Effect of Nursing Intervention on Improving Youth Awareness about Climate Change

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Abstract

Background: Climate change causes a cascade of adverse effects for the physical environment of the planet and the living organisms on the globe. It also poses a threat to the sustainability of health systems performance and development goals through increased pressure from elevated heat, extreme weather events, droughts, changes in length and prevalence of diseases, air and water pollution. Hereafter, education is crucial to promote climate action, it helps young people to be more educated and equipped to understand the complexities of climate science and have more awareness of the dangers of climate change. Hence, this study **aimed** to evaluate the effect of nursing intervention on improving Youth awareness About Climate Change. **Subjects and methods**: A quasi-experimental research design with pre-post test was used, where 124 governmental secondary school students were enrolled using a cluster random sampling technique. Two tools were used for data collection: (1) An Interview questionnaire composed of personal and environmental data, (2) Health Effects of Climate Change Questionnaire composed of two parts (perception about changes in the frequency of disease occurrence related to climate change and the effect of climate change on various health aspects). **Results**: Studied youth were initially unaware (39.5%) about health effects of climate change. Moreover, the most common health aspect for the student's Awareness about the effects of climate change on health was on the physical health. **Conclusion**: Nursing intervention proved to be an adequate tool in improving youth awareness regarding health effects of climate change. **Recommendations**: Health education about climate change ought to be conducted to school students. Moreover, booklet contains information about climate change and its consequences on health should be available on all school based clinics. Furthermore, conducting long-term campaigns in schools related to the impact of climate change on health

Keywords: Climate change, youth, and awareness

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Introduction:

Climate change is widely considered one of the most consequential threats facing humanity today. Not only do the threats posed by this unprecedented problem endanger the sustainability and health of the planet, but they also exacerbate social, economic, environmental, and geographic inequality across generations. Given that the current generation of young people will face the brunt of climate change's consequences as they reach adulthood in the next 10-20 years **(Kessler, 2021)**.

Youth is not just a certain age, but a developmental phase characterized by expanding capacities and broadening perspectives, alongside the personal challenges associated with moving into adulthood **(Fisher, 2016)**. Nowadays, there are 1.2 billion youthful individuals aged 15 to 24 years, accounting for 16 per cent of the worldwide population **(The United Nations, 2023)**. Youth aged 10–24 make up nearly one-third of Egypt's population **(United Nations Population Fund Agency, 2023)**.

Human and natural factors both affect the earth's climate, but the long-term trend observed over the past century can only be clarified by the impact of human activities **(U.S. Global Change Research Program; Fourth National Climate Assessment, 2017)**. This type of climate change is sometimes referred to as anthropogenic, which describe the term of "caused by human beings."). The unchecked burning of fossil fuels over the past 150 years has drastically increased the presence of atmospheric greenhouse gases, particularly carbon dioxide. At the same time, extensive devastation of wetlands, forests, and other carbon sinks natural resources that trap carbon dioxide and keep it from escaping the atmosphere has resulted from logging and construction **(Turrentine, 2022)**.

Climate change causes a cascade of adverse effects for the physical environment of the planet and the living organisms on the globe such as rising sea-level, increasing temperatures, more extreme weather events, increased droughts, storms, flooding and wildfires, diminish in water level, negative agricultural impacts, food insufficiency and pressures on the national economy **(Heshmati, 2020)**. Moreover, it can cause several serious alterations and in the long run affecting human health. There are two primary ways in which climate change impacts human health. Firstly, it alters the severity or occurrence of health problems that people already face. Secondly, by creating new or unexpected health problems in individuals or environments where they have not been before **(Di Napoli et al., 2022)**.

Climate change problems may be seen as opportunities for action and show leadership. Cultural beliefs about knowledge, often guide the interpretation of climate science. In engaging with climate change, young people are implicitly or explicitly entering into debates that involve dissenting from prevailing norms, beliefs, and practices, including financial and social norms like consumption, fossil energy use, and the unjust use of power in decision making **(O'Brien et al., 2018)**. Hereafter, education is crucial to promote climate action, it helps young people understand and address the impacts of the climate crisis, empowering them with the knowledge, skills, values and attitudes needed to act as agents of change **(United Nations Educational, Scientific and Cultural Organization, 2023)**. Individuals

who are more educated may be better equipped to understand the complexities of climate science and have more awareness of the dangers of climate change **(Angrist et al., 2023)**.
Nursing has great potential to create and disseminate climate-related messages that are acceptable to those who are doubtful about climate change **(Butterfield et al., 2021)**. Community health nurses have a crucial role to play in educating the public about climate change and advocating on behalf of those whose lives depend on a healthy planet. Nurses can advocate for areas' having easier access to resources for recovery and emergency assistance. Similarly, they can advocate for and assist vulnerable clients in obtaining health insurance and overcome barriers. Advocating for Building climate-resistant facilities, switching to clean renewable energy, and minimizing their institution's carbon footprint are all important ways that nurses may make a significant contribution to the healthcare system. Advocating for climate change prevention refers to publicly support the sustainable use of resources and for the actions to address climate change in local communities, on governmental levels such as policy writing **(Nsiah et al., 2019)**.

Significance of the study

Climate change is an inevitable and urgent global challenge with long-term implications for the sustainable development of all countries **(United Nations, 2022)**. Climate Change can cause several serious health consequences including re-emergence of some diseases, malnutrition, and health disorders associated with natural disasters **(Abdallah & Farag, 2022)**. On the other hand, World Health Organization (WHO) pointed out that between 2030 and 2050, climate change is expected to cause approximately 250000 additional deaths per year, from malnutrition, malaria, diarrhea and heat stress **(WHO, 2021)**. In this context, **Chi (2021)** pointed out that reducing the impacts of climate change means shifting people lifestyle to achieve low-carbon emissions for a sustainable future. Moreover, **Hickman etal. (2021)** pointed to evidence of widespread worry about Climate change among children and youth. So, Climate change experts declared that increase awareness especially in educational institutions can affect youth perception regarding the causes and effects of Climate change and its related alternative solutions which can minimizing the great environmental and health consequences **(Abdallah & Farag, 2022)**.

Aim of the study

This study aimed to evaluate the effect of nursing intervention on improving Youth awareness About Climate Change**.**

Research hypothesis:

Nursing intervention can positively promote youth awareness regarding climate change**.**

1. Method

1.1. Design

A quasi-experimental design with pre-post test was used to achieve the aim of the present study .

1.2. Setting

The current study was conducted at three governmental secondary schools affiliated to Hehya district, Sharkia Governorate, Egypt. Sharkia Governorate is the 3rd most populous of the governorates of

Egypt. Located in the northern part of the country**.** Sharkia Governorate is mainly agricultural and industrial based area.

1.3. sampling

The study sample involved 124 governmental secondary school students from both sexes, aged 15 to <24 years and free from mental and physical disability or chronic disease**.**

1.4. Sample size

In post intervention phase the awareness of energy saving in every day activates among studied group was 84.1% compared to 66.1% in pre intervention phase (Mikami et al, 2022). Confidence level is 95% with power of study 90%. Sample size was calculated to be 124 participants. Sample size calculated using the Open-Epi, version 3.0 software package**.**

1.5. Tools of data collection: The following two tools were used for data collection:

Tool I: A structured Interview questionnaire

A structured Interview questionnaire was developed by the researchers after reviewing the related literature to collect the necessary data for the study. It composed of three parts**:**

Part I: Personal data as age, sex, residence and academic year.

Part II: This part includes questions such as Have you heard about "climate change"? and the sources of information about climate change.

Part III: Environmental data as being a member of any association that carries out activities related to environmental conservation and environmental exposure to pollutants: This part included 10 questions distributed on three main pollutants as air pollutants (eg: burning wood and other materials for heating or household purposes, dust resulting from vehicle exhaust), water pollutants (eg: throwing waste in canals and water drains, using canals and waterways as a means of collecting waste), and soil pollutants (eg: excessive use of agricultural pesticides and insecticides).

Scoring system: Environmental exposures

Each item checked was scored one. For the total exposure, the scores of the items were summed-up and mean, standard deviation, and median were calculated. Total score of environmental exposures was 10 and classified as follows: no exposure (score zero), and exposure (score 1-10**).**

Tool II: Awareness of Health Effects of Climate Change Questionnaire

The questionnaire was developed by the researcher guided by Sulistyawati etal. (2018), Carter etal. (2021), and Kotcher etal. (2021): It composed of two main parts **:**

(A) Perception about changes in the frequency of disease occurrence related to climate change: this part included questions about diseases associated with climate change as what is your overall perception about diseases due to climate variability in your locality, do you think climate change has an impact on health**?**

(B) The effect of climate change on various health aspects: this part composed of questions about main effects of climate change on health (physical health, mental health & social health)**.**

Scoring system

For each of the items, a correct response was scored one and the incorrect Zero. For each domain and for the total questionnaire the scores of the items were summed-up and the total divided by the number of corresponding items, giving mean scores. Total score for health effects were 20; these were converted into percentage scores. Awareness of the health effects was considered**:**

•High: 60% or more (12-20 point).
•Low: less than 60% (0-11 point).

1.6. Pilot study

A pilot study was carried out on 13 secondary school students (10 % of the total studied sample), to test the feasibility, clarity, comprehensiveness and applicability of the study tools. The students enrolled in the pilot, were included in the main study sample as there was no modifications done.

1.7. Field work

Once permission was granted to proceed with the study, the researcher started to prepare a schedule for collecting the data. The fieldwork was carried out within the period of four months, starting from the beginning of February 2023 to the end of May 2023. The youth empowerment program was carried out on 8 sessions. The researchers utilized various teaching methods as lectures with group discussions, brain storming, mind mapping and problem based learning. Diverse teaching materials were used as power-point presentations, videos and pictures .

Nursing intervention

The intervention was executed through the phases of assessment, planning, implementation, and evaluation.

Assessment phase

This phase involved the pre-program data collection for baseline assessment. The researchers introduced themselves and explained the aim of the study briefly seeking their agreement in the study, and reassured them that information obtained is strictly confidential and would not be used for any purposes other than research. The researchers read and explained each item of the study tools to the students and then recorded his/her response to each item. The time consumed for filling out the study tools ranged from 30 to 45 minutes .

Planning phase

The students' identified needs, requirements and deficiencies were translated into aim and objectives of program and set in the form of an illustrated colored booklet and brochures that was prepared by the researchers and its content was validated by scientific committee and then distributed to each of the studied students as a guide for all of pertinent data related to intervention. Besides some relevant videos and concurrent news and real life situations were prepared as teaching tools .

The nursing intervention program on improving Youth awareness About Climate Change consisted of 8 sessions as follows:

- Session 1: The main objective of this initial session was to explain the aim of the program, Schedule the timetable (twice/week) for each group, clarify the basic roles of the program, and build a positive relationship between the researcher and the students.
- Session 2: In this session the researcher conducted the pre-test using the program data collection tools.
- Session 3**:** This session was to help the students to identify the meaning of climate change, some terms related to climate change, causes of climate change and the features of climate change.
- Session 4: The focus of this session was to realize the relationship between environmental pollution and climate change, and identify examples of some environmental pollutants that have led to climate change.

- Session 5**:** This session involved providing information about the physical effects of climate change on human health.
- Session 6**:** This session involved providing information about the social and psychological effects of climate change on human health.
- Session 7**:** In this session the researcher revised all the information learned during the program, and took the feedback about the program from the students
- Session 8**:** This session was the termination of the program, the researcher conducted the post-test using the same tools of the pre-test to evaluate the effect of the program, and acknowledge the students for their cooperation, good interaction and response, and wished all the best in their life.

Implementation phase

The program was implemented in the study setting twice/week for each group of students. This was intended to give more chance for discussions, and interactions. The total sample was divided into small groups (each group ranged from 4 to 5 students). Also, the researchers ensured that all groups received the same content using the same teaching methods. The sessions took place in specified place equipped with adequate facilities to be held appropriately as good ventilation, comfortable furniture, data show and not noisy**.**

Evaluation phase

Immediately after each session an oral feedback was taken and post-test was done immediately after completion the program by using the same pretest tools to compare the degree of improvement in student's knowledge, attitude, awareness, and behavior after application of the program sessions **.**

Validity and reliability

The tools were revised by a panel of three experts in the fields of community health nursing, medical and surgical nursing, and nursing administration who assessed the tools for clarity, relevance, application, and comprehensiveness. Internal consistency of the tools was assessed by calculating Cronbach's Alpha coefficient (knowledge score was 0.95, attitude score was 0.68 and behavior score was 0.80).

1.8. Ethical Considerations

The study proposal was approved by the Research Ethics Committee (REC), Faculty of nursing, Zagazig university, Egypt (approval ID: M.D.ZU.NUR/115/15/11/2022). The students were informed that their involvement in this study is voluntary and they have the right to refuse or withdraw at any time of data collection as well as the confidentiality and anonymity of the collected data. They were also assured that any obtained information would be used only for research purposes**.**

1.9. Statistical design

Data entry and statistical analysis were done using SPSS 20.0 statistical Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables. In order to identify the independent predictors of the scores of knowledge, attitude, awareness, and behavior, multiple linear regression analysis was used and analysis of variance for the full regression models was done. Statistical significance was considered at p-value <0.05**.**

2. Results

As to personal characteristics of the students in the study sample, 50.8% of students aged 17 years and also were females. Concerning residence, 66.1% of them belonged to rural areas. Considering the source of information about climate change as reported by students, 55.6% of students heard about climate change, and the most common source of their information was social media, TV and the school (45.2%, 29%, 21%) respectively.

Regarding activities related to climate change and environmental protection, **table 1** showed that only 16.1% of students follow environmental protection activities, meanwhile only 2.4% of them are members of environmental NGOs. Also, the study results displays that agricultural activities were the most common practiced school activity to help protect the environment. Totally, 56.5% of students participated in these activities**.**

Concerning exposure to surrounding environmental hazards, **figure 1** showed that the most frequent source of air pollution as reported by the students was from burning agricultural waste (71.0%). Moreover, Waste disposal in canals was the mainly reported water pollutant (87.1%). Meanwhile, the soil was polluted mainly from Pesticides (60.5%). Ultimately, students reported exposure to 1 to 10 environmental hazards. The study demonstrated that 96.8% of students reported environmental exposure to hazards

Table 2 showed that the students' awareness about the relation between climate change and its effect on health has been demonstrated (99.2%) post intervention and the most affected aspect was the physical health (91.1%).

Figure 2 indicates marked improvement in total students' awareness about health effects of climate change post intervention with presence of statistical significant difference between pre and post intervention ($p< 0.001$**).**

Table 3 confirms a statistically significant positive correlation between students' awareness about climate change and number of environmental exposures and number of sources of information which also indicates that the level awareness about climate change increases as exposures to environmental pollutants increases and the number of different sources of information about climate change increases.

Table 4 demonstrates best fitting multiple linear regression model for the score of awareness about hazardous effects of climate change. As shown in this table, school year was statistically significant independent negative predictor of awareness level. Also, this table declares that female gender, active participation in school activities, no. of environmental exposure are statistically significant independent positive predictors of student's awareness about climate change. This result means that being female with higher no. of environmental exposures and the more active participation improves the awareness score. The model explains 52% of the variation in this score as the value of r-square indicates**.**

Table 1: Activities related to climate change and environmental protection as reported by students in the study sample (n=124)

Items	Frequency	Percent
Member in environmental NGOs	3	2.4
Follow environmental protection activities	20	16.1
School has environmental protection activities	23	18.5
School environmental protection Activities:		

Plantation	13	56.5
Awareness raising	5	21.7
Safe waste disposal	3	13.0
More than one	2	8.7
Participate in these activities	13	56.5

*NGO (Non-Governmental Organizations)

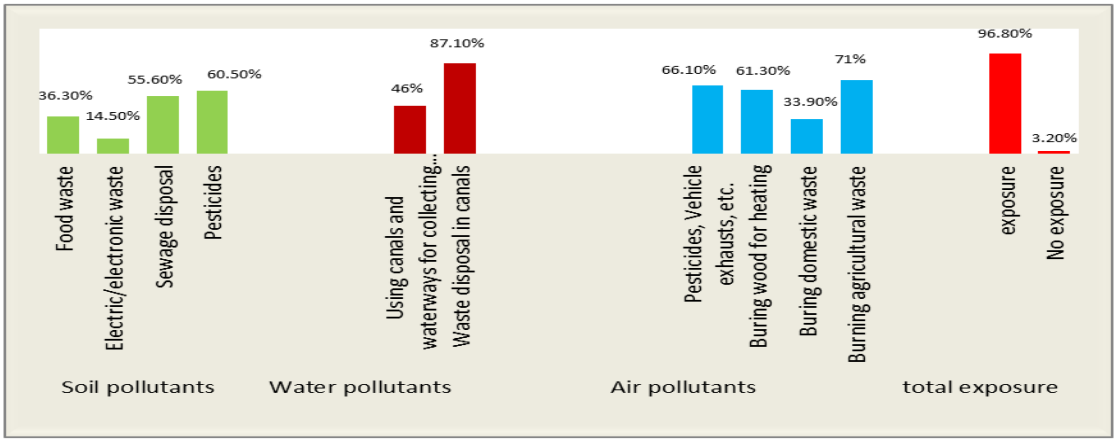

Figure 1. Exposure to surrounding environmental hazards

Table 2: Pre-post students' awareness of health effects regarding climate change.

	TIME				X^2 test	p-value
	Pre (n=124)		Post (n=124)			
	No.	%	No.	%		
Diseases due to climate changes:						
Increase	5	4.0	0	0.0		
Decrease	54	43.5	0	0.0	77.42	<0.001*
No change	65	52.4	124	100.0		
Awareness of the relation between climate change and health:						
High	68	54.8	123	99.2		
Low	56	45.2	1	0.8	68.91	<0.001*
Climate change affects health:						
No	41	33.1	16	12.9		
Yes	83	66.9	108	87.1	14.24	<0.001*
Awareness of the effect climate change and physical health:						
High	62	50.0	113	91.1		
Low	62	50.0	11	8.9	50.49	<0.001*
Awareness of the effect climate change and mental health:						
High	55	44.4	72	58.1		
Low	69	55.6	52	41.9	4.66	0.03*
Awareness of the effect climate change and social health:						
High	87	70.2	87	70.2		
Low	37	29.8	37	29.8	0.00	1.00

Statistically significant at p<0.05

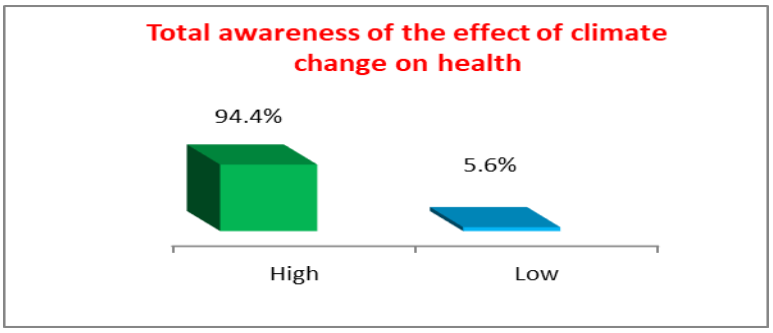

Figure 2: Total students' awareness of health effects regarding climate change.

Table 3: Correlation between students' awareness and their characteristics.

Items	Spearman's rank correlation coefficient
	Awareness
School year	-.144*
Age	-.086
Father education	-.133*
Mother education	-.020
Family income	.121
Crowding index	-.047
Socioeconomic level	.047
No. of environmental exposures	.135*

(*) Statistically significant at p<0.05 (**) Statistically significant at p<0.01

Table 4: Best fitting multiple linear regression model for the score of awareness about hazardous effects.

Items	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	-13.69	25.97		-0.527	0.599	-64.85	37.47
Intervention	5.89	2.96	0.16	1.993	0.047	0.07	11.71
School year	-8.55	2.35	-0.24	-3.646	**<0.001**	-13.17	-3.93
Age	2.92	1.70	0.11	1.719	0.087	-0.43	6.26
Female gender	6.89	1.75	0.19	3.931	**<0.001**	3.44	10.35
Active participation in school activities	9.04	2.20	0.20	4.107	**<0.001**	4.70	13.38
No. of environmental exposures	1.36	0.36	0.17	3.824	**<0.001**	0.66	2.06
Heard about climate change	4.73	2.62	0.11	1.805	0.072	-0.43	9.88

r-square=0.52 Model ANOVA: F=32.76, p<0.001

Variables entered and excluded: SES, residence, NGO membership, active follow-up/participation in activities, number of information sources

3. Discussion

Climate change has emerged as one of the biggest environmental problems facing the world. It refers to the shift in climate patterns mainly caused by Greenhouse gases emissions **(Fawzy et al., 2020)**. Climate change leads to a cascade of side effects that impact the life of plants, animals, and humans. It also causes deleterious health consequences leading to increased morbidity and mortality **(Heshmati, 2020)**.

As to student's characteristics, the current study results revealed that more than half of both study and control groups were females aged 17 years old, belonged to rural areas. In the same stream, **Femi (2023)** implied that 59% of the students at secondary schools in Osun state in Nigeria were females. Also, **Tolppanen and Aksela (2018)** demonstrated that 51% of secondary school students in the study sample were female (with a mean age of 17.6 years). This result finding could be attributed to the fact that there is a relative increase in the number of girls over boys according to the population census, and that girls are more committed and keen to go and attend school than boys.

Considering exposure to surrounding environmental hazards as reported by students, the results of the present study clarified that the majority of the students were exposed to the surrounding environmental hazards. This result can be attributed to that the highest number of students in the study live in rural areas and that most of these areas are surrounded by many different environmental pollutants as burning agricultural waste such as rice straw, spraying pesticides, and dumping sewage waste in canals and waterways. In the same line, a study carried out by **Martenies et al. (2023)** in United States of America revealed that exposures tended to be higher in later years compared with earlier years and combined exposures to environmental hazards and social stressors were at a higher rate.

Pertaining to air pollutants, the present study results demonstrated that most frequent source as reported by students was from burning agricultural waste. This result can be attributed to the fact that most of the students in this study are mostly from rural areas, and according to the nature of these areas, and given that the main activity of the population is agriculture, accordingly resulting waste is sometimes difficult to dispose of, so it is burned. In the same vein, a study conducted in the United States of America by **Kamai et al. (2023)** reported that agricultural burning is an important and underappreciated source of air pollution. A contrary result reported by **Maione et al. (2021)** in Europe clarified that industry and traffic were perceived as the most air polluting sectors, while agriculture and households' activities are seen as the least polluting ones. This discrepancy between results might be attributed to the difference of setting nature.

As for water pollutants, the current study findings clarified that water pollution occurred from waste disposal in canals. This result is in agreement with **Sulaeman et al. (2018)** in Indonesia who demonstrated that the most common source of polluting water was a trash in irrigation canals. However, this finding comes in disagreement with the study of **Li et al. (2016)** in China who indicated that industrial sources were the most common sources of water pollution. Such differences between studies might be attributed to differences in nature of work activities in countries and its resources.

Regarding soil pollutants, the existing study demonstrated that the most common source of soil pollution was from Pesticides. This result might be attributed to the fact that Pesticides are widely used in the world to protect crops from insects, harmful weeds, fungi, and other pests that attack agricultural crops, in addition to their use in combating domestic insects (such as flies and mosquitoes) that transmit human and animal diseases. In contrary, a study conducted in India by **Koul and Taak (2018)** reported that the two most important categories of soil pollutants were heavy metals and organic compounds.

Regarding pre-intervention students' awareness of climate change and its effects on health, more than half of the students had low awareness about climate change and its effect on health. A possible explanation for this result is that awareness reflects student's perception, feelings or being conscious about climate change, on contrary to their knowledge which reflect the facts, information, or experiences they acquired through education. This result goes in the same stream with the finding of a study conducted in Nepal by **Gautam et al. (2021)** which revealed that only ten percent of the secondary level students had adequate awareness on effects of climate change on health. On the other hand, a study by **Sulistyawati etal. (2018)** in Indonesia clarified that senior high school students were aware that climate change has a serious impact on human health. Possible explanation of such discrepancy in the result findings is that the level of awareness of students has a significant impact on what they think how climate change affects human health.

Conversely post-intervention, the majority of the students had high awareness of climate change and its effects on health. In the same line, **Kabir et al. (2015)** in Bangladesh stated that educational intervention for secondary school students achieved a significant increase in the knowledge about climate change health risks.

Moreover, the current study clarified statistically significant positive correlation between awareness level and number of environmental exposure. This result could be attributed to that the vast majority of the students under study were exposed to environmental hazards. The higher the exposure to these hazards, the more this constitutes awareness among the students. Similarly, a study conducted by **Yalçin et al. (2023)** in Turkey stated that the level of awareness of the participants increased as a result of their exposure to many risk factors in their environment.

The existing study demonstrated statistically significant positive correlation between number of sources of information and students' knowledge, awareness, attitude and behavior. This is because the use of various sources of information works to raise the level of awareness and knowledge about climate change, which in turn reflected in gaining a positive attitude and adequate behaviors to reduce climate change. In the same vein, in Malaysia **Masek et al. (2022)** clarified that different sources of information has positively affected the students ' knowledge, increased their awareness and behavioral intention. As well, **Rosenthal (2022)** in Singapore revealed that multiple sources of information offer vicarious experiences of an environmental phenomenon that largely escapes direct perception about climate change.

Additionally, the Existing study revealed negative correlation between students' awareness about health effects of climate change with school year, and father education. This result can be explained by the fact that students in the second stage were more knowledgeable about the topic of climate change than students in the third stage, because the curriculum of the second year contains topics related to climate change. As for the father's educational level, this result is due to the fact that most of the students in

the study had fathers who had little or no education as reported by them. Also, highly educated fathers usually wok either abroad, or in place away from home, or for long hours where there is very little contact with their kids.

In the same line, a study conducted in Nigeria by **Falaye and Okwilagwe (2016)** mentioned that students from homes where fathers have little or no education reported significantly better knowledge and practices than those from educationally advanced homes. In contrast, in **Ofori et al. (2023)** reported that fathers' level of education had no significant influence o n student's perception towards aspects of climate change; also third year students exhibited the best and statistically significant perception about climate change than those in their second year.

Finally, Climate change is one of the most urgent issues facing the international community. Youth are related to climate change in different ways. On the one hand, their security, well-being, and even mental health, will be negatively affected by climate change; On the other hand, they can be seen as environmental stewards for the future through education which helps them understand and tackle the global warming consequences, motivates them to modify their behavior and helps them to adapt to what is already a global threat **(Han & Ahn, 2020)**. Hence, the present study results support the alternate hypothesis that; implementation of empowerment program improved youth knowledge, attitude, behavior and awareness about climate change and its effect on health.

4. Conclusion

The current study results bring about the conclusion that the Studied youth were initially unaware about health effects of climate change. Moreover, the most common health aspect for the student's Awareness about the effects of climate change on health was on the physical health. Meanwhile, Nursing intervention proved to be an adequate tool in improving youth awareness regarding health effects of climate change.

Relevance for Clinical Practice:

Based on the finding of this study, education is a critical agent in addressing the issue of climate change. It can encourage people to change their attitudes and behavior; it also helps them to make informed decisions. In the classroom, young people can be taught the effects of global warming and learn how to adapt to climate change. Education empowers all people, but especially motivates the young to take action. Knowing the facts helps eliminate the fear of an issue which is frequently colored by doom and gloom in the public arena.

On the basis of the current study findings, the study recommended that climate change literacy interventions must be directed to school students. Also, involving students in environmental endeavors as forestation, planting of plants, reducing use of firewood, considerate use of non-renewable resource of energy, waste management, etc. Moreover, booklet contains information about climate change and its consequences on health should be available on all school based clinics. Furthermore, conducting long-term campaigns in schools related to the impact of climate change on health.

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