

Shape Your Body Image: Implementing Embodied Learning For Children

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Abstract: This action research aims to promote the development of a positive body image in a sample of children aged between 9 and 11 years at a primary school in Cassino, Italy. Using a mixed methodological approach, the project includes an initial data collection phase using the Body Image Disturbance Questionnaire (BIDQ) and focus groups to assess the participants' body perception. The main topics addressed in the focus groups include body image, gender differences in body image, body changes over time, the experienced body and the perceived body, and body dysmorphia. Next, an educational intervention based on embodied learning will be implemented, aimed at fostering a better understanding and acceptance of one's own body. A final data collection will be conducted utilizing a second administration of the BIDQ and focus groups to assess the effectiveness of the educational intervention and to verify any changes in the children's body perception. The aim is to provide empirical evidence useful for developing educational strategies aimed at promoting the development of a positive body image from childhood, a vulnerable period for the development of body image.

Keywords: Body Image; Body Dysmorphic Disorder, Embodied Learning; Educational Intervention; Children.

1. Introduction

Body image encapsulates a multifaceted construct that mirrors individuals' experiences of their own embodiment (Cash & Smolak, 2011), hence a negative development – yet the onset of mental disorder such as body dysmorphic disorder – suggest the existence of correlation with corporeal experiences.

When discussing embodiment, one can observe the intricate historical development that the concept of body has undergone. This evolution spans from Descartes' mind-body dualism (Baker & Morris, 2005), wherein the body assumed a subordinate role in comparison to the mind, to philosophical perspectives where the body serves as a conduit for engaging with and experiencing the world.

Indeed, body assumes a pivotal role within phenomenological discourse, affording individuals the opportunity to engage with and be influenced by the world, while simultaneously influencing it.



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This engenders a perpetual cycle of interaction that encapsulates the multidimensional essence of the body (Digennaro & Iannaccone, 2023a; Husserl, 1990; Merleau-Ponty, 2013).

Body transcends mere corporeality, exhibiting four concurrent dimensions: social and symbolic, corporeal, psychic, and sensorial (Digennaro & Iannaccone, 2023a). Consequently, each dimension contributes to the overarching phenomenology, with each being susceptible to potential influence from bodily experiences.

By delving into these characteristics, there is potential to narrow the significant knowledge gap surrounding the conventional understanding of this psychiatric disorders and its contact points with the phenomenology of embodiment.

Specifically, exploring how and whether these disorders extend beyond the domain of psychiatry unveils a more intricate relationship with bodily experiences, opening avenues for potential interventions aimed at averting deceptive onsets or impeding/arresting the progression of this condition.

2. Body Image

Body image (BI) construct constitutes a nuanced aspect with the broader conceptual framework of body. Similarly to the multidimensional nature of body, BI embraces different dimensions: cognitive, perceptual, affective, and behavioural (Smolak & Thompson, 2009; Cash, 2012).

With the aim of clarifying this multi-layered notion, the perceptual (or subjective) and affective dimensions are basically tied to individuals' satisfaction or dissatisfaction with their own bodies. In this scenario, body image primarily revolves around the conscious appraisal of one's physical appearance (Byrne, 2012), alongside the associated satisfaction derived from this perception. Both these dimensions are intertwined with the cognitive one, which includes thought, beliefs, attributions, and attitudes related to an individual's appearance, as well as with the behavioral dimension, which describes a person's body image-related behaviors such as avoidance of mirrors or perpetual body-monitoring (Digennaro & Iannaccone, 2023b).

What follows is the mental representation of individual's own body, regardless of their appearance, which encompasses the way one sees, thinks, feels, and behaves in relation to the appearance and function of one's body (Cash, 2012; Cash & Smolak, 2011).

Examining the complex interplay among the dimensions of body image facilitates a deeper comprehension of both individual experiences concerning BI itself, and the mechanisms underlying its development. As part of how people experience their own embodiment (Cash, 2012), BI is an elastic and changeable human experience that can be influenced by outside variables, such as peers and media.

The Tripartite Influence Model (van den Berg et al., 2002) is commonly employed to elucidate the impact of external factors on the dimensions of body image. Specifically, this model identifies three primary elements that directly influence body image: peers, parents, and media. Through this model, it is possible to highlight the sociocultural, psychological, and biological determinants that shape the way individuals, through their body, live, interact with others and experience the world.

A journey which may lead to either a positive BI or a negative one, characterized by feelings of body dissatisfaction, a desire for thinness, and the development of disordered eating behaviors, particularly prevalent among females (Elizabeth et al., 2018).

3. Body Image Development

BI development is shaped through interactions with the external environment, and it is significantly impacted by factors that extend beyond the immediate bodily appearance (Burychka et al., 2021). Its construction is affected by societal standards of beauty prevalent in own culture, as well as by the feedback received from others, both positive and negative (Henriques & Patnaik, 2021). Additionally, comparisons with peers, the capacity to engage in self-care and maintain one's appearance along with the stereotypes of beauty and appearance propagated by social media, which we are consistently exposed to, influence our self-perception (Jiotsa et al., 2021). BI begins to take shape in early childhood, a critical and vulnerable period for the development, as the way children construct their BI in the first decade of life significantly influences their perception of themselves in adolescence (Burke et al., 2012). This has implications for their social interactions, self-esteem, and sense of competence.

BI is a complex concept; attitudes toward it are established in early childhood (Paxton & Damiano, 2017). Even as young as age 3, children often internalize stereotypes about body size (Spiel et al., 2012), and by age 5, they may already express dissatisfaction with their bodies (Davison & Birch, 2002) and engage in behaviors like dietary restraint (Damiano et al., 2015).

Physical changes during puberty tend to increase body dissatisfaction (Arim et al., 2011), so concerns about body shape are widespread among pre-adolescents and adolescents (Confalonieri et al., 2008).

Research involving pre-adolescents and adolescents suggests that the internalization of appearance ideals may increase the risk of developing BI concerns and could also have a negative impact on the development during early childhood (Nichols et al., 2018).

The development of BI in both boys and girls is influenced by various factors and unfolds differently based on gender dynamics and societal expectations. In boys, it often involves a focus on muscularity, strength, and physical performance. Media representations of idealized male bodies can shape boys' perceptions of their bodies and influence their desire to attain a similar physique (Hargreaves & Tiggemann, 2004).

Additionally, peer comparisons and feedback, particularly related to athletic abilities and physical appearance, play a significant role in shaping boys' BI. Conversely, girls' BI development is often influenced by societal ideals of thinness and beauty (Papageorgiou et al., 2022).

Media images featuring thin models and celebrities can lead girls to internalize unrealistic beauty standards and foster dissatisfaction with their bodies. Peer interactions, including comparisons with friends and social media influences, further contribute to girls' perceptions of their BI (Pedalino & Camerini, 2022).

Both boys and girls may experience body dissatisfaction and engage in behaviors aimed at altering their appearance, such as dieting or excessive exercise. However, the specific concerns and pressures faced by boys and girls regarding BI may differ due to gender-specific societal norms and expectations (Fischetti et al., 2020).

Overall, supporting healthy BI development in both boys and girls involves promoting acceptance of diverse body types, fostering positive self-esteem, encour-

aging critical thinking about media representations, and promoting a balanced approach to physical health and well-being (Tort-Nasarre et al., 2023).

4. Body Dysmorphic Disorder

Among the characteristic facets of BI, Body Dysmorphic Disorder (BDD) stands out as a prospective consequence of an intricate developmental processes. BDD, formerly referred to as dysmorphophobia, is characterized by an individual's obsessive concern with an imagined flaw in their physical appearance, which may lead to various time-consuming rituals such as mirror gazing or constant comparisons (Aravind & Krishnaram, 2006).

As it is characterized by an excessive preoccupation for an imagined defect in appearance, this condition entails an obsessive and distressing concern regarding a perceived flaw in appearance, which may be either non-existent or barely noticeable to others.

The beliefs regarding these perceived defects often hold significant personal significance. As outlined in the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-5-TR), BDD involves a fixation on a perceived defect or flaw in one's physical appearance, despite appearing normal (Nicewicz et al., 2024). Therefore, individuals engage in time-consuming behaviors aimed at either examining the imagined flaw repeatedly or attempting to disguise or improve it. Such behaviors may include excessive grooming, camouflaging, dieting, and seeking treatment or unnecessary surgical interventions (França et al., 2017; Mitchell, 2017; Phillips, 2012).

BDD frequently eludes recognition in clinical settings due to its elusive nature, compounded by individuals' feelings of embarrassment regarding their symptoms. Clinical manifestations encompass a range of features, including preoccupation with appearance, repetitive behaviors, avoidance tendencies, and muscle dysmorphia (Phillips, 2012).

Appearance preoccupations in individuals with BDD can manifest as fixation on a singular body area or extend to virtually every aspect of their body. The conviction that their appearance deviates from the norm engenders profound distress, anxiety, and self-loathing. These emotions serve as catalysts for repetitive behaviors aimed at remedying, concealing, scrutinizing, or seeking reassurance regarding the disliked aspects. Termed compulsions or rituals, these behaviors are deliberate responses to the preoccupations with appearance. They are characterized by their repetitive, time-consuming nature, and the difficulty in controlling them, often devoid of any sense of pleasure (Cash et al., 2004; Feusner et al., 2007; Phillips, 2012; Phillips & Kelly, 2021).

Social avoidance is a prevalent characteristic, stemming from individuals' apprehension that others will see their perceived flaws, and reject or ridicule them due to their perceived ugliness. Consequently, a significant portion of individuals with BDD actively avoid social interactions, with many steering clear of more intimate relationships such as dating or marriage (Phillips, 2012).

Muscle Dysmorphia represents a subtype of BDD characterized by an obsessive preoccupation with the belief that one's physique lacks sufficient muscularity or leanness, often perceiving themselves as being too small (despite appearing physically normal). Individuals with muscle dysmorphia commonly engage in the typical repetitive behaviors; additionally, many adhere to meticulous dietary regimens and rigorous workout schedules, frequently involving extensive weightlifting. These behaviors can

escalate to the point of causing physical harm or involve the consumption of potentially hazardous substances (Phillips, 2012; Phillips & Kelly, 2021).

5. Embodied Learning

To unravel the intricate relationship between BDD and the phenomenology of embodiment, the authors propose an innovative approach that has gained traction in educational settings over the past decades. This approach delves into and harnesses the body's capacity to experience the world and acquire knowledge from the environment, operating within the framework known as embodied learning.

Embodied learning manifests as a multimodal and playful process, necessitating the active involvement of the human body in cognitive activities. It posits that in such a learning paradigm, the body, alongside the mind, plays a significant role in the overall learning process, facilitating comprehension through bodily experiences and interactions with the environment (Kosmas et al., 2019).

Recent research, as evidenced by a review conducted by Aartun et al. (2022), has demonstrated the effectiveness of embodied learning in deepening understanding of embodiment and elucidating concepts such as gender, health, and body, as well as various aspects of physical literacy (Whitehead, 2019).

Therefore, the described approach, rooted in principles of embodiment, adopts a student-centered and inductive methodology aimed at fostering the holistic and multidimensional development of the body.

6. Methods

6.1. Study Design

By exploiting Action-Research as research method, the present work aims to an in-depth investigation on the prospective impacts of embodied learning on both fostering a positive body image and preventing-managing BDD within the specified sample group.

Participants will be selected from a scholastic institute based in Cassino, Italy; it will include children aged between 9 to 11 years, as it represents a critical period as far as body image development is concerned.

An initial data collection will include both a qualitative research tool, specifically focus groups, and a quantitative research tool, the Body Image Disturbance Questionnaire (BIDQ)(Cash et al., 2004a, 2004b). This will be followed by a 3-month embodied learning intervention aimed at promoting the development and enhancement of a positive body image through engaging body experiences and guided reflections within the domain of physical education. Therefore, a group of experts from the research team will include scholars in activity where body plays a central role in the learning process.

Finally, a post-intervention data collection will be conducted to check whether there will be any changes compared to the initial data.

6.2. Body Image Disturbance Questionnaire

The Body Image Disturbance Questionnaire (BIDQ) is a self-administered screening tool developed to provide a means for thorough assessment of body image disturbance on a continuum within both nonclinical and clinical populations (Cash et al., 2004a). It is an adaptation of the Body Dysmorphic Disorder Questionnaire

(BDDQ; Dufresne et al., 2001) that was previously developed to screen clinically for BDD using a yes/no response format, and without a continuous scoring.

By adapting the BDDQ to use continuous rather than dichotomous response scaling for all items, the tool may have psychometric value beyond its original, more limited goal of screening for BDD.

Questionnaire consists of seven items, each of which can be answered through a 5-point Likert scale: (1) concern about some part(s) of the body felt to be unattractive (rated from 1="not at all concerned" to 5="extremely concerned"); (2) mental pre-occupation with these concerns (rated from 1="not at all preoccupied" to 5="extremely preoccupied"); (3) experiences of emotional distress over the "defect" (rated from 1="no distress" to 5="extreme and disabling"); (4) its production of impairment in social, occupational, or other important areas of functioning (rated from 1="no limitation" to 5="extreme, incapacitating"); (5) its interference with social life (rated from 1="never" to 5="very often"); (6) interference with school, job, or role functioning (rated from 1="never" to 5="very often"); (7) avoidance of things due to the "defect" (rated from 1="never" to 5="very often").

Items 1,2, 5, and 7 also include open-ended clarification of response that might be informative in clinical contexts, as well as qualitative research (Cash et al., 2004b).

6.3. Focus Group

This work will employ focus groups as qualitative research methodology to explore participant perspectives. Through the utilization of open-ended and semi-structured questions, participants will be afforded the opportunity to freely articulate their viewpoints within a structured framework.

The main themes addressed in the focus groups include physical appearance, body image, the ideal of female and male beauty, gender differences in body image, changes in the body over time, self-perception, and body dysmorphia. During each session's discussion, a group of experienced observers will take notes of behaviors, reactions, opinions, and experiences, as well as significant quotes, while a member of the research team will conduct the focus group as moderator.

The focus group sessions will occur in two different phases – before and after the intervention – to gather data concerning any shifts in participants' perceptions and experiences. Moderation techniques will be used to facilitate discussion and encourage participants to share their thoughts and reflections during the embodied learning process. Collected data will be analyzed using qualitative approaches, including thematic analysis, to identify key emerging themes and major developments during the entire intervention period.

7. Discussion

The present study will adopt a mixed-methods approach, combining qualitative and quantitative methods to explore the impact of embodied learning on participants' body image. The initial phase of the research involves the use of focus groups, a qualitative method widely used to explore participants' perspectives, experiences, and perceptions on a particular topic.

Focus groups are commonly utilized in qualitative research as they allow for gathering a wealth of information in a relatively short amount of time. Moreover, they could provide a comprehensive overview of participants' opinions and experiences

concerning body image, enabling the identification of key themes and areas of interest for the study.

In addition to the qualitative data collection, the use of a standardized questionnaire is proposed to gather quantitative data for thorough assessment of body image disturbance before and after the intervention. The BIDQ, as a 7-item adaptation of the BDDQ (Dufresne et al., 2001), represents a fundamental screening tool withing both nonclinical and clinical populations, given the typically deceitful onset of this disorder. Therefore, through the acquisition of quantitative data suitable for statistical analysis, it will be possible to assess potential shifts in participants' body image as consequence of the embodied journey.

Overall, the mixed-methods approach used in this study enables a comprehensive understanding of the impact of embodied learning on participants' body image, combining qualitative insights with quantitative data to provide a thorough and in-depth view of the issue.

As far as the embodied learning intervention is concerned, it has been designed to promote the development and enhancement of a positive body image among participants. Through a series of practical and experiential activities, experts will guide participants to explore and understand the complex nature of body and its dimensions, as well as to increase awareness and acceptance of their own bodies. Furthermore, the intervention will be meticulously designed to prioritize inclusivity and flexibility, tailored to accommodate the diverse needs and preferences of the participants through a pupil-centered and inductive approach (Aartun et al., 2022).

The decision to include children aged 9 to 11 years into the sample is suggested by the profound societal transformations currently underway. Indeed, although numerous studies have targeted adolescence as the most likely developmental phase for the occurrence of body dissatisfaction and body dysmorphic disorder, an increasing number of works have also found that the rapid transition from childhood to adolescence may actually anticipate such dissatisfaction, as well as the onset of body image concerns, drive for thinness, and disordered eating behaviors, especially among females (Digennaro & Iannaccone, 2023b; Elizabeth et al., 2018).

Living in the so-called “Onlife” society (Floridi, 2015), children are subject to continual exposure to social media and the dissemination of heavily stereotyped beauty and appearance standards. Consequently, directing attention towards childhood is deemed pertinent, given that the development of BI predominantly unfolds during this evolution stage. Fostering the cultivation and enrichment of a positive BI is thus identified as a priority.

8. Conclusions

Through this work, authors would like to highlight the importance and effectiveness of embodied learning as a tool for facilitating the learning process yet promoting a positive development of body image.

Furthermore, by integrating qualitative insights with quantitative findings, this research could provide a comprehensive understanding of the multifaceted dynamics governing body image development and its nuanced interplay with the phenomenology of embodiment. Specifically, it could illuminate how this mental disorder, typically categorize within the psychiatric domain, intersects with the embodied way of experiencing the world.

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