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Social support for students with visual impairments in educational institutions: An integrative literature review

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Introduction

Visual impairment may limit social interaction and have a negative impact on individuals' socioemotional development (Rosenblum, 1998). Children with visual impairments may present with more emotional and behavioural difficulties than their sighted peers (Harris & Lord, 2016; Pinquart & Pfeiffer, 2014). They also appear to prefer to spend most of their time in solitary and parallel play and do not usually engage in imaginative play or social interactions with their sighted classmates (Celeste, 2006; McGaha & Farran, 2001). This may be due to the limitations they face in perceiving both visual cues and others' non-verbal movements (Celeste, 2006). In addition, research shows that they may present problem behaviours and poorer social skills than their sighted classmates (Ozkubat & Ozdemir, 2015), which may result in social isolation (Huurre, Komulainen, & Aro, 1999). There is also evidence that they are at greater risk of emotional difficulties: findings from a systematic literature review suggest that children and adolescents with visual impairments present with more emotional problems, namely anxiety, fear and/or and depression (Augestad, 2017). Research evidence indicates that these problems may stem from a number of factors, such as the neurological impairments associated with their vision, limited participation in leisure-time activities, increased dependency on others and increased parental control (Augestad, 2017; Pinquart & Pfeiffer, 2014). Adolescents with

visual impairments seem to be bullied more often by their sighted peers in the school environment (Rosenblum, 2000) and to demonstrate lower self-esteem compared to the latter (Halder & Datta, 2012). As with younger children, loneliness can also be frequent among adolescents with visual impairments (Huurre & Aro, 1998; Jessup, Bundy, Broom, & Hancock, 2017). High levels of loneliness among students with special educational needs in mainstream schools may indicate that these students are at risk of lifelong socioemotional problems if they do not receive the appropriate support (Bossaert, Colpin, Pijl, & Petry et al., 2012; Schwab, 2015).

It is generally acknowledged that children and adolescents with disabilities often encounter additional adversities, disadvantages, and difficulties during their development, and experience exclusion from age-appropriate activities (Hart et al., 2014). For that reason, it is suggested that interventions and practices aiming to enhance resilience may be particularly beneficial for these children, provided that their access to and equal participation in them are ensured (Hart et al., 2014).

Resilience refers to positive outcomes with regards to adaptation and development despite the presence of significant challenges (Masten & Coatsworth, 1995). It is considered to be a dynamic process resulting from the interactions both within the individual and between her and the environment (Luthar, Cicchetti, & Becker, 2000; Masten, 2001; Hart

et al., 2014). Resilience implies the involvement of protective factors (Rutter, 1990). Protective factors are conceptualised as individual and environmental characteristics which contribute to the modification of the individual's response to adversities (Rutter, 1985) and moderate or lessen the impact of risk factors (Masten & Coatsworth, 1995). Research on resilience has demonstrated that protective factors pertain to child attributes (e.g. intellectual functioning, positive self-perception, social skills), family characteristics (e.g. good parenting, affectionate close relationship with a parent, socioeconomic status) and environmental influences (e.g. positive experiences in school, positive relationships with peers) (Benard, 1991; Masten, 2014; Rutter, 1985). Research has also focused on the investigation of protective processes in order to gain an understanding of how protective factors lead to positive outcomes (Luthar et al., 2000; Rutter, 1985).

However, the construct of resilience and the related research evidence has been subject to criticism. As outlined by Luthar et al. (2000), various concerns regarding the terminology as well as the definition and the measurement of concepts related to resilience have been expressed. For instance, it has been argued that the term 'resilience' is used in the relevant literature to refer to either a personality trait or a dynamic process. The nature and the stability of resilience have also been called into question and the need to further define positive adaptation and competence has been underscored (Luthar et al., 2000). In addition, particular emphasis has been put on the lack of examination of the

cultural context in the resilience research (Masten, 2014). These criticisms have led to the clarification of misunderstandings and contributed to the formation of directions for future research (Luthar et al., 2000) as well as to the inclusion of variables, such as those related to the cultural context, in research on resilience (Masten, 2014).

From the risk and resilience perspective, the social support provided in the context of the family, the school and the community, constitutes a protective factor for the psychosocial development of at-risk children (Luthar et al., 2000; Masten, 2001). With regards to school, research evidence has demonstrated the protective effects of relationships with caring teachers and peers, and of the provision of social support and resources that enhance participation in the students' academic and socioemotional development (Benard, 1991).

Social support refers to the prosocial behaviours or attitudes that individuals receive from their family and social environment with the aim of enhancing social functioning and social interactions (Nolten, 1994 as cited in Elliott, Malecki, & Demaray, 2001). These behaviours contribute to the development of the feeling of being valued and accepted. Social support also refers to the guidance and practical assistance which help individuals cope with the challenges they face in their social interactions (Pavri & Monda-Amaya, 2001). According to Berndt and Hestenes (1996), there are four types of social support:

(1) esteem support, which refers to enhancing individual's self-esteem and includes compliments, appraisals and the development of close social relationships, (2) informational support, which refers to the advice and guidance that individuals receive in order to solve their problems, (3) instrumental support, which is defined as the provision of practical assistance in order to help individuals face challenges and (4) companionship which consists of the close social relationships that individuals develop with their family and peers as well as their joint participation in pleasant activities.

The social support that students with visual impairments receive at school from their teachers and peers may promote their future independent living (Celeste & Grum, 2010). The development of social relationships and friendships with their classmates may also have a positive impact on their self-esteem and self-confidence (Lindsay & McPherson, 2012). Moreover, social support is positively related to social skills since the latter allow the individual to seek and maintain social support (Elliott, Malecki, & Demaray, 2001). In addition, the development of the sense of belonging and acceptance in the school environment, and the provision of instrumental and emotional support from teachers and peers (key parameters of social support) have a positive impact on students' well-being and they are considered fundamental components of inclusive education (Pavri & Monda-Amaya, 2001). The value of inclusive education has been endorsed by educational policies around the world and particular emphasis has been placed on the importance of

respecting the differences of all students and addressing their needs in mainstream schools (UNESCO, 2006). Research shows that students with special educational needs who receive social support in inclusive settings may have similar levels of social inclusion to their typically developing classmates (Tuersley-Dixon & Frederickson, 2016).

Despite the fact that the importance of social support for those children requiring additional support or for those who are at risk for developing psychosocial difficulties has been widely acknowledged, we were not able to find a peer-reviewed literature review which examines the provision and the outcomes of social support to children and young adults with visual impairments. Consequently, the purpose of this study was to conduct an integrative review and to synthesise research evidence concerning the social support (including support from school personnel, peers, and support services, as well as interventions) that individuals with visual impairments receive in educational institutions (schools and universities). The term “interventions” refers to ‘a planned modification of the environment made for the purpose of changing behavior in a prespecified way’ (Tilly (2000, p. 21). Intervention studies aim ‘to describe the effect of some kind of educational approach upon a targeted outcome’ (Douglas et al., 2019, p. 16). In accordance with the definition of the social support cited above, in the current review the search focused on intervention studies aiming at enhancing the social interaction and the social functioning of students with visual impairments.

The research questions were the following:

- (1) To what extent do individuals with visual impairments receive social support in educational institutions and from whom?
- (2) What are the types of social support that individuals with visual impairments receive in educational institutions?
- (3) What are the main outcomes of the social support that individuals with visual impairments receive in educational institutions?

Method

Search strategy

In order to identify published studies relevant to the topic of the current review a search was conducted using electronic databases (ERIC, PsycINFO, Web of Science) as well as Google Scholar. The keywords used were *visual impairment, blindness, low vision, partially sighted, visual disability*, which were combined with the keywords *social support, intervention, counselling, social skills training*. A hand search in the reference lists of retrieved articles was also made. Following this procedure 75 articles were retrieved. On the basis of the abstract of the studies, 25 articles were retained as relevant.

The authors then read the full text of the remaining articles and removed those studies which did not meet the inclusion criteria. Finally, a total of 17 studies was retained.

Criteria for inclusion

To be included in the review, articles had to be published in academic journals between January 1998 and December 2018, that is during the last two decades and after the Salamanca Statement in 1994, when the idea of inclusive education was embraced by 92 countries (Ainscow & César, 2006; Ruijs & Peetsma, 2009); provide evidence from research conducted in educational settings; report research findings from either quantitative or qualitative studies concerning the provision of social support to individuals with visual impairment and no additional disabilities; and be written in English. Our initial plan was to only include studies which focused on children, adolescents and young adults aged 3-25 years. However, as the literature search proceeded it became apparent that we would be missing a substantial body of literature which addressed the experiences of university students, since in many cases the latter are older than 25 years. Consequently, it was decided to extend the age range of participants so that these studies could be included.

Evaluation of the studies and data extraction

An integrative review allows the researcher to combine empirical articles which rely on a variety of quantitative and qualitative methodologies. This made it suitable for the mixed methodological base of the selected articles in the research area. The process of data analysis in an integrative review comprises four steps: (1) data reduction, which involves a primary classification of the data according to the methodology that has been used in the studies or the settings and samples' characteristics, (2) data display which refers to the report of this classification in the form of graphs, matrices or tables, (3) data comparison which includes the detailed examination of the data in order to identify themes and patterns and (4) conclusion drawing and verification which refers to the interpretation of these themes and patterns in order to evaluate their scope and focus on the data (Whittemore & Knafl, 2005).

Tables 1 and 2

In the current research, the studies were divided into two main categories: First, studies which focused on the social support provided to students with visual impairments by educational institutions individually, and second, educational interventions implemented

by researchers in educational institutions. Two tables were created (one for each classification) and main information for each academic publication was recorded (Tables 1 and 2). An inductive approach was used to generate the themes of the studies. The authors independently read the articles and discerned the themes that were elaborated in each study, which then were compared, and similar themes were grouped together. Subsequently, the authors discussed any points of difference until they reached a consensus. The themes and patterns that were identified in the data, as well as their interpretation, are presented in the following section.

Findings

The studies included in the current review took place across 11 different countries: Australia, Finland, Jordan, India, Kenya, Malaysia, Singapore, Tanzania, Turkey, USA, Zimbabwe. The majority of the studies were conducted in mainstream educational settings, i.e. mainstream or inclusive schools (six studies) and universities (3 studies). Five studies were conducted in special schools and two studies took place in both special and mainstream schools. In one study (Celeste, 2007) no information is given regarding the type of educational institution. Six studies were qualitative and nine were quantitative and two studies (Irungu & Warnocho 2010; Milinga & Possi, 2015) used both qualitative and quantitative methods. It should be noted that seven of the nine quantitative studies

presented the outcomes of educational interventions. Conversely, most of the studies (five out of seven) that aimed to examine the participants' perceptions or experiences of social support used a qualitative approach. Interviews and focus groups with the students with visual impairments were the most prevalent methods used in these studies. In two cases teachers and/or parents and sighted students were also included as informants. The results from most of the intervention studies mainly relied on self-reports scales administered to students with visual impairments as well as on observations of children with visual impairments (four studies) and their sighted peers (two studies). Only one of these studies included parents and teachers as informants (see tables 1 and 2).

Three main themes emerged from the analysis: The experiences of social support in educational institutions, the impact of social support from staff members and peers and the impact of educational interventions on the academic and social inclusion of adolescents with visual impairments. Several sub-themes were also developed. The themes and the subthemes are presented in table 3 and they are described below.

Table 3

The experiences of social support in educational institutions

This theme refers to how the participants across the studies define social support. It also addresses the main differences in the experiences of social support which relate to the existence of visual impairment, the frequency of social interactions with peers and gender.

The definition of social support

In four studies the participants' accounts revealed how they defined social support. Milinga and Possi's study (2015) aimed to examine sighted students' prosocial behaviours towards their peers with visual impairment in inclusive secondary schools. The teachers who participated in the study described social support from sighted peers as referring to the development of friendships, co-operation, and assistance to move around. In two qualitative studies Bodaghi and her colleagues explored the perspectives of undergraduate and postgraduate students with visual impairments with regard to the librarians' attitudes and support. The university that the students attended was designated by the Malaysian Ministry of Higher Education as suitable for students with disabilities. According to the students, the 'greeting and tone of voice' were important signs of the librarians' sense of empathy (Bodaghi et al., 2016). The students also considered that friendly discussions and assistance in particular tasks constituted the main characteristics of a friendly librarian (Bodaghi et al., 2017). In another study conducted in a Zimbabwean state university where inclusive practices were implemented (Manyumwa, 2018), the students specified that the support they received from sighted students mainly

related to practical assistance (e.g. assistance in movements around campus, cooperating in research activities). They also mentioned that the staff members of support services provided social support to them by being helpful and by having a caring attitude towards them (for further information regarding the studies see table 1).

Differences in experiences of social support

Differences based on the existence of visual impairment. This issue was examined in only one of the included studies (Hadidi & Al Khatteb, 2014). According to its findings, adolescents with visual impairments received more support from their family, peers and significant others compared to their sighted peers.

Differences based on frequency of social interactions with sighted peers. Alongside the work outlined above, Milinga and Possi (2015) also investigated the factors which influence sighted students' prosocial behaviours towards their peers with visual impairments. It was found that sighted boarding students exhibited more prosocial behaviours towards adolescents with visual impairments than sighted day students, which the authors attributed to the frequency of their interactions.

Differences based on gender. Two studies investigated the differences in social support among female and male students with visual impairments (Hadidi & Al Khateeb, 2014;

Huurre et al., 1999). Huurre et al. (1999) found that female adolescent students with visual impairments in regular schools felt that they received significantly lower social support from friends compared to their sighted female peers. Hadidi and Al Khateeb's study (2014) indicated that female adolescents who attended either a special school or a mainstream school received less support compared to male adolescents (albeit not statistically significant) (see table 1).

The impact of social support from staff members and peers on the academic learning and socioemotional development of students with visual impairments

This theme focuses on the impact of social support from staff members, support services and peers on the academic learning and the socioemotional development of students with visual impairments. Their satisfaction regarding the social support that they receive and their suggestions for future improvement are also included.

Impact of social support on the academic learning of students with visual impairments

Social support provided by staff members. Two studies examined the impact of social support from staff members on the academic learning of students with visual impairments (Bodaghi et al., 2016; Datta & Palmer, 2015). In Bodaghi et al.'s study (2016) the

university students reported that they felt uncomfortable asking for further assistance from librarians, because of the lack of a written policy concerning the issue of social support. As a result, they were trying to solve their academic problems by finding volunteer readers. Datta and Palmer (2015) revealed different findings: the majority of the students with visual impairments, as well as their parents and their teachers referred to the positive impact of support services in both mainstream and special schools (e.g. use of adaptive technology, development of an inclusive curriculum) on students' academic learning (see table 1).

The impact of social support on the socioemotional development of students with visual impairments

Social support provided by staff members. A number of studies investigated the impact of the social support provided by staff members on the socioemotional development of students with visual impairments across a variety of educational institutions (Bodaghi et al., 2016; Bodaghi et al., 2017; Datta & Palmer, 2015; Manyumwa, 2018; West et al., 2004) (for further information regarding these studies see table 1).

West et al. (2004) explored the perspectives of adolescents, who had attended elementary special schools in Singapore, regarding their inclusion in the secondary mainstream

schools that they were attending at the time of the study. According to their accounts, the participants benefited from their teachers' assistance in the development of social relationships with their peers.

Social support has also a positive impact on the social inclusion of students with visual impairments at university level. The participants in Bodaghi and colleagues' study (2017) referred to the feelings of being valued and respected when they received the librarians' support. In a similar vein, university students who participated in Manyumwa' s study (2018) reported that the social support provided by some lecturers and some staff members from a support service in the university made them feel secure and accepted. Conversely, the participants of another study (Bodaghi et al., 2016), described how the lack of a written policy about the social support they should receive made them feel afraid that the librarians might get angry if they asked for help.

Social support provided by support services. Two studies examined the impact of special support services provided in educational settings on the socioemotional development of students with visual impairments. Irungu and Wamocho (2010) examined the organisation and the content of the guidance and counselling service in a secondary special school for blind students in Kenya. The students and staff members reported a

low rate of service use (37%), which they attributed to problems with the way the service functioned. In contrast, a study conducted in Australia revealed that the school's support services helped the adolescent students with visual impairments to face daily problems and cope with social situations (Datta & Palmer, 2015).

Social support provided by peers. Only two of the studies reported on the impact of social support provided by peers on the socioemotional development of students with visual impairments (Huurre et al., 1999; West et al., 2004). West and colleagues (2004) indicated that adolescents experienced feelings of acceptance and inclusion when they received voluntary assistance from their peers. Additionally, Huurre, Komulainen, and Aro (1999), found that male adolescents who received more social support from their friends presented higher self-esteem.

Social support and students' satisfaction

Satisfaction towards the social support provided by staff members. Two of the studies examined to what extent students were satisfied with the social support that they received from staff members in educational institutions (Bodaghi et al., 2017; West et al., 2004). The secondary school students with visual impairments who participated in West et al.'s

study (2004) reported that when they entered mainstream education they felt that their peers and their teachers were not interested in their special needs and as a result, they preferred not to seek assistance from them (West et al., 2004). The university students in Bodaghi et al.'s study (2016) had a similar impression concerning the attitude of the librarians in the university.

Satisfaction towards the social support provided by support services. The results of Irungu and Wamocho's study (2010) demonstrated that only a small number of secondary school students were using the counselling service of the school because it was not properly organised and did not ensure privacy. In addition, the staff members had not received the appropriate training in guidance and counselling.

Suggestions for the improvement of social support. Staff training and disability awareness were suggested by three different studies as necessary conditions for the improvement of social support (Bodaghi et al., 2016; Bodaghi et al., 2017; West et al., 2004). More specifically, adolescents stressed that their feelings and abilities should be considered by their teachers and peers (West et al., 2004). Moreover, university students suggested that

librarians should attend more training focused on special educational needs, which would enhance their empathetic behaviour (Bodaghi et al., 2016; Bodaghi et al., 2017).

The outcomes of educational interventions on the academic learning and socioemotional development of students with visual impairments

This theme refers to educational interventions which aim to enhance various different aspects of social inclusion of students with visual impairments. In most cases, these interventions resulted in positive outcomes (for further information about the relevant studies see table 2).

Educational interventions focused on students with visual impairments. Three studies focused on interventions implemented solely on students with visual impairments in special education settings (Kim, 2003; Uplane & Wadegaonkar, 2017; Yildiz & Duy, 2013). Kim (2003) implemented an assertiveness training for adolescents with visual impairments but found that there was no statistically significant difference at the post-test between the treatment and the control group in terms of students' social and assertiveness skills. On the other hand, Yildiz and Duy (2013) implemented a psycho-educational programme which contributed to the improvement of the sense of empathy and the

communication skills of the adolescents with visual impairments. Similarly, the social skills training developed by Uplane and Wadegaonkar (2017) had a positive effect on the social skills of the majority of the adolescents who participated in the study.

Educational interventions focused on students with and without visual impairments. Five studies investigated the outcomes of educational interventions in which both students with and without visual impairments participated. The interventions took place in mainstream schools and aimed to increase social interactions and communication (D' Allura, 2002; Celeste, 2007; Jindal-Snape, 2005a; Jindal-Snape, 2005b; Peavey & Leff, 2002). D' Allura (2002) found that the use of a cooperative learning strategy in an integrated class contributed to the increase in the length of interactions among pre-schoolers with and without visual impairments. In a case study Celeste (2007) found that the number of interactions and the play behaviours of a pre-schooler with visual impairments increased following her participation in an intervention comprising social skills training and activities for the girl and her peers. Similar results are reported by Jindal-Snape (2005a, 2005b): self-evaluation and the social skills of two boys with visual impairments improved after an intervention in which sighted peers provided feedback to them. Finally, Peavey and Leff (2002) demonstrated that the implementation of an intervention aiming

to enhance the understanding of diversity contributed to the improvement of social skills and social acceptance levels of children with visual impairments.

Discussion

Most of the studies which refer to the social support that children with visual impairments receive, were carried out in countries of Africa and Asia. Since it is estimated that the highest percentage (75%) of the children with visual impairments of all around the world lives on these continents (West et al., 2004), this could be expected. However, research evidence indicates that there is limited research data coming from the global South countries compared to northern countries, especially with regard to the education of students with special educational needs and the need for better social support (see Ainscow, Booth & Dyson, 2004; Ainscow & Miles, 2008; Harter, 2012; Pavri, 2004; Saylor & Leach, 2009). Therefore, global North countries may have developed inclusive practices compared to global South countries and they may have focused on other educational matters in the time period covered by the present review, instead of laying emphasis on the social support that students with special educational needs receive. Furthermore, the small number of the studies, which were included in this review and were conducted in European countries or in the USA and Australia, compared to the studies which were conducted in global South countries, may reflect a lower incidence of

psychosocial problems in students with visual impairments in these countries, which could be attributed to the enhancement of social inclusion (Kef, 2002). It should be also mentioned that a number of barriers, such as the limited understanding of inclusive education's goals, the lack of teachers' training and the absence of sufficient financial resources, may hinder the implementation of inclusive practices in some global South countries, such as developing countries in Africa or in the Asia-Pacific region (Donohue & Bornman, 2014; Sharma, Forlin, Deppeler & Yang, 2013). Consequently, this may explain why research studies from these countries are mainly concentrated upon inclusive practices and the role of social support.

Despite the cultural and educational differences that may exist between the countries where the studies were conducted, the accounts of their participants reveal that they conceptualise social support in a similar way, that is as the development of cooperation and friendships with staff members and peers, and the empathetic behaviour and the provision of assistance on the part of the latter in tasks and activities which the students find difficult (Bodaghi et al., 2016, 2017; Manyunwa, 2018; Milinga & Possi, 2015; West, 2004).

A limited number of studies investigated the differences in the experiences of social support among students with visual impairments compared with students without visual

impairments (Hadidi & Al Khatteb, 2014), or according to the frequency of social interactions with sighted peers (Milinga & Possi, 2015) or to gender (Hadidi & Al Khateeb, 2014; Huurre et al., 1999). The limited evidence base makes it hard to draw any firm conclusions. More research in this area would be useful.

Only two studies examined the effect of social support provision from staff members, support services and peers on visually impaired students' academic learning. It was found that the use of adaptive technology and the promotion of an inclusive curriculum have a positive effect on students' academic learning (Datta & Palmer, 2015). Research evidence also shows that the use of assistive technology has made the learning process more accessible to individuals with visual impairments (Nees & Berry, 2013). However, it may sometimes present with technical difficulties (Zaid, 2017) and it may also increase the social stigma towards students with visual impairments, especially when their teachers are not familiar with the use of special equipment, their peers treat them differently or both their teachers and peers share the common belief that these students rely on the use of special equipment which eradicates the extent of disability (Nees & Berry, 2013). On the other hand, we were unable to identify any studies exploring the impact of social support provided by peers on the academic learning of students with visual impairments. Social support from peers promotes problem-solving and cooperation thus encouraging

further learning (Danielsen et al., 2009). Therefore, future studies focusing on this issue would be welcome.

With regard to the socioemotional development of students with visual impairments, the findings of the studies indicate that the social support provided by teachers and members of the staff and the support services contributes to the formation of peer relationships (West et al., 2004), the development of feelings of acceptance (Bodaghi et al., 2017; Manyumwa, 2018), and problem-solving in challenging social situations (Datta & Palmer, 2015). However, adolescents and university students with visual impairments are not always satisfied with the social support they receive (Bodaghi et al., 2017; Irungu & Wamocho, 2010; West et al., 2004) and consequently, they suggest the staff members' training and further disability awareness.

It is noteworthy that although peer support is considered as an important protective factor (Kef, 2002) and enhances students' self-esteem and autonomy (Danielsen et al., 2009), only two studies investigated its impact on the socioemotional development of students with visual impairments. These studies indicated that peer support contributed to the enhancement of students' self-esteem and social acceptance (Huurre et al., 1999; West et al., 2004). This is an important finding that merits further investigation. The role of peer support has been underscored in the literature on students with mild or severe disabilities.

Findings from qualitative studies have demonstrated that social support from peers contribute to the enhancement of self-esteem in students with learning disabilities and to increased acceptance of their difficulties (Givon & Court, 2010; Rosetti & Henderson, 2013). Carter et al. (2015) suggested that peer support arrangements consisting of both the provision of academic (e.g. paraphrasing lectures, sharing notes) and social support (e.g. encouraging initiations for communication, talking about hobbies or interests) by classmates without disabilities can be particularly beneficial for students with severe disabilities in secondary inclusive classrooms.

The positive effects of educational interventions on the social inclusion of students with visual impairments have been established in almost all the relevant studies. More specifically, the interventions that focused solely on students with visual impairments (which were implemented in special school settings) contributed to the development of their social skills (e.g. communication skills, self-control). The interventions which included both students with visual impairments and their sighted peers in their majority took place in mainstream educational settings. These interventions led to an increase of social interactions and social acceptance, and to the improvement of self- evaluation and social skills of the children with visual impairments. Research evidence has shown that the presence of disability may not affect the number of social interactions among students with sensory impairments and their typically developing peers in mainstream schools

(Avramidis, 2012), since children with visual impairments may feel more accepted and they may not be treated differently by their teachers and peers (Kasomo, 2012). Besides that, typically developing children in inclusive classrooms have more opportunities to interact with their peers who have special educational needs and they may, therefore, not develop prejudices, but a positive attitude towards them and a better understanding of individual differences (Salend & Duhaney, 1999).

It is worth noting that the evidence concerning the interventions including both students with and without visual impairments is drawn from research on younger children and that there were no interventions of this type targeting adolescents. In northern countries, this may be because of increased school curriculum requirements, which may limit the time available for the implementation of such interventions. On the other hand, in southern countries, in line with the millennium developmental goals, the main focus until 2015 was the provision of universal primary school education (Unterhalter, 2014), therefore, the opportunities to attend secondary and vocational education may have been particularly limited for students with special educational needs in these countries (Waage et al., 2010). However, given the importance of peer relationships in adolescence for students with visual impairments (Kef, 2002), it should be noted that this kind of interventions could be particularly helpful since they provide opportunities for these students to practice skills during interactions with their peers. Additionally, they enable sighted students to gain

understanding of the difficulties and the needs of their classmates with visual impairments (Roe, 2008). That is not to say that the importance of interventions focused solely on students with visual impairments should be understated. These interventions and those which include both students with and without visual impairments fall under the two broad categories of approaches which are proposed within the context of a dual-model of access: learning to access approaches aiming to the enhancement of independence skills (e.g. self-advocacy, braille, etc), and access to learning approaches aiming to the provision of environmental conditions necessary for the promotion of inclusion (e.g. accommodations, teaching support, peer training etc.). As it has been argued, these approaches can be considered as complementary, since they both promote social inclusion (Douglas et al., 2019).

The limitations of the current review and of the studies included should be considered. The review focused on studies investigating social support provided to students with visual impairments in educational institutions. Therefore, some useful studies reporting findings regarding the social support these students receive in other contexts (e.g. from rehabilitation services, family, and peers in the neighbourhood) were excluded. The number of the studies identified for the purpose of this review (and particularly of those examining the impact of social support from peers on socioemotional development and from staff members on academic learning) is very limited. Only a few studies included a

definition of visual impairment (Datta & Palmer, 2015; Kim, 2003; West et al., 2004) and except for Datta and Palmer's study (2015) information regarding the onset of visual impairment was not provided; however, the onset of visual impairment may play a considerable role in the socioemotional development of students with visual impairments (Pinquart & Pfeiffer, 2014).

The majority of the studies used small samples sizes; therefore, caution is needed as regards the generalisation of their results. Another limitation is that some studies did not provide further information regarding the demographic characteristics of their participants (Manyumwa, 2018) or the procedures and the research findings (i.e. the duration of the intervention, the participants' scores in the assessment tools, quotations from the participants) (Irungu & Wamocho, 2010; Peavey & Leff, 2002). It is also worth noting that the findings of the majority of the studies relied solely on students' self-reports and that the views of other informants (parents, teachers) were not examined. Additionally, most of the studies which investigated the students' experiences of social support were based on interview data. Therefore, the data of these studies may reflect the perceived rather than the received support. It has been argued that the protective role of social support does not lie only in its availability but also in the individual's satisfaction with the quality of his/her social relationships (Rutter, 1985). However, future research could benefit from reporting both the actual level of support alongside the students'

perception in order to draw valid comparisons. The majority of the studies which examined the participants' experiences of social support and their impact on academic and socioemotional development were conducted in mainstream educational settings. No studies investigating the differences in the social support that students with visual impairments receive in mainstream and special schools have been identified in the context of the current literature review. Consequently, future research may address this issue.

Taking into account the above limitations, future research could focus on the investigation of the provision of social support from peers and its impact on the psychosocial development of students with visual impairments across multiple data sources. More research is also needed concerning the impact of social support provided by the school or university staff members on the students' academic learning. Finally, the positive outcomes of educational interventions including students with and without visual impairments could be further examined by evaluating the relevant perspectives of multiple informants.

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Table 1. Characteristics and main findings of the studies

Author(s) (Publication year and country)	Participants	Educational Institution	Research instruments	Main findings
Bodaghi et al. (2016) Malaysia	18 SVI (13B, 5LV) 6F, 2M 9 undergraduates 9 postgraduates	University	semi-structured interviews focus groups communications via email	The tone of voice, greetings and friendly conversations were perceived by SVI as indicators of librarians' empathy, which made them feel valued SVI faced academic and social restrictions due to the lack of officially written guidelines
Bodaghi et al. (2017) Malaysia	22 SVI 7F, 15M 10 postgraduates 12 undergraduates Age: 20-37 years	University	semi-structured interviews focus groups	Friendship was defined as librarians' willingness to help and have friendly conversations and meetings with SVI
Datta & Palmer (2015) Australia	14 SVI (LV, B) Age: 15-18 and 19- 25 years 4 teachers 5 parents	Adolescents: mainstream and specialist secondary schools Adults: vocational courses at TAFE Institutes.	semi-structured interviews	Positive impact of support services on students' ability to solve daily problems, academic achievement and social relationships

Hadidi & Al Khateeb (2014)	86 SVI (LV, B) 42M, 44F	High School for the Blind, public schools	Multidimensional Scale of Perceived Social Support	Higher levels of social support reported by SVI compared to their sighted peers
Jordan	73 sighted adolescents 34M, 39F Age: 12-17 years (Mean age: 13.5)			Less social support reported by female participants compared to male participants
Hurre et al. (1999)	115 with VI (LV, B) 76M, 39F Age: 13-16 years Control group: 607 sighted adolescents. Age: 12-17 years	Mainstream schools	self-report questionnaire (social support) 5-point scale (self-esteem)	Less social support received from friends by female SVI compared to sighted female participants. Social support from friends related to self-esteem for male LV and male blind from birth.
Irungu & Wamocho (2010)	1 head of guidance and counseling 1 deputy principal 4 teachers 16 SVI (LV, B)	Special Residential Secondary School for the Blind	questionnaires (students, teachers) interview (deputy principal) observation checklist	Restrictions were reported regarding the functionality of the service (lack of members' training, lack of privacy, proper setting, and individual counselling) It took place once per week
Manyumwa (2018)	6 students with VI (LV, B)	State University	semi-structured interviews	Social support from friends and fellow students and assistance from some staff members was reported and made SVI feel accepted
Zimbabwe				

Milinga & Possi (2015) Tanzania	76 participants: teachers SVI (F) (B, partially sighted) sighted students (it is not clear how many participants were in each category)	Inclusive secondary schools	focus group discussions semi-structured interviews closed-ended questionnaires	Sighted students provided support to their peers with VI because of personal and egoistic reasons, as well as religious factors Sighted boarding students showed more prosocial behaviours than their sighted day peers towards SVI
West et al. (2004) Singapore	9 with VI (LV, B) 3M, 6F Age: 13-17 years	Mainstream secondary school	semi-structured interviews diary casual observations	Participants reported their need to have their feelings and abilities acknowledged by their teachers and peers Assistance from peers made SVI feel accepted Assistance from teachers helped SVI deal with social situations

Table 2. Characteristics of the studies including educational interventions

Author(s) (Publication year and country)	Participants	Educational Institution	Research instruments	Description of the intervention	Main findings
D' Allura (2002) USA	Integrated class: 4 sighted children Age: 46 months 4 with VI Age: 53.8 months Self-contained class (Comparison group): 5 VI (LV, B) Age:52 months	Preschool for children with VI	observations – Individual Social Behavioral Scale	Application of cooperative learning strategy in the Integrate Class for 3 months	Children with VI in integrated class spent more time interacting with peers and initiated more interactions
Celeste (2007) USA	1 female with VI Age: 4 years and 6 months	Preschool classroom	observations	Classroom wide interventions Naturalistic interventions Social integration activities Explicit teaching of social skills	Play behaviours and social interactions of SVI increased
Jindal-Snape (2005a) India	1 boy with VI (totally blind) Age: 9 years and 4 months 1 sighted boy Age: 9 years 1 sighted girl Age: 9 years and 2 months	Integrated school	interviews (teacher and director) observation	2 target behaviours: Modification of the direction of the gaze Increase in conversation The VI boy was trained to recruit his sighted peers' feedback and to self- evaluate the target behaviours	Improvement of self-evaluation and target behaviours The SVI learnt to demonstrate these behaviours even in the lack of feedback

Jindal-Snape (2005b)	1 boy with VI (totally blind) Age: 9 years and 8 months	Integrated school	interviews with the father and the teacher	2 target behaviours: Modification of the direction of the gaze On-task behaviour	Improvement in self-evaluation and target behaviours
India	1 sighted girl Age: 9 years 2 months 1 sighted boy Age: 9 years and 6 months 1 sighted boy Age: 9 years and 8 months Father of VI participant Teacher of the VI participant		observations	Sighted children were trained on how to provide feedback to a VI boy about the target behaviours	The SVI learnt to demonstrate these behaviours even in the lack of feedback
Kim (2003)	23 with VI (LV, B) 11 in the treatment group, 12 in the control group Age: 13-19 years Participants' parents and teachers	Special school for blind children	Social Skills Scale SSRS (student, parent, teacher form) Modified Rathus Assertiveness Schedule Cognitive Distortion Scales Role-Play Test	Assertiveness Training Curriculum for Adolescents with Visual Impairments (ATCAV)	No statistically significant effect found on participants' social/assertiveness skills and 'cognitive distortions'
USA					
Peavey & Leff (2002)	5 groups – each group consisted of 1 SVI (LV, B) and 3-6 sighted peers Age: 10-15 years	Mainstream public schools	Social Skills Assessment Tool for Children with VI Confidential written assessment	Trust building lessons and thought-provoking activities (e.g. blindfolding, listening to peers' opinion about them, making a group recipe for love)	4 SVI demonstrated improvement in their social skills and social acceptance
USA					

				of preference for friends		
Uplane & Wadegaonkar (2017)	9M SVI Age: 13-15 years	Two schools for blind boys	SSSVI – Social Skill Scale for Visually Impaired	Direct instructions Modelling Social stories Cooperative Games Role Playing Group Discussion		Improvement in SVI's social skills (taking initiative, maintaining self-control, accepting differences and managing emotions).
India						
Yildiz & Duy (2013)	Treatment group: 16 SVI (VI or loss) 10M, 6F. Mean age: 13.5 years	Elementary school for children with VI	Child and Adolescent KA-SI Empathic Tendency Scale: Adolescent form	9 structured sessions focused on interpersonal communication, importance of effective listening and communication, consequences of dysfunctional attitudes and sense of empathy		Improvement in the sense of empathy and communication skills of participants in the treatment group.
Turkey	Control group (no further information is given)		The Communication Skills Scale			

Note

VI: visual impairment

SVI: students with visual impairments

B: Blind

LV: Low vision

F: Female

M: Male

Table 3. Table with the themes and subthemes

Themes	Subthemes
The experiences of social support in educational institutions	<p>The definition of social support</p> <p>Differences in experiences of social support</p>
The impact of social support from staff members and peers on the academic learning and socioemotional development of students with visual impairments	<p>The impact of social support on the academic learning of students with visual impairments</p> <p>The impact of social support on the socioemotional development of students with visual impairments</p> <p>Social support and students' satisfaction</p>
The outcomes of educational interventions on the academic learning and socioemotional development of students with visual impairments	<p>Educational interventions focused on students with visual impairments</p> <p>Educational interventions focused on students with and without visual impairments</p>