
**SELF-PERCEPTION OF COMPETENCE: CONCEPT, CHANGES IN CHILDHOOD,
AND GENDER AND AGE-GROUP DIFFERENCES****AUTOPERCEPÇÃO DE COMPETÊNCIA: CONCEITO, MUDANÇAS CARACTERÍSTICAS
NA INFÂNCIA E DIFERENÇAS ENTRE GÊNERO E FAIXAS ETÁRIAS**Glauber Carvalho Nobre^{1,2} and Nadia Cristina Valentini²¹Instituto Federal de Educação, Ciências e Tecnologia do Ceará, Fortaleza-CE, Brasil.²Universidade Federal do Rio Grande do Sul, Porto Alegre-RS, Brasil.

RESUMO

Esta revisão narrativa tem como objetivos descrever: 1) o conceito de auto-percepção de competência e a relação com o conceito de *self*; 2) as mudanças características na auto-percepção de competência na infância tendo como principal referência uma perspectiva teórica desenvolvimentista; 3) os resultados de pesquisa sobre auto percepções de competência de meninos e meninas de diferentes idades. Método: Foram revisadas pesquisas em bases de dados, busca manual nas referências de estudos publicados e as principais bases teóricas do auto-conceito na infância. Considerando a base teórica adotada, a auto-percepção é compreendida como o julgamento dos indivíduos sobre suas competências para satisfazer exigências de uma tarefa. Na infância, a auto-percepção é um importante indicador do *self*, pois as crianças naturalmente descrevem a si mesmas tendo como parâmetros o julgamento sobre as suas próprias competências. Entre os 5 e 10 anos de idade, ocorrem várias mudanças cognitivas e as experiências se diversificam guiando as crianças a transitarem de parâmetros mais internos e generalistas nos seus julgamentos para, com o avanço da idade, usar fontes externas de informações nos diferentes domínios de competência. Os resultados das pesquisas sugerem platô nas percepções de competência em relação as idades e percepções mais elevadas em meninos decorrentes, respectivamente, de poucas experiências potencializadoras de desenvolvimento e de crenças de papéis específicos para os gêneros.

Palavras-chave: Desenvolvimento Infantil. Autoconceito. Competência Percebida.

ABSTRACT

The objectives of this narrative review were to describe: 1) the concept of self-perception of competence and the relationship with the concept of the self; 2) the characteristic changes in self-perceived competence that occur during childhood using a developmental theoretical perspective as the main reference; 3) the results of studies on the self-perceived competence of boys and girls of different ages. Methods: Studies published in electronic databases, studies identified by manually searching the references of the published studies, and the main theoretical bases of the self-concept in childhood were reviewed. Considering the theoretical basis adopted, self-perception is the judgment of individuals about their own competencies to satisfy the requirements of a task. In childhood, self-perception is an important indicator of the self, since children naturally describe themselves taking the judgment about their own competencies as a parameter. Several cognitive changes and diversity in experiences are observed between 5 and 10 years of age that guide children to move from internal and general parameters in their judgments to external sources of information in the different domains of competence with increasing age. The results of the studies suggest a plateau in the self-perceptions of competence in relation to age and higher self-perception in boys, which result respectively from the lack of experiences to optimize development and from the beliefs of gender-specific roles.

Keywords: Child Development. Self-Concept. Perceived Competence.

Introduction

The self-perception of competence is a psychological variable that reflects the judgment of people about their own abilities to mobilize resources in order to achieve a particular goal. This perceived competence is a valuable indicator of the self, especially in childhood, as children naturally describe themselves taking the judgment about their own abilities as a parameter^{1,2}. Harter² proposes a concept of the self in terms of attributes and characteristics that are recognized and verbalized by the individual him/herself and that change according to cognitive maturity and experiences of success and failure acquired during human development.

Considering this perspective, the self-perception of competence is an important parameter to understand the motivation and development of the self-concept in childhood. This self-judgment is a mediator for children's achievements since, when children experience success in their attempts, they tend to perceive themselves to be more competent and motivated and continue this pursuit, which generates a continuous cycle of pursuit and engagement to improve performance. This cycle may strengthen the development of other psychological constructs, such as autonomy, self-confidence and self-esteem. Furthermore, the feeling of competence enhances the child's intrinsic motivation to engage in challenging activities, with he/she persisting in the task and striving for mastery. On the other hand, when children have negative perceptions about their competencies, they tend to avoid challenging experiences and to protect themselves from situations that could cause shame because of the expected and unrealized performance^{3,4}. In these two cases, the perceived competence will have a significant impact on the actual competence and on the components of this system².

Several internal and external factors influence the construction and strengthening of self-perceived competence. Parents, teachers, close friends and classmates are significant external agents that provide information for the construction of a self-evaluation mechanism. This mechanism influences the construction of the child's self-concept and depends on the value and importance given by the child to the external agent and experience^{2,6-8}. Internal factors include the developmental stage of the child, motivational orientation, affective reactions to the performance results, and persistence in response to difficulties. Younger children (2 to 4 years of age) tend to have less realistic perceptions and overestimate their abilities. In general, these children have little experience to make effective judgments and fail to distinguish between their desire to be (i.e., idealized self-concept) and what they really are. Consequently, they tend not to judge their competencies realistically. Furthermore, these children base the judgment about their abilities simply on the success in completing the task and/or on the feedback of adults that are important to them^{6,7}. As children advance in the development process, they develop an internal set of performance criteria that can be used in different situations. They begin to prioritize the comparison with peers to enhance self-evaluation and tend to make more realistic judgments about their own performance in different domains^{2,6,7,9}.

Different external mediators affect these perceptions and childhood experiences are influenced by culture. Children of similar ages may have different cognitive abilities affect they way they judge their own abilities. Therefore, several studies have shown divergent results regarding self-perceived competence in children of different ages and between boys and girls. Similar self-perception in young and older children, as well as higher perceptions for younger children have been reported¹⁰⁻¹². Higher perception of competence for boys is another aspect observed in studies. Specifically regarding athletic competence, boys frequently show higher perception than girls, influenced by cultural agents that more strongly value these experiences in boys^{11,13-18}. However, other studies found no such differences¹⁹⁻²², a fact reinforcing the importance of empirical studies on the cultural and developmental factors that can affect these perceptions in childhood.

Understanding the concept of self-perceived competence and how changes in this self-judgement occur during childhood, as well as the identification of the main factors associated with this construct, is fundamental for potentiating child development. The understanding of this construct can assist parents, teachers, school principals and professionals in promoting strategies that help children develop a positive perception about their own competence in different dimensions of life. As mediating agents, these individuals can promote learning experiences that enhance in the child feelings of self-determination and the pleasure of achievement, thus permitting the construction of a realistic perception of his/her competencies. Therefore, the objectives of this narrative review were to describe: 1) the

concept of self-perception of competence and the relationship with the self; 2) the characteristic changes that occur in self-perceived competence during childhood using the developmental theoretical perspective proposed by Harter¹⁻⁴ as the main reference; 3) the results of studies on the perceptions of boys and girls of different ages.

Methods

In this study, we reviewed studies published in the SciELO, Sportdiscus, LILACS, PubMed, Google Scholar and APA PsycNET electronic databases, Capes journals, studies identified by manually searching the references of the published studies, and studies published in thesis and dissertation databases, conference proceedings, and books and book chapters by important authors on the topic. The references of descriptive, observational, experimental studies and systematic and literature reviews that contained information about the self-perception of competence and the self, about developmental and sociocultural aspects of self-perceived competence in childhood, and about factors associated with the self-perception of children were reviewed. In addition, the major works of Susan Harter on the development of the self-concept in childhood were reviewed.

Development

This section covers three subtopics: 1) self-perception of competence and the self; 2) self-perception of competence in childhood considering developmental and sociocultural aspects; 3) the results of studies on the self-perceived competence of boys and girls of different ages. In the first subtopic, we describe the self-perception of competence based on the developmental model proposed by Susan Harter and its relationship with the self-concept. In the second subtopic, we describe the main changes in the self and consequently in the self-perception of competence that occur during childhood, focusing on the period of greatest changes according to the developmental model of Harter, that is from 5 to 10 years of age. In the last subtopic, we compare the results of self-perceived competence between children of different age groups and between boys and girls, focusing on studies that address the athletic dimension of self-perception.

Self-perception of competence and the self

The understanding of the development of self-perceived competence and of related aspects requires above all a reflection on the self. This construct and its relationship with aspects of human behavior have been the subject of interest of researchers in recent decades. The self is a multifaceted construct and its understanding is therefore complex; however, in general, it expresses a feature that distinguishes humans from other animals, i.e., self-reflection¹⁴. As Harter² points out, self-esteem, self-concept, self-image, self-worth, self-evaluation, self-appraisal and self-perception are only some terms used to refer to the self. These terms, which are often used as synonyms, point to different constructs depending on the theoretical orientation assumed.

Harter^{2,9,24} proposes a self-concept in terms of attributes and characteristics that are consciously recognized by the individual him/herself and that can be verbalized. It is expressed in the way one consciously thinks about one's own characteristic evaluated. Thus, according to this concept, we have ourselves as the object of reflection and especially as the object of evaluation that can be expressed by language. The words self-representation, self-description and self-perception are used by Harter^{2,9} for general characterization of the self. It is evident that the position of this researcher on this phenomenon is that it is an aspect subject to self-description explicitly referenced in terms of classifiable attributes. Harter² reinforces that the self-evaluation of an individual for any characteristic occurs within a continuum, for

example, how much the individual evaluates him/herself over a spectrum that ranges from athletic to non-athletic, attractive to unattractive, popular to unpopular. Furthermore, the self is not only a description of a set of characteristics, roles or assumed behaviors (man, friend, or student), but such description is likely to be judged in valuative terms such as “a good man”, a “devoted friend” and an “intelligent student”.

These adjectives express the knowledge that the individual constructs about him/herself not only from a single perspective, but also in different dimensions². This knowledge about oneself cannot be represented by a single measure, as individuals naturally describe and evaluate themselves in the different domains of their lives². Hence, the self as a complex psychological construct is also multidimensional^{2,9}. People may judge their own attributes or characteristics in specific areas, such as in the academic or school environment, work, friendships, romantic relationships, maternal acceptance, the relationship with parents, athletic activities, satisfaction with life, and health status^{2,4,9}. Likewise, the self-evaluated domains are directly related to the stage of life and change with the individual's experiences and development. In addition, the self-evaluations of these modifiable attributes can also change.

Finally, the self conceived from a developmental and sociocultural perspective is considered a cognitive and social construction of the individual². The self is the product of processes that involve the interaction between the individual's resources and the characteristics of the environment in which he/she participates actively across the life cycle. Different perceptions of the self can be observed during the stages of life since cognitive maturity and experiences in a certain context alter the way individuals describe and evaluate themselves². As a result of these processes, researchers have made efforts to understand how changes in the self throughout life can be explained by cognitive processes of change through the development, and by the children's relationships and experiences with others. Issues related to how individuals perceive and ask questions about who they are, about their value as a human being and about their competencies in different domains are the focus of studies^{2,3,5-8}. The following subtopic describes the characteristic changes in perceived competence as an important indicator of the self in early (2 to 4 years), middle (5 to 7 years) and late childhood (8 to 10 years) using the theoretical perspective proposed by Harter^{1,2,4,9,25} as the main reference.

Self-perception of competence in childhood: developmental and sociocultural aspects

The self-perception of competence is a valuable indicator of the self, especially in childhood, as children naturally describe themselves in terms of their competencies². Competence can be understood in this context as the ability of the child to meet the specific requirements of a situation or task in one or several domains of development, which can range from a low to high level^{1,2}.

According to Harter^{2,9}, younger children (2 to 4 years of age) tend to make self-judgments based on aspects that appear to be concrete and observable in their lives. Consequently, children describe their attributes in terms of their possessions (objects, pets) or based on what they think they can do (recite the entire alphabet, climb stairs, count from 1 to 100) or what they feel in a certain situation (I am smart because I can climb a ladder). In this age group, children are even able to verbalize how much they think they have improved their performance in recent periods and naturally tend to have unrealistic perceptions, overestimating their capabilities. This is due to the inability of children to distinguish between their desire to be and reality itself, i.e., by formulating an idealized self-concept, it tends to be different from what is actually observed.

Cognitive limitations that impair children to significantly utilize social comparison information for building their perceived competencies justify the overestimated self-

evaluation in early childhood. Specifically, these factors of influence as established by Harter^{2,9} on the unrealistic perceptions of children are related to the lack of cognitive maturity to understand that they possess opposing characteristics (good and bad). During this phase, children naturally exhibit an “all-or-none” thinking and still do not understand that they can be good at some attributes and bad at others. A second factor of influence is the inability to comprehend and incorporate into the self the criticisms of significant people such as parents and teachers. Furthermore, the significant people in the life of the child, the socializing agents, are benevolent, reinforcing the positive self-attributes of children in an unrealistic manner^{2,9}.

However, having unrealistic positive perceptions during this phase does not compromise the construction of a child’s self. On the contrary, these positive perceptions can serve as a kind of motivational and emotional protection strategy, helping the child to perceive himself effective in the tasks, even if he is not, and thus to persist and develop new abilities¹. According to Harter^{2,9}, the positive and unrealistic perceived competence at this stage may propel the child towards growth-building mastery attempts, introducing a sense of confidence and minimizing perceptions of inadequacy. Taken together, these factors contribute to a positive development. Thus, this trend of positive perceptions has an adaptive and self-reinforcement function in children of this age. This self-reinforcement can serve to prevent feelings of fragility in the face of more challenging situations that are naturally present during the acquisition of new skills, such as learning how to throw a ball, read, and write². Thus, children remain motivated to attempt a broad range of new tasks and these typically positive characteristics tend to persist into subsequent ages.

In middle childhood (5 to 7 years of age), children still exhibit several characteristics of the previous period in the development of self-perception. They evaluate themselves in terms of their various competencies (social, athletic, and/or cognitive ability). In addition, gender differences are more evident, as well as cultural influences, especially in relation to cultural roles, beliefs and values^{2,9}. During this period, the self-description of children already tends to reflect established gender stereotypes, for example, in professional roles. Male-dominated professions such as firefighter, doctor and professional athlete and those in which women predominate such as nurse and teacher are used in the self-description of children at this stage². Behavior norms related to gender roles are also salient during this period. Gender roles do not only dictate the content of stereotypes, but demonstrate the importance of adhering to one of the socially established directions (male or female)^{2,9}.

Cognitive advances are evident in middle childhood. Children begin to show the ability, even if rudimentary, to interrelate concepts that were previously compartmentalized. Moreover, children are able to organize, even though in a rudimentary way, categories that link a number of self-described allusive competencies to the level of judgment presented for a given competence, e.g., “I am good at running, and jumping, and swimming, and writing”. This does not mean that children have already acquired the capacity of coordinating thoughts about self-judgment since the “all-or-none” thinking still prevails. According to Harter², this period emerges from new cognitive acquisitions that allow the child to relate sets in order to map overlapping representations. The representational map in the form of opposites (all-or-none thinking) is still present at this stage and children are able to differentiate attributes such as “bad” and “good”, although they cannot coordinate these representations to understand and accept that one characteristic or representational map can coexist. In other words, children still do not understand that they can evaluate themselves as good at some skills and bad at others.

Like the cognitive advances described above, the context of socialization also plays a fundamental role in the construction of children’s self-perception in middle childhood. Children become more aware of their self-representation and how others construct an image

about them. Thus, the increasing cognitive perception for the perspective of the other influences the development of the self. This relational process allows the child to understand that socializing agents have a particular point of view about their behavior. Increasing discussions and comparisons of typical abilities during this period allows the child to realize that others are actively evaluating them. The self-evaluation of the child is therefore now influenced by the view of others (socializing agents), with this view serving as a guide that helps the child regulate his/her behavior, and children begin to identify what socializing agents expect from them. However, children do not yet have the capacity to internalize these evaluations sufficiently so that they can make independent or autonomous judgments about their own attributes and competencies, and thus show little interest in exploring the self².

As children continue to develop, the perceived competence becomes more realistic and is gradually more influenced by socializing agents, especially peers^{6,7}. Specifically children in the late childhood period, which ranges from 8 to 10 years of age, describe their competencies by focusing on the comparison of their own abilities with the characteristics of others and, certainly, this mechanism becomes much more relevant for their self-evaluation. These social comparisons that before served to adjust behavior and were thus temporary are now intended to contribute to the construction of self-perception. In this respect, the opinion and values of socializing agents are internalized by the child and, at some extension, guide children's options, choices and development. In other words, the external agents, especially peers, provide parameters that are incorporated and support the construction of a self-evaluation mechanism maintained by the feedback of these agents about the adequacy of the child's performance in a given task or experience^{2,9}. This mechanism influences the construction of the child's self-concept and depends on the value and importance it gives to the external agent and on the characteristics of the contexts in which the child actively participates^{2,3}.

Another important advance at this age, as Harter² explains, is the ability of children to link representational sets and thus to realize that they can evaluate themselves as good at some skills and bad in others. This allows the child to make more realistic and potentially more negative judgements about his/her attributes when compared to previous ages. Some cognitive acquisitions that emerge during this period can support the construction of these realistic self-evaluations. First, the cognitive ability of children to understand that they possess not only positive but also negative attributes is a factor of strong influence that allows the child to make more realistic and accurate self-evaluations. Another important cognitive advance is the use of social comparisons for self-evaluation that renders the child's self-perception more mature and, consequently, more competent. Furthermore, cognitive abilities such as the differentiation between actual and desired self-perception, the increased ability to understand what people think about him/her and the capacity to put oneself in someone's place are part of the child's cognitive changes that aid in the development of perceived competence during this period^{2,9}. Another important change in late childhood results from the child's cognitive ability to distinguish between the concept of ability (the capacity to execute the task with mastery) and the concept of effort (the energy needed to develop mastery), to establish relationships between his/her perceptions and the difficulty of the task, and to alter his/her self-perceptions according to lived experiences^{2,4}.

Self-perception of competence in different age groups and in boys and girls: the contributions of current studies to the understanding of this construct

Recent studies on the self-perceived competence of children have demonstrated similar perception between children of different ages^{10,11,18,26,27}. The results showed that older children continue to report unrealistic perceptions, over- or underestimating their own capability²⁸. This plateau in the self-perception of competence, specifically athletic

competence, between 5 and 10 years of age^{10,12} is related to the little experience and lack of internal criteria of these children to make more autonomous and accurate judgments. Theoretically, older children should gradually adopt more intrinsic parameter for self-evaluation and should thus begin to make more efficient judgments about their own performance. However, these cognitive changes depend on lived experiences. If the experiences do not permit the construction of internal parameters for self-judgment, it is possible that children over- or underestimate their own competencies even with advancing age. Valentini¹² emphasizes that the unrealistic and therefore inaccurate perception of children in late childhood is the result of the absence of parameters to judge their own competence and may be due in part to their participation in contexts that do not contribute to the construction of internal criteria for judging their capabilities.

These results are a matter of concern since the construction of a realistic perception is fundamental for motivation and persistence on activities. Children that overestimate their competence tend to build unrealistic performance expectations and the experience of failure in the task, if not recognized as difficult, may lead to the abandonment of tasks as a form of self-protection. On the other hand, when competencies are overestimated, children may develop poor performance expectations in relation to future attempts and, consequently, do not persist on activities⁸.

Another aspect observed in the studies is the higher perception of boys, especially regarding the athletic dimension of self-perceived competence. Several national^{11,17,20,29-34} and international^{26,35-38} studies confirm this trend. Cultural beliefs and values, especially in terms of the attribution of social roles, also influence the construction of perceived competence. In many cultures, gender stereotypes are reinforced with respect to particular roles in which boys should adopt more independent behaviors, for example, being encouraged to participate in physical and sports activities, while girls should engage in more passive and dependent behaviors³⁹. These more passive behaviors may cause girls to build a limited and often negative self-perception of competence, affecting their motivation to perform and consequently their pursuit of challenges and achievements.

Other hypotheses regarding gender differences in self-perceived competence can be raised, especially for the self-perception of athletic competence. One possible explanation might be the frequent social reinforcement of boys to engage in different motor activities and to participate in sports^{22,40}. Consequently, they may use as parameters previous experience and feedback from parents and teachers to report their perceptions of competence in these activities. Bois et al.³⁹ argue that parents as socializing agents in childhood and early adolescence are very influential in modeling the beliefs of their children about their capabilities. The authors further clarify that the mother's perception is particularly important in this modeling process because she is generally more active in raising her children, reinforcing the masculine stereotype model that is characteristic of sport. Other socializing agents such as teachers and coaches also influence this process, especially when they are important to the child^{7,41,42}.

On the other hand, girls frequently receive less social reinforcement to participate in motor activities and therefore have potentially lower motor competence. Girls tend to build a lower and often negative self-perception of their motor competence and thus avoid engagement and the pursuit of challenges and achievements in sports activities^{13,39}. Another important factor is that girls are more affected by the phenomenon of social anxiety and the fear of negative evaluation during physical education classes. The judgments of girls about their own motor competence tend to be weaker¹³. Finally, possible differences in perceived motor competence between genders may also be related to the different reasons that lead boys and girls to participate in motor and sports activities. Girls are more motivated by the fun and sense of well-being that the activity can provide, while boys are more motivated by the

pleasure of competition, the movement itself, the quest for learning, and improvement of performance⁴³. Competition and the pursuit of the best performance can lead boys to have feelings of accomplishment and pleasure for the challenge, consequently affecting their own perception of athletic competence.

Contradictorily, other studies report a decrease in the self-perception of competence with age and similar perceptions in the athletic dimension between boys and girls⁴⁴. Valentini⁸ suggests that appropriately provided development opportunities promote the construction of realistic and balanced perceptions of competence in both genders. Boys and girls with similar perceived competence may experience equivalent opportunities of interaction and social expectations of the environments in which they actively participate. These results reinforce the multidimensionality of this construct and the determinant role of family and cultural mediators. Thus, this phenomenon may exhibit different trends according to the context investigated.

Final Considerations

The self-perception of competence is an important mediating construct of individual development. Its construction is the result of an interactional process that involves individual internal characteristics and characteristics of the environments and culture in which children actively participate. To comprehend the processes related to the construction of self-perception in childhood, it is important to understand that the construction of the self requires self-reflection about one's own capability to mobilize resources in order to achieve a certain goal and that the perceptions of self vary across the child's developmental periods. These changes are the result of cognitive maturity and lived experiences, which change the way individuals describe and evaluate themselves. Younger children (5 and 6 years of age) naturally utilize more internal parameters and more frequently overestimate and generalize their own skills. Older children gradually tend to employ external sources of comparison, begin to better differentiate the domains of competence, and realize that they can have higher or lower competence depending on the domain evaluated.

The results of studies generally show a plateau in the perceptions of competence across ages and higher self-perception in boys in terms of athletic competencies. Possible factors that may explain these results are the lack of adequate parameters to evaluate their performance, for children in general. Regarding these differences, the low participation of girls in contexts that potentially enhance motor development and the low, social reinforcement to engage in broad motor activities and sports since the first years of life may explain the more fragile perceptions of the girls compared to the boys. Importantly, the opportunities and experience acquired in appropriate learning contexts, the cultural values and social support of significant others seems to be the desirable strategies to strengthen children's perceptions of competence. Adequate opportunities are also necessary to promote the construction of realistic perceptions of competence, regardless of gender and age. Providing children with opportunities for interaction and equivalent social expectations of high performance are essential to promote positive and realistic perceptions of competence. Effective learning and educational experiences in an appropriate context, with mediating agents being aware of their role, are fundamental to promote the development of children.

Finally, the data reported here have important practical implications. As mediating agents, relatives in general and parents in particular, caregivers, teachers and coaches must be attentive to the organization of strategies that promote in the child feelings of pride and pleasure for the achievement, that equally motivate boys and girls for the task, and that permit the construction of a positive and realistic perception of their own competence.

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