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The effect of national school health strategy components on the quality of health services: An Analytical research in Baghdad Governorate

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Abstract:

Purpose: The research objective is to diagnose the extent to which the National School Health Strategy contributes to the quality of health services.

Theoretical framework: The quality of health services can provide schools with benefits through building a healthy school community in line with the sustainable development goals, especially regarding quality education, good health, and well-being and through school health, we may be improving the health and well-being of elementary and secondary students, and the necessity of providing healthy foods reduction of fat content in school meals, and awareness to prevent the use of tobacco products and drugs.

Design/methodology/approach: The research relied on the descriptive -analytical method and the research sample is a random sample of primary schools (governmental and private). The research tool is represented by using a questionnaire to collect data.

Findings: Although there is a big school community represented by students compared to their society, studies in most countries of the world are still limited in discussing the quality of health services provided to them and the limited solutions.

Research, Practical & Social implications: We suggest future research to evaluate the national school health strategy: a comparative study between two governorates.

Originality/value: The results indicate that commitment to implementing school health programs positively affects the quality of health services provided to students of school age and that any defect in their application reflects negatively on the health of students currently and society in the future.

Keywords: School Health Strategy, Quality of Health Services.

JEL Classification: I11, I18, M11, M19.

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1- Introduction:

The concept of health is linked to other areas outside the control of the health sector directly, such as environments, water, sanitation, and education. Treating problems in these areas is the basis for enhancing community health. Among these areas is education, as it contributes greatly to students' awareness of health risks and how to avoid them. Schools are important sites for protecting and promoting health due to the presence of large numbers of students and through them, it is possible to reach their families and the community. Here, priority must be given to school health in the health system, providing good health services that meet the needs of the school community, and achieving a safe and healthy learning environment, which would reflect positively on the students' academic achievement, their physical, mental and psychological development, and their social interaction, came preparing the national school health strategy to suit role The Iraqi Ministry of Health, in cooperation and coordination with the Ministry of Iraqi Education and other relevant parties to form participatory visions for school health that contribute to building a healthy society and to take on the responsibility of preparing a generation well from the early stages of their lives. it contributes to building their society with conscious minds capable of making the right decisions and providing them with health and taking responsibility for their health and happiness, represented research problem by decreasing resources (financial, material, and human). Moreover, a shortage of data and information may affect and retreat school health services provided by primary healthcare centers according to the following (School Health booklet Investing in Health and Education Together, 2018):

- 1- Delay in the availability of vaccines necessary to cover the vaccination schedule for new students due to lack of financial allocations.
- 2- The spread of communicable diseases, especially in primary schools, due to overcrowded classrooms and the scarcity of availability of necessary medications in primary healthcare centers.
- 3- Weak implementation of the oral and dental health program due to the lack of workers and the scarcity of availability of the necessary medical materials and supplies that are commensurate with the number of students.

So that the researchers can investigate the research aims based on both theoretical and applied methods, reliance was placed on available books and scientific periodicals, and the structure of this research is as follows: Section 2 reviews the relevant literature, Section 3 contains the methodology, Section 4 presents the results, Section 5 discusses result, and Section 6 contains conclusions.

2- Literature review and Hypothesis Development:

A study by Al- Asady, (2020) aimed to identify the quality levels of school health services provided to school students in terms of actual performance. The descriptive approach was relied upon using the questionnaire . The research population included workers in school health centers in the city of Nasiriyah, with sample size 226 individuals, the most prominent conclusions were that school health center administrations should adopt the dimensions of the quality of school health services and work to achieve them better.

Another study aimed to compare the reality of school health in primary schools located in urban areas and rural areas, the research population and sample included primary school teachers, with 105 individuals the descriptive approach was relied upon and the questionnaire, the most prominent conclusions were the lack of differences in the reality of school health between schools located in urban areas and rural areas (Abdul Wahab, 2021).

A study by Sabando & Alo, (2021) evaluated the quality of school health services through the use of a questionnaire form. The research population and sample included a public university in the Philippines, with 310 individuals. The conclusions were proven the level of quality of school health services is high and the extent of benefit is great.

A research by Wilson et al., (2023) identified gaps in supporting school health staff and improving preparedness for future emergencies. The research population and sample included school health employees in Pima County, Arizona, with 48 individuals. The descriptive-analytical approach was relied upon by asking ten open-ended questions. The most prominent conclusions came that an increase in the workload on school health personnel leads to physical exhaustion, mental distress, and disruption of basic functions, with long-term effects on students' health.

(Darzi et al., (2023) discuss the different dimensions of service quality in healthcare and understand how to measure them by adopting the analytical approach through a systematic review of the literature (100) articles for the period from (2000 – 2020). The study identified 41 dimensions. They used different methods to measure the quality of healthcare services and classified these dimensions into four categories, namely the field of services, employees, hospital management, and patients.

Omoro & Misuko, (2023) explored the effect of Total Quality Management (TQM) practices on the quality of services in the health sector using a questionnaire. The research population and its sample included five hospitals (three public and two private), and the sample consisted of 115 respondents from the healthcare workforce numbering 1,652, the adopted approach was the descriptive-analytical approach. The conclusions were that focusing on the customer (the patient) enhanced evaluations and effective follow-up of patients and helped build strong relationships between healthcare providers and patients through effective communication and continuous quality improvement which works to enhance the service.

Li et al., (2023) aimed to determine the relationship between service quality health schools and student satisfaction in public and private secondary schools, the research population and its sample included students from public and private secondary schools, 22588 students, the research tool was a questionnaire form, and the conclusions came to prove that private secondary school students expressed greater satisfaction with the quality-of-service health provided in school.

Through the presentation of previous studies, we notice that most researchers agreed on the descriptive analytical approach, as for the research material used, they relied on the questionnaire form, with the exception of the study of Wilson et al., (2023) in which they relied on open-ended questions, and the study by Darzi et al., (2023) in which they relied a systematic review of the literature for the period (2000 – 2020), the fields of benefiting from previous studies are to enrich the theoretical side of the research and learn about the statistical methods and tools used as for the most important thing that distinguishes the current research from previous studies the research deals with a strategy for school health it consider a modern strategy and applied and includes basic foundations for the work, in addition to that the components that have been adopted demonstrate the extent of the possibility of transfer from the therapeutic system to the preventive system of health services provided to school-age students.

3- Research Methodology:

The researchers relied on the descriptive-analytical method by using a questionnaire form that was formulated according to a Likert scale and consisted of two axes. The first axis included demographic data for the research sample, while the second axis included two parts. The first part dealt with a set of questions related to the independent variable (the National School Health Strategy), while the second part included a set of questions related to the dependent variable (the quality of health services). We relied on statistical programs (SPSS v.24) to deal with the data and draw conclusions.

We can adopt a case study approach to measure the gap in the implementation of the school health strategy or adopt the comparative approach to compare the implementation of the school health strategy between two governorates.

3-1 The research population and sample:

The research population included primary school principals or their assistants in Baghdad Governorate on the Karkh and Rusafa sides, as the number of primary schools reached 3144. The research sample included 342 school principals or assistants, we chose them because they are the most aware of school health services provided by primary healthcare centers. The sample size was calculated according to the following equation (Thompson, 2012):

$$n = \frac{N \times p(1 - p)}{\left[\left[N - 1 \times (d^2 \div z^2) \right] + p(1 - p) \right]}$$

Where:

N: Population size (3144)

Z: Confidence level at 95% (1.96)

d: Error proportion (0.05)

p: Probability (0.5)

n: Sample size (342.42)

3-2 The research hypotheses:

The main hypothesis: There is a significant effect for the National School Health Strategy components on the quality of health services. This hypothesis is divided into sub-hypotheses as follows:

- 1- There is a significant effect of preventive services on the quality of health services.
- 2 - There is a significant impact of therapeutic services on the quality of health services.
- 3- There is a significant effect of rehabilitation services on the quality of health services.

3-3 The research model:

Figure 1 shows the research model, which includes the components of the national strategy and their impact on the dimensions of health service quality, to understand the research model in more detail, the following can be explained:

- 1- The independent variable: The impact of the National School Health Strategy was measured through three components (preventive services, therapeutic services, and rehabilitative services) (School Health booklet Investing in Health and Education Together, 2018).
- 2- The dependent variable: It is the quality of health services and it has been dealt with through five dimensions (tangibility, reliability, responsiveness, assurance, and empathy) Cronin, & Toylar, (1992).

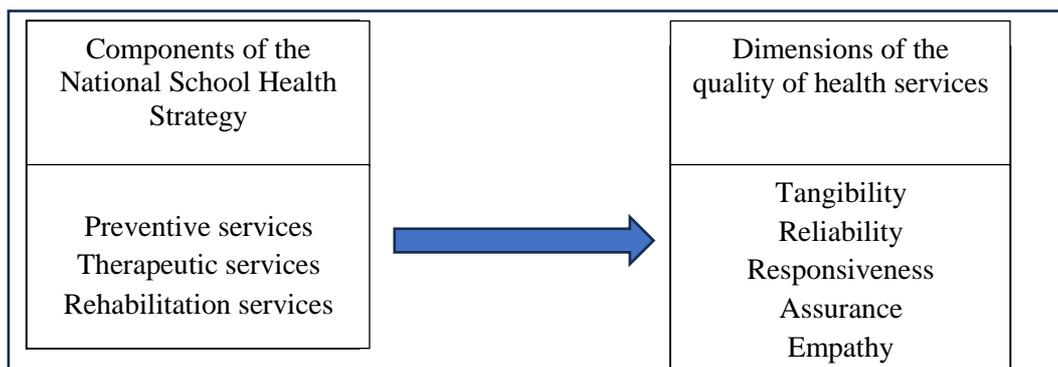


Figure (1): The research model:

3-4 The Concept of School Health:

School health is defined as a group of health services provided to students by health service provision specialists such as (social workers, health visitors, counselors, psychologists, and dental hygienists). It should be provided under a formal agreement between the educational institution and the specialized organization (Jansen et al., 2019). Education is the backbone of development, students must be healthy because those who suffer from health problems cannot concentrate or participate in school activities. On the other hand, healthy students go to school more regularly and can benefit better from education (Belagavi, 2020). It's an effort carried out by the concerned authorities to promote and develop healthy habits and behavior among school-age students, which is implemented in a comprehensive and integrated manner to improve their health (Wardiansyah & Septadina, 2021). It is essential to create safe and healthy learning environments for learners and workers (Mubita et al., 2023). The protection and promotion of physical and mental health, nutrition, well-being and development of school-age children and adolescents can be achieved (UNESCO, 2023). School health programs are an effective means of reducing the risks to which a large number of school students are exposed, the spread of health-risk behaviors, and determining the health status of adolescents, in addition to identifying many health problems that develop early in a student's life, which can be prevented or treated if it was discovered early (Poudyal et al., 2023).

As for the school health strategy fits vision is based on improving the health of students in educational institutions by providing high-quality health services" (National School Health Strategy - Jordan, 2018: 4). The World Health Organization has indicated that "The vision of the World Health Organization is to support member states in accelerating the development, implementation and follow-up of their national action plan for health security" (World Health Organization, 2022).

3-5 The Importance of School Health:

The importance of school health lies in increasing students' ability to live in good health and in a healthy environment that enables them to learn, grow and develop, and for parents to care about the right environment and eat nutritious foods that they can be conscious and healthy people (Wardiansyah & Septadina, 2021). School health management is considered of vital importance through creating safe and healthy learning environments and improving student outcomes, in addition to improving academic performance, reducing absenteeism, and achieving better mental and physical health outcomes for the enjoyment (Mubita et al., 2023). Its importance as a way to meet the health needs of school students and staff includes examination, hearing, sight, immunization treating students' health problems, asthma care, diabetes care, treating ear, nose and throat problems, dental examinations, providing support for those suffering from mental health disorders (Wilson et al., 2023).

3-6 School Health Strategy Components:

1- Preventive services: It is associated with low morbidity and mortality rates, as in the areas of chronic diseases, infectious diseases (immunizations), mental health, sight health, and oral health insight from treatment of disease prevention can reduce the incidence of chronic diseases and reduce the cost of healthcare (Fowler et al., 2020). The main purpose of preventive services is to reduce the risk of serious health conditions and increase the possibility of early detection and diagnosis of diseases. Therefore, efficiency and effectiveness play a decisive role in designing preventive services and in increasing the level of participation in such services (Karatas & Eriskin, 2023).

2- Therapeutic services: they enable the service provider (doctor or nurse) to improve the results of the therapeutic interventions they perform thanks to the relationship they have with the patient. (Aznar-Huerta et al., 2021). Health services are directly related to an individual's health represented by diagnostic services and treatment services. This type of service aims to rid the individual of a disease or injury or alleviate suffering from diseases (Yousfi & Murabitin, 2022).

3- Rehabilitation services: represent “A set of measures that assist individuals who are experiencing, or are likely to experience, an inability to achieve and maintain optimal functioning and interaction with their environments.”(Ahmed et al., 2023). Physical rehabilitation services aim to restore, maintain, enhance physical function and improve the body’s performance. The need for physical rehabilitation has increased as a result of increasing life expectancy and changing lifestyles. Physical rehabilitation services consist of physical therapy, speech, language, hearing, and vision therapy(Mapulanga & Dlungwane, 2022).

3-7 The Concept of Quality Health Services:

It is an essential and a framed process when it is done. It is provided instead of what is required by the patient, and the quality of the service provided is limited to the medical knowledge available to the service provider (Upadhyai et al., 2020) and represents meeting patients' (customers') health needs and achieving their satisfaction (Kipo-Sunyehzi, 2021). Improving health services checks patient satisfaction while enhancing the delivery of compassionate and respectful care (Gietaneh et al., 2022). The extent to which health services are compatible with professional standards through good use of available resources. Hence, they meet the needs of the beneficiary (patient) and achieve optimal health scores (Yuniartika, 2022). This ensures that patients receive the appropriate level of service based on their needs and that resources are used efficiently, from primary healthcare to hospital care (Marchionatti et al., 2023) which includes providing high-quality health services in terms of clinical quality, quality of patient care, and comprehensive professional quality to achieve efficiency and responsibility for patients’ lives(Pedersen et al., 2023). It indicates the extent of healthcare through which the system can achieve the desired goals, such as recovery, preventing premature deaths, halting the progression of the disease from complexity, and maximizing the beneficiary’s patient satisfaction with the service he receives (Endalamaw et al., 2023).

3-8 The Importance of Quality Health Service:

The health sector is considered one of the service sectors whose basic value depends on the quality of services and maintaining quality in healthcare settings, which is a complex task (Moshood et al., 2022) and they specified (McManus et al., 2023). The importance of quality health services is thus:

- 1- acknowledging weaknesses to a distinct and developmentally appropriate approach to population health.
- 2- considering coordinated and sequential transformations for health services primary and specialized, including the integration of health and social services to enhance well-being.
- 3-presenting the support of the workforce appropriately to meet the need for health services.

Primary health services are crucial to detecting and treating infectious diseases and managing the increasing burden of chronic diseases and they contribute to building strong health systems and achieving sustainable development goals (Lewis et al., 2023).

3-9 Dimensions of the Quality of Health Services:

- 1- Tangibility:** represents physical facilities, communication equipment, and employee appearance (Md Hasib Ahsan et al., 2020) they are physical components owned by the organization, such as buildings, equipment, laboratories, and workers who provide services to beneficiaries(Yuniartika, 2022).
- 2- Reliability:** it means awareness and competence of employees and their ability to build a firm belief among the beneficiary towards the service provider (Ahsan et al, 2020).
- 3- Responsiveness:** it is the employee's effort to help the beneficiary by providing the best servants the possible and responding appropriately(Yuniartika, 2022). It is represented by the speed of the service provider in responding to case reports and the ability to explain cases and communicate in the event of suggestions and criticism (Widayati et al., 2023).

4- Assurance: refers to the ability to provide service quickly and accurately (Ahsan et al, 2020) and represents the ability to perform the specified service reliably and accurately (Ighomereho et al., 2022).

5- Empathy: It is the willingness of service providers to pay attention to customers(Yuniartika, 2022) and it means the care and friendliness as well as the attention of the staff when providing services (Widayati et al, 2023).

Results:

After the components of the National School Health Strategy and the dimensions of the quality of health services were identified, and the research sample of 342 private or governmental primary schools was identified, the questionnaire lists were distributed and the results were as follows:

1- The analysis of the research results for the National School Health Strategy components

This paragraph included a presentation, analysis, description, and interpretation of the components of the National School Health Strategy (preventive services, therapeutic services, and rehabilitative services) the results are represented by obtaining the overall arithmetic mean, which is 3.834 the standard deviation also reached (0.857) as for the coefficient of variation(23.1%) that is, homogeneity(76.9%). This shows that the sample's responses indicate that the implementation of the components of the National School Health Strategy in primary healthcare centers has reached a good degree, and these components were arranged according to the research sample as follows: curative services, preventive services, rehabilitative services, and Table 1 shows this arrangement.

Table 1: Descriptive statistics for the components of the National School Health Strategy

The components	Mean	Std. deviation	Coefficient of variation	The priority
Preventive services	3.811	0.879	0.235	2
Therapeutic services	4.276	0.752	0.180	1
Rehabilitation services	3.417	0.941	0.28	3
Total	3.834	0.857	0.231	

The source: The outputs ofSPSS v.24

2- Analysis of research results for the dimension of the quality of health services

This paragraph included the presentation, analysis, description, and interpretation dimensions of the quality of health services (tangibility, reliability, responsiveness, assurance, and empathy). The results are represented by obtaining the overall arithmetic mean, which is 3.998, the standard deviation also reached (0.786), and the coefficient of variation (19.9%) that is homogeneity(80.1%). These indicate that the quality of health services has reached a high degree, and therefore the quality of health services can be improved through the application of the National School Health Strategy.

The dimensions were arranged according to the research sample as follows: assurance, tangibility, empathy, responsiveness, and reliability. Table 2 explains that.

Table 2: Descriptive statistics for the dimensions of health services quality

Dimensions	Mean	Std. deviation	Coefficient of variation	The priority
Tangibility	4.065	0.757	0.194	2
Reliability	3.774	0.865	0.229	5
Responsiveness	3.936	0.857	0.217	4
Assurance	4.272	0.680	0.158	1
Empathy	3.943	0.772	0.200	3
Total	3.998	0.786	0.199	

The source: The outputs of SPSS v.24.

3- Analyzing the research hypotheses

The main hypothesis: There is a significant effect of the components of the National School Health Strategy on the quality of health services. This hypothesis is divided into sub-hypotheses, and the results of the tests will be clarified by agencies:

3-1 Testing the first sub-hypothesis :

Table 3 shows a simple linear regression test for the impact of preventive services which considering it as one of the components of the independent variable on the quality of health services. It turned out that the value of the constant (α) for the regression equation was 3.307 that is, the value of the quality of health services is equal to the value of the constant if the effect between them was zero, and the Sig. value reached (0.000), which is less than the level of significance (0.05) and (0.01), meaning the presence of a statistically significant effect, as the strength of the effect (β) had a value of 0.208, an evaluation level (weak positive directive), the value of the interpretation factor (R2) reached (0.043), meaning that 4.3% of the quality of health services came as a result of the presence of preventive services and the rest from other variables or random errors. Thus, the first sub-hypothesis of the main hypothesis can be accepted.

.Table3: Testing the first sub-hypothesis

Component of the National School Health Strategy	The dependent variable	α	β	R2	Sig.
Preventive services	Quality of health services	3.307	0.208	0.043	0.000

The source: The outputs of SPSS v..

3-2 Testing the second sub-hypothesis :

Table 4 shows the simple linear regression test for the impact of therapeutic services which considers it one of the components of the independent variable on the quality of health services. it turned out that the value of the constant (α) for the regression equation amounted to 2.944 that is the value of the quality of health services is equal to the value of the constant if the effect between them was zero and Sig. value has reached (0.000), which is less than the level of significance (0.05) and (0.01), meaning the presence of a statistically significant effect, as the strength of the effect (β) has reached a value of 0.286, that is, at an evaluation level (weak positive directive).

While the value of the interpretation factor (R2) reached (0.082), meaning that 8.2% of the quality of health services came as a result of the presence of therapeutic services and the rest from other variables or random errors. Thus, the sub-hypothesis can be accepted second from the main hypothesis.

Table 4: Testing the second sub-hypothesis of the main hypothesis

Component of the National School Health Strategy	The dependent variable	α	β	R2	Sig.
Therapeutic services	Quality of health services	2.944	0.286	0.082	0.000

The source: The outputs of SPSS v.243-3- Testing the sub-hypothesis Third From the main hypothesis.

Table 5 shows the simple linear regression test for the impact of rehabilitation services which considers it one of the components of the independent variable on the quality of health services. It turned out that the value of the constant (α) for the regression equation amounted to 2.540, meaning that the value of the quality of health services is equal to the value of the constant if the effect between them was zero, and the Sig. value reached (0.000), which is less than the level of significance (0.05) and (0.01), meaning the presence of a statistically significant effect, as the strength of the effect (β) had a value of 0.542, an evaluation level (medium positive directive), the value of the interpretation factor (R2) reached (0.293), meaning that 29.3% of the quality of health services came as a result of the presence of the rehabilitation services component, and the rest came from other variables or random errors. Thus, the sub-hypothesis can be accepted Third From the main hypothesis.

Table 5 : Testing the sub-hypothesis third from the main hypothesis

Component of the National School Health Strategy	Dependent variable	α	β	R2	Sig
Rehabilitation services	Quality of health services	2.540	0.542	0.293	0.000

The source: The outputs of SPSS v.24The discussion of results

The results demonstrated that the components of the National School Health Strategy have a positive impact on the quality of health services provided by primary healthcare centers, according to the opinions of the research sample, but: -

- 1- Therapeutic services are still the first level (82%) within the classification of components of the National School Health Strategy, which requires increased effort to move from the therapeutic to the preventive system in providing health services.
- 2- It is necessary to pay attention to preventive services by constantly providing the necessary vaccinations and subjecting all new students to a comprehensive medical examination.
- 3- Increasing staff in school health units and within the necessary specializations to match the number of students thus reflects on the speed of response in providing health services.
- 4- Continuous follow-up of students who suffer from health problems, and the work is not limited to the services provided by school health staff.
- 5- Increasing the confidence of students' parents in school health services provided within healthcare centers by raising awareness of them through school meetings with parents.

Conclusions:

The importance of the current research for future research is due to its discussion of a strategy that was recently applied in primary healthcare centers. To contribute to the continuity of this strategy, it must be diagnosed to enhance the strengths, identify the weak points, and try to solve them within the available capabilities. The most prominent obstacle to implementing the research was the hesitation of private school principals in answering the questionnaire because they believed that the questionnaire diagnoses the weak points in their schools due to weak management or lack of capabilities. In light of the results, there is a statistically significant relationship between the components of the National School Health Strategy (preventive services, curative services, and rehabilitative services) with the quality of health services provided by primary healthcare centers, however, curative services come at the forefront of the services provided. Therefore, we advise the need to pay attention to preventive services in line with the state's directions to move from the curative system to the preventive system, which will reflect positively on the health of students in schools and then society.

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Authors Declaration:

Conflicts of Interest: None

-We Hereby Confirm That All The Figures and Tables In The Manuscript Are Mine and Ours. Besides, The Figures and Images, Which are Not Mine, Have Been Permitted Republication and Attached to The Manuscript.

- Ethical Clearance: The Research Was Approved By The Local Ethical Committee in The University.

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