function (Gallagher & MacLachlan, 1999).

The technological advances in prosthesis over the last years are directed toward improving comfort, reducing energy expenditure, improving stability, and have accompanied the evolution of the new technologies, not only within the functionality issues, but also in what concerns aesthetics and the “invisibility” of the prosthesis, which is something that has a great influence in social relations (Quigley, 1992). It is among those with upper limb amputation that the prosthesis has a more aesthetic meaning. Since the human hand is a very complex anatomical and physiological structure that cannot be replaced with current prosthetic technology, upper limbs prosthesis—mostly hands (Esquenazi, 2004)—rely more on aesthetics than on functional terms. In addition, for those whose prosthesis do
not allow overcoming the loss of functions, the social aspects directly related with the aesthetics ones become prominent regarding social mediation in social relations, through the possibility of getting close to the “normal” body image. Thus, the differences are in accordance with the level and type of amputation (see Table 1). Likewise, Kent and Fyfe (1999) had shown that the level of amputation is extremely important on the outcome of successful rehabilitation. People with below-knee amputations, for example, with an equivalent good level of prosthetic rehabilitation, are shown to have consistently less disability than others with above-knee amputation.

Concerning to the functional dimension, the person with an amputation becomes aware of this dimension due to the loss of some bodily functions, which is related with the decrease of capacity and with the necessity to learn how to do things in a different way. This rehabilitation process is often much slower and may generate feelings of being less productive. Actually, one major stressor includes uncertainty about the extent of physical recovery and apprehension about the future vocational functioning (Wald & Alvaro, 2004); many times people with an amputation cannot get their previous employment due to the physical demands. Accordingly, some participants had to abandon their occupations. Those who are employed usually are engaged in administrative functions, with less physical demand. The same come across in Schoppen et al. (2001) study, in which the majority of the participants worked in administrative, scientific, or technical jobs. In fact, as reported earlier (Whyte & Carroll, 2002), our data suggest that an amputation has severe consequences regarding employment status. Previous studies (e.g., Hebert & Ashworth, 2006) also suggest that although a reasonable percentage of these workers return to employment, there are significant differences in the type of employment to which they return.

Both groups confer a significant importance to the prosthesis in functional terms. Authors like Horgan and MacLachlan (2004) reinforce the idea that a prosthesis can help individuals regain mobility and independent functioning. Our results corroborate this idea. Prosthesis has, first of all, a functional meaning. There are some exceptions, however, as sometimes this functionality cannot be recovered given the high level of amputation or when it is an upper limb amputation. When the prosthesis attains primordial meaning in functional terms, allowing people to feel capable, competent, and productive, the body is also perceived in a functional form because the prosthesis becomes part of one’s body through its embodiment. At the same time, this functionality expresses itself in accomplishing the mobility and autonomy capacities, since one does not depend on others. Moreover, if the prosthesis is functional, people will also perceive their body as functional and will be able to get the much needed mobility, which is fundamental for freedom and personal and social autonomy. Its embodiment results in independence since people with a lower-limb amputation can move independently and is able to do their daily tasks. This constitutes an essential feature in the life of both groups, since these people have the opportunity not to depend on others. Actually, when people with disabilities depend on others for physical assistance, they can’t help but be humiliated in a society like ours that prizes independence (Wendell, 1996). Therefore, when people can reach autonomy with their prosthesis, they have a chance to improve their lives, especially for the acquired sense of being capable, independent, autonomous, and productive. As shown earlier by Franchignoni et al.
Sousa, Corredeira, and Pereira (2004), improved mobility can foster functional independence of people with lower-limb amputation in daily living and thus enhance quality of life. Since the main function of the lower limb is mobility, as many have argued, the single most important indicator of success is mobility, and this itself has a profound influence on independent living. This does not seem to be related with sport participation, as it is visible in both groups, even if there are more quotes within those engaged in sport. Nevertheless, some of the participants engaged in sport highlighted that being in shape improves walking with a prosthesis.

Regarding the issue of physical and architectural barriers, it is important to evaluate the type of lived difficulties, which go from the absence of lifts in underground stations, to building architecture that excludes the entry of anyone unable to use stairs and door handles. These examples put people with disabilities at risk for both personal injury and social exclusion by not accounting for their mobility requirements. It is in this context that the participants reported a society where nothing is adapted, from sidewalks, streets, to public transport resulting in forms of “disability discrimination” (Gleeson, 2001). For the participants of this study, the fact that most of the public places are inaccessible results in feelings of exclusion, social rejection, and incapacity. Likewise Ferguson, Richie, and Gomez (2004) highlighted the significant role played by societal barriers in the daily life of people with amputations.

The new body experience lived by the persons with an acquired amputation confronts distinct degrees of adjustment to the new reality. The participants revealed that the body’s perception is positive, contrasting with the negative feelings one has from the others’ perceptions due to constant stares. This has a negative influence in social relations and body exposition, since people feel they are perceived as incapable and invalid. Thus, body exposure is often avoided within those not engaged in sport. The prosthesis acquires an unquestionable functional value for the majority of the participants of this study. Furthermore, it is lived as something embodied and vital for mobility, freedom, and autonomy.

When comparing the two groups, the differences reside only in the body’s theme. Considering that these differences are related to sport participation, one can say sport participation has an influence on body perception. The participants engaged in sport seem to live with their body in a more positive way, better accepting their new body condition and their being-in-the-world. The loss was not considered to be the end of the world and it did not stop them from doing something that they really wanted to do. Moreover, after the amputation, there is a loss of functionality, which is mentioned especially by those not engaged in sport. This fact seems to be related to the benefits that sport provides to motor efficiency, allowing the person with an amputation to improve the lost functionality.

Finally, the social barriers that people with an amputation have to face daily were evident. It is a relation undergirded by prejudiced and discriminatory conceptions, embedded in a society that is inadequate for these people and a society that is incapable in assuming itself as plural in the acceptance of the difference, in this case, the body difference. One of the most significant ideas was the importance of being recognized and treated as a person and not as a person with a disability.
Limitations and Recommendations

The benefits of physical activity on body perception, autonomy, and independence are important messages. Further investigations of the lived experience by people with amputation(s) and the mediating role of physical activity and sport are encouraged. Results from this study are preliminary and descriptive in nature. Further inquiry is needed to illuminate the complexity of the physical activity context, and it would be useful to enlarge the sample to understand the influences of gender.

References


