



## Health Care Strategies for Elementary Schools

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### Authors' contributions

*This work was carried out in collaboration between all authors. All authors read and approved the final manuscript.*

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### ABSTRACT

**Aim:** Every society uses a kind of strategy to provide health care for schools, so the aim of this study was to determine health care strategies for elementary schools.

**Study Design:** This is a qualitative study that conducted content analysis.

**Place and Duration of the Study:** This study was conducted in Isfahan, Iran, during 2014.

**Methodology:** This study was conducted on health care providers of elementary schools. By targeted sampling 17 health care providers from 22 elementary schools were selected. 20 semi-structured interviews were performed. Data was analyzed using qualitative content analysis.

**Results:** Three concepts of social contribution (with two sub-categories of responsibility toward peers and cooperation), family-oriented (with three sub-categories of school and family interaction, parents' desperation and transparency of information between teachers and parents) and holism (with four sub-categories of students' health problems, multidimensionality of health, social skills and promoting spirituality).

**Conclusions:** Using these approaches to provide health care for students could help to enhance the health of this group.

*Keywords: Schools' health; elementary school student; content analysis.*

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## 1. INTRODUCTION

Health and education of people are main duties of each state's authorities [1], and one of the rights of children is to provide the best possible health condition for them [2]. Since students spend a lot of time at schools, providing these services at schools would be of great importance [3]. Health care, providing comprehensive health services [4,5], and paying attention to the health of schools are not new subjects [6]. Providing these services at schools would lead to a better control over chronic health problems and enhancement of students' health [7,8]. The health of students is directly related to the educational goals of schools [6,9]. Also health care at schools along with enhancement of skills and healthy living behaviors during childhood would prevent diseases in adulthood [10,11]. But only schools that could increase their capacity as an environment for healthy living, learning and health performances [2,12,13], and its students and parents could have sufficient contribution in health care programs [14,15] could work effectively in this field. But the problems of health care strategies would cause nurses to encounter an increasing number of students with different physical, mental-psychological and social health problems [16,17]. Therefore considering the importance of health of students, complexity of the effective underlying factors [18] and lack of studies about strategies for enhancing health care, the present study was conducted to determine strategies to provide health care for elementary schools.

## 2. MATERIALS AND METHODS

### 2.1 Research Design and Setting

This is a qualitative content analysis study conducted in 2014 (for 10 months from February to November) in Isfahan, Iran to determine strategies for providing health care for elementary schools.

Besides being a qualitative research method, qualitative content analysis is a method for analyzing qualitative data [19]. Content analysis method is a systematic analysis of the context [20]. In this study health care providers of 22 elementary schools of Isfahan were interviewed. All of the public and private elementary schools of Isfahan are working under the supervision of Department of Education.

### 2.2 Participants and Sampling Method

In this study targeted sampling was performed for selecting the participants. Participants were 17 health care providers (15 female and 2 male) of schools and 4 parents of elementary school students.

Health care providers have studied biology, empirical sciences or school health and based on the covered students were settled in one or two schools (Tables 1 and 2). In selecting the participants, researchers tried to select providers with maximum variety in demographic characteristics. Also participants were selected based on their insight about the research question. Inclusion criteria were being interested in participating in the study and having at least one year of experience as a school health care provider.

### 2.3 Data Collection

Data was gathered through semi-structured face to face interviews. First the researcher explained the aim of the study and its benefits for the participants and then the time and place of the interviews were planned with regard to the participants. After getting oral and written content from participants, interviews were conducted by the corresponding author; the interviews were guided by a research team included two full professors and a nursing PhD student. Duration of interviews was from 45 to 60 minutes and the questions were designed based on the aim of the study. For example: What strategies do you use to provide health care for students? Or what strategies could enhance health care?

### 2.4 Data Analysis

Data analysis was performed according to Lundman and Graneheim [19,20]. All the interviews were recorded using a voice recorder. Recorded interviews were typed word by word after being listened to for 4 to 5 times and for better understanding typed texts were read out 3 to 4 times. The meaning units were named using open codes in terms of latent and manifest contents.

Then based on their similarities and differences, codes were divided into more abstract classes. Data reduction process help to better understand the phenomena and this process continued until all the themes were extracted. MAXQDA

software (version 10) was used to manage the data.

The study's accuracy, reliability of qualitative data and rigor (credibility, dependability, transferability and confirm ability) were assessed using the criteria proposed by Cuba and Lincoln [21]. To ensure credibility of data, interaction, closeness and adequate collaboration were established with participants. Also peer check and constant comparison were used. Data dependability was examined using experts' review and revision was performed by participants and external observers. The researchers also tried to avoid in advance judgment and put their previous beliefs aside to

obtain sufficient conformability. Transferability was provided by rich explanation of data.

For ethical matters, written permission was gained before entering schools. The participants were ensured that their information would remain confidential and they could leave the study whenever they wanted to. All the participants filled written consent form.

### 2.5 Ethical Consideration

All processes and procedures of study was approved by the Ethics Committee and the Research Council affiliated to Kerman University of Medical Science.

**Table 1. Characteristics of health care providers**

Type of school	Job experience	Marital status	Field of study	Age	Sex	Participant no.
Public	5 years	Married	Biology	42	Female	1
Private	4 years	Married	Empirical sciences	34	Female	2
Public	6 years	Married	School health	28	Female	3
Public	4 years	Married	Biology	40	Female	4
Public	8 years	Single	School health	32	Female	5
Public	5 years	Married	Biology	36	Female	6
Public	3 years	Single	Biology	38	Female	7
Private	4 years	Married	Empirical sciences	41	Male	8
Public	6 years	Married	School health	29	Female	9
Public	2 years	Divorced	Empirical sciences	38	Female	10
Private	6 years	Single	Empirical sciences	27	Female	11
Public	8 years	Married	Biology	36	Female	12
Public	10 years	Married	Biology	41	Female	13
Private	7 years	Married	Biology	35	Female	14
Public	4 years	Married	School health	29	Female	15
Public	8 years	Married	Empirical sciences	39	Male	16
Public	3 years	Single	Biology	26	Female	17

**Table 2. Characteristics of parents**

Type of school	Relation to the students	Education	Age	Sex	Participant no.
Public	Mother	Diploma	33	Female	18
Public	Mother	BA	37	Female	19
Public	Father	BA	42	Male	20
Private	Mother	Under Diploma	28	Female	21

(Approval number: 1394.125) The researchers also obtained permission from the directors of each hospital. The participants were explained about the aims of the study and how to complete the questionnaire. They were assured that any information they provided would be anonymous and confidential, then informed consent forms were signed by the participants. No special ethical issue had occurred during study development and data collection.

### **3. RESULTS**

Final results of this study are formed from 3 main classes and their subclasses: 1- social contribution (Cooperation and responsibility toward peers), 2- family-oriented (school and parents interaction and transparency of information between health care providers and parents) and 3- holism (health problems, multidimensionality of health, social skills and promoting spirituality), which are the indicators of providing health care for schools.

#### **3.1 Social Contribution**

##### **3.1.1 Responsibility toward peers**

Results showed that students were used as health promoters and by teaching them the responsibilities and explaining the expectations simply and understandably, they could be helpful in different aspects of providing health care such as controlling environment's health, controlling the nutrition of students at school and other aspects. Students' participation would make them more active and sometimes they even feel more responsible toward health care than their health instructor.

For example participant no. 3 said:" mental health assistant could be helpful in finding friends. They teach children to be kind and do not harm each other. If other students wouldn't listen to them, they would come to so that I would speak to them. Nutrition health assistant would control students' food. The educational health assistant should find article and read it out loud for the entire school. The environment health assistant should care for the cleanness of the yard and the school."

It must be noted that student's engagement in providing health care could have positive or negative effects; therefore their operation should be supervised. In this regard participant no. 5 said:" the health assistant would stand at the

drinking fountains and would not allow students to drink water without a mug. Sometimes they might argue that we would interfere. We are controlling them so no problem would happen."

##### **3.1.2 Cooperation**

Most of the participants mentioned that in providing health care for schools, school staff must cooperate with each other. This cooperation could be in defining students' problems and referring them to the health instructor, helping through the treatment process of problematic students or educating and examination of students.

For example participant no. 13 mentioned:" for example this year me and the physical exercise teacher have decided that if an overweight student could reduce weight by the end of the year by exercising for half an hour a day, they would get a perfect score for their physical exercise. So far only one has been successful."

In regard to health care, school principal could have an important role and could be helpful in performance, supervision and providing financial support. Also, other than intra-sectoral cooperation, it is necessary that different organizations that are related to the education and health of students cooperate with each other.

In this regard participant no. 4 said:" the principal could be really effective. If the principal doesn't want nothing would happen. The principal should support the health instructor and supervise their activities and encourage the staff to take care of students so that they would cooperate in any way they can."

#### **3.2 Family-oriented**

##### **3.2.1 Interaction between school and parents**

Results showed that parents would seek help from schools for solving some health issues of their children. Since students listen to what their teachers tell them, therefore they could be effective in solving students' health problems. Also considering the experience of instructors, they could help in determining students' problems, especially behavioral problems, and solving those problems. For example participant 12 said:" a student's mother came to me and said that my child is a loner, please talk to him/her, (s) he listens to you. Engage him/her in

school activities so the problem would be solved.”

Of course most of the health instructors expect families to cooperate with them to enhance students' health and have mentioned that if families would not cooperate, all of the efforts of health instructors would go to waste. Participant no. 8 mentioned:” if the families wouldn't help, our teachings would be useless and no change would happen toward healthy behavior.”

### **3.2.2 Parents' desperateness**

One of the things that would hurt parents, especially parents of diseased students, is taking care of a sick student and being worried about the kind of care their sick child would receive at school. Also the parents of these students, because of constant presence at their child's school, would suffer from mental, psychological and employment problems. Therefore they would need more support from the school. In this regard participant no. 6 said:” one of the student's father come to school every morning and he is worried that his child might get sick in school. His son is diabetic and his blood sugar is not stable. He has said that I have lost my job because of constant presence at school but my child is more important. If only the school were appropriate for sick children too so I wouldn't be worried about my child when he is at school.”

Also participant no. 18 mentioned:” My child is in first grade. I don't know why but I was nervous when he was at school and worried about his health. I was always afraid that someone would hit him or he would fall. If there was a way that we could be informed about our child's condition at school it would decrease our worries.”

### **3.2.3 Transparency of information between health instructor and parents**

Results showed that not knowing the school health instructor and lack of knowledge about the performance of school and the role of health instructors in providing health care for students would decrease the interaction of parents and their satisfaction with school. If parents knew what is expected from them in this field and what a helpful role they can have, they would improve their interaction and enhance the results of school's performance. For example participant no. 5 said:” one day a mother came to school and unhappily asked us what do we do for students' health? If my child would fall and get

hurt who would take care of her until I arrive? So I arranged a meeting with parents at the beginning of the school year and explained them my duty and how families could cooperate with us in this regard.”

Participant no. 19, about knowing school health care providers, said:” I did not know the health instructor of the school at all. When we sign our child in the school we would get to know their teacher and we could easily communicate with them. If it was the same with health instructors it was good and then we could be aware of our child's health condition in all aspects.”

## **3.3 Holism**

### **3.3.1 Health problems**

Results showed that in each school there are students with physical, mental, psychological and social problems. School as a small society has members with different health problems; the problem might have happened during school years or was existed before school started.

In this regard participant no. 10 said:” overall health problems, especially mental health problems, are very common among students. They are aggressive or depressed. Some are loner for many different reasons and do not play with others or have different diseases.”

### **3.3.2 Multidimensionality of health**

Different factors are effective on the health of students so in providing health care for them all of these factors must be considered. These factors could exist in every environment like school, family and society. Even having health problem in one aspect could affect other aspects of health.

For example participant no. 9 mentioned:” if a student has a mental or social problem, it would directly affect his/her body. So if a student has obsessive thoughts after a while (s) he would develop digestive problems too and this would affect his/her educational status.”

Participant no. 21 said:” It is better if they check all aspects of health at school not only their height and weight or their vision and hearing. If all of these were normal in a kid then does it mean that kid is healthy? So I believe that all the aspects of health must be considered.”

### **3.3.3 Promoting spirituality**

Some of the health instructors mentioned that to enhance students' health their spiritual health must be considered too, because being healthy in this aspect would affect the health of other aspects.

In this regard participant no. 12 mentioned: "if we could empower the relation of students with God and teach them about this subject it would affect their relation with other kids too and it would raise their self-esteem. I'd say they would be healthier".

### **3.3.4 Social skills**

Results indicated that to be healthy, students need education in social matters and strengthen interpersonal relationships. Educating social skills to students not only would lead to their health at school but also could be effective on their health in their adulthood. One of the goals of school is to prepare students for social life.

For example participant no. 10 said: "school is a social environment so we could teach students social skills at school. We could teach them how to find a friend and keep their friends. Somehow they would be prepared for their future life."

## **4. DISCUSSION**

### **4.1 Social Contribution**

Results of this study showed that social contribution is one of the strategies for providing health care. Roussos [22] also indicated social contribution as a health care strategy in the society that would cause faster, easier and more stable behavioral changes. Considering the results of the present study one of the groups that must participate in the providing of these services is students. Other studies in consistent with this study revealed that students must be active in providing school health as health contributors [23,24]. Students' participation would increase their satisfaction, motivation, skill, competence [24], the feeling of self-responsibility and capabilities [25] and consequently they would achieve better health intervention outcomes [26,27]. Also the results of the present study showed that students' health care requires the cooperation of all the school staff with each other and also it requires an interaction between Department of Education and health centers of provinces and other organizations. Previous

studies confirmed this result and indicated that school health care requires cooperation between students, school nurse, school physician, teachers and other staff who are involved with students [28]. On the other hand to provide better health care services the cooperation between the Department of Education and Department of Health must be strong [22].

### **4.2 Family-oriented**

Another strategy for providing health care that was achieved in this study was family-oriented. Family is the most important group that elementary school aged children belongs to [29]. Mäenpää et al. [16] also mentioned family's contribution as one of the strategies for providing health care which is in consistent with the present study . On the other hand families have an essential role in stabilizing healthy behaviors [30] and family's circumstances would greatly affect the health of students [15,31]. By their contribution, problems that students cannot talk about and also family's circumstances would be defined [32]. Results of this study showed that some of the parents were not familiar with school health instructors and their duties and this would affect their contribution. Other studies have also shown that for families to have more participation in school health care, it is necessary that parents would be familiar with school nurse and a flexible relationship based on trust and respect should be established between them [33]. Also in this study parents of sick students were really stressed and worried about their child's presence at school and the type of care that school would provide for them. Samuelson et al. [34], in consistent with the results of this study, revealed that families with sick children and also parents of first grade students would endure a lot of stress due to their child's sickness. Families' contribution would allow them to be informed about the health situation of their child [35] and it would decrease their stress [36]. If parents of sick student get involved in providing health care, the rate of academic success among students would increase and these students would experience more presence at school [37].

### **4.3 Holism**

Holism is another strategy for providing school health care. This study showed that some of the student had health problems in different aspects of physical, mental, psychological and social and parents expect that health care would be provided for their children in all the aspects of

health. Studies have revealed that school nurses are increasingly encountering students with different health problems such as physical, intellectual, mental and psychological problems and social development disorders [16]. Also studies conducted in America, Australia and Canada showed that sore throat, cold, influenza, bronchitis, skin infection, impetigo, STDs and other diseases are common among students [38]. The results of the present study also showed that different factors are effective on the health of students. Other studies confirmed this result and mentioned that different factors affect students' health and good feeling at school, such as relationship with school staff and teachers and their relationship with their classmates [11,39]. Previous studies concluded that healthy communications and social environments, trust, respect and finally healthy physical, mental and social environment could affect the health of students and school staff and enhance their health [13]. Another strategy mentioned in this study to enhance the students' health was promoting spirituality. Previous studies also have mentioned that one of the main needs in caring and providing health care is spiritual care which usually ignored. Spiritual care would improve mental health and increase the quality of life and one's relation with themselves and others [40,41].

## 5. CONCLUSIONS

Elementary school students is one of the social groups that spend a lot of their time in an environment called school and it is necessary to pay sufficient attention to their health and providing health care for them. But the complexity of effective factors on their health and their varied health problems, entanglements of different organizations and families' impact on the health of their children would require three strategies of holism, family-oriented and social contribution to provide health care for students.

## CONSENT

All authors declare that written informed consent was obtained from the patients for publication of this study.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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