



EFFECTIVENESS OF PLANNED TEACHING PROGRAM ON KNOWLEDGE AND ATTITUDE REGARDING HEALTH PROBLEM RELATED TO CLIMATE CHANGE AMONG ADULTS IN SELECTED URBAN SLUM AREA AT AGARTALA, WEST TRIPURA

Nursing

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ABSTRACT

Climate change continues to represent one of the greatest threats to the global environment, society and the economy. India is especially vulnerable to climate change due to its geographical position. The objective is to find out the effectiveness of planned teaching program regarding health problem related to climate change among adults. The current investigation was based on Penders' "health promotion model" 1982; revised, 1996. Fifty 50 adults from Ujan Abhoynagar SD (Satellite Dispensary), Agartala, participated in this pre-experimental investigation. For the study, a purposeful sampling strategy was used. A five-point Likert attitude scale, structured interview schedule were used in interviews to obtain pre-test information. Following the implementation of the scheduled planned teaching program, a post-test using the same instrument was administered. The mean post-test knowledge 58.22 ± 5.91 and attitude score 46.44 ± 1.61 were higher than the mean pre-test knowledge 24.32 ± 6.01 and attitude score 37.98 ± 1.77 , as indicated by the paired "t" test values for knowledge and attitude scores, which were 28.97 and 25.63, respectively. A negative correlation $r = -0.05$ was observed between the pre-test knowledge and pre-test attitude scores, although a weak positive association was observed following the post-test knowledge and post test attitude scores $r = 0.25$. At the 0.05 significance level, a significant correlation was seen between the pretest attitude score and educational qualification ' $\chi^2 = 18.97$ ' and the pretest knowledge score with gender alone ' $\chi^2 = 7.78$ '. The findings of the study concluded that planned teaching program were an effective among adults to increase knowledge and improve the attitude regarding health related to climate change.

KEYWORDS

Effectiveness, Planned teaching program, adults, health problems related to climate change.

INTRODUCTION

The United Nations framework convention on climate change (UNFCCC) defines climate change as a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable periods.¹

A report released in 2021 by the United Nations Development Program (UNDP) and Oxford University found that 61% of adults aged 18 to 35 were impacted by climate-related illnesses. 59% of those in the 36–59 age range came next, while 49% of those over 60 years old did the same.²

The World Health Organization (WHO) estimates that 77,000 deaths in Asia and the Pacific region each year are directly or indirectly caused by climate change, accounting for over half of all deaths worldwide. Malnutrition, malaria, diarrhea, and heat stress alone are predicted to account for over 250 000 more fatalities year between 2030 and 2050 as a result of climate change.³

India came the last on the 2022 Environment Performance Index. This raises concerns about how climate change may affect people's social and economic lives in the future.¹¹ India ranked eighth in the Climate Change Performance Index 2023 report, which was just released. This is a two-place increase from the previous edition.⁴

Numerous reviews have shown that climate change would reverse most of the development gains realized in recent years. Researchers also conducted a survey and gathered data indicating that people in urban slum areas are more susceptible to various climate-related illnesses, such as sunstrokes, dehydration, skin allergies, asthma, common colds, and coughs. We also noticed that people, especially adults, are primarily affected in their day-to-day activities by these diseases. A well-planned educational program may help adults learn more, develop a more positive outlook, and avoid health issues associated with climate change.

Objectives

1. To assess the pre test and post test knowledge and attitude regarding health problem related to climate change among adults.
2. To evaluate the effectiveness of planned teaching program regarding health problem related to climate change in terms of knowledge gain among adults.

3. To correlate the knowledge of adults with their attitude regarding health problem related to climate change.
4. To find out the association between pretest knowledge and attitude score with selected demographic variables.

HYPOTHESES

H₁- The mean post-test knowledge score of adults is significantly higher than the mean pretest knowledge score.

H₂- The mean post-test attitude score of adults is significantly higher than the mean pretest attitude score.

H₃- There is significant correlation between the knowledge score of adults with their attitude score regarding health problem related to climate change.

H₄- There is a significant association between the pre-test knowledge and attitude score with selected demographic variables.

METHODS

The pre experimental (one group pre test post-test research design) study was conducted at Ujan Abhoynagar, Satellite dispensary Agartala, Tripura west district. The urban slum area was selected for the study. Total 50 adults (18 to 39 years) were selected by purposive sampling technique for this study.

Data Collection Tool And Technique

A systematic interview schedule and a five-point Likert attitude scale were used to gather data. Demographic information, the structured interview schedule, and a five-point Likert attitude scale were the three components of the structured interview schedule. Multiple-choice questions with a maximum score of 82 were part of the structured interview schedule. Ten (10) statements with a maximum score of 50 and a minimum score of 10 were included in the Likert attitude scale.

After taking consent from adults, pre test knowledge and attitude on health problems related to climate change was conducted which followed by planned teaching program on the same day for consecutively 5 days from 10 adults. With the help of 3 ASHA workers and 1 Anganwadi worker data was collected. After 7 days post test was conducted with the same tool for consecutively 5 days from 10 adults.

The Planned teaching program based information on definition, impact of climate change, causes of disease related to climate change, signs and symptoms and home remedies of diseases related to climate change. Diseases related to climate change like sunstroke, dehydration, skin

allergies and respiratory diseases were included for this study.

Tools were tested for content validity by 9 experts from different fields. The reliability of the tool was established by 'spearman- brown prophecy' method which was 0.81 (knowledge) and 0.71 (attitude).language validity was established.

RESULTS

Table-1: Frequency And Percentage Distribution Of Socio-demographic Data Of Adults. N=50

Sl no	Demographic proforma		Frequency (f)	Percentage (%)
1.	Age (in years)	23-30	35	70%
		31-39	15	30%
2.	Gender	Male	15	30%
		Female	35	70%
3.	Educational qualification	Illiterate.	10	20%
		Primary.	10	20%
		Secondary.	15	30%
		Higher secondary.	10	20%
		Graduation	05	10%
4.	Monthly Income	5k to 15k.	15	30%
		No personal income.	35	70%
5.	Occupation	• House wife	35	70%
		• Driver	5	10%
		• Daily labour	10	20%
6.	Type of house	• Katcha	30	60%
		• Pucca	5	10%
		• Semi pucca	15	30%
7.	Type of sanitation	• Katcha	45	90%
		• Pucca	5	10%
8.	Sources of water	• Public tape	35	70%
		• Hand pump	15	30%
9.	Type of sewage management	• Storage	10	20%
		• Open	40	80%
10.	Previous sources of information	Yes	00	00%
		No	50	100%

Table 1 showing that, maximum 70% of the adults were belongs to age group 23-30 years. maximum 70% of the adults were female, maximum 30% of the adult's educational qualifications were secondary, maximum 70% of the adults monthly income were no personal income, maximum 70% samples of the adults were house wife, maximum 60% of the adults were staying in katcha house, maximum 90% of the adults were using katcha sanitation, maximum 70% of the adults were using public tape, maximum 80% of the adults were using open sewage management, maximum 100% of the adults were did not have any previous sources of information regarding health problems related climate change.

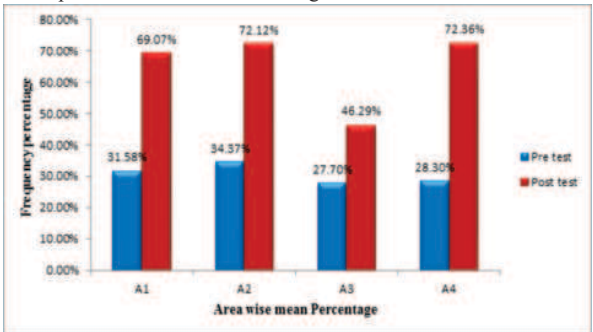


Figure-1: Comparison Between Mean Percentage Of Pre-test And Post-test Knowledge Score Of Among Adults. N=50

NB:

- A1- Introduction, definition, reason and impacts of Climate change.
A2- Causes of diseases related to climate change
A3- Signs and symptoms of diseases related to climate change
A4- Home remedies of diseases related to climate change

Figures 1 showing that in pre-test lowest mean percentage of pre-test knowledge score was 27.70% in the area of A3 and maximum mean percentage knowledge was 34.76% in the area of A2. Whereas in the post-test the lowest mean percentage of post-test knowledge score was 46.29% in the area of A3 and maximum mean percentage score was 72.76% in the area of A4. The data also depicted that the mean percentage of post-test knowledge score in all the four areas were higher than mean percentage of pre-test knowledge score.

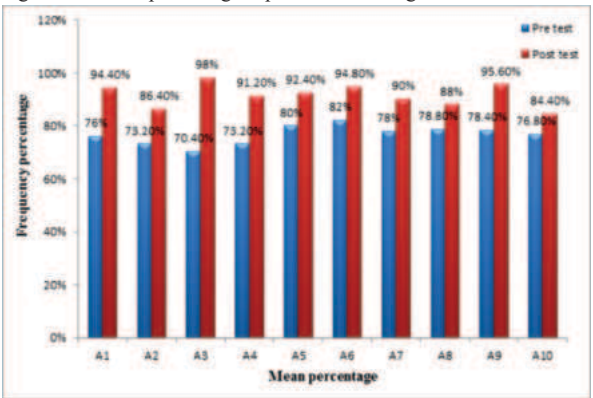


Figure 2- Comparison Between Mean Percentage Of Pre-test And Post-test Attitude Score Of Among Adults. N=50

NB-

- A1- Climate change is one of the reasons for bad human health.
A2- Climate change is uncontrollable.
A3- It is our personal responsibility to control climate change.
A4- Climate change is not a serious problem for animal and plants.
A5- Climate change is happening because of changes in natural atmosphere.
A6- Climate change is happening not mostly because of human activity.
A7- Climate change is punishment of god.
A8- It is not our Moral duty to do something about climate change.
A9- Human activities have significant impact on global temperature.
A10- Climate change is not the single biggest health threat facing humanity worldwide

Figure 2 showing that in the pretest the lowest mean percentage of pre-test attitude score 70.4% in the area of A3 and the maximum mean percentage attitude score was 82% in the area of A6. Whereas in the post-test the lowest mean percentage of post-test attitude score was 84.4% in the area of A10 and the maximum mean percentage attitude score was 95.6% in the area of A9. The data also depicted that the mean percentage of post-test attitude score in all the areas were higher than mean percentage of pre-test attitude score.

Table-2: Mean, Median, Standard Deviation, Mean Differences' Value Of Pre-test And Post-test Knowledge Score Of Among Adults. N=50

Group	Mean	Median	SD	Mean difference	't' value
Pre-test knowledge	24.32	23	6.01	33.9	28.97*
Post-test knowledge	58.22	60	5.91		
Pre-test attitude	37.98	38	1.77	8.46	25.63*
Post-test attitude	46.44	46	1.61		

*= Significant at 0.05 significance level

Table 2 showing that the mean post-test knowledge score and SD were 58.22 ± 5.91 and attitude score and SD were 46.44 ± 1.61 were higher than the mean pre-test knowledge score and SD 24.32±6.01 and attitude score and SD were 37.98±1.77, as indicated by the paired "t" test values for knowledge and attitude, which were 28.97 and 25.63, respectively.

Table-3: Finding The Correlation Between Knowledge And Attitude Among Adults. N=50

Sl no	Variables	Correlation		Remarks	
		Pre- test	Post test	Pre-test	Post-test
1	Knowledge	-0.05	0.25	Negative correlation	Weak positive correlation
2	Attitude			between knowledge and attitude.	between knowledge and attitude

Table 3 revealed that there was a negative correlation ($r = -0.05$) was observed between the pre-test knowledge and pre-test attitude scores, although a weak positive association was observed following the post-test knowledge and post test attitude scores ($r = 0.25$).

Table-4: Chi Square (χ^2) Of Association Between Pre-test Knowledge Scores With Selected Demographic Variables. N=50

Sample characteristics		Below median (<23)	Equal of above median (>23)	Calculated chi square value(χ^2)	df
Age(in years)	23-30	15	20	0.06	1
	31-39	7	8		
Gender	Male	7	20	7.78*	1
	Female	15	8		
Educational qualification	Illiterate	5	5	1.17	2
	Bellow secondary	13	12		
	Above secondary	5	10		
Monthly income	No income	15	20	0.06	1
	5k to 15k	7	8		
Occupation	House wife	15	20	0.06	1
	Daily labor	7	8		

*= Significant at 0.05 significance level

Table 4 revealed that there was a significant association found between pre-test level of knowledge score among adults with their selected demographic variables such as- gender χ^2 value- 7.78 were significant at 0.05 significance level

Table-5: Chi Square (χ^2) Of Association Between Pre-test Attitude Scores With Selected Demographic Variables N=50

Sample characteristics		Below median (<23)	Equal of above median (>23)	Calculated chi square value(χ^2)	df
Age(in years)	23-30	13	22	0.03	1
	31-39	5	10		
Gender	Male	5	10	0.13	1
	Female	13	22		
Educational qualification	Illiterate	5	5	18.97*	2
	Bellow secondary	10	15		
	Above secondary	5	10		
Monthly income	No income	13	22	0.03	1
	5k to 15k	5	10		
Occupation	House wife	13	22	0.03	1
	Daily labor	5	10		

*= Significant at 0.05 significance level

Table 5 revealed that there was a significant association between pre-test level of knowledge score among adults with their selected demographic variables such as- educational qualification χ^2 value- 18.97 were significant at 0.05 significance level.

DISCUSSION

Majority of the adults were female who belongs to age group 23 to 30 years. Majority of the adults occupation was housewife. They lived in kaccha house and use kaccha latrine also.

Researcher also found that adults had poor knowledge in the area of signs and symptoms and home remedies of disease related to climate change. Their attitude was moderately favorable regarding health problems related to climate change.

The planned teaching program was effective to increase the knowledge and improve the attitude of the adults. There was also a weak positive correlation found in the post test knowledge and attitude. A significant association found with knowledge and gender and also significant association found with attitude and educational qualification.

So, from this study researcher wants to highlights that young adults need awareness program to improve their understanding and attitudes towards health risks associated with climate change. The study advocates for educational interventions that can help bridge the knowledge gap and promote more proactive health behaviors in response to climate change-related issues.

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REFERENCES

1. The United Nations Framework Convention on Climate Change (UNFCCC);2014 Internet.Availablefrom:https://en.wikipedia.org/wiki/United_Nations_Framework_Convention_on_Climate_Change.
2. The Economic Times report.Percentage of affected people; 2021. Available from: climate change: 67% population under 18 years in India consider climate change global emergency.)
3. Deaths annually in Asia and Pacific are due to the direct and indirect effect of climate change; 2014.Internet. Available from: <https://www.who.int/india/health-topics/climate-change>.
4. Position of India globally according to climate change performance index 2023; Internet. Availablefrom:https://www.google.com/search?q=The+climate+change+performance+report+2023+index+about+climate+change&rlz=1C1RXQR_enIN1030IN1030&oq=The+climate+change+performance+report+2023+index+about+climate+change&aqs=chrome..69i57j139570758j0j15&sourceid=chrome&ie=UTF-8
5. Bhattacharjee M, Mandal k.(2021). cartoon based information versus traditional teaching for better outcome in oral hygiene among primary school students. Indian J cont Nsg Edn 2022(1), page no-188-192 doi ; 10.4103/igcn.igcn_103_20
6. Kothari. C.(2004).Research methodology.2nd ed. New age international publishers. New Delhi (India).