A Phenomenological Study of Health Requirements regarding School Activity in Post-Corona Period

Hamid Chekaveh [a] , Mohsen Shakeri [a]* , Hossain Hassani [a]

[a] Department of Psychology and Educational Sciences, Yazd University, Yazd, Iran.

A R T I C L E I N F O

ORIGINAL ARTICLE

*Corresponding Author:
Mohsen Shakeri

Email:
shakerimohsen@yazd.ac.ir

Tel: +98 9125763726

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A B S T R A C T

Background: In Iran, from the academic year 2021-2022, it was decided to reopen all schools. It is of great importance that the activities of schools be accompanied by principles, solutions, and requirements; so, concerns about students and school staff contracting this disease will be reduced. The present investigates the experiences of elementary school principals in Roodan city, in Hormozgan Province, Iran, about health requirements of school activity during post-corona era.

Methods: This was a qualitative and phenomenological study. Data were analyzed by Smith's method after theoretical saturation of data obtained from an in-depth semi-structured interview. The interview contained 12 principals of elementary schools in Roodan city in the academic year of 2021-2022, who were selected through purposive sampling.

Results: The experiences of elementary school principals about school activities were obtained in the form of 3 main themes including executive measures (provision of disinfectants, improvement of school infrastructure, absence of sick students and teachers in school, safe distance, creating a happy and safe environment for students to attend, and seeking support from benefactors and parents counseling sessions), educational and promotion-interventional measures (holding classes and remedial measures, teaching health issues to students, informing parents, environmental and virtual information, and counseling sessions), and supervisory measures (supervision of students, teachers, principals, and assistants of the school).

Conclusions: The results of examining the experiences of elementary school principals about reopening of schools in the post-corona period showed that there is a need for many facilities and measures. Moreover, capable principals face various challenges and need to work with organizations, officials, students, and families.

Keywords: Communicable Diseases, Perception, Qualitative Research, School Health Services.

Introduction

Following COVID-19 pandemic in March 2020, schools across the globe had extended periods of shutdowns which interfered with educational advancement of countless students (Chimbutane et al., 2023). After the announcement of the first COVID-19 case in Iran in February 2020, the education system was instructed to prioritize the safety of students and staff by suspending all in-person classes and events (Hasanzade et al., 2023).

In all the countries which closed their schools, they carried out their education remotely or virtually. In Iran, virtual education was a new method with no implementation history in schools. The pandemic created new problems for education sector due to the unpreparedness of society to face sudden changes (Isha & Wibawarta, 2023). The closure of schools had an adverse effect on children (Nakgul et al., 2023). If school closure measures are prolonged, they would lead to major adverse effects on health and well-being of children and adolescents (Sheikh et al., 2020).

The harm caused by prolonged school closures is well documented, but there is limited evidence regarding the effect of school closures on reducing the burden of coronavirus (Viner et al., 2020). In countries where schools and kindergartens are open, outbreaks among children have not been reported or only sporadic cases have been reported (Johansen et al., 2020). Compared to adults, children have a significantly lower chance of experiencing severe or deadly COVID-19 symptoms and generally show no symptoms or develop mild and temporary symptoms when infected with COVID-19 (Powell et al., 2023).

Accordingly, some countries such as Denmark, Finland, Norway, France, Germany, Iceland, Sweden, and Taiwan never closed primary schools (Viner et al., 2021). Most countries gradually reopened their schools and universities. Each country used different and sometimes common methods and requirements to resume school activities such as the following: creating stable small groups of children, considering appropriate space and different shifts to attend schools to maintain social distance, avoiding sharing of equipment, reallocating classrooms and common areas, along with ensuring frequent access to hand washing, ventilation of classrooms, disinfection of the environment (Rahbar karbasdehi & Rahbar karbasdehi, 2021), hygiene of the school building, drinking water, restrooms, and classrooms (Muayidi & Dabestan, 2022), social distancing, dividing students into smaller groups, implementing collective measures such as hand washing (Sundaram et al., 2023), involving students in the management process (Janssen et al., 2023), regular testing, reducing social contact within/between classes, mask-wearing (Nguipdop-Djomo et al., 2023), and employing at least two qualified health personnel full-time in each school to provide services to contain and minimize the spread of the disease (Kim et al., 2020).

The continuation of the activity of primary schools is very important. Because basic skills training takes place in this course, and elementary students need face-to-face training to learn better. School principals are one of the most important factors in school activities. In implementing the decisions of the Ministry of Education. Administrators with their powers can use different and creative solutions in school activities during the pandemic. In Iran, since the academic year 2021-2022, it was decided to reopen all schools. With fluctuating rates of new cases and deaths during the COVID-19 pandemic and schools which were scheduled to reopen, in the fall of 2021 following an extended hiatus, the ways to meet the requirements and ensure a secure return to school for children were discussed(Shin et al., 2022). As the government insisted on in-person classes, several parents expressed concerns about the level of preparedness of schools (Mamun et al., 2023). The main issue here was that the activities of schools, especially elementary schools, should be accompanied by principles, solutions, and requirements; there're, concerns about students and school staff contracting this disease would be reduced. This research seeks to investigate the

perceptions of principals in elementary schools in Roodan city regarding the requirements of school activities in post-corona period in the academic year of 2021-2022.

Methods

To explore elementary school principals in Roodan city regarding the requirements in the post-corona era, a qualitative phenomenological approach was utilized. The qualitative phenomenological approach provides situations to discover lived experiences of the participants and provides rich descriptions of how such experiences were made available to the researchers (Smith, 1997). Thus, such approach focuses on the issues which are manifested in someone's perceptions, and clarifies the nature, meaning, and basis of many problems and phenomena. In this method, all concepts directly develop from experience (Peled, 2014). This process was also completed with in-depth and precise reflections as well as the use of rich descriptive language (Ajjawi & Higgs, 2007). In this regard, the principals of primary schools have recounted their experiences regarding health measures in the post-corona time.

In this research, the principals of elementary schools in Roodan city were the target group who were working in the academic year 2021-2022. The sampling method was purposive and criterion-oriented. After conducting 10 interviews, the theoretical saturation of the data was achieved, and for more certainty, the interviews were continued with up to 12 participants. The criteria for entering the research were school principals with at least 5 years of managerial experience and a bachelor's degree, officially employed in Iran's education system.

An in-depth semi-structured interview was implemented in this study as the main data collection tool. In order to ensure the content validity of the semi-structured interview form, questions were also reviewed by three experts in this field.

In this study, interpretative phenomenological analysis (IPA) as a qualitative thematic approach was used to analyze data. Three stages of data generation, data analysis, and case integration were proposed (Smith, 2009). Also, according to Creswell (2007), 4 following strategies were used to evaluate the quality of the findings (Creswell, 2007): 1. Prolonged engagement, the first author did not jump to early conclusions with insufficient observations, he/she spends an adequate amount of time to know the research ecosystem and make a trusting connection with participants. 2. Member checking, all participants confirm their interview text and extracted codes. 3. Rich description, the coding process as well as more details of the extracted themes and direct quotations have been provided to the readers. 4. Peer review and coding were also done and compared by a researcher and an expert in qualitative research. Moreover, the review and adaptation of the opinions of some qualitative researchers and participants were used. A 0.89 reliability of the researcher analysis and peer review by another researcher working in the field related to the research subject were also obtained based on the Miles and Huberman formula (2016).

The participants were informed of the research aims, and before conducting each interview, verbal information about the interview protocol was provided via email and cell phone. Finally, they signed an informed consent form. Ethical clearance was provided by the Ethics Review Committee of Yazd University (IR.YAZD.REC.1401.075).

Results

Based on the analysis and coding of the interviews, the experiences of elementary school principals were finally classified into 3 main themes and 14 sub-themes. Examples of the participants' statements for each sub-theme are provided in Table 1.

The relationships between the main and sub-themes of health measures taken by the principals of primary schools are presented in Figure 1.

Main themes	Sub-themes	Samples of participants' verbal evidence
Table 1. Samples of participants' verbal evidence regarding main and sub-themes		
1. Executive actions	Preparation of disinfectants	Participant 7: *"We prepared sanitary materials, masks, disinfectants, trash cans with lids, and other items related to the health of students and the school. We provided disinfectant pumping devices for classes. When parents see our actions, they will know that the school is doing its best for the students' health."*
	Improving school infrastructure	Participant 3: *"Repair of sanitary facilities, repair of a school water cooler for fresh water, repair of air conditioning and refrigeration systems of school in the hot season, and repair of heating devices in the cold season, increasing the number of tap water according to the school population, proper ventilation for classes, the need to use automatic valves in the school environment are some of the measures, which is on our agenda despite financial limitations."*
	Absence of sick students and teachers at school	Participant 2: *"We have informed the parents that if their child has any of the symptoms of the virus or if there are people in their family affected by COVID-19, they should inform us immediately so that they can be prevented from attending school. Moreover, we have asked the sick teachers not to attend school and have their colleagues manage their classes in some way."*
	Making safe distance	Participant 11: *"Considering that our school has more students than the number of its classes and the benches of each class must have a distance of one and a half meters, two of our classes are physically small, and we had to divide the students of group A into two groups."*
	Creating a happy and safe environment for students	Participant 1: *"Students have been away from school during virtual education or may have suffered some depression at home. So, the school principal should make a happy environment for students to easily interact with other students while following safety tips. Also, the school principal should encourage parents and students to attend school in person and assure them to send their children to school safely."*
	Asking for support from benefactors and parents	Participant 5: *"We identified the parents who had the financial means, and each of them helped as much as they could, and we prepared sanitary items."*
2. Educational-promotional and intervention measures	Holding classes and remedial measures	Participant 9: *"The academic status of students worsened after the reopening of schools. Because the rate of learning of students in virtual space was very low compared to their learning in face-to-face time, and the students were not used to virtual education. Therefore, the educational status of most students suffered a significant drop in scores. The most important decision we could make was to organize training and remedial classes in the subjects that faced a greater failure, such as math."*
	Teaching health issues to students	Participant 12: *"We teach students how to keep hygiene, wash their hands, use disinfectant and disinfect their tables and chairs, etc. at different times and remind them of tips."*
	Informing parents	Participant 4: *"As a principal, I remind parents of health tips that students pay less attention to in parent-teacher meetings and also frequently in school study groups."*
	Environmental and virtual informing	Participant 8: *"The second step is to install necessary training brochures in various cases, such as washing hands, cleaning door handles, or, for example, greeting each other on how to communicate and contact each other. Another step that I did was to send messages of health tips and follow health protocols in the form of posters and educational clips in student virtual groups."*

Table 1. Samples of participants' verbal evidence regarding main and sub-themes

| Main themes	Sub-themes	Samples of participants' verbal evidence
	Counseling sessions	Participant 6: *"By inviting consultants, our school tried to reduce the physical and mental injuries of students as much as possible in the era of COVID-19 and virtual education."*
3. Regulatory measures	Supervision of students	Participant 1: *"One of our measures was the implementation of health ambassadors' plan, in which some students are selected as health ambassadors to monitor the compliance of other students' health protocols."*
	Supervision of teachers	Participant 10: *"I ask teachers to continuously remind the children to observe health issues and monitor the implementation of the protocols by the students in the classroom."*
	Supervision of principals and assistants of the school	Participant 7: *"Health principles are monitored by teachers in classes and through school staff, including principals and assistants."*
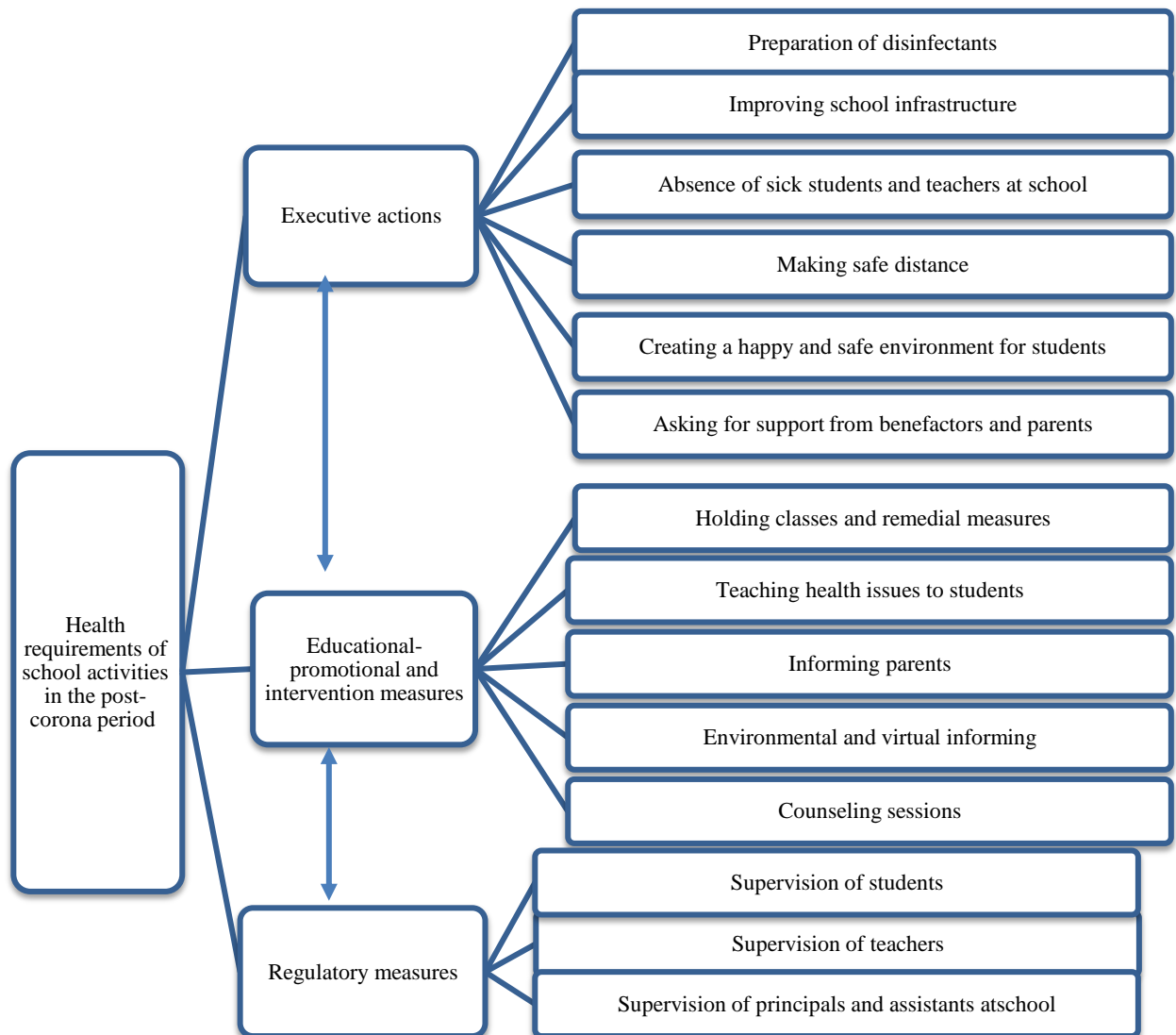
Figure 1. Conceptual model of relationships between main and sub-themes

Discussion

The main theme of perceived executive measures includes the provision of disinfectants, improvement of school infrastructure, absence of sick students and teachers in school, safe distance, creating a happy and safe environment for students, and asking help from benefactors and parents counseling sessions, which were in line with previous literature (Viner et al., 2021; Rahbar Karbasdehi & Rahbar Karbasdehi, 2021; Muayidi & Dabestan, 2022; Sundaram et al., 2023; Nguipdop-Djomo et al., 2023; Melnick & Darling-Hammond, 2020). Implementing effective preventive measures and broad acceptance can help reduce the spread of infectious diseases in any community (Mantovani et al., 2022). The results of Nguipdop-Djomo et al.'s (2023) research indicated that school-based measures, such as social distancing, improved ventilation, and isolation of cases and close contacts likely reduced the transmission risk in schools. Providing disinfectants is one of the most important factors in the safe operation of schools at this time. Disinfectants should be provided to teachers and students to continuously disinfect their hands and benches to eliminate virus transmission. After two years of closing and resuming school activities in the post-corona period, many schools need the so-called infrastructure to deal with this disease. The results of this part of the research were in line with the results of the research by Muwaidi and Dabestan (2022) regarding equipping and reconstructing school infrastructures. They believed that classroom floors, corridors and stairs should be durable, flat and washable, and classroom windows should be equipped with a suitable wire mesh to prevent the entry of insects.

Another sub-theme is virtual education of sick students. In this context, sick teachers or students should teach and learn temporarily through virtual education. Safe distancing was another sub-theme. Strict wearing of masks and social distancing are vital both in schools and in the surrounding communities, according to Spears (2020). In this regard, school principals should divide the students of each class into 2 groups for social distancing if the class population exceeds its capacity. Each group must be at school at different times. Rahbar Karbasdehi (2021) in line with the results of this part of the research pointed to similar measures such as creating fixed small groups of children, considering a suitable space and different shifts to go to schools. Moreover, Sundaram et al., (2023), and Nguipdop-Djomo et al., (2023) recommended avoiding sharing equipment, reassigning classrooms and common areas, along with ensuring frequent access to hand washing, ventilation of classrooms, and disinfection of the environment.

Classrooms or benches should be disinfected between groups. Regarding the sub-theme, the school principal should create a happy and safe environment for students. Shafipour Mutlaq (2019) found that improving people's mental and emotional well-being would make them master the conditions in which they live. Moreover, students can easily communicate with other students while observing safety tips. School principal should encourage parents and students for face to face classes and encourage and reassure them to send their children to school safely.

Support from benefactors and a parent is the last sub-theme. In any school, financial assistance can play a significant role in advancing the school's goals. Every school principal should communicate with parents and inform them of the quality and quantity of the school's actions. Through consultations, those in charge can find financial aid.

The second main theme was perceived educational, promotion, and intervention actions, which included 5 sub-themes: Holding classes and remedial measures, teaching health issues to students, informing parents, providing environmental and virtual information, and counseling sessions, which were in line with previous literature (Sundaram et al., 2023; Janssen et al., 2023; Melnick & Darling-Hammond, 2020).

School environment is a suitable place to enhance young people's health (Mantovani et al.,

2022). COVID-19 led to virtual education, hindering academic progress. Excessive use of cell phones brought physical and mental injuries to students in these two years. One of the measures which could compensate for the academic failure during virtual education was holding compensatory classes and reviewing previous years' materials by teachers.

Another sub-theme was teaching health issues to students. Health education in school is necessary to inform students and all school staff in order to prevent infectious diseases (Shafipour Mutlaq, 2019). Since elementary school students are young and their knowledge and awareness in this field may be low, teaching and memorizing health information should be accompanied by repetition and practice. Melnick & Darling-Hammond (2020) also emphasized educating regarding health and hygiene issues.

Informing parents was among other sub-themes of perceived educational measures. Parents can play an important role in preventing students from the disease by providing personal and hygienic materials and equipment for their children, as well as teaching them about health issues.

Another sub-theme was environmental and virtual information. After the reopening of schools and issuing relevant instructions to schools, parents and students are required knowing about these instructions; they were provided in the form of environmental measures such as installing health brochures in schools or preparing content for sharing in cyberspace. In line with these results, Belair (2012) also emphasized that virtual health education was more efficient in communication methods with messengers in the hands of students who immediately respond to them.

The last sub-theme was counseling sessions. The results of Janssen et al.'s research (2023) indicated that the policy of isolation during the pandemic led to unwanted consequences such as mental health problems of students when they return to the physical school environment. Principals could invite educational consultants to hold meetings with parents and students regarding the reduction of these harms.

The third main theme was perceived supervisory measures with 3 sub-themes, including supervision of students, teachers, principals, and assistants of the school, which were in line with previous literature (Kim, et al., 2022). Upon schools' reopening, establishing adequate sanitation protocols within the classroom was an immediate priority (Deed et al., 2022). In line with this part of the findings Janssen et al. (2023) emphasized on involving students in the management process.

The management of school should monitor compliance of activities with health principles. According to Sundaram's research (2023) formal and informal processes of "reflective supervision" by employees indicate an improvement in the efficiency of the intervention and its implementation. In line with the results of this part of the findings, the research results by Otte im Kampe et al. (2020) also show suggested that the reopening of schools should be accompanied by the development of monitoring capabilities and the ability to quickly track and isolate suspicious cases.

The principals believed that the implementation of health ambassadors' project was a creative and effective activity in this field. They were selected from among the students to monitor other students' adherence to health protocols.

The strength of this research was selection of school principals as the sample group. Considering the limited authority of administrators in the centralized structure of Iran's educational system, as well as the lack of financial resources, it is valuable to examine their experiences of their activities in the post-corona period, which is highly dependent on their creativity and efforts to get rid of these limitations.

One of the limitations of data collection was the lack of conditions for holding focus groups. The research sample was limited to elementary school principals. Data collection method was also limited to semi-structured interviews.

According to the findings, it is necessary to periodically provide required health education to

families and students. To improve the capability of teachers and school staff to prevent COVID-19 in the school environment, in-service classes should be held. The Ministry of Education and its departments should give legal and sufficient powers to the school principals to decide how to resume the activities of schools in the post-corona time.

Conclusions

Teachers can be good role models for students by observing health tips. Furthermore, primary school students need frequent reminders of health tips, and teachers can play a supervisory role. If during teaching a student removes his/her mask or does not respect social distancing, or does not consider any hygiene rules, the teacher should remind him/her of the relevant points. In addition to the supervision of the teacher in the classroom, school principals and assistants should help students by observing health tips. They can also warn the students who do not comply with health issues; so, the circle of monitoring compliance with health principles in the school would be complete.

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Conflict of interest

The authors declared no conflict of interests.

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Ethical Considerations

The participants were informed of the research aims, and before conducting each interview, verbal information about the interview protocol was provided via email and cell phone. Finally, they signed an informed consent form. Ethical clearance was provided by the Ethics Review Committee of Yazd University.

Code of Ethics

IR.YAZD.REC.1401.075

Authors' contribution

M. SH and H. H, conceptualized the study; M. SH conducted methodology; H. CH, made formal analysis; H.CH, did the investigation; H. H, did data curation; M. SH, wrote the original draft; H. H, conducted review and editing; M. SH, found the resources and H. H, did the supervision. All the authors read and approved the final manuscript.

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