REVIEW OF INTERNATIONAL GEOGRAPHICAL EDUCATION

ISSN: 2146-0353 • © RIGEO • 11(5), SPRING, 2021

www.rigeo.org

Research Article

Teachers' perceptions of their role in cognitive awareness, health protection and the promotion of ethical value aspects among students with the Corona Corvid 19 virus pandemic via the distance learning system

Amani M Al-Hosan[1]
Professor of Curriculum and Teaching Methods of Science, College of Education, Nourah bint Abdulrahman University, Riyadh, Saudi Arabia
amalhosan@pnu.edu.sa

Nawal M AL Rajeh[2]
Professor of Curriculum and Teaching Methods of mathematics, College of Education, Nourah bint Abdulrahman University, Riyadh, Saudi Arabia
nmalrajh@pnu.edu.sa

Ahmed Hamza[3]
Nourah bint Abdulrahman University, King Salman Institute for Studies and Consulting Services, Majmaah University, Riyadh, Saudi Arabia
a.hamza@mu.edu.sa

Abstract

This study was conducted by an academic research team at PRINCESS NOURAH BINT ABDULRAHMAN UNIVERSITY with the purpose of promoting the levels of healthy, value and ethical awareness among the students to limit the effects of covid-19. The study applied the descriptive, analytic survey approach to document the conceptions 0f the public education instructors throughout KSA concerning their role in raising the cognitive aspects and healthy and ethical skills for encountering coronavirus pandemic (COVID-19). The study population included all the instructors of public education (male & female) in all the Kingdom governorates with its both public and private sectors amounting (525,610) instructors as per the MINISTRY OF EDUCAYION statistics for the school year (1441 H) . The sample contained 357 instructors (male& female). For this purpose, the researchers designed a questionnaire. The study concluded that there is a high level of conceptions of the instructors about their cognitive skills, healthy and ethical responsibility for providing awareness about coronavirus pandemic (COVID-19) . The study proposes some supporting and effective strategies to achieve such online learning under this pandemic.

Keywords

Students – awareness – online – learning COVID-19.

To cite this article: Al-Hosan, A, M.; AL Rajeh, N, M, and Hamza, A. (2012) Teachers' perceptions of their role in cognitive awareness, health protection and the promotion of ethical value aspects among students with the Corona Corvid 19 virus pandemic via the distance learning system. *Review of International Geographical Education (RIGEO), 11*(5), 1027-1040. doi: 10.48047/rigeo.11.05.98

Submitted: 20-10-2020 • **Revised:** 25-12-2020 • **Accepted:** 28-02-2021

Introduction

All the educators and researchers in the fields of education and psychology at present agree that studying cognitive components and preventive precautionary measures against the spread pandemics related to public health of defined by World Health Organization, specially Coronavirus (COVID-19) has research, scientific, practical, global and community priority due to their connection with people's public health system. In the face of the destined world human fate which demands of all the globe countries take the initiative by launching projects, setting projects of healthy, psychologically and community awareness and combating the dangerous spreading pandemics threating mankind life, specially COVID-19 which still kills thousands of spirits daily according to the WHO statistics in some advanced states and infections rates in the world surpassed 7 millions and the causalities are of hundred thousand. Accordingly, the educational institutions have a big and important role in building a healthy system for students through promoting healthy preventive daily practices School itself is a whole community in which many social strata live and interact (students, educators, administration and parents), so, school is a primary and effective center for delivering messages of awareness and mind cultivation effectively to a big strata of community if it do it properly.

Also, promoting society health through school leads to instilling health education among students which result in spreading healthy awareness among students and making them aware of the need to care about their personal health, and of their body states, the meaning of health and ways of achieving it by balanced diet, how to prevent themselves from diseases, acquiring healthy habits to preserve their bodies and minds : http//www.crdp.org/mag-description?id=9481 Hence, and in collaboration with the great efforts of the Saudi government as represented in the Ministry of Health and their community, field and healthy efforts and services to curb the outbreak of this virus, we conducted this study by an academic research team at Princess Nourah Bint Abdulrahman University as a contribution with its educational and community part to raise the level of positive conceptions and ethical, value and healthy awareness to deal with this pandemic (COVID-19) by the teachers, male & female, for being the front line of awareness and prevention from the virus outbreak among a big categories of student in K.S.A.

Research Problem:

Since the start of Feb., 2020, with the outbreak of Coronavirus (COVID-19) in Chinese Woohan region as per the report of Sahu (2020), then reaching Europe, Americas and the Gulf States, including K.S.A., so., teaching was suspended at the universities all over the world, as well as workshops, conferences,..etc. Consequently, the public sectors in charge had to take precautionary measures to face infection, through dissemination the culture of preventive health and forming such culture to face this dangerous virus in the long run. No doubt that remote learning is one of many scenarios the countries have recourse to for facing the outbreak of Coronavirus. So as to avoid suspending the educational process, as online learning is one of the modern educational concepts and techniques at all education levels. It goes without saying that teachers at both public and private schools are of the second influential lines after doctors in facing Coronavirus, as a result of their direct interaction with their students and with the greatest society strata with different ages ranges from kindergartens to secondary stage. Within the aggravating situation of COVID-19 in the whole world, Eltanahy, Forawi, and Mansour (2020); Labib, Abdelsattar, Ibrahim, and Abdelhadi (2021); Narkuzieva (2020) indicated the importance of paying more attention to the role of teacher in supporting the student health level and developing the society view of health and consider it a life style, helps students acquire a considerable deal of preventive attitudes and information related to diseases and health problems in a way which enables them to protect themselves against such diseases, and facing it scientifically, providing. Here the part of the instructor is evident and provides proper scientific information, promotes skills, instill values and ethics in his students souls, added to his being in direct touch with the student daily life details. Accordingly, it was this research as an attempt to reveal the level of instructors conceptions towards their roles, cognitive, skill, healthy and ethical for facing Coronavirus pandemic and verify their notions in this regard depending on the instructor experience, educational level, qualification, through the following questions:

1- What is the level of instructors conception towards their cognitive responsibility to raise the level of awareness towards Coronavirus?
2- What is the level of instructors conception towards their skill responsibility to raise awareness level towards Coronavirus?
3- What is the level of instructors toward their healthy responsibility to raise the level of healthy awareness to combat Coronavirus?
4- What is the level of instructors towards their value ethical responsibility to raise the level of value ethical awareness towards Coronavirus?
5- What the strategies proposed for the instructors to abide by during remote-learning to encounter Coronavirus?
6- Are there differences in the responses of study sample members in the level of their notion towards their cognitive responsibility to raise awareness levels related to Coronavirus attributed to their specialization ?
7- Are there differences in the responses of study sample members in the level of their notion towards their cognitive responsibility to raise awareness levels related to Coronavirus attributed to school stage?

Objectives

1- Revealing the level of instructors notions towards their part in cognitive awareness, healthy prevention and promoting the students value and ethical aspects within COVID-19 through online-learning system.
2- Identifying the degree of difference in instructors conceptions towards their roles depending on their teaching experience, qualification and educational stage.
3-

Methodology:

This study is based on survey, descriptive analytic approach to document the instructors conceptions towards their cognitive, skill, healthy and ethical roles to face Coronavirus.

Population :

It included all the instructors of public education in all the K.S.A. governorates with its public and private sectors amounting (525.610) instructors as per the Ministry of Education Statistics during the school year (1441H).

Study Questionnaire:

The researchers designed a questionnaire to investigate the conceptions of public education instructors towards their cognitive, health and ethical roles concerning encountering Coronavirus pandemic through remote learning. This tool consisted of 5 pivots as follows:

- **First dimension:** Cognitive conceptions towards.
- **Second dimension: Skill** conception towards.
- **Third dimension :** Healthy conceptions for prevention
- **Fourth dimension :**Value and ethical conceptions about coronavirus
- **Fifth dimension: Education** active strategies to offer e-education after coronavirus.

Theoretical Framework:

The importance of prevention education for combating epidemics and diseases research performed in the health field indicate that prevention and taking precautions against diseases is the best way for combating them and is better than cure. Whatever the cost of combating pandemics is , it is less than that of curing patients after having diseases. This trend has been adopted by advanced states at present. Troubled conditions may be occurred in any of the country sectors. School is an important sector exposed to such conditions. Such disadvantageous conditions range from natural disaster like hurricanes floods or epidemics (like COVID-19), to

emergent states such as a death of a student, human made disasters like shooting incidents at schools or suicide. Such situation are sometimes faced by school administration at all stages and causes a lot of tension and anxiety, and shaken the system ability to proceed when it is unable to face such big problem (Allen et al., 2002). Awareness is one of the major educational processes for the teacher to develop school system, especially at times of crises (epidemics). Without it at its different levels (cognitive, healthy and value) confusion and instability may happen within the educational setting, at times of crises in particular (Barry, 2021). The outbreak of Coronavirus (COVID-19) was announced as general healthy emergency causing international worry. much about it is still unknown, yet we know that it is transmitted through direct contact, respiratory drizzle of ad infected one, individuals could have infections also by touching planes polluted with this virus, then touching their noses, eyes or mouths (WHO - World Health Organizational, 2020). It is very important to protect students against transmission of infection through suspension of school works to the least level, expanding measures taken by school to prevent transmitting of COVID-19 among the students, applying online learning by instructors of all specializations to attain cognitive awareness, and promoting value ethical aspects. We can review the efforts and participations done by the world states for facing COVID-19 through the following studies:

NBO study (2020) pointed out the urgent need of instructors to be acquired with creativity, flexibility at emergency situations, crises and epidemics by using some strategies common in education arena through the internet such as blogs, videos, where teachers guide the students by using cooperative writing, making a story, produce a content, discussion forums, tools off teaching and assessment through the internet drawing mind maps through online learning, the matter that increases opportunities for the learners to acquire cognitive, healthy and ethical awareness. The study of Poonch (2020) found the importance teachers guidance and informing the students that discipline and legal measures will be taken against who violate them. According to Chicago Academy study (2020), the instructors there were trained on the method of providing awareness online about health problems related to COVID-19 and incorporate technology in teaching process. Study of Sonya Proyor Jones (2020) refers to the need to support instructors creativity for facing Coronavirus through styles of artificial intelligence. Mar 19 study (2020) was carried out in San Francisco through using charts, activities and artificial intelligence applications by teachers with expressing voices in languages, science and Math.

According the American School in Shanghai American School (2020), the instructor practices students on awareness through feedback to achieve a better education for students at learning setting via the internet and the instructions of UUNICEF (2020), where the student should absorbs the basic information according, their ages about Coronavirus including its symptoms, implications, way of transmission, way of prevention, through the national Ministry of Health and guide the student to verify the false information which may be available orally or via the internet. When considering the role of the educational institutions in the U.S.A. concerning Coronavirus we find a study conducted by Oklahoma State Department of Education (2021) on using online learning at times of crises, emergencies and epidemics. They saw that virtual learning is one of the forms of remote learning but not for young children unless it is used properly as many community especially at the rural regions lack the use of the internet. As per survey of technological done by OSDE, more than 25% of regions will carry out learning wholly or partly through paper packages distributed to the students. OSDE provided some assistances for their counties suitable for their student's needs, besides, it joined a partnership with OETA T.V. network to provide learning opportunities at homes, so., instructor may practice awareness at times of crises and epidemics, create alternatives via social media or traditional T.V. screens. Readiness and Emergency Management for Schools (REMS) Technical Assistance (TA) Center (2015) and times of crises indicated that the students can be prepared to the period that precedes a crisis through closing schools or student absenteeism, where the instructor can prepare printed educational packages to be used by students at home. Also, the study of the British Psychology Society (BPS, 2020) related to (COVID-19) on how to promote flexibility of instructors. This study indicated that flexibility is correspondent to internal personal trait and can be changed by time according to the situation, and that can be directed better if it is based on society specially within educational organizations. On the other hand, at Hastings Center, Berlinger et al. (2020) carried out a study, with the aim to help in building constant discussions of the ethical topics which can be predicted arising from emergency through raising practical Questions in these situations when planning, protection and Guidance. Study of Hamedani, Haghani, and Kelishadi (2019) aimed to analyze the factors affecting preventing diseases from the students views in Isfahan.

The study used the method of content analysis for 270 students. The questions included health policy, the role of the educational system in promoting health, school ad healthy dietary, schools and sports and developing physical activity informed learning, prevention strategy, amending life style. The study found that controlling the factors affecting life style and improving them make schooling more effective, in particular at time of epidemics. Study of Noor and Jaidin (2017) analyzed the strategies and technologies used by instructors to help the students to practice a healthy behavior such as raising awareness about infectious and noninfectious diseases among the secondary schools students through feedback. Results**:** Generally, the study findings indicated that all the teachers participated in the study preferred using teaching strategies based on the teacher, few of them made efforts to merge strategies based on students.

Bay et al. (2017) reviewed the world increasing burden of infectious diseases (NCDS) and raising awareness of the need to set preventive programs from primary dangers based on many disciplines, with benefitting from educational and healthy experience, as the program basically focus on teachers in determining learning evidences related to ability, change attitude and conduct, in which health practitioners focus on health measures and building stronger understandings of effective learning characteristics for changing behavior and the best way of assessing them, then connecting convincingly between these measures with long term healthy indicators through following the learner behavior and health overtime. Study of Singh et al. (2017) stated that infectious diseases in the world is one of the main causes of deaths (NCDs) and have many risk factors such as un healthy diets, not exercising, smoking and drinking Al Cohol. A study by WHO - World Health Organizational (2016) said that prevention from infectious diseases at schools and school health services (SHS) is the first contact points with health services and recommended that schools should provide children and youth with many opportunities to develop a positive point of view about healthy life styles which help to improve their health.

Al-Rabiaah et al. (2020) indicated that virus respiratory syndrome in the Middle East and the health situation in the K.S.A. and that the start of these cases was at 2012 and that death rates in the kingdom is less than that of the neighboring states and added that such epidemic can put big stress on students mental health. Asaad study in the K.S.A. aimed to investigate cognition and attitudes towards Coronavirus (MERs-COV) among healthy practioners and medicine students who have knowledge better than other health colleges. students Concerning attitude, 50% of students showed a positive attitude towards Corona and highlighted the need to design educational curriculums about these new diseases and epidemics and combating infection for the students of health sciences o pre pare them to deal with such diseases at time of health emergencies through constant awareness campaigns about such rising diseases and improve their knowledge and attitudes towards them. The study of (CDC, 2020) dealt with guidance in higher education about Coronavirus and school role in response and that the best way to avoid infection is not being exposed to virus and learn more about epidemics and provide accurate information on it to students and staff to lessen stigma related to it. The study stressed the role of high education institutions working with local health administrations to slow this epidemic outbreak and ensure healthy and safe environment for learning and work www.cdc.gov/COVID19

Study of Poole et al., (2020) confirmed the importance of providing awareness to student by teachers about the symptoms of COVID-19 (feeling of shortness of breath, cough, high temperature, abdomen pain) and loss of friends. In Derene City in South Africa (May 4, 2020) many measures have bee taking for back to school such as keeping physical distance, constants sterilization and cleaning according the code of Disaster management, taking in consideration that children are still unable to bear responsibility completely. The Report of Gouëdard, Pont, and Viennet (2020) proposed that education leaders should prepare plans for resuming education through alternative methods during social distancing and provide framework for the fields to be covered by such plans.

Study of Hamilton et al., (2020) adopted a different approach as it is difficult to abide by social distancing by children and adolescents at schools due to the limited spaces inside classrooms as well as difficulty for schools to observe full cleanliness precautions during Coronavirus. Study of NASP (2020) dealt with guidance in programs of children care at times of crises and epidemics which should be organized in 3 categories, first preparation phase, lack of community transmission of the disease, the second the lack of the minimum possibility of disease transmission the third is the possible transmission of the disease in the community. Guidance is also provided when discovering certain cases of infection at school regardless the possibility of transmission of it. All decisions of executing school strategies should be taken locally, in cooperation with those

incharge of health.

Concept of Preventive Concept:

Prevention education is one of the new concepts in the educational and scientific setting which lacks a separate definition in dictionaries (Al Qambeizy, 2006). Education refers to increase ad growing while prevention refers to protecting a thing against what harms it and it is over maintenance and caution during adversity. Prevention education as an independent concept is defined by Eltanahy et al. (2020) as the deal of education which deal with prevention aspects in the learners lives in all life areas. Such definition is based on the proverb "Prevention is better than cure". Abdulsalam (1421H) defines it as "knowledge, skills and attitutes – planned- that should be provided to students to behave properly in their daily life and which helps them when taking decisions to face problems crises and disasters and their social, psychological and healthy dangers which affect them and their community. Al Qameizy defines it (2006c) as a set of knowledge, skills and attitudes that should incorporate in curriculums to help students to take sound decisions to face problems, crises and disasters properly.

The Importance of e-education during crises:

The importance of e-education is showed while some consider it a kind of luxury. But at times of war or epidemic and when access to school is impossible, the role of such e-education is so evident. The educational institutions rush to apply it without vision or planning which makes it seems deficient, beside the need to train the teachers and learners on the proper use of such programs and to make its content suitable for electronic setting in a proactive way. The UN Organization set a group of programs to help in remote learning as "Black Board" which depends on design of tasks, curriculums, assignments and tests with scoring them electronically, and communicating with students via virtual setting and application that could be loaded through smart phones. Also Edmodo platform, it social free platform for teachers and students and provide safe environment for communication cooperation, exchange of educational content and its digital applications, added to home assignments, scores and discussions, and "Edrak" application concerned with teaching Arabic online and (Google classroom) which facilitates communication among teachers and students inside and outside school, as well as (**see saw**) application, it is a digital application which assists studentns to document what they are learnt at school and sharing it with teachers, parents and classmates, and **Mindspark application based on** adaptive educational system online and help students to practice and learn Math (Zaid, 2020) There are many online education applications available on the internet some of them are free the most famous of them is Moodle Platform, it is free and easy access and can provide a quick practical solution for transforming the traditional educational process into electronic one at once, besides, it is available in many languages, among which Arabic language. Platforms of videos display can be used as e-educational platforms as youtube via transforming lessons into videos to be watched by any student from all over the world. In this regard, Al-Sulaiman (2020) confirmed that using social media improperly (whatsap, Telegram, etc…) in regular education has negative effects which resulted in using (informal channels, impersonation, dissemination of misleading ideas or piracy dr balsolimann@

Study Sample:

It consisted of (357) instructors (male & female) chosen randomly in all public education stages (elementary, middle and secondary). The following table shows the sample characteristics.

Table (1)
Shows the characteristics of the sample according to the study variables

%	No.	Stage	%	No.	Educ. Experience	%	No.	Qualification	%	No	Specialization	%	No.	Gender
42.6	152	elementary	12.3	44	1-5	14.3	51	diploma	47.6	170	scientific	86.8	310	Female
21.8	78	Middle	29.7	106	6-10	77.6	277	B.E.D	52.4	187	literary	13.2	47	Male
35.6	127	Secondary	58.0	207	More than 10 Year	8.1	29	Post-graduate studies	%100	357	Total	100%	357	Total
100%	357	Total	100%	357	Total	100 %	357	Total						

It's noted that most sample members are female and holding BSC of education and with experience more than 10 years.

The Psychometric Characteristics of the sample:

First: Internal Consistency:

Pearson correlation coeffients will be calculated between each phrase and the dimension it is related as in the following table (2):

It is noted from table (2) that correlation coeffient of each phrase and the dimension it affiliates is statistically significant at (0.01 & 0.05) except the two phrases (1.&7) in the 1st dimension, so they were deleted. Also, the questionnaire internal consistency between the score of each dimension and that of the total score of the questionnaire.
As the correlation coefficient of each dimension (1st, 2nd, 3rd, 4th, 5th) with the questionnaire to score were (0.921 – 0.884 – 0.849 – 0.910 – 0.527) which were all significant at the level (0.01).

Second: The Questionnaire Reliability:

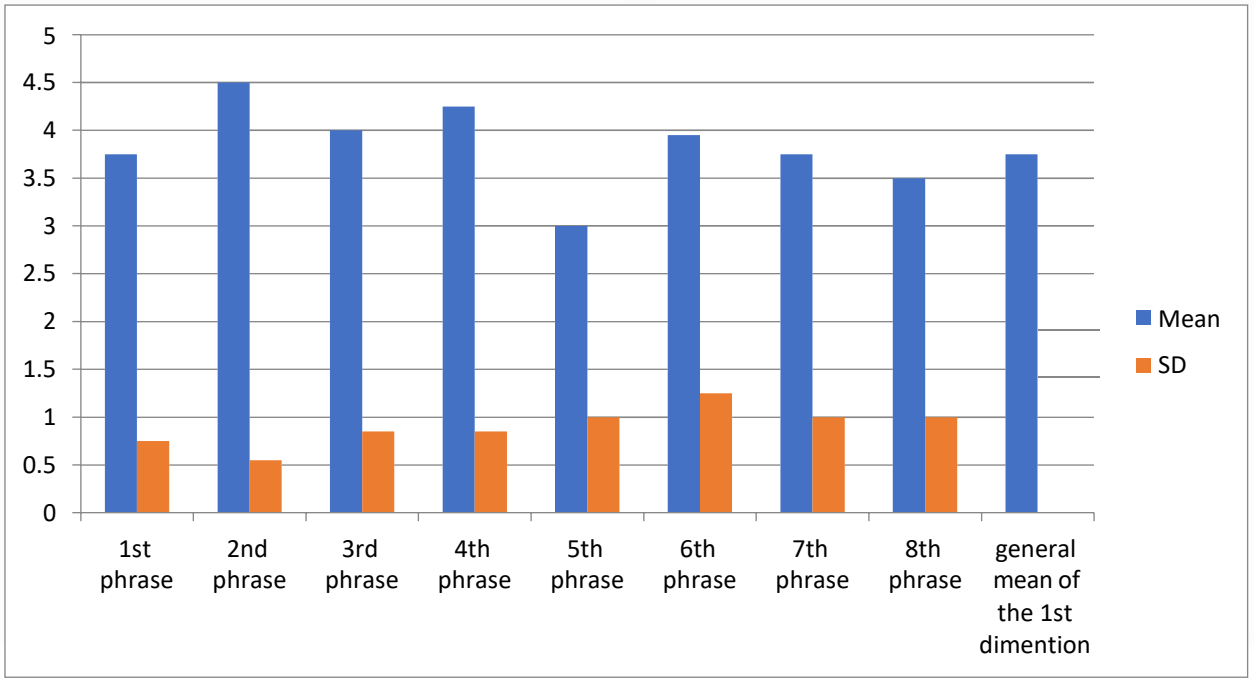
The value of reliability coefficient for each dimension and of the questionnaire was calculated by two ways, Alpha Cronbach coefficient and Pearson Coefficient. Alpha Cronbach coefficient for the dimensions big fives and the total score were as follows: (0.782 – 0.878 – 0.872 – 0.886 – 0.869 – 0.951) respectively. Spearman Brown coefficient for the fifth dimensions and the total score were (0.814 – 0.830 – 0.899 – 0.882, 0.874 – 0.868) respectively, namely thery were high values.

Study Results:

1- What is level of instructor perception towards their cognitive responsibility to raise the level of cognitive awareness related to Coronavirus?
To answer this question we use descriptive statistic methods including frequencies, percentages, means, SD for each phrase of the first dimension and the general average of the dimension by the statistical program of social sciences (SPSS – V25) and Excel (2010) as in the flowing chart.

Table (2)
shows Pearson correlation coefficient between the score of each phrase and the dimension it relates

Correlation coefficient of each phrase with the 5th dimension	Correlation coefficient of each phrase with the 4th dimension	Correlation coefficient of each phrase with the 3rd dimension	Correlation coefficient of each phrase with the 2nd dimension	Correlation coefficient of each phrase with the 1st dimension	Phrase
.583**	.678**	.854**	.684**	.287	**1**
.671**	.869**	.821**	.620**	.634**	**2**
.780**	.380*	.898**	.231	.646**	**3**
.663**	.598**	.772**	.761**	.736**	**4**
.701**	.775**	.782**	.769**	.716**	**5**
.680**	.827**	.598**	.777**	.682**	**6**
.580**	.429*		.894**	.188	**7**
.730**	.795**		.774**	.565**	**8**
.769**	.860**		.761**	.653**	**9**
.687**	.806**			.609**	**10**
.599**					**11**



The chart (1) shows means and SD of the 1st dimension phrases of the sample responses.
From the Chart (1) it is shown that the first dimension, i.e., the level of instructors conceptions of their cognitive responsibility to raise cognitive awareness level towards coronavirus got a mean of (3.88) which is correspondent to the degree of "agreed", the means of phrases range from (4.54) and (3.03) which is correspondent to the response strongly agree and neutral.
The standard deviation (SD) of the phrases ranged from (0.65) to (1.07). the mean of the 2nd phrase was the highest (4.54), followed by the 4th phrase, with a mean of (4.42), while that of the 5th phrase was the least mean, i.e. (3.03).

2- What is the level of instructors conceptions of their skill responsibility to raise the level of skill awareness towards Coronavirus?

To answer the questions, we depended on the following chart:

DEGREE

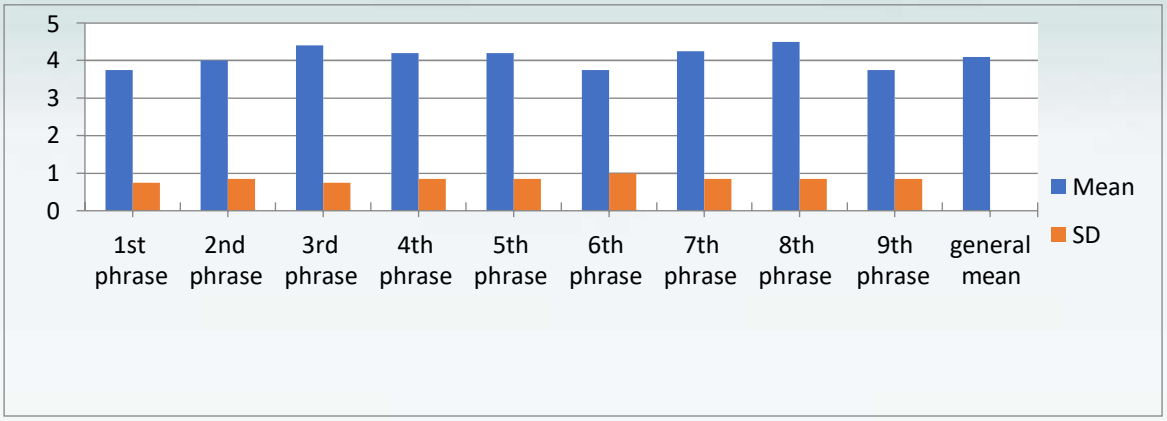


Chart (2) shows means and SD for the 2n dimension phrases of the sample responses.
From the chart (2) it is shown that the 2nd dimension : (the level of instructors conceptions of their responsibility to raise the level of skill awareness towards Coronavirus got a mean of (4.14) corresponding the response score "agree", and the means of the phrases ranged from (4.47) & (1.07), and the mean of the 8th phrase was the highest (4.47), followed by the 3rd (4.40), while the (6th) phrase got a mean of (3.67).

3- What is the level of instructors conceptions of their responsibility to raise the level of healthy awareness to combat Coronavirus?

To answer this question, we depended on the following charter :

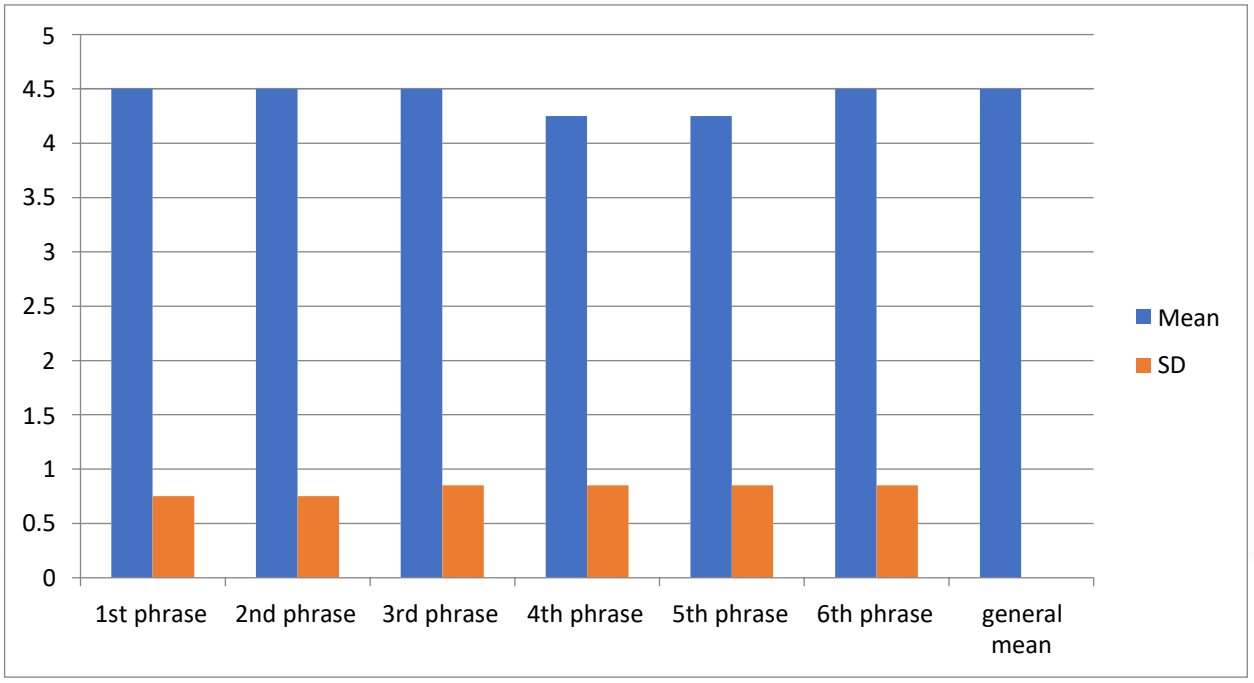


Chart (3) shows means & SD for the 3rd dimension phrases and the sample responses.
From the chart (3). It is shown that the 3rd dimension (the level of instructors conceptions of their healthy responsibility to raise the healthy awareness level to combat Coronavirus, got a mean of (4.5) correspondent to the response score "strongly agree". The means of the phrases ranged from (4.58) & (4.36), corresponded to the response "strongly agree", and the SD ranged between (0.68) & (0.76). the mean of the 6th phrase reached the highest mean (4.58), followed by the 2nd phrase with a mean (4.56) while the 5th one had the least mean (4.36). The results of these questions were consistent with those published by Berlinger et al. (2020) which defined the task of health care, protection and guidance towards practitioners and community during times of emergencies. This results also matched with that of Noor and Jaidin (2017), which introduced many improvements to improve healthy awareness by using strategies centered on instructor and students. It agreed, alike with that of, which indicated that instructors are committed with their health responsibility for raising the level of health awareness to face Coronavirus, through guiding the students to wear masks properly and abide by physical distancing, holding meeting online as

well as performing household tasks. The aims of this question agreed with what Chicago Academy study said (2020) that instructors are being trained due to Coronavirus and incorporating technology into teaching process from the other hand, the aims of this dimension were in general consistent with these of Royal College of Physicians (2021). The Phrases of this questions in particular agreed with what WHO - World Health Organizational (2016) said about the urgent need to care about youth category.

4- What is the level of instructors conceptions about their value and ethical responsibility to raise the value and ethical awareness towards Coronavirus to answer this question, we depended on the following chart :

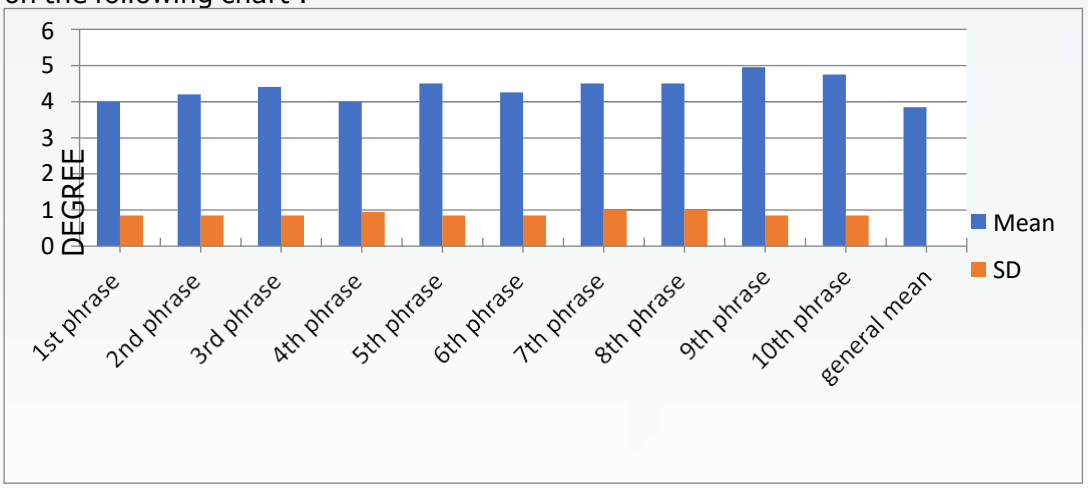


Chart (4) shows mean & SD of the 4th dimension phrases and individual responses.

From the above chart (4), it is shown that the fourth dimension (instructors conceptions about their cognitive responsibilities to raise the value and ethical awareness towards Coronavirus, which got the mean (4.33), correspondent to the score of the response "strongly agree" and "agree". The phrases SD ranged between (0.64) & (0.94) and the mean of the 8th phrase has the highest mean (4.64), followed by the 7th phrase with a mean (4.58), while the 4th phrase had the least mean of (4.05). They also agreed with those of the study of Berlinger et al. (2020), at Hastings Center concerning the need to put a sound framework ethically and focusing on ethics under such conditions, building constant discussions for ethical topics, planning, protection & Guidance this result suits with what UNESCO Digital Library (2020) concerning COVID-19 declaration which decided that policies not based on sound scientific knowledge are not ethical.

5- What are the strategies proposed for the instructors to abide by during teaching online for facing Coronavirus pandemic.

To answer this question we depended on the following chart:

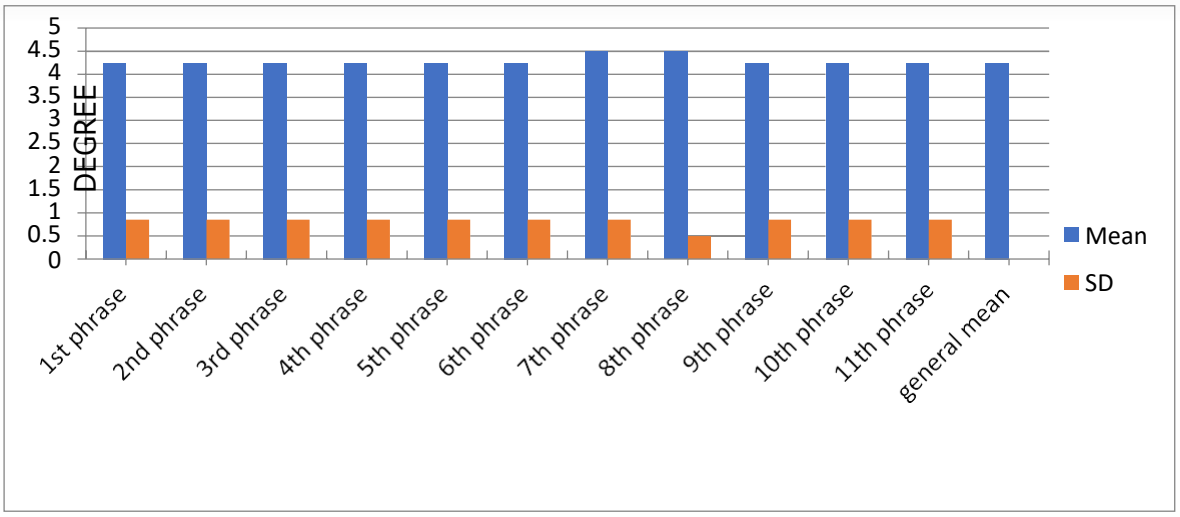


Chart (5) shows the mean and SD of the 5th phrases.

From the above chart, it is shown that the strategies proposed for the instructors to abide by during teaching online to face Coronavirus pandemic got a mean of (4.26), correspondent to the response score strongly agree, and the means of phrases ranged from (4.48) to (4.16) correspondent to "strongly agree" and "agree", and the SD two phrases ranged between (0.65) to (0.80) the mean of the two phrases (7th& 8th) was the highest (4.48), followed by the two phrases (3rd& 11th) with a mean of (4.29), while the 2nd phrase got the least mean (4.16).

6- Is there a difference in the responses of the sample members in their conceptions level of their cognitive responsibility to raise awareness level towards Coronavirus that could be attributed to specialization to answer this question, we use t-tests for the independent sample a shown in the following table.

Table (3)
Present the means & SD, t-test value and level of significance:

Dimensions	Specialization	No.	Mean	SD	T	Freedom score	Significance
Cognitive awareness	Scientific	170	40.241	5.333	.100	355	.921
	Literary	187	40.182	5.880			
Skill awareness	Scientific	170	37.277	5.433	.025	355	.980
	Literary	187	37.262	5.624			
Health awareness	Scientific	170	26.971	3.519	.093-	355	.926
	Literary	187	27.005	3.500			
Value awareness	Scientific	170	43.141	5.897	.419-	355	.675
	Literary	187	43.406	6.035			
Teaching strategies	Scientific	170	46.906	6.164	.099	355	.922
	Literary	187	46.840	6.515			

From the above table, it is shown that:

- There are no differences between those of the specialization "scientific/literary" in their level of conceptions of their cognitive responsibilities to raise the cognitive, skill, healthy and value awareness as well as teaching strategies toward Coronavirus.

The results of this question were inconsistent with those of Asaad, El-Sokkary, Aedh, Alzamanan, and Khalil (2019) study which showed that students of medicine had knowledge better than that of the other health faculties. students Regarding attitude, 50% of the students showed a positive attitude towards Coronavirus syndrome.

7- Is there a difference in the sample members responses in their conception of their cognitive responsibilities for raising awareness level towards Coronavirus that could be attributed to school year? To answer this question, we applied unilateral variance analysis to get the differences according to the school stage of the sample members as shown in the following table :

Table (4):

Dimensions	Analysis	Boxes total	Freedom score	Boxes average	F	Significance
Cognitive awareness	Inter groups	78.051	2	39.025	1.238	.291
	In a group	11161.193	354	31.529		
	Total	11239.244	356			
Skill awareness	Inter groups	34.102	2	17.051	.557	.573
	In a group	10836.082	354	30.610		
	Total	10870.185	356			
Health awareness	Inter groups	83.759	2	41.880	3.457	.033
	In a group	4288.196	354	12.114		
	Total	4371.955	356			
Value awareness	Inter groups	49.578	2	24.789	.696	.499
	In a group	12608.410	354	35.617		
	Total	12657.989	356			
Teaching strategies	Inter groups	120.100	2	60.050	1.497	.225
	In a group	14195.973	354	40.102		
	Total	14316.073	356			

From the table (4), it is shown that:

There are no differences between the means of the responses of the study in the school stages in their level of conceptions of their cognitive responsibilities for raising the level of awareness (cognitive, skillfull, healthy and value), as well as teaching strategies towards Coronavirus. The results of this study agreed with those of Oklahoma State Department of Education (2021), which found that instructors at times of crises and epidemics when they lack online technological teaching techniques can create alternatives through social media or traditional media via public or private T.V. screens. They agreed also with those of Bay et al. (2017) which called for raising awareness and putting programs to prevent primary dangers, it dealt with many school stages for children and adolescents. Yet, what distinguishes our study is defining whether there is difference in the response of the study sample in the level of their conceptions of their cognitive responsibilities to raise awareness level towards Coronavirus that could be attributed to school stage. The study results were also consistent with those of Asaad et al. (2019) study which aimed to study cognition and attitude towards Coronavirus (MERs-Cov) among more than a category (healthy practitioners, students of medicine, students of other health faculties).

Conclusions:

In the light of what this study reached as the researchers reached the following conclusions:

1- High interest of instructors in assuming their cognitive responsibilities to raise the level of cognitive towards Coronavirus through employing the info-graphic (we are all responsible) as a logo for online learning.

2- High interest of instructors in assuming their skillful responsibilities to raise the level of skill awareness towards Coronavirus through training the students on the correct way of wearing masks.

3- High interest of instructors in assuming their responsibilities to raise health awareness to face Coronavirus through ensuring that students following the advices of health care providers through the Ministry of Health.

4- High interest of the teachers of early grades in assuming their responsibilities, ethical and value to raise the awareness level, ethical and value one towards Coronavirus through promoting the skills for facing rumors and avoid displaying clips of alarm among students.

5- That the most important strategies proposed for making the instructor commit with such strategies during teaching online for encountering Coronavirus as represented in : (setting evident work tasks so as to be clear for the targeted students).

6- The study is distinguished from the previous ones in that it dealt with the degree of difference in the responses of the sample in their conceptions level about their cognitive responsibility for raising awareness level towards Coronavirus that could be attributed to specialization and school stage, so, such result can be used in identifying the proper teaching strategies for facing Coronavirus according to specialization and school stage.

Recommendations:

Upon our present results, we present the following recommendations:

1- Incorporating topics on human health and epidemics into curriculums at the different school stages, in particular infectious epidemics which spread via air (COVID-19).

2- It's very important that instructors review the directives of the UNESCO Digital Library (2020) about the correct ways of providing healthy care for those who are suspected to be affected by the virus.

3- Making the most use of the results of the national reports about the extent of Coronavirus outbreak, and incorporate them in the curriculums in a way which achieves awareness and knowledge among the students and instructors.

4- The importance of cooperation between the teacher and the school counselor through providing psychological motivating advices.

5- Using online quizzes by the teachers for students to determine the level of understanding concepts towards coronavirus.
6- The need to practice activities outside classroom such as workshops on the epidemic diseases.
7- Analyzing challenges faced by different educational systems when depending on online learning as an alternative method.

Acknowledgement

The authors extend their appreciation to the Deputyship for Research& Innovation, Ministry of Education in Saudi Arabia for funding this research work through the project number (PNU-DRI-Targeted-20-024)

References:

Al-Rabiaah, A., Temsah, M.-H., Al-Eyadhy, A. A., Hasan, G. M., Al-Zamil, F., Al-Subaie, S., . . . Al-Saadi, B. (2020). Middl
e East Respiratory Syndrome-Corona Virus (MERS-CoV) associated stress among medical students at a university teaching hospital in Saudi Arabia. Journal of infection and public health, 13(5), 687-691. doi:https://doi.org/10.1016/j.jiph.2020.01.005

Allen, M., Burt, K., Bryan, E., Carter, D., Orsi, R., & Durkan, L. (2002). School counselors' preparation for and participation in crisis intervention. Professional School Counseling, 6(2), 96-102. Retrieved from https://www.jstor.org/stable/42732398

Asaad, A. M., El-Sokkary, R. H., Aedh, A. I., Alzamanan, M. A. A., & Khalil, F. O. (2019). Exploring knowledge and attitude toward Middle East respiratory syndrome-coronavirus (MERS-CoV) among university health colleges' students, Saudi Arabia: a cross sectional study. American Journal of Infectious Diseases 15(1), 37-43. doi:https://doi.org/10.3844/ajidsp.2019.37.43

Barry, A. (2021). Equal Opportunity in Education and Employment in Saudi Arabia: Heading in the Right Direction but Challenges Remain. Educational Planning, 28(1), 7-21. Retrieved from https://eric.ed.gov/?id=EJ1284814

Bay, J. L., Hipkins, R., Siddiqi, K., Huque, R., Dixon, R., Shirley, D., Vickers, M. H. (2017). School-based primary NCD risk reduction: education and public health perspectives. Health promotion international, 32(2), 369-379. doi:https://doi.org/10.1093/heapro/daw096

Berlinger, N., Wynia, M., Powell, T., Hester, D. M., Milliken, A., Fabi, R., & Jenks, N. (2020). Ethical framework for health care institutions responding to novel Coronavirus SARS-CoV-2 (COVID-19) guidelines for institutional ethics services responding to COVID-19. The Hastings Center, 12, 1-12. Retrieved from https://www.thehastingscenter.org/ethicalframeworkcovid19/

Eltanahy, M., Forawi, S., & Mansour, N. (2020). Incorporating entrepreneurial practices into STEM education: Development of interdisciplinary E-STEM model in high school in the United Arab Emirates. Thinking Skills and Creativity, 37, 100697. doi:https://doi.org/10.1016/j.tsc.2020.100697

Gouëdard, P., Pont, B., & Viennet, R. (2020). Education responses to COVID-19: Implementing a way forward. OECD Education Working Papers, 12(224), 44. doi:https://doi.org/10.1787/8e95f977-en

Hamedani, Z., Haghani, F., & Kelishadi, R. (2019). Strategies to non communicable diseases prevention improvement from the viewpoints of students in Isfahan: A qualitative research. Journal of education and health promotion, 8, 232. doi:https://dx.doi.org/10.4103%2Fjehp.jehp_218_19

Le, K., & Nguyen, M. (2021). The psychological burden of the COVID-19 pandemic severity. Economics & Human Biology, 41, 100979. doi:https://doi.org/10.1016/j.ehb.2021.100979

Le, K., & Nguyen, M. (2021). The psychological consequences of COVID-19 lockdowns. International Review of Applied Economics, 35(2), 147-163. doi:https://doi.org/10.1080/02692171.2020.1853077

Noor, N. A. H. M., & Jaidin, J. H. (2017). Teaching strategies to raise awareness of non-communicable diseases in secondary schools in Brunei Darussalam. Paper presented at the Proceedings of the International Conference on Education. doi:https://doi.org/10.17501/icedu.2017.3109

Oklahoma State Department of Education. (2021). COVID-19 Resources & FAQs. School Year 2021-22 COVID-19 Guidance. Retrieved from https://sde.ok.gov/newsblog/2020-03-12/coronaviruscovid-19-faqs-oklahoma-public-schools

Readiness and Emergency Management for Schools (REMS) Technical Assistance (TA) Center. (2015). Supporting Continuity of Teaching and Learning During an Emergency. Retrieved from https://rems.ed.gov/docs/Supporting_Continuity_of_learning_and_education.pdf

Royal College of Physicians. (2021). Ethical guidance published for frontline staff dealing with pandemic. Retrieved from https://www.rcplondon.ac.uk/news/ethical-guidance-published-frontline-staff-dealing-pandemic

Sahu, P. (2020). Closure of universities due to coronavirus disease 2019 (COVID-19): impact on education and mental health of students and academic staff. Cureus, 12(4), e7541. doi:https://dx.doi.org/10.7759%2Fcureus.7541

Shanghai American School. (2020). SAS DISTANCE LEARNING PLAN. Retrieved from https://www.saschina.org/uploaded/SAS_Distance_Learning_Plan.pdf

Singh, A., Bassi, S., Nazar, G. P., Saluja, K., Park, M., Kinra, S., & Arora, M. (2017). Impact of school policies on non-communicable disease risk factors–a systematic review. BMC public health, 17(1), 1-19. doi:https://doi.org/10.1186/s12889-017-4201-3

UNESCO Digital Library. (2020). Statement on COVID-19: ethical considerations from a global perspective. Retrieved from https://unesdoc.unesco.org/notice?id=p::usmarcdef_0000373115

WHO - World Health Organizational. (2016). Guidance for managing ethical issues in infectious disease outbreaks. Geneva: World Health Organization. Retrieved from https://apps.who.int/iris/handle/10665/250580

WHO - World Health Organizational. (2020). Key Messages and Actions for COVID-19 Prevention and Control in Schools. Retrieved from https://www.who.int/docs/default-source/coronaviruse/key-messages-and-actions-for-covid-19-prevention-and-control-in-schools-march-2020