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Review Article

Social communication analysis in Homeschooling: a scoping review

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ABSTRACT

In the 21st century, transformations to the social system have made way for educational alternatives in which the speech-language pathologist, as a promoter of communicative skills, adopts a significant role. Homeschooling is one of those options, however, there are controversies around its impact on the development of children's social skills. This article is a scoping review that explores the relationship between Homeschooling and the development of social communication. Studies published in Spanish or English between the years 2000 and 2020 available with abstract and full text were included, and those that included participants with cognitive disabilities or learning disorders were excluded. Of 328 studies found, only 9 met the inclusion criteria. The selected documents were analyzed according to the components of social communication: interaction, social cognition, and pragmatics in verbal and nonverbal communication. There are discrepancies between the results. Some authors claim that the social communication skills of homeschooled children are better than those of children going to school, but others state that they merely meet expected standards for their age. The role of parents or educators was identified as decisive. No studies were found addressing pragmatic skills. In conclusion, the limitations regarding the number of articles and heterogeneity of the methodologies do not allow the results to be generalized to the population. The need for further studies in this area is evident, especially at this time of confinement due to the COVID-19 pandemic.

Análisis de la comunicación social en el *Homeschooling*: una revisión panorámica

RESUMEN

En el siglo XXI, las transformaciones al sistema social han generado alternativas educativas en las que el fonoaudiólogo adopta un papel importante, por ser un promotor de habilidades comunicativas. La educación en casa es una opción, sin embargo, existen controversias sobre su impacto en el desarrollo de habilidades sociales en los niños. Este artículo realiza una revisión panorámica de la literatura que explora la relación entre el Homeschooling y el desarrollo de la comunicación social. Se incluyen estudios publicados entre el 2000 y el 2020, en idioma español o inglés, con resumen y texto completo. Se excluyeron aquellos que incluían participantes con discapacidad cognitiva o trastornos del aprendizaje. En total de 328 artículos encontrados, sólo 9 cumplieron con los criterios de inclusión. Los documentos seleccionados se analizaron de acuerdo con los componentes de la comunicación social: interacción, cognición social y pragmática en comunicación verbal y no verbal. Existen discrepancias entre los resultados. Algunos autores afirman que las habilidades de comunicación social de los niños que aprenden en sus casas son mejores que las de los niños que van a la escuela, pero, en otros casos, estos solo cumplen con estándares esperados para su edad. Se identificó como determinante el papel de los padres o educadores. Sobre habilidades pragmáticas no se encontraron estudios. En conclusión, la limitación en el número de artículos y la heterogeneidad en las metodologías presentadas no permiten generalizar los resultados a la población. Es evidente la necesidad de realizar estudios en esta área, especialmente en este momento de confinamiento debido a la pandemia por el COVID-19.

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INTRODUCTION

In the teaching-learning process, school is considered an essential element for the child to bring cognitive, linguistic, and social skills from an interindividual to an intraindividual plane (Vigotsky, 1977). Education becomes a social mediator (Álvarez & del Río, 1990) and the child is perceived as an entity that is «social, active, protagonist, and product of multiple social interrelations» (Chaves Salas, 2001). Thus, the child is expected to reach a sophisticated level of social competence that will act as a central organizer in development (Guralnick, 1990). In addition, this will imply that they are able to respond flexibly to new social challenges based on their previous experiences (Semrud-Clikeman, 2007). Hence, social communication is important (Orpinas, 2010; Semrud-Clikeman, 2007; Topping et al., 2000) for the child to achieve social goals in specific contexts (Ford, 1982).

Hovland (1948) defines social communication as "the process in which the individual transmits symbols to modify the behavior of other individuals", and describes four important aspects: the communicator who transmits information, the stimulus transmitted by the communicator, the individual who responds to communication, and the response at the time of communication. Adams (2005) conceives it as "the synergistic emergence between social interaction, social cognition, pragmatics (verbal and non-verbal aspects), and language processing (receptive and expressive)", and Garcia-Winner (2011) later described it as the ability to «adapt the behavior effectively based on the situation and what is known about people, so that the sender can react and respond in the way in which is expected". Izaryk & Skarakis-Doyle (2017) understand it as synonymous with pragmatic skills. Finally, Denworth (2018) states that it is an intrinsically social process since it requires the ability to share, understand, and respond to what others feel or say.

For this review, we adopt the perspective of Adams (2005), since this author develops a model to describe social communication from each of its components, which is currently a reference for the American Speech-Language-Hearing Association (ASHA). Each component will be detailed below.

Social interaction can be understood as the exchange of information between two or more participants, located in a social context. Through this process, subjects acquire a reflective capacity to see themselves and give both shape and meaning to the social reality that surrounds them (Rizo García, 2006). Furthermore, social interaction motivates and encourages the

production of language in any of its modalities (sign, verbal, or non-verbal) with a specific purpose.

For its part, social cognition is defined as a neurobiological, psychological, and social process (*Bases cognitivas de la conducta social humana* [Cognitive Bases of Human Social Conduct], 2003). It is responsible for perceiving, recognizing, and assessing social events to build a representation of the environment of the interaction and generate the most appropriate social behavior or response, according to the situation (Adolphs, 2001). In addition, it is related to social perception, an initial stage in which people's intentions are assessed through behavior, non-verbal language, and attributional style (Pelphrey et al., 2004).

Pragmatics (verbal and non-verbal) refers to the ability to follow rules that conform to the culture, in specific communicative situations (American Speech-Language-Hearing Association [ASHA], s. f.-a). It is also linked to the use of resources to convey meanings related to everyday contexts (Serra, 2013; Stainton, 2000). It can be divided into a) communicative intention, expressed directly or indirectly; b) presupposition, the ability to make assumptions about the person's information needs, c) skills to process information and social status; and d) discourse management skills involving the ability to use appropriate strategies for initiation, maintenance, and termination of topics (Landa, 2005).

Finally, receptive and expressive language processing includes how information is received and analyzed through the visual and/or auditory pathways. It is also related to the ability of human beings to communicate through spoken and/or written language. Linguistic processing includes the development of skills at the phonological, morphological, syntactic, and semantic levels.

Thus, social communication involves the ability to vary linguistic style according to the context, consider the perspective of the communication partner, understand and use the rules for verbal and non-verbal communication appropriately, and use the structural aspects of language (American Speech-Language-Hearing Association [ASHA], s. f.-b).

Regarding the communicative development of children from this perspective, communication is acquired by exposure to a series of social activities (Adams, 2005). During this developmental process, social communication allows the child to achieve functional objectives through interaction with others (Acuña & Sentis, 2004; Diaz Favier, 2004). School becomes relevant in this context since it provides an environment in which fundamental aspects of personality can be developed, including cooperation with peers and the acquisition of social skills (Flores, 2010).

At preschool age, many of the children's utterances refer to the present moment and their communicative exchanges are brief, not exceeding a few conversational turns (Owens, 2011). In the following years, they become authentic communication partners, as their ability to adopt other participants' perspectives expands, and they become more aware of social roles (Shatz & Gelman, 1973). At this point, their deep and open participation in the thematic game of social roles allows children to transition successfully from preschool to school (Bredikyte & Hakkarainen, 2007; Solovieva & Quintanar, 2012).

In the cultural-historical approach and activity theory, thematic role play is a particular form of social and cultural experience acquisition (Vigotsky, 1984). For this reason, role play is said to have a social origin (Elkonin, 1980). Initially, this activity comes from the adult's intentions, who proposes the game to the child (Solovieva & Quintanar, 2012), and what makes it attractive is the fact that it is shared. The child interacts with objects with specific and intentional purposes and then uses substitutes for the objects. Subsequently, they influence the behavior of others and their own through their external verbal language. Motivation is important in this process for the development of personality, because it allows the child to learn to behave according to the situation. Thus, an orientation towards social norms emerges.

As children grow they expand their social network, gradually modify their self-image and self-esteem, and become more aware of social expectations (Cicchetti & Carlson, 1989). This, along with a new need for communication, is reflected in their language (Bretherton & Beegly, 1982), which results in an ability to relate to other people in different contexts (Dongil-Collado & Cano-Vindel, 2014).

Problems in this area can translate into an inability to express needs and desires during interactions with peers, and a difficulty to understand other people's perspectives, take turns, and maintain the conversational topic. This can have negative consequences on the child's social interaction, which can lead to peer rejection (Hadley & Schuele, 1995).

Concerning the above, the effects of educational systems on social skills, including communication, are discussed. For example, homeschooling is an option adopted by those who decide to educate their children outside the traditional system *(Red En Familia* [Family Network], 2012). In the 1960s it is proposed that school is unfavorable for education, and for this reason Homeschooling is introduced in the United States, Canada, Australia, and the United Kingdom as an educational modality (Cabo-González, 2012). This is an evolving phenomenon that generates different positions and attitudes, varying between countries. Therefore, there are differences in the legal framework that regulates it (Luebke, 1999). Furthermore, it exhibits both advantages and disadvantages.

Among the advantages, the use of novel methods and tools stands out, which include learning resources for parental supervision, leaving aside blackboards or traditional grades (*Red En Familia*, 2012). The teaching methodology is more flexible and adapts to the needs of the minor, stimulating aspects such as self-management and metacognition (Benabent, 2015). The activities do not have a time requirement; thus they can be carried out at any time during the day. In addition, the curricula offer opportunities to strengthen the relationship between parents and children, so that communication becomes more fluid and close (Cabo-González, 2012). Nevertheless, parents need to be actively involved in the process and receive training, in order to avoid losing the objectivity of the information provided (Run, 2016). For this purpose, there are various training and cooperation programs for parents to develop skills in different areas of knowledge (Valle-Aparicio, 2012).

One disadvantage is that homeschooled children may have reduced opportunities to generate social bonds. This is especially relevant when considering spaces for rest or recreation where children can interact with peers, which would allow them to develop social skills (Pereira Del Prette & Del Prette, 2003). Lebeda (2007) mentions that children educated under the Homeschooling model have difficulty socializing since they are restricted to a single space or context. It is known that for successful interactions people must have experiences in three contexts: home, school, and in establishing social relationships. Homeschooling limits the possibility for children to experience interactions in different social contexts.

Based on the above, it is possible to affirm that there is no consensus on the impact that homeschooling has on the development of children's social skills. Therefore, the objective of this study is to describe the relationship between homeschooling and the development of social communication in children who are educated under this modality. The concept of social communication and each of the components proposed by Adams (2005) and the American Speech-Language-Hearing Association (ASHA, s. f.-a) are explored, to guide the analysis of the information.

METHODOLOGY

A scoping review was carried out considering the criteria proposed by Arksey & O'Malley (2005). A narrative account of the existing literature is presented, without assessing the quality of the evidence or the heterogeneity of the articles. Sources of error are not discussed either. For this reason, the findings of the studies cannot be generalized.

Search strategy

The search was performed based on the PICO question (Population, Intervention, Comparison, and Results), which allows searching for the evidence necessary for research. From this question, keywords or search terms were generated: ("Homeschooling" OR "homeschooling" OR "home education" OR "homeschool" OR "unschooling") AND ("pragmatics" OR "social interaction" OR "social development" OR "socialization" OR "communication" OR language ").

The article search was carried out using the databases 1findr free edition, Communication & Mass Media Complete, Scopus, Web of Science, Education Database, ERIC, and Academic Search Complete, which include most of the publications available in the field of education.

Abstracts or full texts of original articles, written either in English or Spanish, were included. The articles had to present studies carried out between January first, 2000 and the last day of February 2020. This time frame was used considering that the definition of the components of social communication was proposed by Adams in 2005, and that the objective of this review was to find the most current information on said proposal.

Studies carried out in populations with intellectual disabilities, developmental difficulties, learning disorders, or neurological or psychiatric disorders were excluded. The reason is that educational adjustments were made for those populations, in some cases as part of school inclusion policies, hence they would not be generalizable to Homeschooling. Furthermore, the objective of this study is to evaluate the impact of homeschooling on a neurotypical population.

Figure 1 describes the article search and selection process.

Selection of the articles

A total of 328 articles were retrieved using the search terms in different databases. Only 37 articles were included which in the title and/or abstract showed some relationship with the objective of this review. The authors analyzed the abstracts to discard those that did not meet the criteria. A total of 21 articles with full text were left, of which only nine articles met the inclusion criteria. The remaining twelve were excluded for the following reasons: a) there was no relationship between the results and this review's objective, b) they corresponded to systematic reviews, and c) they included subjects with intellectual disabilities.
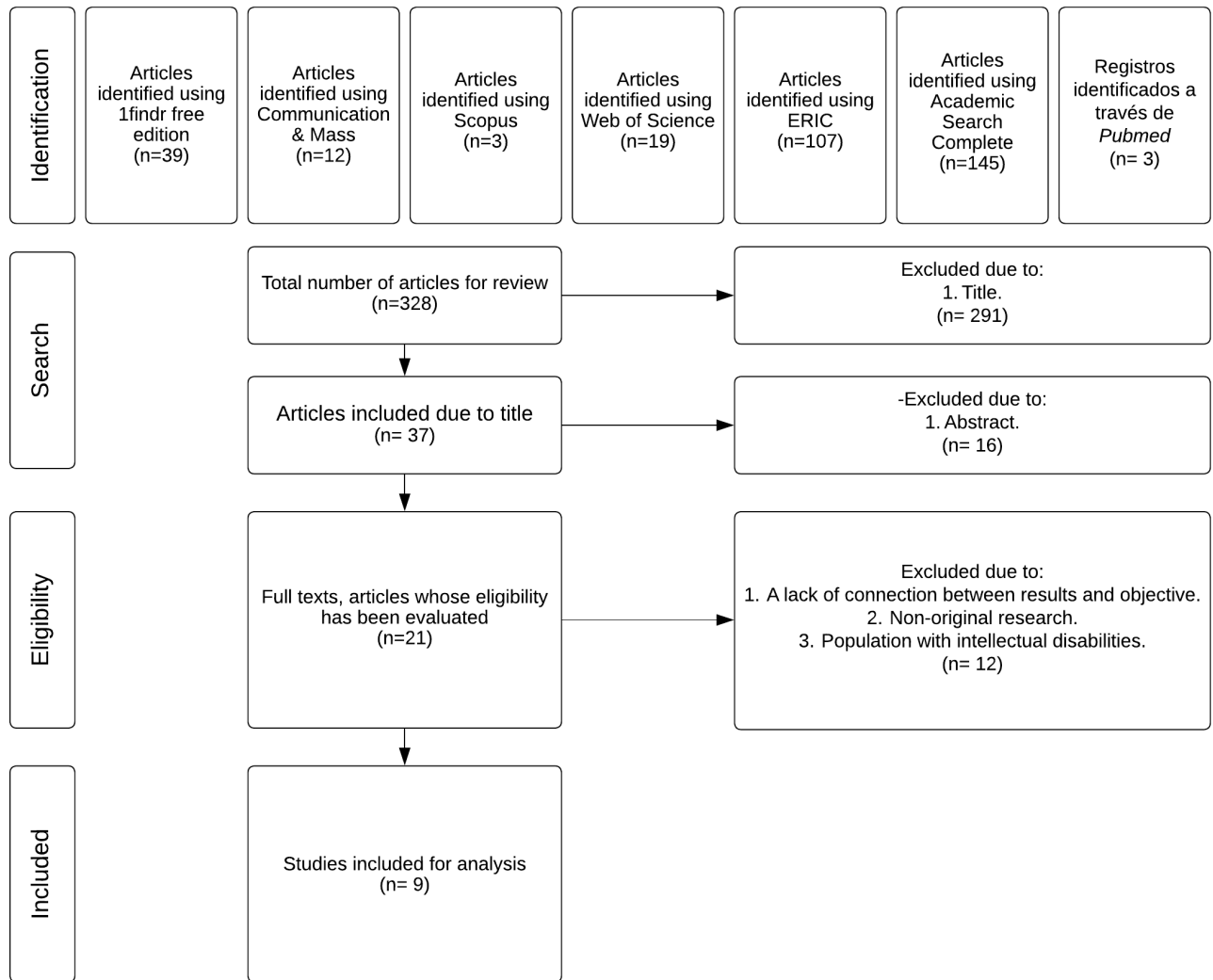
Figure 1. Development of the article search process.

Data Analysis

Three matrices were developed using Microsoft Excel to analyze the articles: first, an article selection matrix based on the database, in which it was assessed whether they met the inclusion criteria; Second, an analysis matrix for full texts according to title, objective, participants, type of study, methodological design, and results. The third matrix contained the components of social communication according to Adams (2005), including aspects of social interaction, social cognition, expressive and receptive language processing, and pragmatics in verbal and non-verbal communication. In each case, a narrative synthesis of the results was included, based on the proposed categories of analysis.

RESULTS

Nine articles met the inclusion criteria. Table 1 shows a summary of the articles, including the following information: country, author(s), title, objective, methodology, participants, and results (see Appendix). The selection included four qualitative studies, two quantitative, two mixed with a qualitative predominance, and one mixed without any predominance. The papers addressed issues related to homeschooling and its relationship with the development of social communication. Most of the studies reported a positive impact of homeschooling in terms of interaction skills and social cognition.

The participants were homeschooled children, public school children from third to sixth grade, and children receiving private education. Parents of children in home education and public education were also included as participants in some of the studies. The countries where these investigations were carried out were the United States, Norway, Indonesia, Israel, and Chile. The smallest sample was 16 homeschooled participants and the largest sample included 564 Norwegian parents with children attending compulsory school.

The instruments used to measure the impact on social communication were questionnaires, standardized scales, interviews, surveys, self-perception questionnaires, child behavior checklists, and hypothetical scenarios. The latter exhibits fictitious situations that represent physical or social victimization. Through this, it is sought to identify participants who have experienced similar situations. They are consulted on the frequency, and their opinion is requested in the face of this hypothetical scenario (Reavis & Zakriski, 2005).

Below, the results are described and organized according to each component of social communication.

Social interaction and affective bonds

The social interaction of homeschooled children was mainly associated with the activities they could participate in (Aliaga Castillo, 2017; Guterman & Neuman, 2017). Generally, children attend different sport and art classes or workshops, in addition to social activities in their community (Aliaga Castillo, 2017). Within these meetings, dedicated mainly to learning, social encounters are developed and the socialization of children with their community is promoted.

Reavis & Zakriski (2005) found that the reduction that homeschooled children experience in their interactions with other children makes them highly dependent on the friendships they establish. This is because they seek to maintain social support and personal well-being. Furthermore, children in the Homeschooling model were not able to recognize the diversity of teachings to be found in the social environment, since they interact only with their regular playmates. The lack of diversity in the contexts of interaction can cause difficulties in recognizing the variety of communicative and social situations.

In contrast, Rahma et al. (2018) state that aspects such as communication, play, and empathy are sufficiently developed in homeschooled children. This is because they can establish positive bonds that help them maintain quality relationships. The authors argue that the number of social relationships of children

who study at home tends to be small, but they are more intimate and closer since they share both the time and activities they participate in. Additionally, favorable attitudes towards educators, more authentic relationships with parents, and higher self-esteem are reported (Kingston & Medlin, 2005).

In another comparative study, homeschooled children reported a deeper bond with their close friends than those who received public education (McKinley et al., 2007). For this reason, McKinley concludes that both the quality and closeness of friendship are related to self-esteem and sociability. They also state that these can be protective factors for negative feelings such as depression and anxiety. Reavis & Zakriski (2005) compared children in private education with children educated at home. They report that, on average, both groups of children have the same number of close friends and the quality of friendship is similar. However, in the group of homeschooled children, those with low-quality friendships presented more anxiety and helplessness than homeschooled children with high-quality friendships. These findings suggest that the social characteristics of the education context may present both benefits and risks for children educated at home. The authors suggest that children exposed to this model appear to be more vulnerable to psychological distress in the absence of high-quality friendships.

On the other hand, the level of the teachers' training is described as a determining factor for the children's social interaction in this modality. This is because the quality of education or whether it includes a social component is not supervised. This may influence the quality and quantity of opportunities for the children to socialize (McKinley et al., 2007).

Regarding the parents, it was found that the greater the attachment with the mother, the fewer the child's social encounters (Guterman & Neuman, 2017). This is because the personalities of the parents and how homeschooling is practiced significantly correlate to social encounters.

Another perspective on social interaction is provided by Aliaga Castillo (2017), who states that in Chile, families explicitly highlight that one of the strengths of home education is the development of an excellent level of sociability.

Social cognition

According to Medlin (2006), homeschooled children described themselves as more cooperative, assertive, empathetic, and self-controlled than children in public schools. This is supported by what was found in the study by Kingston & Medlin (2005). In it, two groups were compared: children exposed to the

Homeschooling model and children from public schools. It is noteworthy that, although the empathy scores of both groups did not differ significantly, girls showed a higher level of empathy than boys (both in the Homeschooling group and in the public school group). This was proven by the fact that girls were more willing to take the perspective of others and more likely to feel concern and compassion for them. Similarly, it was found that children who showed more empathy were also more altruistic. In turn, homeschooled children were considerably more altruistic than public school children. These results could be related to the fact that homeschooled children translate empathetic thoughts and feelings into altruistic intentions more easily than public school children (Kingston & Medlin, 2005).

Pragmatics: Verbal and non-verbal communication

No study found information regarding speech acts, communicative intentions, prosody, conversational maxims, or discourse. As there was no information on the latter, no evidence was obtained on aspects such as assertiveness, maintenance of conversational topic, social-emotional reciprocity, cohesion, or coherence.

Expressive and Receptive Language Processing

There were no results found referring to the comprehension and expression of oral and written language. Therefore, information on phonology, morphology, syntax, and semantics was not obtained.

DISCUSSION

When analyzing the relationship between homeschooling and the development of social communication, most studies show that homeschooling has a positive impact on the development of the social interaction and cognition components. Children educated under the Homeschooling model develop these components better than children who attend traditional schools (Kingston & Medlin, 2005; Medlin, 2006), or at least their development is similar to that expected for children their age (Aliaga Castillo, 2017; Beck, 2008, 2010; Reavis & Zakriski, 2005). In the survey carried out in Chile about the Homeschooling model, it is pointed out that the absence of socialization is not a problem (Aliaga Castillo, 2017). On the contrary, parents indicate multiple opportunities to socialize with their children. In addition, homeschooled children show better skills to relate to other people, since they have not acquired standardized responses usually learned in the traditional educational system. For example, respect for authority is not emphasized, nor are boundaries between peers or between people of different ages, and what a child can and/or should know at certain ages is not established.

However, some studies show opposite findings and mention differences in the social skills of homeschooled children. They conclude that children in private education show better cooperation, affirmation, self-control, and general social skills than homeschooled children (McKinley et al., 2007). Moreover, some of them indicate that the development of socio-emotional skills would be better addressed in the school curriculum, under the guidance of competent teachers and with adequate didactic resources (Rahma et al., 2018).

When observing these discrepancies, it is found that one of the distinguishing factors may be the relationship between homeschooled children and their parents (Guterman & Neuman, 2017). This relates to other studies that highlight the role of the family in the social skills of children. For example, it was found that families with better spaces for communication, expressions of affection, and clearer rules help generate a wide repertoire of social skills, while those that show a disciplined structure characterized by authoritarian actions by the parents, are associated with insufficient social performance (Isaza-Valencia & Henao-López, 2011). Considering the above, it is possible that children develop better social skills when parents maintain a positive and reciprocal relationship with them, have a deep understanding of their particular needs, and great interest in their well-being.

It is important to highlight that Guterman & Neuman (2017) found that parents with fewer children feel a greater need to help them develop social relationships. That is, the tendency of parents to establish social relationships is expressed more in families with fewer children since they consider the need of socializing outside the family as very important (Beck, 2008).

Despite the importance of parents in the development of social skills, they should not fully assume the role of educators, since it can be a risk factor for their mental health. In this regard, Baker (2019) states that additional work can increase stress levels in mothers because it requires spending resources such as time, energy, emotional work, and money for the benefit of their children. For instance, parents who are responsible for homeschooling their children during the pandemic have higher levels of stress, worry, social isolation, and domestic conflict than those who are not. Some parents even report an increase in the use of alcohol and/or drugs (Thorell et al., 2021).

It is important to consider that the lack of assertive social skills favors the appearance of dysfunctional behaviors in the context of family and school. In adolescence, social skills are fundamental when approaching peers, finding a couple, and participating in groups, and they also influence the perception that the young person has of themselves, of others, and reality (Betina Lacunza & Contini de González, 2011).

Regarding social cognition in homeschooled children, Rahma et al. (2018) state that empathy develops according to what is expected for their age. Thus, playing becomes the main tool to learn about friendship and aspects like cooperation and competition. Nevertheless, this finding could be questioned, as it comes from a descriptive and non-experimental study. Coming from another perspective, McKinley et al. (2007) affirm that the heterogeneity in the results depends on the context and the conditions in which the social interaction takes place; therefore, cooperation, affirmation, self-control, and general social skills should be analyzed. In this context, children in private education obtained significantly higher scores than children who received home education (McKinley et al., 2007), which suggests that the difference is not only generated in the education model but in the system itself.

It is noteworthy that no results are found regarding the development of pragmatic and language processing skills in homeschooled children. The foregoing limits the scope of the review and the analysis and interpretation of the results. Having access to information about these areas would allow a broader picture and a better understanding of the development of social communication in homeschooled children, since pragmatics and language processing allow the use of resources to interact and fulfill communicative purposes.

This view must be broadened in further research, distinguishing developmental aspects of social communication. For example, in preschool age the focus should be on observing communicative intention through naturalistic methods, as part of a general assessment of social communication skills. In older children it is necessary to perform a thorough investigation of speech acts, conversational skills, narration, and comprehension of intention, as well as the child's ability to use contextual cues for comprehension (Adams, 2002).

These studies should be carried out in the context of Latin America, considering that most of the studies included in this review were carried out in the United States, Norway, Indonesia, and Israel. It is necessary to consider the particularities of the educational system and the differences and inequalities that may arise concerning access and quality of education (Puryear, 1997). It is also important to homogenize the population to be studied, in order to obtain more precise results. It should be noted that four studies work with children (McKinley et al., 2007; Medlin, 2006; Rahma et al., 2018; Reavis & Zakriski, 2005), four consider families or homeschooling educators (Aliaga Castillo, 2017; Beck, 2008, 2010; Guterman & Neuman, 2017) and one involves both populations (Kingston & Medlin, 2005).

These factors influence the interpretation of the results and enrich the range of perspectives to be analyzed, because it takes into consideration the diversity of the population in home education. In addition, they invite us to reflect on the reasons for implementing this model and how it is carried out. All of the above makes it difficult to accurately determine the impact of this educational practice on the social and communicative development of children (Cheng & Donnelly, 2019).

As Medlin (2013) states, social skills should not be seen as static traits, as they involve dynamic and interactive processes. It is for this reason that they ideally should be evaluated in the natural environments where homeschooled children develop their social life.

In Latin America, with the situation caused by COVID-19, it is necessary to evaluate the actions of inclusive education and study the different strategies that were implemented during the emergency to continue providing educational services. Strategies that include national homeschooling plans, programs, or projects using a virtual modality are highlighted, as well as tele-education and radio, television, and printed resources as strategies to reach corners where connectivity is not possible (Delgado-Valdivieso, 2020).

At a time when there are educational changes associated with the COVID-19 pandemic, it is necessary to continue researching this topic and to incorporate strategies of the Homeschooling model, considering its usefulness within the current context.

It is noteworthy that recent research has identified positive elements in children's routines when spending more time reading and doing extracurricular activities at home (Champeaux et al., 2020). This generates learning opportunities, but at the same time creates needs regarding socio-emotional aspects such as mental health, well-being, and behavior. It is necessary to consider that the risk of socio-emotional issues may be greater for those living in poorer households, with a lower educational level, and in children with fewer socio-emotional skills.

The above must be addressed and analyzed in future research within the population exposed to the Homeschooling model. Additionally, Speech-Language Pathology, as a discipline that studies human communication and its disorders, can help guide future research towards the population of children and adolescents with communication disturbances, addressing the development of their social communication either in the traditional educational system or in homeschooling. The speech-language pathologist is a professional competent to identify and evaluate social communication, in addition to diagnosing and treating its possible disorders. Thus, the results of their evaluations would be expected to characterize the social communication of this population and determine their communicative needs. Based on the information obtained, where appropriate, strategies would be designed aimed at parents, educators, caregivers, and the children themselves. These strategies would seek to impact the promotion of communicative and social skills in children, to prevent difficulties that may have an unfavorable impact on the components of social communication. Similarly, to implement additional strategies from a speech-language therapy perspective, to promote communication, social interaction, and the development of socio-emotional skills, involving the use of technological and innovative resources.

Limitations

Three major limitations can be recognized in this review. The first one refers to the number of articles, the second one to the heterogeneity of methodologies between studies, and the third one to the systematization of the results. The first two limitations do not allow the results to be generalized to different populations, and the third one implies that the research presents various biases, making it necessary to propose a systematic review in the future, which includes several of the studies carried out during the pandemic.

CONCLUSIONS

The majority of the studies in this review show a positive impact of homeschooling on the development of social interaction, bonding, and social cognition. The findings are mainly focused on the social interaction component, which is one of the four indicated by Adams (2005). In this, performance in social interaction with peers is associated with the activities that can be developed in a specific context and with the adults as educators, where more positive relationships can be developed.

On the other hand, regarding social cognition, Medlin (2006) proposes that children exposed to the Homeschooling model develop greater empathy, which is also associated with an increase in children's altruistic intentions (Kingston & Medlin, 2005). Regarding pragmatic and language processing skills, no relevant information is found.

Throughout the review, a common denominator is that parents or homeschool educators have a significant influence on the social interaction of homeschooled children, in contrast to same-age children who attend the traditional educational system. Homeschooled children are not inserted in a context in which they meet with other children daily, and for this reason, the components of social communication in a child educated at home become a fundamental axis in their development. In general, the results show a need to expand the research in this field, especially considering the COVID-19 pandemic, since during this period many of the strategies of the Homeschooling model have been incorporated into the education of children and teenagers. Finally, it is important to recognize the educational role of speech-language pathologists when proposing strategies to promote communicative well-being in homeschooled children.

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APPENDIX

Table 1. Description of the selected articles.

Country	Author(s), (year)	Title	Objective	Methodology	Participants	Results
United States	Kingston & Medlin (2005)	Empathy, Altruism, and Moral Development in Home Schooled Children.	To compare empathy, altruism, moral reasoning, and prosocial behaviors of homeschooled children and children who attend public schools.	Quantitative-descriptive.	The public school group had 80 children between third and fifth grade, and the homeschooling group had 30 children. Parents also participated in the study.	Homeschooled children translate empathetic thoughts and feelings into altruistic intentions more easily than children from public schools.
	McKinley et al. (2007)	Social Skills and Satisfaction with Social Relationships in Home-Schooled, Private-Schooled, and Public-Schooled Children.	To compare the social skills between homeschooled children, children in private education, and those in public education.	Quantitative-descriptive.	53 homeschooled children, 49 privately educated, and 48 in public education, between the ages of 8 and 12 years old.	Children in private education obtained significantly higher scores than children who are homeschooled when measuring cooperation, affirmation, self-control, and general social skills.
	Medlin (2006)	Homeschooled Children's Social Skills.	To examine the social skills of homeschooled children, from their point of view.	Mixed methodology.	70 homeschooled children, 32 boys and 38 girls in grades 3 to 6.	Children educated at home have better social skills than those who attend traditional schools.
	Reavis & Zakriski (2005)	Are home-schooled children socially at-risk or socially protected?	To compare the relationship with peers and psychological adjustment between home-schooled children (HS) and those with traditional schooling (TS).	Mixed, with qualitative predominance.	16 homeschooled children and 48 traditionally schooled children.	The relationships of children in HS and TS are similar. On average, both groups had the same number of close friends, with similar quality.
Norway	Beck (2008)	Home Education and Social Integration.	To analyze the social integration among Norwegian students who are homeschooled in different regions.	Qualitative-descriptive.	128 home educators from Norway.	Among registered and supervised homeschooling educators, homeschooling seems to produce students who are well socially integrated.
	Beck (2010)	Home Education: The Social Motivation.	To investigate the motivations for implementing real education at home and the motivation for establishing a possible education at home.	Qualitative-retrospective.	A sample of 564 Norwegian parents with children who attend the Norwegian compulsory school.	Particular school experiences in private schools may influence certain areas of the children's social skills, namely improving their cooperation, assertiveness, and self-control, and reducing their loneliness.
Indonesia	Rahma et al. (2018)	The Social Emotional Development of Homeschooling Children.	To discuss the social and emotional development of homeschooled children.	Qualitative-descriptive.	Students from *Khoiru Ummah Surabaya Homeschooling*	The development of socioemotional skills is best addressed in the curriculum under the guidance of competent teachers and with appropriate didactic resources.
Israel	Guterman & Neuman (2017)	The Role of Family and Parental Characteristics in the Scope of Social Encounters of Children in Homeschooling.	To examine the relationship between the social encounters of a child and the personality of the parents.	Mixed, with qualitative predominance.	140 parents who have educated their children at home.	The personalities of the parents and how education is practiced at home are significantly correlated with the social encounters of children at home.
Chile	Aliaga Castillo (2017)	*Educación en el hogar en Chile. Informe de resultados de la Encuesta Nacional* [Homeschooling in Chile. Report of the National Survey's results]	To investigate the reasons that the parents had, the values, interests, and forms of socialization.	Qualitative-descriptive.	67 families that practice homeschooling in Chile.	Families indicate multiple socialization opportunities that parents, in the family or groups, provide for their children.