

Systematic Review: Local Action for Sexual and Reproductive Health of Street Children: A Systematic Review



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ABSTRACT

Context: Street children may expose to high-risk behaviors such as unwanted pregnancy, abortion, and Sexually Transmitted Diseases (STDs).

Objectives: This study systematically reviewed and presented preventive strategies for promoting Sexual and Reproductive Health (SRH) against unsafe abortion, STDs, and unwanted pregnancy in street children.

Data Source: In this systematic review, we searched databases of ScienceDirect, Web of Science (ISI), PubMed, Scopus, Scientific Information Database (SID), and Google Scholar. Published articles between 1990 and 2020 were retrieved. Finally, 41 articles were used to compile the results of this study.

Study Selection: A total of 1522 potentially relevant articles were identified; 275 articles were removed due to duplication and in abstract screening, and 766 articles did not meet the inclusion criteria or focus on the research question. Next, the full-text of 481 remained articles were screened. Studies in languages other than English or Persian, studies presented in conferences, and those with no information regarding the SRH among street children were removed. Finally, 41 studies were included in this systematic review.

Data Extraction: Data were extracted from the articles according to the selection criteria by two independent reviewers.

Results: Results of this study were categorized into 2 tables. Table 1 presents the strengths, weaknesses, opportunities, and threats of SRH in street children were shown. Table 2 presents the preventive strategies regarding unwanted pregnancy, unsafe abortion, and STDs in the street children in four categories of 1) expansion program and promotion of educational services, 2) expansion program and promotion of educational services, 3) creating secure umbrella and social welfare, and 4) expansion program and promotion of social protection.

Conclusions: Because of no information on street children regarding SRH, the government should consider adequate sexual education programs such as protected sexual intercourse and counseling on preventing STDs and unsafe abortion. It is essential to allocate affordable and accessible healthcare centers and facilities to provide services with no judgment on these children.

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1. Context

Currently, we experience increasing social developments such as population growth, industrialization, urbanization, mass displacement, migration to large cities, and the suburbanization of metropolises. These changes have created social inequalities and class divisions in metropolises. Family construction and functioning have changed and caused increasing social tension with unfortunate social consequences in developed and developing countries such as Iran. Children are considered the most vulnerable group because of their inability to appropriately interact with the social environment and dependence on adults to meet their needs [1, 2].

Based on the UNICEF definition, street children are those who are under the age of 18 and spend most of their time in low-income jobs such as selling drugs, with or without adult supervision [3]. Street children, as a social phenomenon, has been reported all over the world for a long time. But in recent years, the number of these children has increased for various reasons such as the divorce of parents, losing caregivers, parent's unemployment, and low socioeconomic status worldwide and in countries like Iran [4-6].

According to the UNICEF statement, it is difficult to estimate the prevalence of street children accurately. However, approximately 10 to 100 million street children live in the world [7-9]. More than 40 million street children live in Latin America and at least 18 million in India [3, 8]. The prevalence of street children in Tehran, the capital of Iran, has been estimated at nearly 20000 [10]. Based on the literature, economic problems (poverty and low socioeconomic status) [11, 12], political changes, natural disasters (flood and earthquake), and parent separations and conflicts are the leading causes of the street child phenomenon in the world [13, 14].

Street children work in unsafe environments that may increase the probability of their exposure to high-risk behaviors such as smoking and drug abuse, engaging in sexual activity at an early age, vulnerability to sexual abuse, unwanted pregnancy, and Sexually Transmitted Diseases (STDs) such as HIV/AIDS. Studies showed that the lack of access to Sexual and Reproductive Health (SRH) services worsen their health conditions [15, 16].

Based on the results of a study in Ghana, more than one-third of the street children (36%) were involved in risky sexual behaviors, and poverty was the most com-

mon cause of sexual behavior in these children [17]. The literature review showed that factors such as lack of information about the health services [18], ignorance of the health consequences, stigma and discrimination, unfriendly staffs, unaffordable costs, and far distance of the health service location were the main barriers for street children to utilize the local SRH services. Preferable places for SRH among street children were peer groups, public health centers, religious organizations, Non-Governmental Organizations (NGO) clinics, and private clinics [14].

Street children with adequate sexual and reproductive health will have a satisfying and safe sexual life and can choose whether to have children and, if so, when and how to have them [14]. The literature review shows that compared to other age groups, street children are either exposed to various environmental risk factors or are severely restricted in accessing and receiving support from healthcare services [18]. So, they experience various sexual challenges such as unwanted pregnancy, unsafe abortion, and STDs such as HIV/AIDS, sexual activity under the effect of substance use, unprotected sexual relationships, homosexual relationships, commercial sexual activities, and compulsory sexual intercourse. This condition causes considerable physical and psychological disturbances [13, 19].

The literature review showed that although different studies have been carried out across the world regarding the social challenges of street children, studies regarding their SRH challenges and interventional studies for promoting sexual health among these children are scarce. Also, there is no systematic review in this regard. So this study aimed to investigate the studies regarding the SRH of street children and systematically review the strategies carried out to promote the SRH status in three areas of unsafe abortion, STDs, and unwanted pregnancy.

2. Evidence Acquisition

This systematic review was performed following the "Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines" (PRISMA) and approved with the ethical number of IR.HUMS.REC.1399.219. The main research questions addressed in this review were as follows: "what are the Strengths, Weaknesses, Opportunities, and Threats (SWOT) of risky sexual behaviors in street children based on the literature" and "what are the appropriate performed strategies for promoting SRH in the street child all over the world?"

The PICO in this study comprised: Population = street children, Intervention = every intervention or strategy regarding promoting the SRH among street children, C = have no comparison group, and O = outcome is the promotion of the SRH among street children. Based on this PICO strategy, the researchers independently searched through international databases (ScienceDirect, Web of Science [ISI], PubMed, and Scopus) and national databases (Scientific Information Database [SID] and Google Scholar). The following key search terms with their Persian equivalents in the search strategy (as per the MeSH) were used to retrieve articles published from 1990 till 2020: ["street child" OR "street children" OR "on the street" OR "of the street" OR "homeless child"] AND ["reproductive health" OR "sexual health" OR "reproductive health services" OR "sexual and reproductive health" OR "sexually transmitted diseases" OR "unwanted pregnancy" OR "unsafe abortion"] AND ["strategies" OR "solutions" OR "approaches"]. Moreover, the references of the retrieved articles were manually searched in journals to extract studies on related topics.

The full text of each article was read carefully, and relevant and required data for the compilation of findings were extracted and categorized. Literature showed that data regarding the reproductive health of street children are not adequate, and also, most of the studies assess the socioeconomic status of street children [10, 11, 20]. The health status of these children is one of the most critical issues which is commonly ignored by the health policies of the countries [16, 21]. So in this study, researchers comprehensively reviewed the various studies in this regard and proposed strategies for promoting the SRH in street children.

All relevant studies and documents were extracted during the advanced search. After removing the duplicates, irrelevant articles were also identified through their titles, abstracts, and full texts. The initial literature search yielded 1522 articles. Two researchers (M.A, F.A) independently screened titles and abstracts and chose relevant articles according to the following inclusion criteria: published in scientific journals, published between 2000 and 2020, and focused on street children and reproductive health. All types of studies such as cross-sectional, cohort, randomized controlled trial, systematic review, guidelines of WHO, and qualitative studies were included in this study. After deleting repeated citations (n=275), 1247 articles remained.

It should be noted that during abstract screening, 766 articles were excluded due to not focusing on this study

research question. Also, during full-text review and appraisal, articles that had no information regarding the SRH among street children (n=378), studies in languages other than English and Persian (n=30), and summaries of articles presented at conferences or have no full text were excluded (n=32). Finally, 41 articles (36 in English and 5 in Persian) were included in the review study (Figure 1).

3. Results

In this study, the sexual high-risk health consequences in street children of unwanted pregnancy, unsafe pregnancy, and STDs were assessed.

Unwanted pregnancy

Because of the high prevalence of unprotected sex, unwanted pregnancy is reported highly in street girls [14]. Also, due to the immature reproductive system, they are exposed to fertility-related problems such as preterm labor, dystocia and mother and baby damages, low birth weight, increased susceptibility to infections, and diseases [8, 22, 23]. The result of a study showed that among sexually active street children, 25% had a history of unintended pregnancy, and 55% of these children reported a history of induced abortion ($P<0.05$) [24]. Also, based on another study, these girls encountered unwanted sex, and more than 50% of them terminated their pregnancy through unsafe and traditional tools, and a quarter of them decided to deliver their babies instead of abortion [25].

Unsafe abortion

Because the street children have no husband or social and financial supports in their life, in the cases of pregnancy, girls feel the pressure for terminating the pregnancy. In these cases, lack of support and advice on getting a reproductive health service for termination of pregnancy causes the high prevalence of unsafe abortion by inexperienced people or by themselves [8, 14]. These illegal methods of pregnancy termination have increased the risk of infection, bleeding, and even the probability of mother death ($P<0.001$). In some cases, damage to reproductive organs and infertility can lead to psychological problems such as depression [8, 14, 26]. In a study that assessed students' attitudes toward abortion in Nigeria, a student declared that they need proper reproductive health education and counseling about unsafe abortion preventive methods [27].

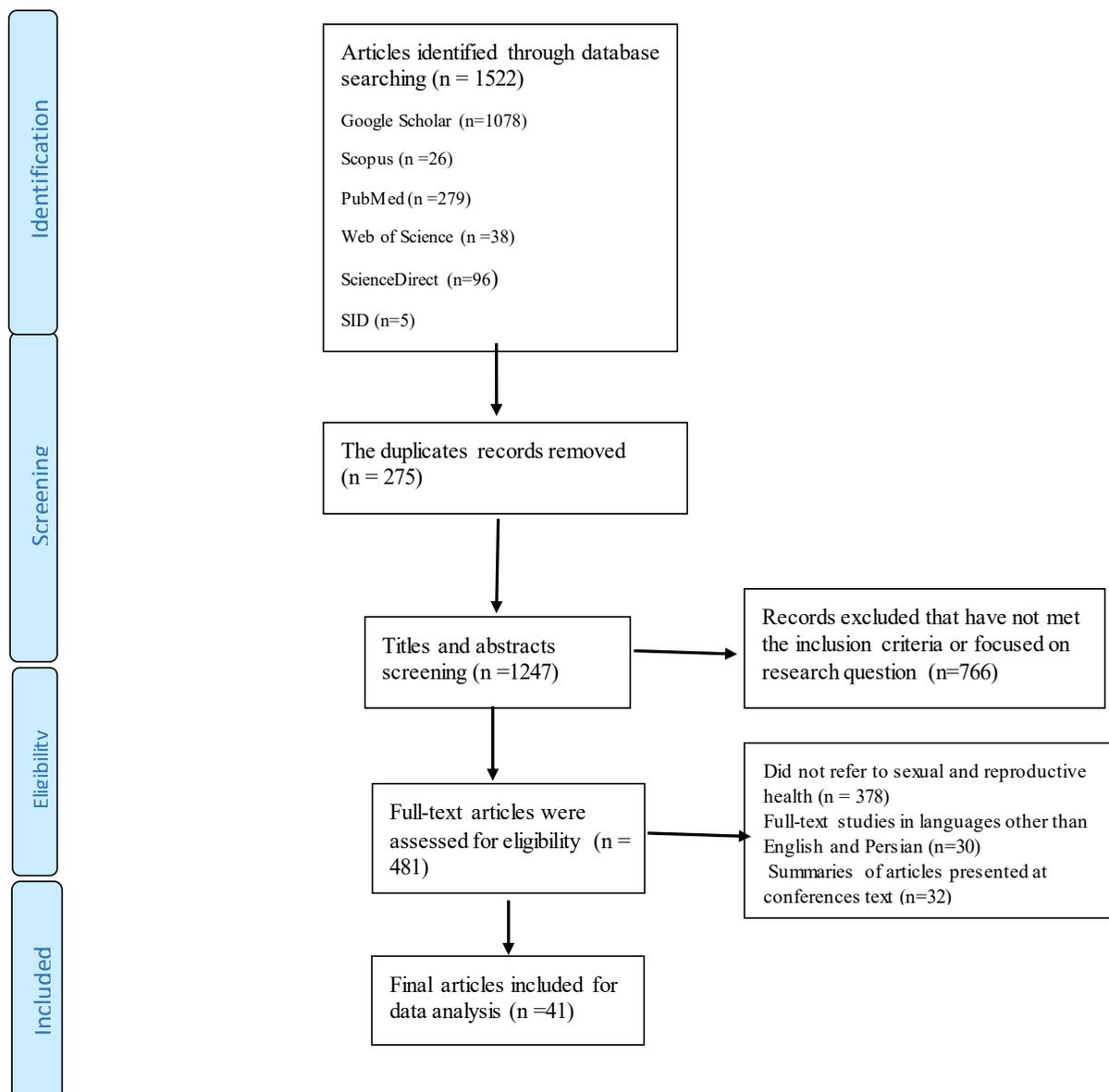


Figure 1. Process of search

Sexually transmitted diseases

In some street children, sexual intercourse occurred before menstruation, so they need health care providers to receive secure health information and services [18]. In these children, the risk of STDs such as HIV or AIDS is highly reported due to having unprotected sex at an early age [2, 28, 29]. The prevalence of HIV infection or AIDS among street children in the United States ranged between 0.5% and 1%. Also, in European countries, the prevalence is reported between 2% and 37%, and in Asian countries between 0% and 20% [30]. In Tehran, the capital of Iran, the prevalence of HIV/AIDS is estimated at 4% to 4.5% [31]. Other STDs reported in different studies were chlamydia, syphilis, trichomonas, chan-

croid, Human Papillomavirus (HPV), and Herpes Simplex Virus (HSV) [32]. The main cause of the high prevalence of STDs in these children was having multiple partners or having a partner who has multiple partners [8].

SWOT of the SRH of the street children

SWOT analysis is a strategic planning technique used to help a person or organization identify strengths, weaknesses, opportunities, and threats related to project planning [33, 34]. It is intended to specify the project's objectives and identify the internal and external factors that are favorable and unfavorable to achieve those objectives. The user of a SWOT analysis often asks and answers questions to create meaningful and valuable information for each category to identify their competi-

Table 1. The Strengths, Weaknesses, Opportunities, and Threats (SWOT) of Sexual and Reproductive Health (SRH) in street children

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> -Peer groups education [5] -Role-playing education -The effectiveness of education with a supportive approach to these children [1] 	<ul style="list-style-type: none"> -Poor continuity of education provided to these children due to lack of parental support [12] -Exposure to rape due to unawareness of self-protection practices [20] -Inadequate access to proper sanitation, clean food, and clothes due to long term work in streets [1, 5] -Exposure to various physical, mental, and infectious diseases [1, 16, 43] -Limited access to health and vaccination services -High educational costs [1, 16] -Parental illiteracy and low level of knowledge -Parental indifference, ignorance, or misconduct [1] The large population of families [1] -Parental addiction or divorce [1, 5, 20] -Behavioral conflicts of family members [1] 	<ul style="list-style-type: none"> -Existence of street children organizing headquarters -Gathering street children -Being centers for taking care of street children along with training them [1] -The existence of crisis intervention centers -Holding conferences on street children health -Cooperation and common programs between NGOs and international and governmental organizations such as UNICEF [14] -Holding workshops on street children and raising people's awareness regarding this issue [44] -Establishing open centers for street children education and communication with their families [5] -Conduct research on street children's health -Existence of school of the street children [40] -Existence of 79 to 85 articles related to the Labor Law on street children 	<ul style="list-style-type: none"> -The absence of an organization that directly employs street children -Lack of proper and safe shelter to spend the night [16] -Lack of specific planning and long-term view regarding street children issue [42] -Temporary plans with no follow-up for collecting and maintaining street children -Inaccurate information and evaluation of policies and programs performed so far -Unfair distribution of wealth in society and being severe class divisions [1, 5] -Lack of government policy in the field of collective control [18] -Diminishing the values and traditions and indifference of citizens to street children [11] -The lack of a database of street children -Inadequate budget allocation in government and parliament for these children -Civil war or turmoil [1]

tive advantages. Strengths and weaknesses are internally-related factors, while opportunities and threats commonly focus on the external environment of the issue. SWOT analysis can be used in any decision-making situation in every organization, such as governmental units and individuals. This method may also be used in generating a recommendation for health issues, exploring new solutions to problems, identifying barriers that will limit goals or objectives [34]. For these reasons, first, we used the SWOT method to assess the current condition of a street child's SRH. Table 1 presents the SWOT of SRH in street children.

Strategies for promoting SRH in the street children based on general and specific objectives

In this study, researchers present both general and specific prevention strategies regarding promoting SRH in street children. General preventive strategies of risky behavior such as unwanted pregnancy, unsafe abortion, and STDs were training and assigning healthcare providers and social workers for street children. The specific programs include providing employment services for

parents of street children, holding training courses on addiction prevention for parents, identifying street children and issuing health certificates for them and supporting them, generating special three digits emergency phone line, performing NGO and creating health kiosks for presenting health services for street children. Preventive strategies for each SRH problem in street children were classified into main categories (Table 2).

4. Discussion

The present study aimed to review the SWOT of SRH in street children and present the preventive strategies to promote the SRH in street children based on published literature. According to our review, in cities, especially big cities, low socioeconomic status of families, a limited chance of education for children, and lack of skills for getting official jobs resulted in working in the street [17, 26]. Studies showed that these children are more exposed to high-risk behavior such as early pregnancy, STDs and HIV, unwanted pregnancy, and unsafe abortion. They become sexually active at an early age [35, 36]. Although these children have been exposed

Table 2. Preventive strategies in unwanted pregnancy, unsafe abortion, and Sexually Transmitted Diseases (STDs) in street children

Specific Objectives	Strategies			
	Expansion Program and Promotion of Social Protection	Creating A Secure Umbrella and Social Welfare	Expansion Program and Promotion of Health Services	Expansion Program and Promotion of Educational Services
Unwanted pregnancy	<ul style="list-style-type: none"> -Convince legislators to allocate the budget for presenting health and contraceptive services to street child -Community education on the human rights of the street child so that they are less humiliated [1] 	<ul style="list-style-type: none"> -Expand more secure places for the overnight dormitory of street children -Creating more places for daily rest, especially in the daylight hours [1] -Reduce stress through the daily distribution of hot food -Creating playhouses for children [35] 	<ul style="list-style-type: none"> -Make contraceptives available (condoms, emergency pills, etc.) [35] -Introducing kiosks and places of offering contraceptives -Establishment of health service stations, such as kiosks for street children in areas of the city with a daily hangout or their maximum daily traffic [42] 	<ul style="list-style-type: none"> -Training on reproductive physiology and sexual relationship [5] -Training on contraception methods and how to use contraceptives -Continuous training through films, photos, and discussion groups [5] -Education through role-playing for increasing use of contraception -Training the stress reduction techniques and skill of saying no to the sexual relationship and also using condoms in sexual contact to prevent unprotected sex [35, 42]
Unsafe abortion	<ul style="list-style-type: none"> -Creating guidelines for hospitals to accept these children with no-cost -Community education through media and health professionals on non-judging child pregnancy [45] 	<ul style="list-style-type: none"> -Creating confidence in street children to tell they are pregnant and get healthcare services [40] -Accepting street children without the fear of being judged [45] 	<ul style="list-style-type: none"> -Creating and accessing health services [46] -Creating links that the health caregivers can refer to street children -Providing post-abortion services to children, including iron pills, supplements, and health supplies 	<ul style="list-style-type: none"> -Education about pregnancy symptoms -Education about unsafe abortion and its outcomes [5] -Educating street child to tell her pregnancy to health caregivers with no fear and stress
STDs such as HIV/AIDS, Hepatitis B virus	<ul style="list-style-type: none"> -Convince the legislators to allocate the budget for vaccination -Approval of midwife recruitment plan for street children's health [47] -Increasing social knowledge about the health needs of the street children as a social right [48] 	<ul style="list-style-type: none"> -Creating a safe shelter [46] -Creating confidence in street children to contact healthcare providers before and after sexual intercourse to receive safety enhancements such as condoms [42] 	<ul style="list-style-type: none"> -Access to condoms, sanitary and hygiene items, sanitary pads, paper towels available as health bags and considering syringe for them [43] -Put on thick gloves and a mask for garbage disposal child -Creating specific baths and toilets for street children on city levels in the form of concessions [49] -Presentation of free therapeutic action based on sexually transmitted diseases symptoms [13] -Annual vaccination plan against HBS and HPV based on the health certificate Center for performing a screening test for STDs [5, 50] 	<ul style="list-style-type: none"> -Training about diseases, ways of transmission, complications, and symptoms of diseases [8] -Training in daily and nightly hangouts of street children through group [2] discussion, individual methods, film, etc. [13] -Education on how to prevent sexually transmitted diseases with barriers methods such as using condoms, avoid using a common and infected syringe [1, 5, 51] -Disease transmission training in street children [19] Drug abuse training [52]-

to some reproductive health risks, their SRH needs are relatively unmet, and this issue seriously damages their health and well-being [37].

The most critical problems in most street children regarding SRH are STDs and HIV infection [2, 38, 39]. In a study conducted in Ethiopia, most street children experience sexual intercourse. More than 40% of them express that their desire was the most reason for sexual relationships, and other reasons were exchange money, peer pressure, the influence of substance use, and rape [35]. Based on the results of another study, commercial sex was reported by 78.5% as the main source of their income. During their last sexual intercourse, 44.0% had not used a condom. Also, previous pregnancy was reported by 62.5% and current pregnancy by 12.3% of them [40].

In a study that assessed the prevalence of sexual abuse in street children, the results showed that 17.2% of these children had penetrative sexual intercourse. More than half of the sexual partners were adults. Other types of sexual abuse included inappropriate touches and verbal abuse. In an abused child, the level of pregnancy awareness and STDs were 43% and 55%, respectively [39]. The high prevalence of any type of abuse and STDs and the ignorance of sexual issues represent their poor quality of reproductive health education and knowledge [41]. Having proper knowledge of STDs and their transmission do not completely prevent sexual relationships but may decrease the willing intercourse among street children [14, 30]. Activities such as encouraging street children to seek health information from a healthcare worker, decreasing the incidence of unprotected sexual intercourse among street children, increasing their level of knowledge about HIV and AIDS, and promoting their communication skills and ability to protect themselves are some of the important counseling programs which may be helpful in these children [42].

Unwanted pregnancy was one of the critical reproductive consequences of engaging in sexual activities. These children may have limited knowledge and information about what happens for one to become pregnant. In pregnant street girls, the burden of taking care of a child falls on her. However, because of no physical and financial abilities to keep their pregnancy, the prevalence of illegal abortion is high [18].

5. Conclusion

Based on published literature, street children have inadequate information and no access to reproductive health issues. So the governments should consider

providing adequate sexual education programs on protected sexual intercourse and counseling on the harmful effects of drug use or the prevention of STDs and unsafe abortion. In this regard, the World Health Organization (WHO) has emphasized sex education, life skills, and health education as the critical needs of street children. Besides education, governments should provide affordable, accessible healthcare centers and facilities with no judgment for these children. Financial support of parents may also be an essential action to decrease the number of street children. Finally, these children have this chance to continue their educations and have a good and certain occupational status in the future.

Our study was the first systematic review that not only assessed the SWOT of SRH among street children but also evaluated the performed strategies for promoting the SRH among street children. So, the results can be applied as a good resource for health policymakers in designing specific programs for this group's SRH. It is also a good guideline for healthcare providers to hold appropriate counseling regarding these children's reproductive health in clinics.

One of the limitations of this study is ignoring and not determining the bias in included studies. Another limitation is overlooking articles in other languages than English or Persian in this study. However, there was no other systematic review that assessed the SRH challenges of street children, and also, there was no study to investigate the strength, weaknesses, opportunities, and threats of SRH condition systematically among street children. These are the strong points of this study to be a good resource for future interested researchers in this regard. Also, this study can be an appropriate document for health policymakers to design health interventions for these children.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by Hormozgan University of Medical Sciences (Code: IR.HUMS.REC.1399.219).

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Authors' contributions

Conceptualization and supervision: Ziba Taghizadehr; Methodology, investigation, writing – original draft, and writing – review and editing: Marzieh Azizi & Farzane Alidost; Data collection: Nasimeh Setayesh and Haniyeh Nazem.

Conflicts of interest

The authors declared no conflict of interest.

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