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## Effect of Textbook Activities on Students' Health Consciousness at Primary Level

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#### Abstract



This research had aimed to find an effect of activities in textbooks on primary level students' health consciousness. The review of related literature discovered that health consciousness can be upgraded with the help of textbook activities. The design used had been quasi-experimental without randomization. Pre-test post-test non-randomized control group design had been used. Two groups were selected with convenient sampling for collecting data. There were sixty-two (62) participants in the experimental and control groups. The instrument used for data collection was a health consciousness test. Data had been analyzed with a t-test. Some recommendations were made for the teachers teaching Science subjects at primary school to improve their teaching methodology in a way that they may involve textbook activities to focus on students' health consciousness. Further researches may be conducted to find the effect of Text Book activities on some areas of the cognitive and the psychomotor domain.

**Keywords**: Textbook (TB), Health consciousness (HC), Primary Level **Introduction** 

"Health is wealth" is a famous proverb. A sound mind and a strong body make a balanced personality. Maintaining good health can be made possible by creating health consciousness and use a balanced diet among individuals. This target may be achieved by developing awareness especially among the school students as the students are the hope for a promising and bright future. Instead of this, it is a sad fact that they are at stake due to malnutrition. Hence, the need for hours is to make them aware of health-related issues and concerns. Health-conscious behavior alludes to describe a methodology wherein an individual has attention to a mind-blowing healthiness. Health insightful people attempt to remain concerned and stressed concerning their wellbeing and reliably battle to keep up an arranged good ways from unpleasantness, raising individual fulfillment and keeping their wellbeing by remembering themselves for sound exercises and acting normally to take care of their health in a better way (Newsom et al. 2005).

To estimate the health status of the people different examinations in writing have been attempted. This had been done by the researchers under various conceptualizations. Different writers worked to measure the health status of the individual. Their concern had been to check the individual's concern about food and issues related to food. They also make evaluations about the importance of health for an individual. The World Development Report, recently stated that the developing countries which focused on better education and healthcare between 12 to 24 years of age could produce enviable economic growth. Education is the fundamental tool of development and prosperity for individuals. It realizes positive changes and changes our ways of life and decisions. It supports and sustains human turn of events and connections and assumes an imperative job towards the prosperity of family and network. In this unique circumstance, school is a remarkable general health setting, since it is conceivable to arrive at an enormous populace more than quite a long while and because numerous later grown-up propensities are shaped in youth and youthfulness. It is simpler to envision health-harming conduct from the get-go throughout everyday life than later adjust a previously settled propensity. Youngsters who go to class have a superior possibility of good health, and healthy kids are bound to learn all the more successfully (Trollvik, 2014; Nutbeam, 2000).

In Pakistan, like many other countries of the world, Textbooks are considered the main source of the teaching-learning process. They are considered the only tools for education. They help learn

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processes. They show their worth in the achievement of learning goals. Textbooks, in other words, can be given the title of the foundation stone of school instruction. Now many tools are available in TB to assist the child in teaching. It looks reasonable that now children have more tools for effective learning and they are provided with more opportunities than ever before (Klymkowsky, 2007). Litz (2005) stated that textbooks most commonly work as helpers and facilitators in the teaching and learning process. Textbooks are the forums that open a window to a world of thrill, enthusiasm, and inspiring material. Hence, there is a dire need to use this tool for awareness about health. Hence, there is a dire need to use this tool for awareness about health.

Gandhi quotes: "True education is that which draws out and stimulates the spiritual, intellectual and physical faculties of the children". Health can not only be assumed as the basic factor of a long-lasting development (Mato-Juhasz & Szegedi, 2016). According to Klymkowsky (2007), students are 34 million and teachers are 1.28 million in Pakistan. Hence, there is a dire need to pay attention to school health programs as it would be helpful for the country in solving several problems.

Pakistan is focusing on and striving extremely hard to ensure necessary measures for the development and consciousness about these parameters. Lack of awareness, poor diet, water pollution, and hygiene problems are the main health issues that lead us to communicable and non-communicable diseases. Despite the improvement in basic health issues and nutrition over time, the state of health is very bleak. Young children are open to the risks of various infections and diseases. It is the responsibility of the school to make students aware of healthy and hygienic behavior. Therefore, this study has been planned to see the effect of textbook activities on 4<sup>th</sup> graders' health consciousness.

In any case, sick health during youth can markedly affect life accomplishments and instructive objectives, just as impacting social and enthusiastic turn of events, causing lower confidence, which thus may prompt forceful types of conduct. The relationship additionally works the other way: low confidence and externalized conduct issues increment the danger of a youngster performing more unfortunate in school. There is proof that an endless loop of poor psychological wellness and poor school accomplishment follows the kid into pre-adulthood, for instance, nongraduation, disabled health, and danger of joblessness are unequivocally related (Newsom et al. 2005).

Solely, it is vital from an early age, thru the school setting, to awaken children's interests forand give them tools to increase their knowledge about health-related issues (Trollvik, 2014). And, because of the link between child health and wellbeing, and school aims to meet their educational goals; health promotion and creating supportive environments in school, are even more crucial today

In the Pakistani context, it has been reported that the Chief Justice passed some serious remarks over the threatening quantity of arsenic in drinking water in Punjab (December 2017). Chief justice of Supreme Court had taken suo moto action to ensure quality drinking water in Punjab. The suo moto case on the provision of clean water at the Lahore registry was heard by a three-member bench of the SC, presided by Chief Justice Mian Saqib Nisar. Furthermore, Energy drinks in school surroundings were banned vide a notification issued by the Punjab Food Authority for schools as well. In pursuance of this notification, Punjab Food Authority has restricted all the cold drinks manufacturing companies that they could not sell their products inside the educational institutions and 100 meters from their premises. Banned breaches will have to face severe action.

## **Statement of the Problem**

In many science classes teachers who teach through traditional teaching methods do not take interest in practicing textbook activities in the classrooms. As they only focus on the academic achievements of their students hence, health consciousness is neglected at the primary level in Pakistan. To link the said two, the research had been conducted to find an effect of textbook activities on students' health consciousness at the primary level.

## **Objectives of the Study**

Research was proposed to achieve the following main objective:

- 1. To find out the effect of textbook activities on students' health consciousness.
- 2. The main objective was further divided into four sub-objectives.
  - i- To explore the effect of textbook activities on students' consciousness about a balanced diet.

- ii- To explore the effect of textbook activities on students' consciousness about the use of water
- iii- To explore the effect of textbook activities on students' awareness about the prevention of diseases.
- iv- To explore the effect of textbook activities on the personal hygiene of the students.

## Hypotheses of the study

Following research hypotheses were formulated for this study.

 $\mathbf{H}_{01}$ : There is no significant difference between mean scores of students' balanced diet consciousness in experimental and control groups.

 $\mathbf{H}_{02}$ : There is no significant difference between mean scores on the use of water in experimental and control groups.

 $\mathbf{H}_{03}$ : There is no significant difference between mean scores on students' awareness about the prevention of diseases in experimental and control groups.

 $\mathbf{H}_{04}$ : There is no significant difference between mean scores on students' awareness about personal hygiene in experimental and control groups.

 $\mathbf{H}_{05}$ : There is no significant difference between mean scores of students' health consciousness in experimental and control groups.

## Significance of the Study

The study is having its significance as it provides the fundamental stage in the educational system which is aiming to provide scientifically literate individuals in society. The study would/ be remarkable for the policymakers; they can make policies keeping in view the results of the study. Textbook developers can add more health and social life skills for the social development of the learners otherwise need to be reconsidered in the textbook. Results of the study would/is helpful for Science teachers to improve their professional attitude and would/ make them aware of the strengths and weaknesses of their teaching skills. The study would/is also open a new horizon of research for researchers. Findings of the proposed study would/is helpful for curriculum planners in curriculum development. They would/ be able to select appropriate instructional material and contents for a course. All stakeholders, including parents, educators, and public health professionals would/is to take help from the findings of the research.

## **Literature Review**

Pakistan is facing many problems with health. The situation is almost similar in many other countries like Bosnia and Herzegovina. Carter and Swinburn (2004) had discussed that the health department in Pakistan is having numerous problems. Lack of infrastructure, scarcity of resources, gender inconsiderateness is some major issues. Pakistan is faced with a perilous economic dearth. Shortly it can be said that Pakistan is in dire need of far-reaching health sector reforms. The rise in health consciousness can be trigged through textbook activities.

A school is a place where children spend the early stages of their life. This school environment is suitable for the health education of students. School provides such an environment where the students get direct and immediate interaction with the outside world (Carter & Swinburn, 2004). In this connection, schools make use of different tools to give awareness to the learners. Textbooks play a remarkable role to fulfill the purpose. A lot of time children pass in school. This time is remarkable in influencing many habits of children. For instance, the eating habits of children are influenced by the school environment. School is a medium for social interaction. It is a place where teachers, parents, and all stakeholders. The school is the environment in which children contact their fellows and teachers. These serve as sources of information for the children. Many factors influence them. These may potentially affect their social behavior and well-being. It includes eating choices and physical activity habits. Textbooks help the students to practice different activities and are also beneficial for them to sustain information and enable them to apply that information in different fields and circumstances. Many factors are involved in the modification of the behavior of the students (Sun, Lalsing, & Subratty, 2009).

The world is in a transition process regarding food and nutrition plans. All the countries of the world are involved in the process whether they are high or low-income countries. Nutrition transition takes place as a result of modernization. It encourages the increase of food worldwide and it also upholds a more passive way of living, School-based nutrition programs have been practiced in Chile. The reports of the research show a positive impact of educational programs on students' awareness of

health. (Olivares et al., 2004). As a result of the health awareness intervention, students' behavior about health changed and there had been an increase in the intake of healthy food. School course books are a fundamental piece of health training. They are the essential devices for transmitting instructive substance and directing the study hall exercises (Lebrun, Laforest, Larose, & Spallanzani, 2002). School course books have been considered as remarkable as instructors, understudies, and the homeroom itself in accomplishing instructive objectives (Kazemian, Ghasemi, Movahhed, & Kazemian, 2014).

According to Bruce, (2019) to develop health consciousness among students it should be necessary to teach the Health Education Curriculum, it is very vital to be aware of healthy behavior. The food and Health unit of Canada introduced standardized lesson plans for the primary students (Bruce, 2019). In recent times many developing countries have also paid attention to health-related impositions for their school. In 2000 the CHERISH (Championing Effort Resulting in Improved School Health) Award had been launched. The purpose of this award is to establish health promotion programs for students. School Health Programs are seriously being implemented in several other countries in Asia such as Malaysia, Sri Lanka, and Thailand. Textbook activities can be a source to achieve the objectives of Health consciousness. Therefore, this study has been planned.

In Pakistan, like many other countries of the world, TB is considered the main source of the teaching-learning process. They are considered the only tools for education. They are helpful in the learning process as they show their worth in the achievement of learning goals. Textbooks, in other words, can be given the title of the foundation stone of school instruction. Textbooks are ever-present in the education system although it may be thought in previous years whether to use textbooks or not. Textbooks are already available for almost every possible discipline and even any sub-discipline. Over the years, they have become more interesting, more encyclopedic, and supplemented by more additional materials such as extension activities exercises. Textbooks are part and parcel of our education system. In the textbook, we are having many colorful pictures and activities. Now many tools are available to assist the child in teaching. It looks reasonable that now children have more tools for effective learning and they are provided with more opportunities than ever before (Klymkowsky, 2007). Litz (2005) stated that textbooks most commonly work as helpers and facilitators in the teaching and learning process. According to Bruce (2019), textbooks are the forums that open a window to a world of thrill, enthusiasm, and inspiring material. Textbook activities can help develop the health consciousness of school children. Hence, there is a dire need to use this tool for awareness about health. Hence, there is a dire need to use this tool for awareness about health.

"True education is that which draws out and stimulates the spiritual, intellectual and physical faculties of the children". Health can not only be assumed as the basic factor of a long-lasting development. It is linked to all the three pillars viz. environmental, social and economic dimensions as well (Mato-Juhasz & Szegedi, 2016). Sound health is neither a nightmare nor a lollypop; it is experienced and sustained by being disciplined with a lifestyle that needs simple everyday healthy habits that lead to a healthy and energetic life. According to Bruce (2019), students are 34 million and teachers are 1.28 million in Pakistan. Hence, there is a dire need to pay attention to school health programs as it would be helpful for the country in solving several problems. Measures to reduce dropout, availability of quality education, better health conditions can help us out in controlling disease and overall progress in health conditions of the society. The health situation faced by Pakistani students is depicted as:

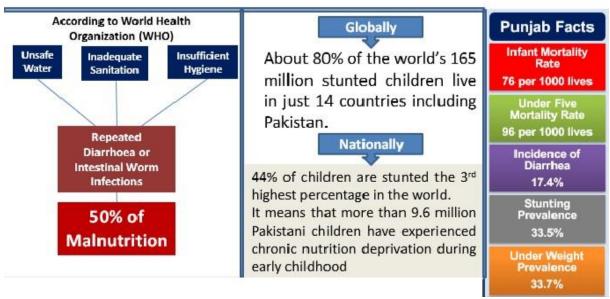


Figure 1: Healthcare status of Pakistan

Pakistan is focusing on and striving extremely hard to ensure necessary measures for the development and consciousness about these parameters. Lack of awareness, poor diet, water pollution, and hygiene problems are the main health issues that lead us to communicable and non-communicable diseases. Despite the improvement in basic health issues and nutrition over time, the state of health is very bleak. Pakistan is ranked third among the countries which are suffering from water shortages, according to an International Monetary Fund (IMF) report. Young children are open to the risks of various infections and diseases. It is the responsibility of the school to make students aware of healthy and hygienic behavior. The teachers need to take it as their first and foremost duty to guide the students and inspire them to adopt fruitful health practices, Bruce (2019).

Therefore, textbooks are an important part of the curriculum implementation process. The fact is that, for achieving the objectives of the curriculum, written material on the books plays an important role. In a great educational program, parts of learning materials, including course books, are viewed as significant. Successful learning happens just in the presence of persuaded students, acceptable teachers, and fitting, well-graded, and all-around chose materials including guidance TV, radio, correspondence exercise, customized writings, and students' course readings.

Reading material is just tantamount to the educator who utilizes it. In showing arms stockpile, course reading is a significant instrument. Science instructors saw that when the students learn science subjects, there is a need to accentuate profoundly reasonable seeing instead of authentic reviews. This requires course readings that fuse a wide collection of substance explicit instructional backings that advance comprehension among students from various foundations, interests, and capacities. Textbooks are the very soul of the educational-based learning process because these help in meeting the objectives of the curriculum. Textbooks help the students to practice different activities and are also beneficial for them to sustain information and enable them to apply that information in different fields and circumstances. To study the subject formally, the textbook is considered the standard source to provide information and it also serves as an instrument for the process of teaching and learning. Schools are having the opportunity for the provision of target-oriented education that takes into consideration the health and fitness problems of today's youth and consequential health problems that can result from it (Newsom et al. 2005). The present study was conducted to explore the effect of textbook activities on students' health awareness at the primary level.

#### **Method and Procedure**

They are as:

## Design

The design used had been quasi-experimental, as already stated which had been specifically pretest-posttest non-randomized control group design. A public school had been selected for the experiment. Students in the experimental class experienced a set of 15 activities based on their textbook while the control class studied as per their routine.

#### **Delimitations of Study**

The study had been delimited to students of all Girls Public Schools students at Grade 4 in District Rawalpindi.

## Sample

The total sample size comprised during experimentation had been 62. For the selection of the sample, the technique used had been Convenient sampling.

#### Instrument

The test comprising MCQs related to health consciousness had been an instrument to collect data which had been a test to find the effect of Textbook activities on the health consciousness of the students. It had been validated/authenticated by the faculty members in AIOU Islamabad.

## **Data Analysis**

The data were analyzed by using t –statistics with the help of SPSS

**Table 1: Comparison of Balanced Diet** 

Group	Pretest (Mean)	SD (Pre- Test)	Posttest (Mean)	SD (Post- test)	Gain Scores	Effect size	t-value	df	Sig (2-tailed)
Control (N=31)	4.48	1.50	6.19	.91	2.13	1.13	6.30	30	.000***
Experimental (N=31)	4.68	1.30	8.29	0.82	3.61	2.11	11.78	30	.000***

For control group Table 1 shows that there had been a remarkable difference in the in the mean pretest scores (M=4.48, SD=1.503) and posttest scores (M=6.19, SD=.91) as t (30) = 6.30, p = 0.000 < 0.05. For experimental group Table 1 shows that there had been a remarkable difference in the mean pretest scores (M=4.68.SD=1.30) and mean scores of posttest (8.29, SD=0.82),t (30) = 11.78, p=.000<0.05.

**Table 2: Comparison on Usage of Water** 

Group	Pretest	SD	Posttest	SD	Gain	Effect	t-	df	Sig(2-
	(Mean)	(Pretest)	(Mean)	(Posttest)	Scores	size	value		tailed)
Control (N=31)	5.16	1.36	6.23	.84	1.07	0.63	3.54	30	.304
Experimental	5.97	3.48	8.06	1.63	2.09	0.56	3.14	30	.004
(N=31)									

For the control group Table, 2 shows that there had been a remarkable difference in the mean pretest scores (M=5.16.SD=1.36) and posttest scores (M=6.23, SD=.84, t (30) = 3.54, p= 001<0.005. For the experimental group Table, 2 shows that there had been a remarkable difference in the mean pretest scores (M=5.97.SD=3.48) and mean scores of a posttest (8.06, SD=1.63), t (30) = 3.140, p=.004<0.05.

**Table 3: Comparison on Prevention of Disease** 

Group	Pretest	SD	Posttest	SD	Gain	Effect	t-value	df	Sig(2-
	(Mean)	(Pretest)	(Mean)	(Posttest)		size			tailed)
Control (N=31)	4.10	1.72	6.68	2.41	2.58	0.81	4.54	30	.000***
Experimental (N=31)	4.29	2.46	8.42	1.05	4.13	1.42	7.90	30	.000***

For control group Table 3 shows that there is a remarkable difference in the mean pretest scores (M=4.10, SD=1.720) and posttest scores (M=6.68, SD=2.414) as t (30) = 4.547, p = 0.000<0.05. For the experimental group Table, 3 shows that there had been a remarkable difference in the mean pretest scores (M=4.29, SD=2.46) and mean scores of a posttest (M=8.42, SD=1.05), t (30) = 1.42, p=.000<0.05.

**Table 4: Comparison of Personal Hygiene** 

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Group	Pretest	SD	Posttest	SD	Gain	Effect	t-value	df	Sig(2-
	(Mean)	(Pretest)	(Mean)	(Posttest)		size			tailed)
Control (N=31)	4.55	1.43	5.55	2.27	1	0.37	2.06	30	.048
Experimental (N=31)	4.81	1.88	8.10	1.07	3.29	2.04	11.40	30	.000***

For the control group Table, 4 shows that there had been a remarkable difference in students that there is a remarkable difference in the mean pretest scores (M=4.55, SD=1.43) and posttest scores (M=5.55, SD=2.27) as t (30) = 2.06, p = 0.048<0.005.For experimental group Table 4.shows that

there had been a remarkable difference in the mean pretest scores (M=4.81, SD=1.88) and mean scores of posttest (M=8.10, SD=1.07),t(30)=1.76,p=.000<0.05.

**Table 5 Comparison on Health Consciousness** 

Group	Pretest (Mean)	SD (Pre- Test)	Posttest (Mean)	SD (Post- Test)	Gain	Effect size	t-value	df	Sig(2- tailed)
Control (N=31)	19.26	4.80	24.65	3.87	5.39	0.82	4.57	30	.000***
Experimental (N=31)	19.74	5.13	33.19	2.60	13.45	2.52	14.04	30	.000***

Table 5 shows that the control group showed improvement in health consciousness. However, the experimental group showed more remarkable improvement than the control group as the experimental group got effect size better than the control group. Table 5 shows the overall gain and effect sizes of the control and experimental group for health consciousness.

#### Findings

Analysis of data showed a remarkable difference in the scores of control and experimental groups. Group taught using textbook activities showed remarkable improvement in Health consciousness with four sub-constructs as already displayed as well as on health consciousness score in overall comparison.

### Conclusion

It is concluded that is a significant difference in the health consciousness of the students when taught through textbook activities. Textbook activities improved the health consciousness of the students for the usage of water, prevention of disease, and personal hygiene. This shows that textbook activities help to make the students 'concepts better and improve their performances as compared to the traditional way of teaching in which little or no focus is given to textbook activities. Textbook activities are also helpful in enhancing the skills and attitudes of the learners. The inclusion of health-related activities in textbooks brings positive results to the health consciousness of the students. However, there is no significant difference in the mean scores of the experimental and control group on a balanced diet.

#### Recommendations

Based on the observations made during the study, the following recommendations are suggested:

- 1. Teachers can give enough freedom to students so they may directly or indirectly guide to ensure that they have to do different activities. Studies proved that students perform to show their creative ideas in a less rigid atmosphere instead of the suppressed atmosphere. It must be the duty of the teacher to allow students to work on different concept-related projects given in the textbooks. It is mandatory to apply from the primary education level.
- 2. Textbook activities mainly involve hands-on activities skill. ABL is well acknowledged to participate in the literature for developing Affective domain thinking skills. Textbook activities improve the awareness of the students. So the activities which are there in the textbook help make concepts better. They help to comprehend the topics and guide students towards the practical nature of things. It is, therefore, recommended that textbook activities may be adopted at all levels to teach sciences in Pakistan.
- 4. The present study was conducted on textbook activities of General science. Further studies may be replicated in all science disciplines.
- 5. Keeping in view the significance of activities for the students, teachers may be equipped with the knowledge and skills of implementing an activity-based approach in the school through pre-service and in-service programs.
- 6. In this connection, different training campaigns may be designed. Refresher courses are vital for science teachers may be organized to nurture them so that they may effectively holding activities.
- 7. The study may further be by making the given variations:
  - a) Larger sample sizes may be taken to carry out the study.
  - b) A more challenging content may be taken. Students' awareness about different content through textbook activities may be studied.
  - c) A larger-scale assessment of the students may be done.

- d) Different contents which are more descriptive and conceptual can be taken into consideration for carrying further work.
- 8. The level of conducting the study may be enhanced. It can be used reproduced starting from primary level to university level.
- 9. The study may be carried out in tackling some other behavior of the students. It can be used to find the effect of textbook activities on some other variable of the affective domain.
- 10. The study may be replicated to find the effect of textbook activities on some areas of the cognitive and psychomotor domains.
- 11. The study also recommends teaching the contents of the lesson with its relevant activities.

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