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Review

School reintegration of pediatric burn survivors: An integrative literature review[☆]



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ABSTRACT

Background: The school is an essential context for children's social interaction with peers and to develop academic skills. Therefore, a fast reintegration can help children with burns to normalize their life. Thus, school reintegration is an important outcome after burns. The aim of this review was to systematically synthesize the literature addressing school reintegration programs of pediatric burn survivors.

Methods: Five electronic databases were searched independently by two reviewers. The search yielded 13 eligible publications. A qualitative content analysis was conducted.

Results: The two themes identified centered around (1) the roles, obstacles, and support for the different stakeholders (i.e., the child, parents and teacher) and (2) the contents of the school reintegration programs in which subthemes such as purpose, planning, essential elements, team, and effect were distinguished. The results show that return to school should start as soon as the child is admitted to the hospital and the program should acknowledge the different stakeholders' needs and tailor the program to these needs.

Conclusion: The review emphasizes the necessity of an integrated school reintegration program empowering both the child, the parents and the teachers and tailored to the child's

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specific situation. Furthermore, it offers recommendations for further improvement of the field.

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1. Introduction

Burns are a public health problem around the world, with an estimated 265,000 deaths each year [1]. Most burns happen in low or medium-income countries, for example India [1] and Brazil [2], with about one million burns per year, about seven times more than in high-income countries [1]. Childhood burns represent high lethality rates and are the fifth most common cause of non-fatal injuries [1]. Thermal and scald burns are the most common type of injury in children [3,4]. Burns can deprive the child from normal activities such as school and interactions with peers. Therefore, efforts to assist the child in returning to common daily activities are important to facilitate reintegration after burns.

School plays a vital role in the socialization process of children and provides a context that helps to develop the child's identity, academic and social skills, and many other abilities [5]. Severe burns require hospitalization that may take up a period of weeks to months, interrupting school activities for a period of time or even completely abandon them [6]. The disruption of normal routines and being apart from family and classmates may be an additional stressor beyond the physical and psychological problems the children may have to cope with. Therefore, keeping contact and nurturing friendship with peers can be important for the recovery process, especially in adolescence [7].

After the period of hospitalization, the child will take up normal life while the process of scar maturation is ongoing. Scar maturation can take months to years before the final stage has been reached. A common complication of deep dermal wounds is the formation of hypertrophic scarring [8]. Hypertrophic scars are red, thickened, and hard resulting in movement limitations and disfiguring scars. In an attempt to suppress hypertrophic scarring, children need to wear pressure garments [9]. These ongoing changes in

appearance, that may be accompanied by stigmatization, may hamper school reintegration beyond the suffering from traumatic stress, anxiety, depressive symptoms and other challenges to quality of life [10–12]. It may be as scaring for the schoolmates and the teacher as for the child itself to meet each other and to adjust to these changes. This indicates the need to prepare peers, teachers and staff to the child's return.

When back at school, the child may be less able to participate in school activities such as sports and drawing as a result of functional loss in gross or fine motor skills. This can provoke feelings of frustration and irritability [13]. These negative experiences can deteriorate their motivation to return to school even further. Also on the longer term when they are reintegrated into society, the child can be faced with situations of stigmatization. Bullying is an example that concerns all stakeholders such as the pediatric burn survivors, parents, siblings, teachers and other members of the school community [14,15]. Therefore, a program that helps clarifying what happened during the period of hospitalization and how the scars will progress might prepare the school community to adjust to the situation, to increase awareness of what happened and possibly to facilitate a successful school reintegration.

In conclusion, burns can interrupt school activities during hospitalization and the physical and psychological consequences of a burn injury may constitute an obstacle to return to school. As attending school is a pivotal factor in a child's life, it is important to identify barriers that hinder the process of school reintegration and find ways to facilitate school re-entry. The objective of this study was to identify, summarize, and integrate current knowledge on school reintegration for pediatric burn survivors. The literature review may support clinical practice by assisting health professionals in developing and improving strategies to help the child as much as possible.

2. Method

An integrative literature review was chosen, which permits the inclusion of different methods with a view to a complete understanding of a specific theme [16]. The following steps were taken: identification of the research problem and elaboration of the guiding question; establishment of inclusion and exclusion criteria and literature search; definition of information to be extracted from the selected articles and categorization of the studies; detailed assessment of the studies included in the review, interpretation and discussion of the results, and knowledge synthesis. The guiding question was formulated as follows: “What knowledge in scientific literature has been produced about the school reintegration of child and adolescent burn survivors?”.

Electronic databases LILACS, PsycINFO, PubMed, Web of Science, and Scopus were searched for English-, Portuguese- and Spanish-language studies, without time limits. The descriptors and keywords used were based on the Descriptors in Health Sciences (DeCS) and the Medical Subject Headings (MeSH): child, adolescent, childhood burn, pediatric burns, burns, school reintegration, school re-entry and schools service. Articles were included if they described the topic school reintegration of child and adolescent burn survivors; independently of the methodological approach. Articles were excluded when focused on children with other chronic

conditions, burns prevention in school, medical and esthetic practices for school reintegration or physical, social, psychological rehabilitation and quality of life. In addition, comments, literature reviews, critiques, books, thesis and dissertations were excluded.

The literature search resulted in 664 references. After excluding duplicates, 233 publications were retained of which 11 articles met the inclusion criteria. Additionally, a manual search was undertaken in the two dedicated burns journals: *Burns* (1975-2015) and *Journal of Burn Care & Rehabilitation* (1980-2005), renamed to *Journal of Burn Care & Research* (2006-2015). This search resulted in six additional articles, totaling 17 studies for full reading. Four studies were excluded after full reading because they focused on general burn rehabilitation. Thirteen papers met the final criteria (See Fig. 1).

The selection process was performed independently by two researchers (RP and BDS). Doubtful studies were included for full reading and discussed by the researchers. To verify the level of agreement between the two researchers, the Kappa test was applied, with a coefficient $K=0.69$, indicating substantial agreement [17]. To analyze the data, the premises of deductive content analysis were followed, consisting of three phases: preparation, organization and presentation of the data [18]. The data were extracted from the articles with the help of a tool the authors had previously developed. This tool included: year, place of study, introduction, objective, design, participants, theoretical-methodological procedures

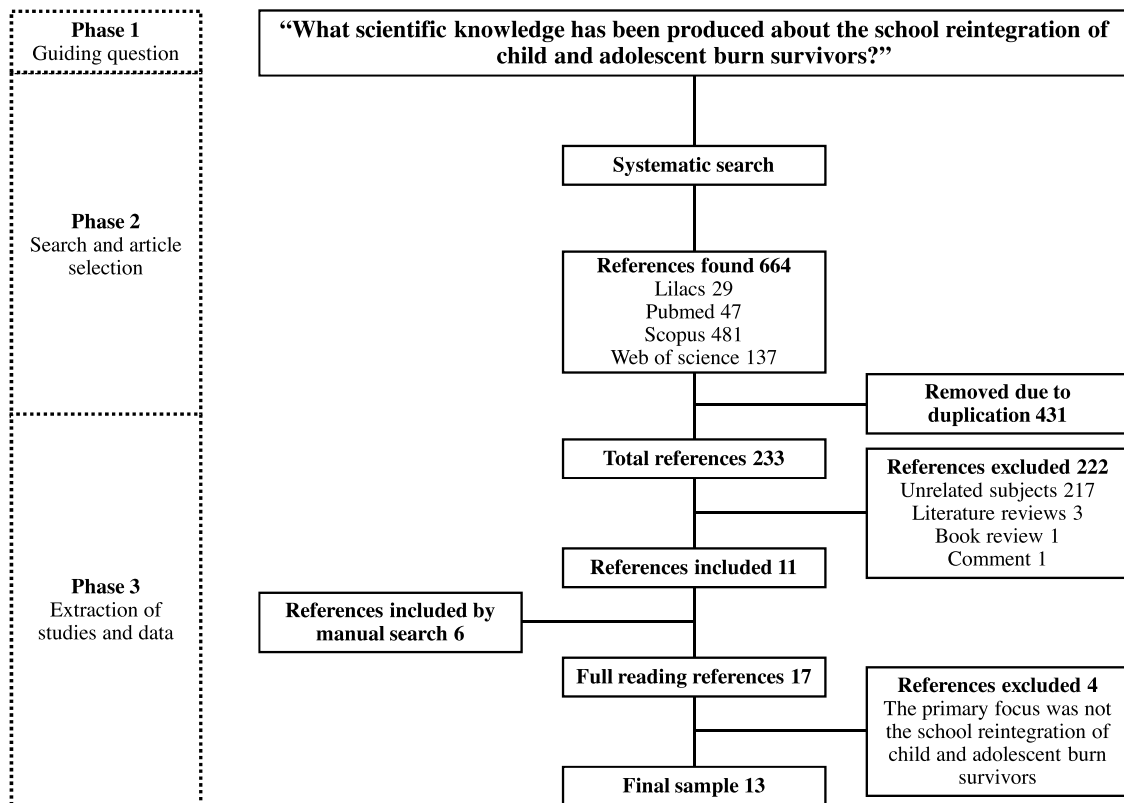


Fig. 1 – Flowchart to select studies.
Source: Elaborated by the authors.

and results of child and adolescent burn survivors' school reintegration. Three authors (RP, BDS and NVL) read the papers and analyzed the articles separately.

3. Results

3.1. Study characteristics

Table 1 presents a summary of the 13 studies. Among the 13 articles included in this review, 12 presented reintegration programs for pediatric burn survivors [19-30]. Six papers were opinion articles based on clinical experience that described the program, criteria, and its implementation complemented by case reports [24,26-30]. Two qualitative studies, one exploring parental and psychosocial factors [31], and one involving teachers' experiences [19] were included. Two studies aimed to describe time to return to school and factors related to school reentry [21,22]. The remaining three papers evaluated the programs using objective parameters and evaluations of children, parents or teachers [20,23,25]. These five studies used various designs such as mixed methods, retrospective medical record review or a survey study. Ten studies came from the United States and three from the United Kingdom.

Children involved in the program ranged in age from four to 18 years old. Of the studies that reported injury characteristics, the range of burn severity was wide. The percentage of total body surface area (%TBSA) affected mentioned in the studies ranged between 0.5% and 85%. The length of the hospitalization ranged between one and 198 days. The period before returning to school ranged between 1 and 185 days after the burn injury (See Table 1).

3.2. Content analysis

The two themes that were identified using qualitative content analysis of the 13 studies included in the present review were: (1) stakeholders' roles, obstacles and how to support them; and (2) school reintegration programs.

3.2.1. Stakeholders' roles, obstacles and how to support them
In a school reintegration process several stakeholders are involved: child, parents, teacher, classmates and school community [19,21,22,24,28-31]. Good communication among all parties, established in an early phase and continued during hospitalization, is considered imperative to facilitate the integration [19,22,30]. The ultimate aim of the preparation entails that all stakeholders should be fully informed and prepared [24]. However, the several stakeholders have a different role and different needs that will be presented below.

3.2.1.1. The child.

3.2.1.1.1. Role. The pediatric burn survivor is unexpectedly admitted to the hospital and has to deal with a sudden and dramatic change in life. The school reentry may not be point of attention until discharge from the hospital as the emotional and physical problems the child has to deal with may prevail. Depending on the child's age, the efforts to take contact with peers will differ.

3.2.1.1.2. Obstacles. Two child-related factors could be identified that seemed to influence the school reentry process, i.e., burn severity and demographic characteristics. All studies indicated that burn severity affected school return in some way. Burn severity was found to influence time to return to school. More severe burns require longer hospital admission periods, therefore directly affecting the period of return to school [21]. The time between hospital discharge and school return was slightly shorter in the more severely burned group [22], probably because more severely burned children leave the hospital in a later phase of rehabilitation. Two studies reported that only children with larger burns made use of the school reintegration programs suggesting that indeed burn extent is a significant factor in school reintegration [21,25].

A larger burn extent is more often associated with visibility of scars, physical limitations, and use of the pressure garments and rehabilitation devices. These factors mark the child's changed appearance and make them different from peers. Although it has been suggested that these characteristics impede school return [24], one study did not find evidence for later school return in children with visible burns and in children wearing pressure garments [21]. The changed appearance, however, can induce fears that indirectly may affect school return. From the child's and parents' perspectives, there are fears how others will respond and they may be anxious about a possible rejection or the risk of being ridiculed [24,25].

A limited number of studies investigated demographic characteristics such as age and gender in relation to school return. Older children and boys returned to school at a later point in time [21,22]. In general, it is assumed that young children tend to better accept the appearance differences resulting from the burn injury, once they get acquainted with it whereas in adolescents, social acceptance and peer-related issues may hamper acceptance [24]. However, it was suggested that older children had more severe burns, more mental health referrals and pre-burn problems which could explain the age and gender influence [22]. Also pre-existing characteristics such as behavioral problems or school achievement may explain the longer time to return to school [21]. One study investigated educational outcomes which demonstrated that the burn event had little impact on school performance in terms of grade loss, learning problems, academic achievement and acceptable behavior in classroom [22]. Another study suggested that school drop-out was a problem in children with difficulties to adapt to school due to the appeals of classmates, causing aggression, depression and affective dullness [29].

3.2.1.2. Parents: an essential contact in school return communication.

3.2.1.2.1. Role. The studies acknowledge the value of the family enrolled in school return but views differ with respect to their specific role. While some studies acknowledge that parents may have the role of informant in providing information about academic skills and give permission to contact the school [24], other studies suggest to encourage family members to be actively involved in the initiation and implementation of the program [29], and being active part of the team that works together [19]. Parents also have an

Table 1 – Synthesis of 13 selected articles according to authors, year, aim, study design, sample characteristics, significant findings, limitations, and strategies to facilitate school reintegration.

Authors/Year	Aim/Study Design	Sample characteristics/ findings/limitations	Strategies to facilitate school reintegration
Arshad, Gaskell, Baker, Ellis, Potts, Council, Ryan, Smith, Nixon, Greaves, Monk, Shelmerdine, Leach, Shah (2015)	<p>Aims: To evaluate how the program impacted on the time to school re-entry after a significant burn.</p> <p>To gather qualitative feedback from parents, teachers and the pediatric burn survivor after the school reintegration program (SRP) has been delivered.</p> <p>Mixed method study</p>	<p>Sample characteristics: N = 14 (SRP) / 9 (full SRP) children; Mean TBSA: 8.8 / 4.9 %; Mean Child age: 9.3 / 8.5 years old; Mean Time to school re-entry: 33 / 20 days; Mean LOS: 14.4 / 11.4 days</p> <p>Findings: Program used by more severely burned children; Program: Reduction in time to return to school; Qualitative reports: increased awareness, feeling supported, and reduction of fear; Program was very well received by children, teachers and parents (positive feedback); Program had a positive impact on children returning to school.</p> <p>Limitations: Small sample size and lack of reference group.</p>	<p>School Reintegration Program: Offered to all children who were admitted for more than 48 h (Total = 52).</p> <p>Services: Booklets, on-site visit, videos, and puppets.</p> <p>Booklet Content: structure of the skin, scar management, physiotherapy, occupational therapy, sun care, nutrition, and psychological well-being, with orientation on how the best way to support the child in reentry school.</p> <p>Primary School: puppets, other hands-on visual aids and DVD.</p> <p>Secondary School: information on the structure of the skin and how it heals, first aid and facilitating discussions on topics such as social stigma following a burn injury.</p> <p>These materials can be sent to schools beforehand the child's return or in case that has not been possible to arrange a visit.</p> <p>Selection Criteria: Samples of all admissions of pediatric burn survivors that were school aged over a 6 months period and hospitalized for 48 hours or more.</p> <p>Team Involved: Three members that may be clinical psychologists, occupational therapists, physiotherapists, nurses and play specialist.</p>
Wilson, Gaskell, Murray (2014)	<p>Aim: To investigate how teachers experience a school reintegration program (SRP) for young children.</p> <p>Qualitative study</p>	<p>Sample characteristics: N = 4 female teachers (primary school)</p> <p>Child's characteristics (They are not study participants); Mean TBSA: 3.75%; Mean Child age: 6.54 years old; Mean Time to school re-entry: N.R.; Mean LOS: 8 days</p> <p>Findings: Five themes:</p> <ol style="list-style-type: none"> 1. The emotional impact of a burn injury: Worries about child's wellbeing and classmates (need for information from burns care team). 2. Working together to provide the best package of care: Being good prepared (need for information on emotional and practical issues). A meeting between school and burns care teams without child present (before the visit). Child presents in the visit. No consensus on when the visit should occur. 3. The classroom family: Strong sense of needing to work together in class. Keep the children present in the classroom, sending cards and giving them regular updates. Reintegration visit helped the injured child to feel more comfortable with their peers. 4. The danger in being different: To normalize the child's situation (need to ask questions). To help the other children understand their incident in context. Despite any visible differences, the children were the same underneath. 5. Using it as a learning opportunity: Provides learning opportunities. Much of the learning was cemented within 	<p>School Reintegration Program: Offered to all children. Provided just for all those who request it.</p> <p>Services: On-site visit, videos, and puppets.</p> <p>Visit Content: Support and information.</p> <p>Young children: Puppets and handling pressure garments.</p> <p>Older children: More specific information regarding skin, burns and first aid. Discussion about treatment, and how peers may support the returning child.</p> <p>When the visit was not possible: Sent a DVD which simulates the visit.</p> <p>Each visit was managed around the individual child and their needs.</p> <p>Selection Criteria: Children and adolescents up to 16 years of age, who were burned.</p> <p>Team Involved: Multidisciplinary team, which includes nurses, doctors, surgeons, psychologists, play specialists, occupational therapists, physiotherapists and clinical psychologists</p>

Table 1 (continued)

Authors/Year	Aim/Study Design	Sample characteristics/ findings/limitations	Strategies to facilitate school reintegration
Dunlap, Kagan, Arnold, Gottschlich (2013)	<p>Aim: To examine the potential benefit of the program Remember Me as judged by perceptions of the patient's teachers and parents.</p> <p>Survey study</p>	<p>the reintegration visit, which participants were positive about.</p> <p>Limitations: Small sample size.</p> <p>Sample characteristics: N = 30 children; Mean TBSA: 43.6%; Mean Child age: 8.4 years old; Mean Time to school re-entry: N.R.; Mean LOS: 52.4 days</p> <p>Findings: All children participating in the program received a response from their classmates during their hospitalization.</p> <p>The Remember Me program was effective at maintaining communication among the child burn survivor, his/her classmates and teachers during hospitalization.</p> <p>Program very well appreciated by children, parents, teachers, and classmates.</p> <p>Limitations: Small sample size</p>	<p>School Reintegration Program: Offered to children who were enrolled in kindergarten through eighth grade, had more than 20% TBSA and an expected length of stay of at least 2 weeks.</p> <p>Services: Phone calls, Teddy bear, Envelope, information materials.</p> <p>Informational Materials: Explanation about the program.</p> <p>Teddy bear: Held the chair of the burned child each day that the student was absent from school. When the child burn survivor returned to school, he/she could keep the bear.</p> <p>Envelope: For teachers, students, and school staff to fill with cards, letters, photos, and other objects for delivery to the patient to display in his or her hospital room.</p> <p>Selection Criteria: Children enrollment in kindergarten through eighth grade, with a burn injury of greater than 20% TBSA, and an expected length of stay of at least 2 weeks.</p> <p>Team Involved: Multidisciplinary team, including nurses, physicians, therapists, social workers, child life specialists, and education specialists.</p> <p>Selection criteria: Parents who had child (7 years old or older at the time of injury) admitted to the hospital prior to 1st January 2007; and, if they were still in contact with the service.</p> <p>A central factor in determining how quickly children returned to school after a burn was how proactive, available and supportive school staff were towards parents and children.</p> <p>The model indicates two main areas where clinical intervention could facilitate the return to school process for children and their families:</p> <p>1st - Supporting parents to regain their confidence and successfully adapt their roles;</p> <p>2nd - Helping schools proactively contact parents to reestablish a parental sense of confidence in the school</p> <p>The burn care team and health professionals should take into account child and parental psychological, physical and social factors, improving parental confidence, role adaptation and school receptivity, providing the facilitation of reintegration process.</p>
Horridge, Cohen, Gaskell (2010)	<p>Aim: To examine how influential parental and other factors were in the return to school process of pediatric burn survivors.</p> <p>Qualitative study</p>	<p>Sample characteristics: N = 12 parents; Mean TBSA: 5.4%; Child age: 8 to 15 years old; Mean Time to school re-entry: N. R.; Mean LOS: 7,4 days</p> <p>Findings: Five categories pivotal in the return to school process:</p> <ol style="list-style-type: none"> 1. Parental emotional reactions: Parents were neither expecting nor prepared for the injury. After the injury, parents experienced guilt, anxiety and stress. 2. Regaining confidence in the self, child and system: Parental confidence in themselves, their children, and their children's schools. Parents had the challenge of adopting new roles and learning new skills to support their children through the recovery and returning to school processes. 3. Role adaptation, skill acquisition and lifestyle flexibility and support: Parents who were better supported by their friends, families and communities were better able to cope with adapting their roles and learning new skills. 4. Child's psychological and physical functioning: Children and their parents both experienced stress responses to the injury. Psychological difficulties became less pronounced with time. <p>Once children began to recover from their physical and</p>	

(continued on next page)

Table 1 (continued)

Authors/Year	Aim/Study Design	Sample characteristics/ findings/limitations	Strategies to facilitate school reintegration
Christiansen, Carrougher, Engrav, Wiechman-Askay, Kramer, Gibran, Klein (2007)	<p>Aim: To determine the time to school re-entry and to identify the factors associated with re-entry time in pediatric burns survivors.</p> <p>Retrospective descriptive study</p>	<p>psychological injuries the majority of parents reported that their children were motivated to get back to school.</p> <p>5. School receptivity: The largest factor that determined how quickly children went back to school after their burn-injuries was concerned with how receptive and supportive the school were during the child's period of absence.</p> <p>Limitations: Only parental perspectives were considered in developing the model.</p> <p>Majority of families of White British origin and this would have heavily influenced the model; Small TBSA%.</p> <p>Sample characteristics: N = 64 children; Mean TBSA: 14.3%; Mean Child age: 11.4 years old; Mean Time to school re-entry: 37.9 days; Mean LOS: 23.7 days</p> <p>Findings: Average time to school return was 10.5 days after discharge.</p> <p>Associated factors to a longer time to school re-entry: gender (male), older age, LOS</p> <p>Limitations: Database of patients with more extensive burn injuries and more likely to require surgery; Small sample size.</p> <p>The time to school re-entry, burn size and number of operations may not be generalizable to the entire population of pediatric burn patients.</p> <p>Other factors may impact the time to return to school not captured in this study such as the parent's ability to provide care at home.</p> <p>Sample characteristics: N = 34 children; Mean TBSA: 25.9%; Mean Child age: 11.3 years old; Mean Time to school re-entry: 22.2 days; Mean LOS: 30.8 days</p> <p>Findings: Average time to school return was 7.4 days after discharge.</p> <p>All children demonstrated appropriate classroom behavior before and after burns.</p> <p>Little loss of grade was noted.</p> <p>Postburn school problems related to pre-burn school problems.</p> <p>Points to consider: The communication between hospital and school should be established early in a child's hospitalization. This contact before re-entry might help a smooth transition.</p> <p>A supportive family and school also might facilitate an early and smooth school return.</p> <p>Older children had more severe burns, more problems, but</p>	<p>School Reintegration Program: Materials used were not specified. The program is directed, typically, for only students who had been out of school for longer periods of time (ie, several weeks), who had undergone surgery, or who were wearing masks or splints and pressure garments at the time of reentry require school intervention of the program.</p> <p>Team Involved: Coordinated by a child life specialist.</p>
Staley, Anderson, Greenhalgh, Warden (1999)	<p>Aim: To relate demographic data with return to school time and school performance.</p> <p>Medical record review and interview with parents, children, teachers</p>	<p>Sample characteristics: N = 34 children; Mean TBSA: 25.9%; Mean Child age: 11.3 years old; Mean Time to school re-entry: 22.2 days; Mean LOS: 30.8 days</p> <p>Findings: Average time to school return was 7.4 days after discharge.</p> <p>All children demonstrated appropriate classroom behavior before and after burns.</p> <p>Little loss of grade was noted.</p> <p>Postburn school problems related to pre-burn school problems.</p> <p>Points to consider: The communication between hospital and school should be established early in a child's hospitalization. This contact before re-entry might help a smooth transition.</p> <p>A supportive family and school also might facilitate an early and smooth school return.</p> <p>Older children had more severe burns, more problems, but</p>	<p>School Reintegration Program: Offered to all school-aged children admitted in a burn hospital.</p> <p>Services: Phone calls, written correspondence, individualized videos, on-site visits to the child's home, school and community.</p> <p>Selection Criteria: Any school-aged child, as part of burn care.</p> <p>Criteria to receive an on-site visit: Children with 40% or greater TBSA burn or less than 40% TBSA burn, but with visible scars on face, head, arms and hands, also, amputation or significant physical limitation.</p> <p>Team involved: If parents or school team did not feel equipped to present a school-wide program, the hospital school reentry team would provide it.</p>

Table 1 (continued)

Authors/Year	Aim/Study Design	Sample characteristics/ findings/limitations	Strategies to facilitate school reintegration
Bishop e Gilinsky (1995)	<p>Aim: To describe school return programs in pediatric burns survivors across U.S.</p> <p>Program description with three case reports</p>	<p>returned earlier to school.</p> <p>Limitations: Small sample size</p> <p>Sample characteristics: N = 1 / 2 children; TBSA: 80% / 66 and 62%; Child age: 5 years old / N.R.; Mean Time to school re-entry: N.R.; Mean LOS: N.R.</p> <p>Points to consider: Children have to return to school as quickly as possible.</p> <p>The approach should be multidisciplinary.</p> <p>School reintegration programs are popular with the parents and the teacher.</p> <p>The burn team needs to look at the concerns and feeling of the adults.</p> <p>Case 1: Flexibility is important with this age group.</p> <p>All questions and comments during the presentation were age-appropriated.</p> <p>Case 2: Age-appropriated presentation and the burn team support to the school team during the re-entry was beneficial to alleviate fears.</p> <p>Limitations: Low level of evidence</p>	<p>School Reintegration Program: Offered to all patients with acute and rehabilitative needs, severe burns, and an extremely altered body image.</p> <p>Services: Phone calls, personalized videos, and if needed, an on-site visit at school. The burn team acted as a continuing resource for the school.</p> <p>On-site visit: Occurred on the child's return day or the day before. Offered to all school contact person who may have contact with returning child. The burn team met with school nurses, physical education teachers, counselors, and other support persons. Question and answer were provided after the video.</p> <p>Video content: Presented for classmates and teachers before the burned child returns to school. Features the returning student, and burn team. This was age-appropriate and provided concrete, visual information on changed body image, needed garments and appliances, any change in activity levels, hospital experiences, and scarring. Burn prevention was also discussed.</p> <p>Criteria for a video and/or on-site visit: Children with burn injuries greater than 40% TBSA, hand or face involvement, and/or other complex issues that the burn team might deem necessary to address.</p> <p>Team Involved: Child life specialist, rehabilitation therapist, nurse case manager, psychosocial personnel, and school teacher.</p> <p>School Reintegration Program: Offered to all children. There are three different approaches depending on the children needs and the staff resources.</p> <p>The school was contacted by telephone, soon after the child was admitted to the hospital, then it was contacted again, during the hospitalization (if needed) and before the patient's discharge.</p> <p>Services: Phone calls, video, and on-site visit.</p> <p>Video: During the development of the video, the pediatric burn survivors were encouraged to talk, expressing whatever they want their audience know.</p> <p>Patients with the most complex difficulties were provided an on-site visit at school by the burn team in addition to the video. Explained the burned injury, the hospital care, the scarring, the appliances and garments that had to be worn, and physical limitations and body changes.</p> <p>Criteria for phone calls: All hospitalized burned children.</p> <p>Criteria for video: Children with burn injuries greater than or equal to 40% TBSA or less than 40% TBSA with hand or facial involvement.</p>
Blakeney, Moore, Meyer, Bishop, Murphy, Robson, Herndon (1995) part II	<p>Aim: To evaluate the effectiveness of a school reintegration program.</p> <p>Mixed method study</p>	<p>Sample characteristics: N = 84 children's school contact person / 44 parents and 58 patients / 20 teachers (10 "re-entry group" and 10 "no re-entry group"); Mean TBSA: N.R.; Mean Child age: N.R.; Mean Time to school re-entry: N.R.; Mean LOS: N.R.</p> <p>Findings: Teacher, parents and children value the School Reintegration Programs.</p> <p>Questionnaires: Described the program as "valuable" and beneficial to the burned child.</p> <p>Interviews: The most difficult aspect of adjustment was confronting reactions of others according to parent and child.</p> <p>School reentry was mentioned less often as most difficult.</p> <p>Teacher Report Form: School reentry program did not demonstrate positive effect.</p> <p>Limitations: It was reported that effects of school re-entry programs are complex to measure.</p> <p>Selection of appropriate outcomes was found difficult.</p>	<p>School Reintegration Program: Offered to all children. There are three different approaches depending on the children needs and the staff resources.</p> <p>The school was contacted by telephone, soon after the child was admitted to the hospital, then it was contacted again, during the hospitalization (if needed) and before the patient's discharge.</p> <p>Services: Phone calls, video, and on-site visit.</p> <p>Video: During the development of the video, the pediatric burn survivors were encouraged to talk, expressing whatever they want their audience know.</p> <p>Patients with the most complex difficulties were provided an on-site visit at school by the burn team in addition to the video. Explained the burned injury, the hospital care, the scarring, the appliances and garments that had to be worn, and physical limitations and body changes.</p> <p>Criteria for phone calls: All hospitalized burned children.</p> <p>Criteria for video: Children with burn injuries greater than or equal to 40% TBSA or less than 40% TBSA with hand or facial involvement.</p>

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Table 1 (continued)	Aim/Study Design	Sample characteristics/ findings/limitations	Strategies to facilitate school reintegration
Authors/Year			
Blakeney (1995) Part I ^a	<p>Aim: To describe school reintegration programs to facilitate the child transition from hospital to home and school.</p> <p>Opinion article based on clinical experience and prior opinion articles</p>	<p>Ethical considerations prevent controlled study limiting the evidence and control group</p> <p>Points to consider: School Reintegration Programs can vary in format depending on the patients and/or family needs, and the capability of the burn team. The burn team role is to use its expertise to assist the burned survivor, not to dominate his/her life.</p> <p>Principles of School Reintegration Programs:</p> <ol style="list-style-type: none"> 1. Planning for school reentry begins as soon as possible. 2. Parents or guardians of the child should be empowered to actively participate as appropriate advocates for their child. 3. Each plan for each child should be individualized. 4. Each child is treated as if he or she will return to school on discharge. 5. Continued availability of burn team professionals is necessary for communication with school professionals as problems arise. <p>Limitations: Low level of evidence</p>	<p>Criteria for on-site visit: Usually children with severe scarring, with multiple physical limitations and numerous psychosocial concerns.</p> <p>School Reintegration Program: Offered to anyone who would interact with the child or whoever was important to prepare the child on the return. For example: school community, family, neighbors, and church groups.</p> <p>Audio Materials and/or school visit: Occurred a time immediately preceding the child's actual return.</p> <p>School Presentation: Typically was chosen to do the presentation without the child being there. The presence of child's parents might be helpful.</p> <p>Services: Phone calls, booklets, photographs, slides, videos, dolls, and on-site visit.</p> <p>Written Materials: Booklets were sent to school early in the child's hospitalization.</p> <p>Audiovisual Materials: Photographs, slides, and videos.</p> <p>Other Teaching Aids: Dolls and handling of splints, face mask and/or pressure garments.</p> <p>School presentation during on-site visit content: How the incident occurred; What happened in the hospitalization; Explanation about scars, splints, masks, pressure garments and other appliances; The child's limitations; Role of peers in child's reintegration; and Showed that the child looked different on the outside but the same on the inside.</p> <p>The words and methods of presentation could vary with target audience, but the content remains the same.</p> <p>Team Involved: Any professional able to answer for multiple areas of health, attending such as physical and psychological recovery of the patient. The burn team used a script to guide the program team in visiting the school.</p> <p>School Reintegration Program: Offered to all school-aged children treated at the burn center.</p> <p>Planning school reentry process: Occur two weeks before the child's anticipated discharge.</p> <p>Discharge report: Sent to the school faculty and therapist or delivered to them on the day of the on-site visit.</p> <p>Services: Letters, phone calls, on-site visit, and discharge report.</p> <p>On-site visit: The physical therapist discuss physical deficits, scarring, and special equipment needs of the child.</p> <p>Discharge Report: Child's information about physical abilities, how much attention she or he demanded at school, kind of transportation, skin care, special equipment, whether she or he can or can't participate in the gymnastics and sports, as well as psychological adaptations that child may have.</p>
Meyer, Barnett, Gross (1987)	<p>Aim: To present the role of the physiotherapist in a school reentry program for pediatric burns survivors.</p> <p>Opinion article based on clinical experience</p>	<p>Points to consider: Physiotherapist as a primary liaison between hospital and school team.</p> <p>After the faculty requested more information about the burned adolescents (because they were unable or reluctant to volunteer this own information to their peers or faculty), the hospital physiotherapist committed to provide physical therapy input to all children, from preschool through adolescence, who are returning to school.</p> <p>This program was designed to meet the needs of burned children, but the goals of school re-entry program may meet similar needs of children with other chronic conditions.</p> <p>Limitations: Low level of evidence</p>	

Table 1 (continued)

Authors/Year	Aim/Study Design	Sample characteristics/ findings/limitations	Strategies to facilitate school reintegration
Rosenstein (1987)	<p>Aim: To describe a school re-entry program to provide the child, family, and school personnel with emotional support and information needed to ease the transition back into the school and to provide education concerning fire prevention.</p> <p>Opinion article based on clinical experience</p>	<p>Points to consider: The program has central goals but it is an individualized program, e.g., specific information about the child's physical state is provided.</p> <p>Timing of program is critical; recommended to be provided at first day at school</p> <p>Returned to school as soon as possible.</p> <p>The child burn survivor played an active role in the classroom presentation. He/she is motivated to share with the classroom his/her thoughts about being burned and medical events encountered. If the child is unable to discuss these topics, the therapeutic recreation specialist is supportive to the child and continues the presentation.</p> <p>Limitations: Low level of evidence</p>	<p>School Reintegration Program: Offered to all children.</p> <p>Appropriated time to conduct the SRP: the first day that child returns to school.</p> <p>Child Admitted: Schoolteacher contacted school system and collected school data and recorded information in a frame.</p> <p>Two weeks before discharge: The burn team contacted the school to arrange a meeting.</p> <p>Phone Call: To remember school when the date was approaching; physiotherapist and occupational therapist reported the need to involve the physiotherapist and occupational therapist school in the on-site visit.</p> <p>At Discharge: Team members filled out the discharge report to be sending to school that was signed by doctors.</p> <p>Stages of presentation:</p> <ol style="list-style-type: none"> 1. Burn team encouraged the school to identify them with the burned child; 2. Information about burns injuries was shared. 3. The school audience was motivated to share feelings and ideas about the incident and burn injury involving their classmate. 4. The therapeutic recreation specialist and burned child demonstrated basic burn treatment through a game. 5. School audience was asked to share feelings about burn treatment. 6. Fire prevention and safety are discussed and first aid techniques were demonstrated. 7. The program concluded with a period of questions and answers. <p>Services: Phone Calls, on-site visit, and booklet.</p> <p>On-site visit and child's presentation content: Fire prevention, games, equipment of rehabilitation and booklet.</p> <p>Information for school audience about physical abilities of the child, equipment of rehabilitation and clinical assistance.</p> <p>Booklet Content: General information about the physical and psychological issues faced by burned children and their family. It discuss the school reentry program and provides information in a question-and-answer format.</p> <p>It was sent to school soon after a child was admitted to the burn center.</p> <p>Team Involved: Recreational therapist, nurses, occupational</p>

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Table 1 (continued)

Authors/Year	Aim/Study Design	Sample characteristics/ findings/limitations	Strategies to facilitate school reintegration
O'Brien and Wit (1985)	<p>Aim: To describe school re-integration program that facilitate the transition of the disfigured/burned child from the hospital back into the school.</p> <p>Opinion article based on clinical experience and three case examples</p>	<p>Points to consider: Hospitalization phase: Family members and the child were actively involved in initiation and implementation of the program. Ongoing contact maintained a sense of normality between patients and peers, e.g., contacts reduced the patient's feelings of isolation and despair. Program received positive response within the hospital and community. Social worker was the liaison with the schools. The child had the option to be present or not during the program. The program was recommended to be provided to children transferring to new school. Mass media could be used to improve general public's awareness of burns and to promote the acceptance of the burned persons.</p> <p>Limitations: Low level of evidence</p>	<p>therapist, physical therapist, social worker, and hospital school personnel.</p> <p>School Reintegration Program: Offered to all children that fill the inclusion criteria described below.</p> <p>Planning in two phases: Hospitalization phase and discharge phase.</p> <p>Hospitalization Phase: Program started when the injury was no longer life threatening. The hospital staff contacted the school team. The classmates were encouraged to send letters, cards, newsletters, and audio tapes. When patient was medically stable, visits might be arranged.</p> <p>Discharge Phase: Activities with classmates were provided and they were age-appropriate in each class.</p> <p>Services: Letters, phone calls, on-site visit and child presentation with activities for classmates.</p> <p>Activities for early childhood (3-5 Years): Puppets handling, games with medical devices, bandages, splints and pressure garments; Booklet about fire prevention and burn care; games that require physical contact/touch. Presentation of hospitalization aspects to encourage positively the identification of classmates with burned child.</p> <p>Activities for middle childhood (6-11 Years): Exhibition of adaptive equipment (splints, pressure garments, etc.). Questions-and-answers period. Puppets and parody.</p> <p>Activities for adolescence (Ages 12 and up): Slides presentation addressing causes, classification and physiology of injuries burns, medical interventions and routine hospitalization; questions-and-answers period; small discussion groups addressed randomly draw and engage in simulation experiences.</p> <p>Selection Criteria: Children or adolescents current enrolled in preschool, elementary or secondary education. Patients with injury burn classified as deep second or third degree with potential for scarring/ disfigurement; burn injuries in visible areas and/or that potential cause loss of body parts. Hospitalization of more than two weeks or frequent readmissions for reconstructive surgery; rehabilitation patient requiring pressure garments, adaptive equipment, or splints, and/or a high anxiety level.</p> <p>Team involved: Social worker, recreational therapist, physical therapist, occupational therapist.</p>

Table 1 (continued)			
Authors/Year	Aim/Study Design	Sample characteristics/ findings/limitations	Strategies to facilitate school reintegration
Cahners (1979)	<p>Aim: To describe an intervention that provides support and knowledge to teachers facilitating the transition from hospital to school</p> <p>Opinion article based on clinical experience and two illustrative cases</p>	<p>Points to consider: The social worker is best prepared to carry out aspect of planning for a successful reentry. Contact between the child and school team during hospitalization.</p> <p>If the school treats burn scarred children as normal, they will have a better chance of feeling normal.</p> <p>The rehabilitation team extends its services to the community to ensure an acceptable quality of life.</p> <p>The hospital should provide school staff and the patient's classmates with the tools and knowledge needed to facilitate the transition</p> <p>Social worker must deal with school in the same way as family as the same emotions may present. This is necessary for a productive relationship</p> <p>Limitations: Low level of evidence</p>	<p>School Reintegration Program: Offered to children with most severe burns.</p> <p>Services: Phone calls and letters to school sent by hospital team. Teachers' visits at hospital and/or at children's home.</p> <p>Bum staff visited schools of the most severely burned patients to work with the school professionals, the parents of the students and the students themselves.</p> <p>The return to school planning should begin at hospital admission.</p> <p>Team involved: Social worker and others not specified.</p>
<p>Legend: NR=Not reported. SRP=School reintegration program. TBSA=Total body surface area. LOS=Length of stay at hospital.</p> <p>^a This article is the only one that reports suggestions about developing a school reentry program. It is not about a specific program.</p>			

important role in supporting their child in school reintegration and should feel competent to do that [24].

3.2.1.2.2. *Obstacles.* Among the reviewed literature, one study investigated more in-depth the experiences of parents in relation to school return [31]. A major obstacle in the initial phase is the overwhelming emotional reaction in response to their child's burn event that showed to impact their functioning during the recovery period. Over time, most parents regained confidence in themselves and in protecting their child. A proactive school atmosphere established during recovery was reported to be helpful in increasing confidence, pointing to the importance of communication [31]. The authors identified parental confidence, role adaptation and school receptivity as pivotal in this process.

After discharge, both the child and family members need to adjust to changes in family life resulting from the burn event. The parents have to learn how to cope with their own emotions and their child's reactions. They may worry about the impact at school of their child's changed appearance [24], and their lack of self-confidence and extensive role adaptation. Besides these obstacles, parents may need to deal with other daily demands, therefore being proactive to make contact and arrangements with school is not a priority for them [24,31].

3.2.1.2.3. *How to support parents.* The child's return to school needs to get planned while the parents' taking initiative and forward thinking may be impaired. Moreover, parents reported to feel deskilled as a result of the many things that were taken over by the burn team [31]. This may limit their efficacious handling. Support in regaining confidence, instructions to train their ability to contact the school and arrange the reintegration of the child, can be important to facilitate the school reintegration [31].

After school return, children may be hurt by reactions to their scars [24] although one study reported that the child's peers were helpful and supportive [31], indicating a burn event does not necessarily evoke negative reactions. However, when negative reactions emerge, the burn care team could assist the family during the outpatients visits at the burns treatment center, encouraging them to report all occasions when somebody hurt the children's feelings, what was said, who said it, for the sake of better coping in the future [24]. In conclusion, the communication between the family and the school starting early in the recovery process and the support of both throughout the process of rehabilitation may facilitate school reintegration [22,29].

3.2.1.3. *Teachers: being prepared through information and empowerment.*

3.2.1.3.1. *Role.* Teachers have a central role in communication about school reentry. Their role concerns keeping up academic skills and to facilitate social reintegration [19].

3.2.1.3.2. *Obstacles.* From the studies, the evidence emerged that a smooth reintegration process may be hindered when the teacher is troubled with doubts and fears. Obstacles for the process experienced by teachers included concerns about their own feelings and the child's wellbeing, and concerns about personal management of the situation.

Some teachers may struggle with their own feelings. They have to deal with the emotional impact of the burn event on

themselves and expressed they had to put their own feelings aside [19]. They may be concerned about feelings and prejudices toward the child's appearance, toward "looking different" and about the child's capacities and wellbeing, the reassurance the child is not in pain, about peers' reactions that may upset the child and that other children might be insensitive or frightened by the child's new appearance [19,24,30].

Teachers sometimes question their own capabilities to deal with the situation. They may be afraid that the children demand great care and that they are incapable of recognizing these demands [24]. It was reported that, sometimes, the teachers ended up impeding the children from doing normal activities based on misconceptions of the children's physical abilities [28]. Children may consider excessive protection as invasive or restrictive, depending on their age [19]. The teachers and the school team may feel scared, anxious or threatened when coping with the burn, as they do not understand it or do not have (enough) information [24,30]. One study reported they may feel anger and blame toward the parents for the incident [30] what could affect their communication and relation.

3.2.1.3.3. *How to support teachers.* To facilitate the school reintegration process, the teacher should be well-prepared and equipped to deal with the situation. The preparation process should start early after the burn event [19,24,29-31]. It helps the school reintegration planning in a way it does not overburden the teachers beyond their daily demands [31]. It was found useful to assign a contact person in the burns team, as the teachers tend to question or raise any difficulty more easily when a reference person is available [23]. Meetings with teachers before the return to school return and contact between teachers and the health care team during the entire recovery phase induced a feeling of relieve as they could share their responsibilities and questions [31].

In preparing the school return, both general information on burns and its consequences and specific information tailored to the child's situation should be provided [19,24]. Addressing burns and its consequences (e.g., pressure garments) and how it may affect the child had the effect to increase awareness of burns and danger and facilitates a better understanding of the child's situation [25]. Information about the child-specific situation, skills and needs can be helpful in further increasing awareness and mutual comprehension of the situation. To give an example, if the child is taking any medication, they need to know if this can affect the school activities, and know that they can call the burns treatment center whenever they need to [24]. Of notice, the child and parents should have a voice in the type of information that will be shared in public as it should be in congruence with the child [19].

Although there is little evidence to identify school-related factors, one qualitative study [31] indicated that school receptivity during the child's period of absence is an important factor that determines the speed of school return. When the school community treats the children as normal, they have more chances of feeling normal [30]. Furthermore, when classmates sympathized with the child's return they expressed protective attitudes, which helped the teachers to prevent further damage to the child [19]. Contact and academic support during the child's absence appeared to be a facilitating

factor. It was advocated that the burn team can play a role in encouraging the schools to be more proactive, as this showed helpful to child and family [31].

3.2.2. School reintegration programs

The introduction of school reintegration programs for children with burns trace back more than 35 years, with Sue Cahners being the first to present their program [30]. The initiation of the programs was rooted in burn care professionals' insight that teachers should be better prepared to the school return of the severely burned child and also to contradict misconceptions that may hamper the child's return to school [27,30].

Ideally, the burns hospital has a school reintegration program. If school activities are interrupted, the school can forward the school activities to the hospital and one of the parents or a health team member can help the children by serving as a teacher. As soon as the child's health condition improves, the academic activities may be introduced, following the school's instructions. The planning of the program should be focused on the child, their family, and community [24].

3.2.2.1. Purpose and target group. The main purposes of the program include: to help the students to prepare for the return to school, to reduce anxieties and constraints, to maximize communication between the child and peers and to favor their mutual identification and, to provide the child, family, and school personnel with emotional support and information needed [20,24,27,29,30].

The programs vary according to the institution and team of the burn service and according to the children's needs and demands (See Table 1). Therefore, the programs should be adapted to the particular needs of each child, family, school and community [24]. Whereas some burn centers offer the school reintegration program to all pediatric burn survivors of school age [25], others used selection criteria such as the child being absent from school for long periods, the child having went through surgeries, or wearing masks or splints. In some cases, children in outpatient care were selected for the program [21].

3.2.2.2. When to start the planning. There was a large consensus across the studies the preparation of the school reintegration should start during hospitalization, as soon as the injury is no longer life threatening [23,24,26,29,30]. The contact between the hospital and the school in an early phase helped to understand what caused the burn, what the child went through in hospital and the progress in treatment, granting an understanding of what the child went through [30]. The school reintegration planning should be appropriately planned in order to not overburden the teachers beyond their daily demands [22,31].

3.2.2.3. Services and elements of the program. In the studies included in this review, different strategies to facilitate the school reintegration were presented in the detailed programs, such as phone calls [22,24,26,29], videos [24,26], DVDs [25], books [25], visits to the children's school [19,25,28,29], and a teddy bear to replace the children at school [20]. A program can contain one or more strategies depending on the burns team's resources and the child's needs.

Receiving phone calls and letters from the school during hospitalization and replacing the child with a bear [20] was suggested to reinforce engagement and to let the child and class get acquainted with the situation [23,26,30]. A teacher's visit to the burn center was reported to shape a special bond with the child that was created through the exchange of experiences, like working with the actual books [30].

After discharge, most programs offer a hospital team's visit at the school [20,22,24,25,27–29]. The integrity of the child burns survivors should be guarded, without using them as an example for preventive work, as they could be exposed to an embarrassing situation [19].

Although there is no discussion about the surplus value of a school visit on site, there appears no consensus on the ideal time to conduct the program. One study [27] proposed the ideal time to conduct a school reintegration program is on the first day the child returns to school, as this is the most frightening. Some expressed their preference for some days after the school return whereas others wanted to wait less or longer [19]. This indicates there is room for discussion and it may differ across children and schools.

3.2.2.4. Team involved. Most programs were offered by a multidisciplinary team [19,20,27], including nurses, psychologists, occupational therapists [19,25,26], physicians, surgeons [19], play specialists [19,25], child life specialists and teachers from the school [26]. The person chosen to visit the school should be capable of accounting for all areas involved in care, addressing the children's physical and psychological rehabilitation. A script with the information to be provided can be used to support the school visits, enhancing the team's flexibility to decide on who will visit the school, in view of the time and budget available [24]. The health professionals engaged in school reintegration programs should be concerned with a careful methodological analysis, and not only with their testimonies of direct engagement [23].

3.2.2.5. Effects of the program. Overall, the school reintegration programs did not demonstrate to have a measurable effect on school return. One study found a drop in the mean length of time from discharge to return to school in the children that participated into the program but the small sample size and study design limits the strength of the results [25]. Another quantitative study could not substantiate a positive effect on the child's adjustment as measured by the Teacher Report Form, a standardized behavioral checklist [23]. However, consistent evidence for a positive influence that facilitated school return emerged from qualitative studies. The programs were judged 'very useful' [20] and highly appreciated by children, family members and teachers [19,23,25]. Arshad et al. [25] furthermore identified three themes through which the programs might facilitate school return. First, parents and teachers reported the program helped them to increase awareness of the burn event and the difficulties that surrounds it, in line with suggestions from prior literature [30]. Second, through the program, teachers, parents and children felt supported which increased confidence. Moreover, the teachers felt relieved by the health team visits, as they could share their responsibilities. Third, it helped in reducing fears in children and teachers [25], and – as reported

in another study [31]—the school visit helped the child feeling more comfortable with peers.

4. Discussion

4.1. Summary and limitations

The reviewed studies show that school reintegration after a burn event is a process that starts early after admission to the hospital and it is tailored to the individual child and specific circumstances. It also showed to be a complex process because there are different stakeholders characterized by their own specific obstacles and needs to which the burn team needs to respond and adjust. This review identified three central actors in the school reintegration process: the child, the parents and the teacher who require attention in the program. Although other parties such as the broader school community are mentioned, they were not specifically addressed in the reviewed body of literature.

The child is the most central actor in the school reentry process, but the child's preferences, needs, and role in the reintegration program were not subject of research in scientific literature. Consequently, how the child can be best supported remains unclear. Especially when the child is of an older age, one could think of a larger individual contribution to the reintegration process, for instance, by using the new social media technologies that exist today. Especially in adolescents, they could take up an important role in self-management, e-learning, and communication with peers. Introducing the concept of self-management [32] in school returns programs could be very useful for children and parents. As parents reported the feeling of being 'deskilled' during the hospitalization of their child [31], giving them a larger role in the school return with support of the burn team may help them feeling more confident and help them to take charge at an earlier time point. Moreover, it might be efficient and easy applicable.

From the extant literature, it was difficult to conclude that the existing programs were effective in their aim to facilitate school reintegration. The quantitative studies failed to show an effect on the adjustment of the child [23] but a faster school reentry was suggested in children receiving the program [25]. However, the qualitative results showed a high appreciation for the reintegration program, providing support for the continuation of school reintegration programs.

Limitation of the review included the small number of papers spanning a period of more than three decades. Five papers included expert opinions based on clinical experience, which is a valuable means of research that, however, offers only a low level of evidence. The incorporation of recent qualitative papers has revealed additional knowledge, but generally, the topic of school return is understudied. Moreover, all papers came from the US or UK, limiting the generalizability of findings to Western high income countries. The context, possibilities, and resources of school return may extensively differ in low income countries preventing the applicability of these programs in these countries. But also in higher income countries, funding for the programs is scarce [33]. Notwithstanding these limitations, this review may guide several

recommendations for improving the programs. These will be addressed below.

4.2. Three phases with different needs and support

It might be helpful to specifically identify three phases in which the actors have different needs which guide the type of support. (See Fig. 2) First, the preparation phase should start during hospitalization with the aim to inform teacher and classmates. In this phase, child and parents may have to deal with the physical and emotional consequences of the burn. Parents may have a role in keeping contact between the child and school because they know their child best and know the school background. The burn care team can empower the parents in adjusting to this role and to provide them with information about the child's health state that helps them to bridge the gap between child and school. The burn team can appraise the appropriate time at which both child and parent can be supported to make contact with school in consultation with the burn staff. A contact person from the burns team can be appointed in this preparation phase.

During the second phase, return to school, the school visit takes place. This visit is suggested to be an important component of the program. There is consensus across most studies that the burn care team plays a valuable role in this visit. During the visit, the teachers and classmates can be educated about a broad range of aspects of living with burns, including physical and psychological information, and burn specific issues such as pressure garments and rehabilitation devices. The information given by the burn care team should always be discussed with child and parents. There was no consensus on when to implement the school visit. In general, it should be tailored to the preferences and needs of the child and its social and educational environment.

The role of the parents in this phase is less clear. Because of the emphasis on the physical aspects of burns it may be difficult but not impossible to let the parents do the school visit. There may be possibilities to support the parent in taking up this role. This would be a good alternative for children living at a long distance from the hospital that prevents a school visit because it is too time-consuming or expensive. On the other hand, modern techniques such as videoconferences or virtual reality technology in which the child can be virtually present in school and even can look around in class while classmates can do the same in clinic, opens new avenues for school contacts. This technology could also assist burn team members in being virtually present at school when parents are not in for such a visit or feel incapable for taking up this role.

The third phase, after the return to school, reflects the school reintegration period. Several studies argue that the integration at school should continue in the months after school return. The children may be hindered by the scars and pressure garments and they may be faced with unpleasant remarks to the changed appearance. This seems to be a specific need that is currently unmet in the school reintegration programs. A study demonstrated that 61% of school-aged burns survivors report being targets of bullying in school and that the most common types of aggression include nicknames (67%) [15]. The schoolyard, the child's classroom and lunch-time are the places where bullying takes place more

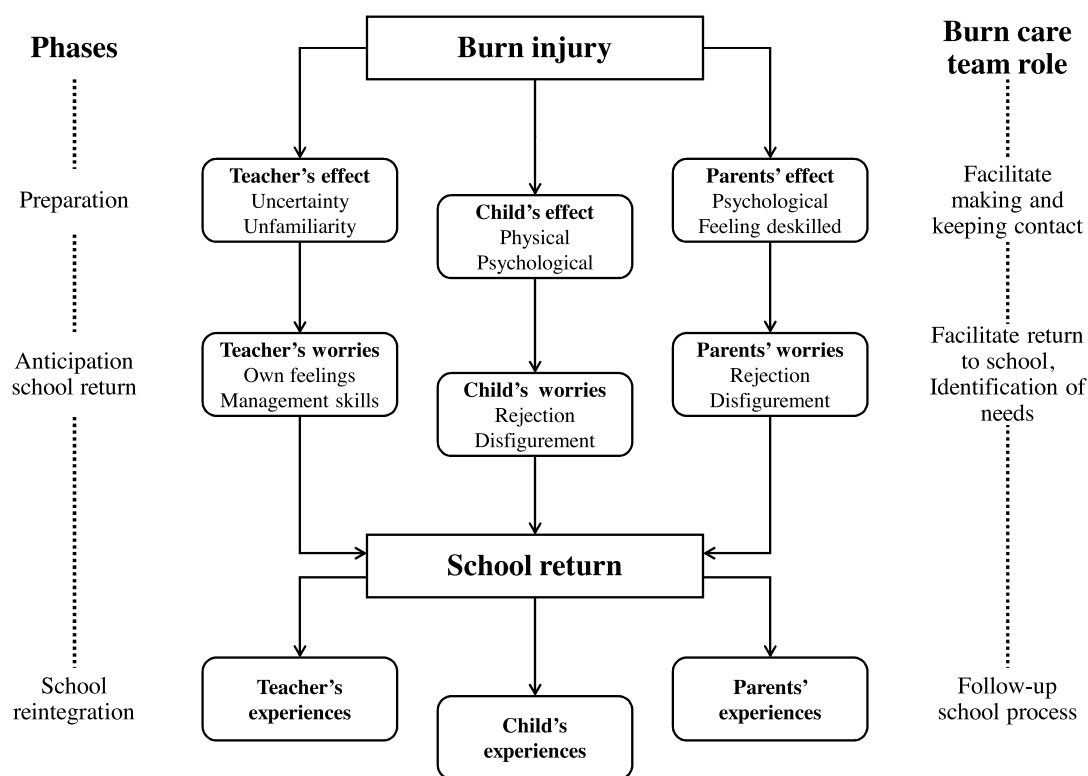


Fig. 2 – Flowchart summarizing the school reintegration process.

Source: Elaborated by the authors of this review.

frequently. It was stated that liaison with the burn team after school return has to be recommended. Efforts to develop a prevention program for bullying should be part of such a program.

4.3. Research recommendations

The preferences of the child with regard to their role in school return programs has hardly been studied with respect to school reintegration. Studies are needed that focus on the children's experiences in-hospital, the role they could play in the school visit, and the period thereafter in which living with physical limitation, including disfigurement, is the challenge. This investigation can further broaden insights regarding the specific support needed for the child with respect to school reintegration.

More research that investigates the feasibility and relevance of specific elements of the program could add to the existing literature. In a study of children living with a chronic disease it was demonstrated that, with the support of school reintegration programs to class- and schoolmates, these children increased knowledge about the health condition. This knowledge, in turn, reduced the fear and stimulated the growth of positive attitudes toward the returning child [34]. The most appropriate way to intervene is still a topic of debate. The current review summarized several suggestions, but it cannot be concluded which specific elements are crucial.

Studies that investigate a larger role for parents in their child's school return may be interesting from different

perspectives. First, parents can continuously monitor the process of school return. Second, in cases where children are living far away from the burn center and an on-site visit is not possible, the parents' involvement could possibly be supported by visual aids or on-line contact with a burn team professional. Third, considering the limited financial resources available in burn centers to implement the programs, a broader role for parents may be cost-saving.

More efforts are required to broaden the scope of the school reintegration program with elements that anticipate on bullying and other unwanted reactions. According to Goffman, it is possible to minimize the effects of stigma if the stigmatized person understands the structure of interactions [35]. Knowledge from existing bullying prevention and intervention strategies can be used to develop programs for this specific group of children returning to school [36]. For example, a game could be developed where in the virtual setting the child faces what is expected in each phase of the school reintegration process and how she or he might deal with reactions in their own family, school community, and living community.

Other possibilities include social skills training to deal with reactions of others, by improving communication skills and quality of social relationships [37], using cosmetic techniques as an aid in camouflaging scarring [38], and supporting pain management strategies to reduce anxiety [39]. A sense of confidence for parents and child should be developed, empowering and preparing them to deal with people's reactions, stigmatization, teasing, and bullying. Organizations such as *Changing Faces*, dedicated to assisting persons with facial disfigurement, offers programs, including emotional

support, cognitive strategies and other activities to promote adaptive behavior. The person with distinguished appearance is trained to react for uncomfortable social situations, e.g., when someone stares at them, asks them what happened, and turns away from them [40].

The community must be trained as the child and family to gain skills for better communication on what to say or do to facilitate reinsertion. Some adult and child reintegration programs educate the community, addressing the intellectual and emotional aspects of burn injury, providing general information, and emphasizing the survivor's abilities, as well as clarifying the ways in which a survivor may need support. Examples of interventions that these programs carry out include sending home-made videos to target audiences, educational pamphlets or letters that can be directed, and visits of burned team members in the local community who can answer questions that people may be reluctant to ask the patient or family [41].

As school programs are found supportive in the return to school, they may also be proposed in other important transition phases in children's life. In this respect, O'Brien and Wit [29] recommends that, beyond the return to school after the hospitalization, the children should receive support from a program when they are transferred to new schools and when they go to school for the first time, addressing a dimension of the length needed for the program. More research is needed to establish the need for offering the program in transition phases, including whom should be the actor to provide it.

5. Conclusion

This review shows that the planning of school reintegration should start during hospitalization as soon the child's health state allows this. Furthermore, the individualized program should be tailored to needs and specific social and educational context of the child. It is imperative for a successful school return to identify child, parent and teacher's needs, to identify their capacities, and to bring together the different actors' perspectives in an individualized way. Empowerment of the child and family to stimulate self-care is warranted. Acknowledging and anticipating the different needs across the different stages may lead to a more targeted effective school reintegration program. To facilitate school reintegration, the children, their parents and the school community can benefit from a school reintegration program but more research is needed to identify the elements that are essential.

Conflict of interest

The authors declare that there are no conflicts of interest relating to this work.

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