

EDUCATING THE BODY AND THE MIND: THE EFFECTS OF AN INTERVENTION ON CHILDREN'S BODY LITERACY AND STEREOTYPE AWARENESS

L'IMPATTO DI UN INTERVENTO EDUCATIVO SULL'ALFABETIZZAZIONE CORPOREA E LA PERCEZIONE DEGLI STEREOTIPI DI IMMAGINE NEI BAMBINI



Double Blind Peer Review

Citation

Visocchi, A., & Digennaro, S. (2025). Educating the body and the mind: the effects of an intervention on children's body literacy and stereotype awareness. *Giornale italiano di educazione alla salute, sport e didattica inclusiva*, 9(1).

Doi:

<https://doi.org/10.32043/gsd.v9i1.1397>

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gsdjournal.it

ISSN: 2532-3296

ISBN: 978-88-6022-509-2

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ABSTRACT

This qualitative action research analysed the impact of an educational intervention on body literacy in children aged 9-10, focusing on body image stereotypes. Initial focus groups revealed that many children expressed dissatisfaction with their bodies, aspiring to physical characteristics perceived as ideal according to social and media standards. After the intervention, greater self-acceptance and an increased critical awareness of imposed aesthetic models were observed. Children began to appreciate body diversity and reduce comparisons with unrealistic ideals. The findings suggest that targeted educational interventions can foster positive body perception, counteracting aesthetic stereotypes' negative effects, and promoting school-aged children's psychological well-being.

Questa ricerca-azione qualitativa ha analizzato l'effetto di un intervento educativo sull'alfabetizzazione corporea di bambini 9-10 anni, con focus sugli stereotipi di immagine. Dai focus group iniziali, è emerso che molti bambini esprimevano insoddisfazione verso il proprio corpo, desiderando caratteristiche fisiche percepite come ideali secondo gli standard sociali e mediatici. Dopo l'intervento, si è osservata una maggiore accettazione di sé, con un incremento della consapevolezza critica rispetto ai modelli estetici imposti. I bambini hanno iniziato a valorizzare la diversità corporea e a ridurre il confronto con ideali irrealistici. I risultati suggeriscono che interventi educativi mirati possono favorire una percezione più positiva del proprio corpo, contrastando gli effetti negativi degli stereotipi estetici e promuovendo il benessere psicologico dei bambini in età scolare.

KEYWORDS

Body literacy, image stereotypes, primary school, media literacy, action research
Alfabetizzazione corporea, stereotipi di immagine, scuola primaria, media literacy, ricerca-azione

Received 30/04/2025

Accepted 17/06/2025

Published 20/06/2025

Introduction

In the contemporary landscape, characterized by increasing digitalization and ever-earlier exposure to media, children are confronted with pervasive aesthetic standards and image stereotypes that can profoundly influence the perception of their bodies. Research indicates that body dissatisfaction begins to manifest as early as childhood, with 40-50% of children between 6- and 12-years expressing dissatisfaction with their physical appearance (Smolak, 2011). This issue assumes clinical and social relevance considering its correlations with harmful behaviours, such as reduced physical activity (Grogan, 2006), unhealthy eating patterns (Tremblay & Lariviere, 2009), and an increased risk of mental health problems, including depression (Xie et al., 2013).

Image stereotypes, understood as standardized and generalized representations relating to physical appearance, play a crucial role in the formation of children's body image. These stereotypes, amplified by traditional media and social networks, promote often unreachable aesthetic ideals and contribute to the construction of arbitrary associations between certain physical characteristics and personal qualities, social success, or individual value (Tiggemann & Slater, 2014). The rapid diffusion of platforms such as Instagram, TikTok, and YouTube has intensified children's exposure to these idealized models, implementing preventive educational interventions even more urgent.

Body literacy, defined as the ability to understand, accept, and appreciate one's own body by developing resistance against harmful influences from society and media, emerges as a fundamental pedagogical tool to counter the negative impact of image stereotypes (Whitehead, 2010). This multidimensional construct includes body awareness, interoception, perception, and comprehension of the body, offering a holistic perspective to address issues related to body image.

The present study aims to evaluate the effectiveness of an educational intervention designed to promote body literacy and reduce the influence of image stereotypes among Italian primary school students aged 9-10. The intervention research, preventive in nature, incorporated workshops aimed at promoting body awareness, appreciation of diversity, and self-acceptance, with a specific focus on image stereotypes. The main objectives include improving body image, mitigating the negative influence of media and social networks, and building a positive framework for understanding one's own body.

This study is situated within the growing literature that emphasizes the importance of inclusive school-based interventions to address concerns related to body image during childhood. The expected results include increased media literacy, reduced internalization of harmful ideals, and improved psychological and social well-being of children. The initiative aims to provide significant contributions to the literature on body image while also offering practical solutions to support the holistic development and resilience of children in a media-saturated world.

2. Theoretical Framework

2.1 Image Stereotypes in Contemporary Culture

Image stereotypes represent sociocultural constructs that define and impose standards of beauty and physical attractiveness considered desirable within specific cultural contexts. These stereotypes are not limited to establishing aesthetic canons but create implicit associations between certain physical characteristics and personal attributes, conveying powerful messages about the value attributed to bodies of different shapes, sizes, and characteristics (Grogan, 2008). In contemporary Western culture, dominant stereotypes promote an ideal of thinness for females and muscularity for males, implicitly suggesting that conformity to these standards is indicative of personal control, success, and social value (Jones et al., 2004).

The construction and perpetuation of image stereotypes occur through multiple channels, including traditional media, social networks, advertising, toys, and even educational materials. Research has extensively documented how repeated exposure to these messages can influence self-perception and evaluation of one's own body from childhood (Levine & Murnen, 2009). Of particular relevance is the process of internalization, through which individuals assimilate cultural aesthetic ideals as personal goals to achieve, establishing a direct link between conformity to these standards and self-evaluation (Rodgers et al., 2015).

In recent years, the advent of social media has amplified the pervasiveness of image stereotypes, introducing new dynamics of social comparison and self-validation based on visual approval. Platforms such as Instagram and TikTok, characterized by the centrality of image and the possibility of photographic manipulation, offer fertile ground for the diffusion of unrealistic aesthetic standards and the normalization of digitally altered bodies (Chua & Chang, 2016). The use of filters

and retouching applications contributes to creating an "augmented reality" that distorts the perception of bodily normality, making it even more difficult for children to develop a healthy and realistic body image.

2.2 Image Stereotypes and Body Image Development in Childhood

Childhood represents a critical period for the development of body image, significantly influenced by image stereotypes present in the sociocultural context. Contrary to the previous belief that concerns related to physical appearance emerged primarily during adolescence, contemporary research demonstrates that children begin to form evaluations of their bodies at a very early age (Smolak, 2011). Studies indicate that children between 3 and 5 years generally show positive attitudes toward their own body but begin to absorb and internalize image stereotypes present in their environment. Starting from 5 years of age, many children have already internalized the dominant aesthetic ideals in their culture, and by the age of 6, a significant percentage express dissatisfaction with specific body parts, weight, or shape, manifesting desires oriented toward thinness in females and muscularity in males (Richardson et al., 2009).

Image stereotypes influence the development of body image through various psychological mechanisms. Social comparison represents one of the main processes: children constantly compare their appearance with that of peers, media characters, and influencers, evaluating their worth based on perceived conformity to dominant aesthetic ideals (Festinger, 1954). In parallel, the internalization of stereotypes leads children to develop cognitive schemas that filter information related to the body, reinforcing negative perceptions and minimizing positive aspects (Smolak, 2012). A particularly relevant factor is gender differentiation in exposure to and internalization of image stereotypes. Research suggests that girls tend to be more vulnerable to the negative effects of stereotypes related to thinness, developing early behaviours of weight control and concerns for physical appearance (Dohnt & Tiggemann, 2006). Boys, on the other hand, show increasing concern for muscularity and physical prowess, reflecting dominant masculine stereotypes (Tatangelo et al., 2016).

2.3 Body Literacy as a Prevention Tool

Body literacy emerges as an essential educational paradigm to counter the negative influence of image stereotypes on children's body image. This concept includes not

only motor competence but also the ability to understand, value, and take care of one's own body consciously and critically (Digennaro & Visocchi, 2024).

In the context of image stereotypes, body literacy comprises several interconnected dimensions: body awareness, which refers to the ability to perceive and understand one's own body concerning the surrounding space; interoception, which implies the recognition and interpretation of internal bodily sensations; body perception, which concerns the subjective evaluation of one's own body influenced by cultural and personal factors; and body comprehension, which includes knowledge of how the body functions and the ability to make informed decisions about one's physical well-being.

A crucial element of body literacy concerning image stereotypes is critical media literacy, defined as the ability to critically analyse media messages related to the body and beauty (McLean et al., 2016). Educational programs that integrate media literacy help children understand image manipulation techniques, recognize the artificial nature of beauty ideals proposed by media, and develop resistance against messages that promote unrealistic aesthetic standards (Wilksch et al., 2015).

Emotional literacy represents another fundamental component in preventing the internalization of image stereotypes. This concept includes emotional intelligence and emotion regulation, both essential for promoting a positive self-perception. The ability to recognize, understand, and express one's emotions effectively is associated with greater resistance to image stereotypes and reduced vulnerability to body dissatisfaction (Damiano et al., 2015; Digennaro & Visocchi, 2023).

Schools represent privileged contexts for implementing body literacy programs, given their ability to reach a diverse student population. Research indicates that well-structured school interventions can mitigate risk factors such as the internalization of beauty ideals and appearance-based comparison, simultaneously improving self-esteem and general well-being (Richardson & Paxton, 2010).

3. Methodology

3.1 Research Design

The present study adopted a qualitative action research approach, articulated in three distinct phases. The first phase involved initial data collection, conducted through focus groups to explore baseline perceptions and attitudes among participants, with particular attention to image stereotypes. The second phase

involved the implementation of an intervention program designed to promote body literacy, with a specific focus on developing body awareness, self-acceptance, and critical media literacy. The third and final phase consisted of post-intervention data collection, again using focus groups to evaluate changes in participants' perceptions and behaviours related to image stereotypes after the intervention.

This methodological design was chosen to provide an in-depth understanding of the impact of the intervention, maintaining a participant-centered approach sensitive to context. The qualitative action research allowed not only to document changes in students' perceptions but also to adapt the intervention iteratively based on emerging needs and participants' responses.

3.2 Participants

Participants were selected through convenience sampling from fourth and fifth-grade classes at the Pio di Meo Primary School in Cassino, Italy. The selection process was conducted in collaboration with classroom teachers to ensure effective inclusion of students. The study involved a cohort of 50 participants.

The sample included children aged between 9 and 11 years, with a balanced distribution between males and females. Particular attention was paid to the representation of various sociodemographic characteristics, to capture a variety of perspectives and experiences related to image stereotypes.

3.3 Data Collection Instruments

For data collection, a focus group was conducted with the entire sample to investigate participants' habits regarding social media use, as well as their perceptions and opinions about their physical appearance and body image, with particular emphasis on image stereotypes.

According to Lederman, a focus group is a technique that involves in-depth group interviews, where participants are intentionally selected to represent a specific population interested in a particular topic (Rabiee, 2004). It is essential that participants feel comfortable speaking openly with interviewers and with each other during the focus group (Richardson & Rabiee, 2001).

The focus group was characterized by anonymous open-ended questions posed by a moderator, designed to stimulate dialogue and gather students' perceptions regarding the influence of social media on their body image and the internalization

of image stereotypes. Audio recorders were used during the focus group session to ensure accurate transcription of discussions.

The discussions revolved around a series of targeted questions to explore various aspects of children's interaction with online photos and image stereotypes. Topics included posting photos online, parental roles in photo sharing, emotions associated with sharing one's photos online, friends' access to shared photos, motivations that drive children to share their photos, children's favorite influencers, and the perception of image stereotypes spread in media and social networks.

3.4 Educational Intervention

The second phase of the research involved the implementation of an educational intervention, characterized by practical-educational workshops aimed at improving body literacy within the target sample, with particular attention to the deconstruction of image stereotypes.

Each workshop lasted two hours and consisted of an initial and final section consistent across all sessions, while the central section varied, as each activity was carefully designed to align with the main theme of each specific workshop. The themes of the workshops conducted were as follows: self-awareness, body image, emotional intelligence, gender stereotypes, and image stereotypes.

In particular, the workshop dedicated to image stereotypes included activities aimed at identifying image stereotypes present in media and social networks, critically analysing image manipulation techniques, exploring the impact of image stereotypes on the perception of self and others, developing strategies to resist the influence of image stereotypes, and promoting appreciation of body diversity.

The initial part of each practical session involved creating a timeline, an activity designed to recall and reflect on the memory, personal meaning, and symbolic value attributed to the activities of the previous workshop. The final part involved a game called "The Wool Thread," which involved constructing a relational network using a ball of wool and included reflection and verbalization of feelings and emotions related to the activities just completed.

3.5 Data Analysis

Qualitative analysis of the data collected in the intervention research was performed through the use of Nvivo software, which allowed for the identification

of several relevant thematic areas. The analytical approach followed the principles of thematic analysis, with particular attention to narratives related to image stereotypes.

The process of analysis involved transcribing audio recordings from the focus groups, followed by coding the data to identify recurring themes and significant patterns. Particular attention was paid to identifying changes in perceptions and attitudes related to image stereotypes before and after the educational intervention.

The analysis also considered gender differences in responses to the intervention, as well as the influence of social media use on the internalization of image stereotypes. This analytical approach allowed for a nuanced and contextualized understanding of the impact of the intervention on participants.

4. Results

The qualitative analysis of the collected data allowed for the identification of significant themes related to image stereotypes before and after the educational intervention. The qualitative data analysis revealed significant changes in participants' perceptions and attitudes toward image stereotypes following the educational intervention. Students aged 9-10 demonstrated increased critical awareness of media influences, developed strategies to resist stereotypes, and showed a more balanced view of personal value beyond physical appearance. However, some difficulties persisted due to ongoing social pressure and the pervasive influence of social media. Notable differences were observed between genders and among different types of social media users.

The results are presented following the main thematic areas that emerged from the analysis, with particular attention to changes in participants' perceptions and attitudes. A summary of the key findings is presented in Table 1.

Thematic Area	Before Intervention	After Intervention	Persistent Difficulties
Dominant Beauty Standards	<ul style="list-style-type: none"> • "Pretty girls are always thin, that's how they should be" • "I wish I had a more muscular physique because it would make me feel more confident" 	<ul style="list-style-type: none"> • "Before, I thought it was normal to want to look like people on social media; now I understand that many of those images aren't real" • "I've understood that people who truly appreciate me do so for who I am, not for how I look" 	<ul style="list-style-type: none"> • Gender differences in response (boys showed greater resistance to questioning muscularity stereotypes)
Beauty and Social Success	<ul style="list-style-type: none"> • "If you don't fit into certain aesthetic canons, people judge you more" • "On social media, those who get more likes are always those who are more beautiful" 	<ul style="list-style-type: none"> • "Before, I believed that being beautiful was the most important thing; now I know there are many other qualities that make me special" • "I've learned that I can appreciate my body for what it can do, not just for how it appears" 	<ul style="list-style-type: none"> • "Even though I've understood that stereotypes are wrong, many people still use them, and this makes it difficult to really change" • "At school, those who are more popular still correspond to the beauty ideals we see on social media"
Gender Stereotypes	<ul style="list-style-type: none"> • "Boys must be strong and muscular, otherwise they get made fun of" • "Girls must be graceful and well-groomed; it's important to be appreciated" 	<ul style="list-style-type: none"> • "Now I better understand how stereotypes condition the way we see ourselves and others" • "Now I can understand when a stereotype is influencing me, and I try not to let it condition me" 	<ul style="list-style-type: none"> • "For a boy, it's still important to be strong, even if I understand that not everyone can be muscular"
Use of Filters and Retouching	<ul style="list-style-type: none"> • "I always use filters in my photos because I 	<ul style="list-style-type: none"> • "Now I post photos without filters because I 	<ul style="list-style-type: none"> • "It's difficult not to use filters when

	look better that way" <ul style="list-style-type: none">• "Everyone uses filters on social media; if you don't use them, you seem strange, and your photos don't get likes"	don't want to hide behind a false image" <ul style="list-style-type: none">• "I've understood that filters can be fun, but they become a problem when they make us feel insecure about our real appearance"	all my friends do it" <ul style="list-style-type: none">• "Even though I understand that social media doesn't show reality, I continue to feel insecure when I see certain images"
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Table 1. Summary of the key findings of the research

5. Discussion

The results of this intervention research offer important insights into the effectiveness of educational interventions aimed at deconstructing image stereotypes and promoting body literacy among primary school children. The analysis of data collected before and after the intervention reveals a complex picture of changes, persistence, and individual differences that deserve careful consideration.

5.1 Effectiveness of the Intervention in Deconstructing Image Stereotypes

The educational intervention has demonstrated significant potential in promoting critical awareness of image stereotypes among participants. The increased ability to identify and critically analyse stereotypes suggests that children, even at a young age, can develop cognitive tools to resist harmful media messages when supported by targeted education. This result is consistent with previous studies that have highlighted the effectiveness of school interventions in improving media literacy and reducing the internalization of beauty ideals (McLean et al., 2016; Wilksch et al., 2015).

Particularly significant is the observed change in the perception of the link between physical appearance and personal value. The reduction in importance attributed to aesthetic conformity suggests that the intervention was successful in promoting a more holistic vision of personal value, a key element of body literacy (Whitehead, 2010). This cognitive shift could represent an important protective factor against the development of body dissatisfaction and associated risk behaviours.

The more critical attitude toward the use of filters and image modification technologies represents another promising result of the intervention. The ability to recognize the artificial nature of modified images and to resist the pressure to conform to unrealistic aesthetic standards is fundamental for the development of a positive body image. This result is particularly relevant considering the increasing diffusion of photographic modification technologies accessible even to younger children (Chua & Chang, 2016; Tiidenberg, 2014).

5.2 Persistence of Stereotypes and Contextual Factors

Despite the positive results, the persistence of some difficulties in completely overcoming the influence of image stereotypes highlights the complex and multifactorial nature of this phenomenon. The continuing social pressure, exerted by peers, family, and society in general, represents a significant challenge to the long-term effectiveness of the educational intervention. This observation reflects the systemic nature of image stereotypes, which are rooted in broader social and cultural structures (Grogan, 2008).

The results suggest that educational interventions, as effective as they may be in promoting critical awareness, may encounter limits when not supported by broader changes in the social context. This is consistent with the socioecological model of body image, which recognizes the influence of factors at individual, interpersonal, community, and social levels on the formation of body image (Voelker et al., 2015). The persistent influence of social media on the body perception of some participants underscores the power and pervasiveness of these means of communication in the lives of contemporary children. The difficulty of resisting online social comparison dynamics, despite greater critical awareness, reflects the complex interaction between cognition and emotion in the experience of social media (Vogel et al., 2014). This suggests that future interventions might benefit from specific attention to emotional regulation strategies in the context of social media exposure.

The gender differences observed in responses to the intervention deserve particular attention. The greater resistance of male children to questioning stereotypes related to muscularity and physical strength could reflect the strong cultural association between masculinity and physical power, an association that begins to be internalized at a young age (Tatangelo et al., 2016). These results suggest the need for gender-sensitive approaches in body literacy education, which

consider the specific pressures and social expectations that differently influence boys and girls.

5.3 Interaction Between Social Media Use and Intervention Effectiveness

The analysis of the interaction between social media use and response to the educational intervention offers interesting insights for the design of future body literacy programs. The diversity of responses observed among active, moderate, and limited users suggests that the effectiveness of educational interventions can vary significantly based on the level of exposure to digital media.

The fact that some active social media users showed the most significant changes after the intervention indicates an important transformation potential, precisely among subjects more vulnerable to image stereotypes. This result is encouraging and suggests that critical media literacy can be particularly effective for those who are most exposed to problematic content (Levine & Murnen, 2009).

On the other hand, the ability of moderate users to maintain a balance between appreciation of digital platforms and critical awareness of their risks highlights the potential of social media as tools for promoting body literacy, when used consciously. This observation is consistent with previous research that has identified potential positive effects of social media on body image, depending on the nature of content consumed and shared (Cohen et al., 2019).

The preventive benefit observed in limited users underscores the importance of early interventions, which can provide critical tools before problematic patterns of interaction with media develop. These results suggest the opportunity for differentiated approaches to body literacy, calibrated on children's level of exposure to and engagement with social media.

5.4 Implications for Body Literacy

The results of this research have important implications for the conceptualization and implementation of body literacy in the contemporary educational context. First, they highlight the need to explicitly include the deconstruction of image stereotypes as a fundamental component of body literacy. The ability to recognize, critically analyse, and resist image stereotypes emerges as an essential skill for the development of a healthy relationship with one's own body in the digital era.

Second, the results underscore the importance of integrating critical media literacy in body literacy education. In a context where children are exposed to idealized and

often manipulated body images from early childhood, the ability to critically decode media messages related to the body becomes a fundamental skill for promoting well-being (Richardson et al., 2009).

Finally, the diversity of responses to the intervention observed among participants suggests the need for personalized approaches to body literacy, which take into account individual differences in terms of gender, media exposure, and vulnerability to image stereotypes. This implies the development of flexible educational programs, capable of adapting to the specific needs and characteristics of different groups of children.

6. Conclusions and Implications

This intervention research investigated the impact of image stereotypes on children's body perception and assessed the effectiveness of an educational program aimed at fostering body literacy. The findings underscore the potential of such education to counteract the negative effects of image stereotypes, encouraging a more positive and realistic body image. The analysis of pre- and post-intervention data revealed several key insights. First, image stereotypes are both present and influential from an early age, with children between 9 and 11 years old already exhibiting signs of internalizing unrealistic beauty standards and linking physical appearance to personal worth. Second, a structured educational intervention can successfully enhance critical awareness of these stereotypes, reducing their impact on body perception and strengthening children's resilience to harmful media messages. However, the success of these interventions is shaped by contextual elements, including ongoing social pressure, the use of social media, and gender differences, all of which can either support or hinder the change process. Finally, body literacy—when combined with critical media literacy—emerges as a promising strategy for promoting a healthier relationship with the body in the digital age, though it must be tailored to the specific characteristics and needs of the target population.

6.1 Practical Implications

The results of this research carry important practical implications for educators, parents, and professionals working with children, highlighting the need for a coordinated and multidimensional approach to promoting healthy body

perception. For educators, it is essential to integrate body literacy into the school curriculum, with a focus on deconstructing image stereotypes and fostering an appreciation for body diversity. This includes adopting gender-sensitive strategies that address the different aesthetic pressures faced by boys and girls, incorporating activities that promote critical media literacy to help students decode implicit messages in media content, and cultivating school environments that value bodily differences and encourage a culture of respect and inclusion.

Parents also play a crucial role by recognizing how their behaviours and language around body image can shape children's self-perception. They should actively monitor and mediate their children's exposure to social media, guiding them toward more conscious and critical engagement, while also affirming their children's abilities and qualities beyond physical appearance to support a multidimensional sense of self. Open and honest conversations about image stereotypes and their impact are also key to nurturing children's critical thinking and resilience.

For professionals, the findings suggest the importance of designing early prevention programs that combine body literacy with broader efforts to support psychological well-being. A multidisciplinary perspective is necessary, one that accounts for individual, interpersonal, and sociocultural influences on body image. Moreover, interventions should be scalable and adaptable to various educational contexts to ensure greater impact and long-term sustainability.

6.2 Limitations and Future Directions

This study presents some limitations that are important to acknowledge. First, the qualitative nature of the research, while valuable for exploring participants' subjective experiences, limits the generalizability of results. Second, the short-term evaluation of the intervention does not allow for determining the stability of observed changes over time. Finally, the specific context of the research (an Italian primary school) might limit the applicability of results to other cultural contexts.

Future research directions could include:

1. Longitudinal studies to evaluate the long-term impact of body literacy interventions on the perception of image stereotypes.
2. Comparative research in different cultural contexts to understand how image stereotypes and their influence vary across cultures.

3. Studies combining qualitative and quantitative methodologies to provide a more comprehensive understanding of intervention effectiveness.
4. Research on the development of digital body literacy interventions that could leverage the positive potential of digital media to counter image stereotypes.
5. Studies focused on the role of parents and teachers as mediators of exposure to image stereotypes and facilitators of body literacy.

In conclusion, this intervention research highlights the importance of proactively addressing the influence of image stereotypes from childhood through educational interventions that promote body literacy and critical media literacy. In an era characterized by the pervasiveness of digital images and increasing aesthetic pressure, equipping children with tools to critically navigate this landscape represents a fundamental educational priority to promote their overall well-being and resilience.

Author contributions

Author Contributions: Conceptualization, A.V.; Methodology, A.V.; Formal Analysis, A.V.; Writing—Original Draft Preparation, A.V.; Writing—Review & Editing, A.V. and S.D.; Supervision, S.D. All authors have read and agreed to the published version of the manuscript, and both authors appear as first authors.

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