



HEALTH EDUCATION IN ALGERIAN EDUCATIONAL SCHOOLS FOR THE PREVENTION OF EPIDEMICS

SCIENTIFIC EDUCATION AND TECHNOLOGY BOOK FOR THE FIFTH YEAR OF PRIMARY EDUCATION AS A MODEL

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Abstract:

Health education in educational schools is one of the most effective means of development, because children at this age have a superior ability to receive information and adopt healthy behaviors to reach their family and even their entire community. from the spread of epidemics.

We have tried in this scientific paper to shed light on the implications of health education in educational schools, where we adopted the descriptive approach as a method and content analysis as a tool. And the search for the foundations of health education contained in the book and their relevance to the living reality.

Keywords: Health education, epidemic prevention, scientific and technological education book.

Introduction:

Health education is the process of translating health facts into healthy behavioral patterns that reflect on the individual's culture and practice behavior, and hence on society as its most important units and the basis of its systems, using modern educational strategies that make the learner a vital and active element that contributes to the construction of his/her learning, and in the processes of maintaining himself/herself and his/her society. Considering that health education does not only provide theoretical information, but also transforms it into healthy behaviors through directing children's participation in the prevention process,

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and forming the personality of the healthy individual who works to protect himself/herself and his/her country.

Because the elementary school is the foundation in the lives of individuals, where the individual is in great need of this education and considering that children are the weakest link because they are more susceptible to diseases due to their weak immunity and lack of guile, so they must have a culture and awareness of health rules on the one hand, and to protect them directly on the other hand.

Considering that the textbook is the most effective and easiest way to implement, the educational system has resorted to including a set of health education rules in it. Through this, we can raise the following questions:

Main question:

- What are the principles of health education included in the fifth-grade science and technology textbook?

Sub-questions:

- Does the fifth-grade science and technology textbook include the necessary health information?
- Does the Algerian school make the learner able to take measures to prevent the spread of infectious diseases?
- Do the activities presented in the fifth-grade science and technology textbook help to accustom students to a healthy behavior?

THE FIRST TOPIC: METHODOLOGICAL ASPECT

1.2 DEFINING CONCEPTS

A. Health Education

"Health education is a process of education that works to educate the community on how to protect itself from diseases and health problems and provides individuals with the necessary experiences in order to influence their health information and practices"¹.

"Health education is a process of translating known health facts into healthy behavioral patterns at the individual and community level, using modern educational methods"².

"Health education is a process of changing individuals' thoughts, feelings, and behaviors about their health"³.

The Operational Definition: It is a set of principles, laws, and measures that an individual follows unconsciously towards his/her life practices to maintain his/her health.

B. Prevention of Epidemics: A set of measures and procedures that prevent the onset of diseases, to help the immune system in its work and increase its efficiency and ability to fight.

C. Science and Technology Education Textbook: A document adopted by the Algerian school, affiliated to the Ministry of National Education, and printed by the National Office of School Publications.

¹Kamash, Youssef Lazem. (2015). Health and Health Education. Amman: Dar Al-Khaleej for Publishing and Distribution, P33.

² Ibid. P34.

³Saleh, Safaa Al-Haj. (2015). Health Education in Primary Schools. Jordan: Debono Center for Thinking Education, P11.



2.2 OBJECTIVES OF THE STUDY

When the Corona pandemic spread in the global environment and reached Algeria, we returned to the extent of our acquisition and possession of a healthy culture that protects us from this pandemic. We shed light on the Algerian school through its books, which are the main source for acquiring this culture. Through this scientific paper, we aimed to:

- Identify the principles of health education included in the Algerian science textbook for the fifth grade.
- Identify the necessary health information included in the Algerian science textbook for the fifth grade.
- Identify the preventive measures against the spread of infectious diseases included in the textbooks.
- Provide a practical model that is required by health education, especially in the primary education stage, as presented by world literature.
- Inform decision-makers in the Ministry of National Education about the reality of health education in primary schools.
- Open a wide field for researchers and students to research in this field.

3.2 PREVIOUS STUDIES

Study of Rahma Bouzida: (Algerian study) aimed to identify the role of the school in health education among primary school students. The researcher adopted the descriptive approach, a sample of 30 students were randomly selected, and the form was used as a data collection tool. The study concluded with the following results: that the primary school is based on instilling health education, spreading health awareness among them, and forming attitudes and habits among them¹.

Study of Khalid Al-Sarairh and Turki Al-Rashid²: (Arab study) This study aimed to identify the level of school health in elementary schools in Kuwait from the perspective of principals and teachers. The study selected 104 principals and 670 teachers using a stratified random sample of 50% of principals and 5% of teachers. The study found that the level of school health in Kuwait was average and made a number of recommendations, including:

- Conducting continuous courses for elementary school principals and teachers and providing them with health skills;
- Raising awareness of the importance of raising the level of school health among the research sample by developing appropriate training programs.
- Evaluating school health programs to identify strengths and weaknesses and implement remedial measures.

Comment on the studies:

These studies have addressed the role of the school in health education, both in terms of the services that have been emphasized and occupied the largest space, or in terms of instilling a healthy culture, which has been dealt with in a kind of suppression, which is what we lack in our institutions, especially with the spread of epidemics and infectious diseases that have spread throughout the world. These studies have helped us to define the theoretical aspect, expand the information and deepen the research problem, and enable us to achieve the objectives accurately,

¹Bouzid, Rahma. (2015/2016). The Role of Schools in Promoting Health Education among Primary School Students. M'Sila, Algeria: Mohammed Bouadiaf University.

²Al-Rashidi, Turki Nasser, & Al-Sarayreh, Khaled Ahmed Salamah. (October 31, 2012). The Level of Health in Primary Schools in Kuwait. An-Najah University Journal.



and an analytical reading of the results reached, and compare them to what has been reached, but this type of study must be based on the analysis of the documents used, especially the textbook.

3. THEORETICAL ASPECT

3.1 THE IMPORTANCE OF HEALTH EDUCATION

Health education is an important factor in promoting health and protecting it from disease. It is one of the factors that are directed to promote health and prevent epidemics and infectious diseases. The World Health Organization (WHO) has indicated that the percentage of smokers among males over the age of 15 is (47%), the percentage of obese women over the age of 20 is (41.7%), and the percentage of obese men is (27.3%). The rate of blood pressure among the population over the age of 18 is (46.5%), and the percentage of diabetics over the age of 25 is (18%) among women and (17%) among men ¹(Saleh, 2015, p. 20). These are dangerous indicators that call for a review of the process of instilling a healthy culture, encouraging healthy practices and improving bad habits, through attempts to reduce smoking, encouraging the consumption of healthy food and physical activity. In order to instil such a healthy culture and change the attitudes and behaviors of children, it requires health classes and programs, which is one of the roles of the school, especially the elementary school.

3.2 CULTURE, HEALTH, AND DISEASE

The close relationship between these three is the result of the mutual influence between the prevailing values in society with its diverse sources, which were worked by the institutions of social development to instil it (family, group of friends, places of worship, media ...), the health system, and health conditions. The cultural pattern within each structure and system has an impact on the formation of perceptions and representations about the disease, and health programs work to develop the existing patterns, whether rural, rural, or urban, in line with the nature of the social structure. "Anthropological studies also emphasize the importance of cultural factors in health, disease, and death. Researcher (De Benda) worked to try to explain the reason for the high rate of child mortality in rural Colombia and found a kind of indifference among parents. This behavior of indifference is the result of cultural beliefs, as parents seek health services for their sick children. If the children die, their parents console themselves by saying that their fate was determined by not growing up"².

3.3 AREAS OF SCHOOL HEALTH

School health has a range of magazines and interests, which are represented in the field of health services, where it provides students with medical care and provides the necessary treatment, as it seeks to detect any disease or epidemic that appears among the learners, to work on isolating these cases and work on treating them or transferring them to hospitals. The health services are divided into:

- Treatment services: Examinations and treatment patrols through field visits to schools.
- Preventive services: Including vaccinations, monitoring the school environment, and participating in health events.

Health education is an important part of the educational process that achieves the raising of health awareness among students by marrying him with information and experiences in order to

¹Saleh, Safaa Al-Haj, Ibid. P20.

²Rahab, Mukhtar. (June 2014). Health and Disease and Their Relationship to the Cultural Context of Society: An Approach from the Perspective of Medical Anthropology. Journal of Humanities and Social Sciences, P177.



influence his knowledge, attitudes, and behavior, and to give him healthy habits that help him live in a healthy society¹.

Health education also encourages students to get rid of bad behaviors and habits that harm their health and the health of others, which is what we are facing to confront this new and widespread epidemic in our nation. The media has played this role, and some schools have also used school radio, wall magazines, posters, murals, and small publications.

3.4 SCHOOL HEALTH ACTIVITIES IN THE OFFICIAL PUBLICATIONS OF THE MINISTRY OF NATIONAL EDUCATION

"School health activities are among the most important educational activities, as they play a role in maintaining the health of students and providing a suitable school space for practicing school activities"². This aspect is related to the field of health services and providing the appropriate space for school life and maintaining the health of students. "Educating students about the rules of health and hygiene and the harm that can befall them, whether by not respecting those health rules or through bad behaviors and habits that harm their physical, psychological, and mental health"³. This falls within the field of health education, and it was programmed under the title: acquiring necessary health information, healthy behavior, and taking measures to prevent the spread of infectious diseases. "The educational system, in coordination with other related sectors, especially the health and population sector, has put in place systems and mechanisms represented in detection and follow-up units and school health clubs, which aim to maintain the health of students and follow them up, educate them about the risks of communicable and non-communicable diseases and how to prevent them, and maintain the health of their school environment, within a national program for health in the school environment".

3.5 THE OBJECTIVES OF HEALTH EDUCATION

Dr. Youssef Lazim Kamash mentioned a set of objectives of health education, which are as follows:

- Contributing to the improvement of the health level of community members, by starting with health from the fetal stage, starting with the interest in the mother's healthy nutrition.
- Working to spread health awareness and health culture, by providing health facts, instilling a sense of responsibility among individuals, and in order to transform their practices into healthy behavioral patterns and habits.
- Emphasizing the spirit of cooperation between individuals (community members and supervisors of public health programs).⁴.
- The transition from the concept of treatment to the concept of prevention, and creating a healthy community, by knowing the causes of diseases to avoid them.

¹Saleh, Safaa Al-Haj, Ibid. P46.

²Ministry of National Education. (2017). Official Gazette. Algeria, Algeria: Ministry of National Education, P18.

³Ministry of National Education, Ibid. P18.

⁴Kamash, Youssef Lazem, Ibid. P34.



4. THE FIELD ASPECT

4.1 THE METHODOLOGY USED

Adopting the scientific method is an essential task in scientific research, and no research is devoid of this main step. It is the way through which the researcher reaches the truth. The method helps the mind to use its capabilities and resources well.

Our topic, which deals with (health education in educational curricula), requires the adoption of the descriptive method as it is: "An inquiry that focuses on a phenomenon as it exists in the present in order to diagnose it, reveal its aspects, and identify the relationships between its elements or between them and other phenomena"¹. Descriptive research is based on the analysis and interpretation of the results obtained.

4.2 THE TOOL

We adopted content analysis as a tool on the basis that analysis is: "the process of returning an object to its constituent elements, whether material, spiritual, or intellectual. Then, after decomposition, comes composition, which means the reassembly of the parts into a whole"². This requires the researcher to provide explanations of the phenomenon that is the subject of the study, and its understanding is only possible through its analysis into the elements and parts that make it up. This allows the researcher to identify the structure of the phenomenon, its impact, and the factors that affect it. This explains the process of conceptual analysis that the researcher performs by categorizing the subject of the study into subcategories. Then, the researcher returns to the process of composition. "The content, on the other hand, means what a document or a set of written or recorded documents contains"³. In other words, the content is the elements that a document contains that is to be analyzed. It may consist of written documents, visual documents, or audio documents.

4.3 THE SCOPE OF THE ANALYSIS

The study was limited to the content of health education contained in the books of scientific and technological education for the fifth year of elementary education, which is an official document of the Ministry of National Education that was written and published for the academic year 2019/2020. The analysis process is defined as the extraction of the principles of health education, through all that indicates it, such as ideas, phrases, images, shapes, activities, and so on, from the various knowledge contained in the mentioned books.

4.4 UNIT OF ANALYSIS

Each idea (word, phrase, sentence, visual document (scene or image)) about one of the types of rules adopted is taken as one degree of repetition. Therefore, the number of repetitions obtained in the analysis tables dedicated to the analysis axis reflects the repetition of the adopted ideas.

¹Al-Azzaawi, Rahim Yunis Kuru. (2008). Introduction to Scientific Research Methodology. Jordan: Dar Dijla, P97.

²Al-Badawi, Ahmed Zaki. (1993). Dictionary of Social Science Terms: English, French, Arabic. Beirut, Lebanon, P18.

³Zrouati, Rachid. (2007). Methodology and Tools of Scientific Research in Social Research. Algeria: Dar El Huda for Printing, Publishing, and Distribution, P163.



4.5 THE STABILITY OF THE ANALYSIS

The same material is analyzed twice, by re-analyzing the book of scientific and technological education for primary education after a time interval.

The use of more than one researcher to analyze the texts of the book, where each researcher performs the same work and then the tables obtained are taken for comparison and the percentage of agreement is extracted (by dividing the number of agreement categories by the number of analysis tool categories).

4.6 RELIABILITY

Reading the results of the book's analysis with previous studies.

Displaying the analysis categories and units to judges (a group of professors, researchers, and specialists) to consider the classification that I adopted for the types of health education principles, on the one hand, and for the analysis axes, on the other.

4.7 STUDY SAMPLE

We know the sample as a small, partial group of the community. In such studies, its steps are centered on content analysis, and it is difficult to analyze all books of the primary education stage. We chose the fifth-grade book as a summary and a graduation outline of what was discussed in all of this stage, which is the year of controlling concepts, knowledge, and learning.

Description of the book of scientific and technological education for the fifth grade of primary education through the following table:

Table 1: concerns the description of the book of scientific and technological education for primary education stage.

Stage	Book of primary education stage
Level	Fifth grade
Title	Scientific and Technological Education
Number of fields	04
Classes and activities	20
Number of pages	111
Legal deposit	First semester 2019
Book production	Using colors in all of its pages
Printing	National Office of University Publications
Edition	First 2019-2020
Number	152/2019

The book includes four fields, which can be explained as follows:

- The first field: Matter and the world of things, which in turn includes the following situations:
 - Situation 1: The components of air and the risks of some gases.
 - Situation 2: Powering electrical appliances and safety rules.
- The second field: Man and health, which in turn includes the following situations:
 - Situation 1: Functional coordination during muscle effort.
 - Situation 2: Adaptation of the organism to muscle effort and health rules during it.
- The third field: Man and the environment, which in turn includes the following situations:



- Situation 1: Air and water quality.
- Situation 2: Waste disposal.
- The fourth field: And includes five situations.
 - Situation 1: Adaptation of plants to a low-water environment.
 - Situation 2: The need for green plants for mineral salts.
 - Situation 3: Insemination and protection of animal eggs.
 - Situation 4: Air and water quality.
 - Situation 5: Waste disposal.

THE SECOND TOPIC: APPLIED SIDE

5. RESULTS AND DISCUSSION

Table 2: Illustrates Health Education in the Field of Substance and Material World.

Situations	Second Situation		First Situation		The domain	
	Repetition	Ratio	Repetition	Ratio	Repetition	Ratio
Health Rules						
Ensuring High Level of Cleanliness	0	00	0	00	0	00
Being attentive to imparting necessary health information.	4	40	3	23.07	7	30.43
Instilling healthy habits in students.	6	60	10	76.92	16	69.56
Taking measures to prevent the spread of infectious diseases.	0	00	0	00	0	00
The total	10	100	13	100	23	100

Based on Table 2, which pertains to the field of substance and material world, it is evident that the highest percentage was attributed to "Instilling healthy habits in students" with a percentage of (69.56). Following the same order, the next scenario is "Imparting necessary health information to learners" with a percentage of (30.43). The remaining scenarios do not have any recorded health rules, whether related to the level of cleanliness or taking measures to prevent the spread of infectious diseases.

Regarding the focus on instilling healthy habits in students, this is intentional and reflects the strategies adopted in competency-based approaches by making learners active participants in the learning process, with a particular emphasis on how it reflects in their behaviors. This approach does not overlook the cognitive aspect related to knowledge. This alignment with the theoretical framework emphasizes the focus on functional requirements (adaptation, goal achievement, balance, integration, and value preservation).

Regarding the level of cleanliness and the attention to prevention of infectious diseases, this is a derogation from them, and it negatively impacts the overall stability and is one of the shortcomings of health education in facing pandemics.



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Table 3: Illustrates Health Education in the Field of Human and Health.

Situations	Second Situation		First Situation		The domain	
	Repetition	Ratio	Repetition	Ratio	Repetition	Ratio
Health Rules						
Ensuring High Level of Cleanliness	0	0	0	0	0	0
Being attentive to imparting necessary health information.	2	50	4	40	6	42.85
Instilling healthy habits in students.	2	50	6	60	8	57.14
Taking measures to prevent the spread of infectious diseases.	0	0	0	0	0	00
The total	04	100	10	100	14	100

Clearly, there is a significant focus on the two health rules, "Instilling healthy habits" ranking first with a percentage of 57.14 and "Imparting health information" obtaining a percentage of 42.85. However, the two health rules, "Level of cleanliness" and "Prevention of infectious diseases," did not receive any percentage.

It is expected that this field, related to human and health, should be more focused on health education. However, the number and percentages of health rules were modest and inadequate to serve the purpose.

Developing students' capacities in health education through enhancing their relational skills and interactions with other sub-contexts is essential. This will help instill healthy behaviors in students and enable them to fulfill their roles responsibly. Consequently, the process of functional requirements begins to manifest, and the individual learners embody these requirements based on the key actors' guidance, particularly those involved in conveying health rules and culture to the youth. However, the essential health rules for self-protection and protection of others, such as maintaining cleanliness and preventing the spread of prevalent epidemics, are lacking. This is especially concerning given the recent emergence of certain issues or biological wars, making schools limited and deficient in this aspect and role. If the higher-level context fails to play its role in disseminating health culture, functional disruption is inevitable.

Table 4: Illustrates Health Education in the Field of Human and Environment.

Two situations related to health education have been selected:

First Situation: Air and Water Quality.

Second Situation: Waste Disposal.



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Situations	Second Situation		First Situation		The domain	
	Repetition	Ratio	Repetition	Ratio	Repetition	Ratio
Ensuring High Level of Cleanliness	2	18.18	1	10	3	14.28
Being attentive to imparting necessary health information.	5	45.45	4	40	9	39.13
Instilling healthy habits in students.	2	18.18	4	40	6	26.08
Taking measures to prevent the spread of infectious diseases.	2	18.18	1	10	3	14.28
The total	11	100	10	100	21	100

From the table, it is evident that the books contain necessary health information for the learners, with a percentage of (39.13), ranking at the top. Following that, there is a focus on instilling healthy habits, with a percentage of (26.08). However, the two health rules related to "Level of cleanliness" and "Prevention of infectious diseases" share the remaining percentage, with each receiving (14.28) percent.

The functional structuralist perspective, as seen through Talcott Parsons, pioneers the study of the social construction of medical practice (as part of his study of the social system in 1951). He conducted typification of the role of the medical practitioner and analysis of the role of the patient, examining their combined impact on other aspects of the overall construction of the social system¹.

Indeed, the focus on large social structures and institutions like schools, in their relationship with other institutions and their directed effects on individuals' behaviors to achieve functional requirements (adaptation, integration, goal attainment, pattern maintenance, and the latter represented in values), obligates the school as a social context to play a role in shaping its sub-contexts, represented by the learners, and imparting them with a health culture that enables them to adapt to their living environment.

However, from this table, it becomes apparent, as we are in the field of human and environment, which is expected to include ways of adaptation and imparting all necessary health rules to learners adequately, that this has not been achieved, and the table demonstrates a lack of attention in this regard. This represents a discrepancy between the school's objectives and its outcomes.

SUMMARY OF THE ANALYTICAL READING OF THE TABLES:

The analytical reading of the book on Scientific and Technological Education for the fifth grade of primary education has revealed the presence of health education values. This was evident through the inclusion of health in different domains. However, the emphasis on health education is not sufficient to ensure that the learners possess a health-conscious culture, starting from their concern for cleanliness. There was a noticeable deficiency in this fundamental health rule. Furthermore, the book provides them with necessary health information and knowledge to

¹Makawi, Ali. (1990). *Medical Sociology: A Theoretical Introduction*. Cairo, Egypt: KotobArabia, P148.



make them competent, and these should be reflected in their behaviors, which is the essence of the pedagogy adopted by the Ministry of National Education.

Yet, it appears that the weakest link in this support system is one of the most important health rules, namely educating students on the importance of protecting themselves and others from infectious diseases, especially in light of the recent global pandemic of COVID-19, which has also affected Algeria recently. Here, it becomes essential for our students to embrace this health rule to control and manage the situation effectively.

Indeed, we are in dire need of the interrelated relationship between sufficient health literacy to overcome crises, which should be acquired from schools through all their official supports.

RECOMMENDATIONS

Reviewing the content of textbooks to enhance the level of health education in educational institutions by giving more attention to including the following health rules:

- Emphasizing the importance of cleanliness and habituating students to it.
- Ensuring the provision of necessary health information.
- Acclimating students to adopt healthy behaviors.
- Implementing preventive measures to control the spread of infectious diseases.

At the level of the curriculum for all educational levels, explicit and didactic objectives should be presented to make learners more committed to practicing the health culture in all its aspects. This should be done with a focus on continuity and progression, both in the content of higher levels and in the conceptual and practical practices.

6. CONCLUSION

The school plays a prominent role in promoting health education and raising health awareness among young individuals, guiding them towards adopting healthy habits, and continuously monitoring students' health behaviors. Additionally, the school provides health services that enhance individuals' capacities, making health education a crucial and urgent matter that imposes itself on the national priorities. Health, with its services and educational aspects, has become an investment in the future and an effective tool for individuals and communities.

The desired outcomes necessitate the concerted efforts of various stakeholders, starting from those involved in curriculum development and textbooks, to the implementers at the institutional level, including school principals and teachers, and extending to the targeted groups, including individual students and smaller units within the community.

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