



A STUDY TO ASSESS THE EFFECTIVENESS OF INFORMATION BOOKLET ON KNOWLEDGE AND ATTITUDE REGARDING HEATWAVES AMONG CARDIAC PATIENTS IN SELECTED HOSPITAL, BANGALORE

Nursing

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ABSTRACT

Background: Heatwave is a well-known weather-related hazard associated with increase in both mortality and morbidity. It is important for all to take care during hot weather, but for some, such as people with heart diseases, there are extra reasons. The study was undertaken to assess the effectiveness of information booklet on knowledge and attitude regarding heat waves among cardiac patients, determine the association between post test knowledge and attitude with selected socio-demographic variables and the correlation between knowledge and attitude. An evaluative approach was selected; one group pretest and posttest was adopted. Purposive sampling technique were used; 60 cardiac patients were selected. Structured Knowledge Questionnaire and Five Point Likert scale to assess the knowledge and attitude respectively, followed by providing information booklet. Posttest was conducted after 7 days. Descriptive and inferential statistics was used for analysing data. The study revealed that there was a statistical significant ($P < 0.05$) reduction in the mean score of knowledge and attitude from the pretest to posttest. This concludes that information booklet is effective in improving the knowledge and attitude regarding heat waves among cardiac patients.

KEYWORDS

Assess; Knowledge; Attitude; Cardiac patients; Information booklet.

INTRODUCTION

Heatwave is a period of abnormally high temperature more than the normal maximum temperature that occurs during summer season for an extended period of time. It is regarded as one of the primary weather-associated threats to human life. In particular, person with cardiovascular or respiratory diseases are at enhanced risk from heat exposure. For instance, in 2003, extreme heat waves caused more than 20,000 deaths in Europe and more than 1,500 deaths in India. Studies have shown people with heart disease or people who are taking medicines for blood pressure or excess fluid, such as diuretics, are at higher risk of heat-related illnesses, heart attack and even death during heat wave. As the temperature rises, the body tries to adapt and balance the heat by increasing blood flow to the skin and by sweating. Sweating leads to dehydration, which reduces the volume of blood being pumped around the body. This makes the heart pump harder in order to circulate the reduced amount of blood around the body. For people with heart disease and those who are at high risk of a heart attack; these changes can overwhelm the heart and result in heart attack. As the researcher's experience in cardiac emergency, ICUs and wards many of the patients arrived with the life threatening conditions with different kinds of heart diseases. The researcher felt that there is lack of knowledge and unfavourable attitude regarding heat waves among cardiac patients and felt the need to give awareness.

OBJECTIVES

To assess the level of knowledge and attitude of cardiac patients regarding heatwaves.

To evaluate the effectiveness of information booklet on knowledge and attitude regarding heatwaves.

To determine the association between the posttest knowledge and attitude of cardiac patients regarding heatwaves with selected socio-demographic variables.

To find the correlation between knowledge and attitude of cardiac patients regarding heatwaves.

HYPOTHESIS

H1:- There is a significant difference between pre-test and post-test knowledge and attitude score among cardiac patients.

H2:- There is a significant association between post test knowledge and attitude score of cardiac patients with selected demographic variables.

H3:- There is significant correlation between knowledge and attitude of cardiac patients regarding heatwaves.

METHODS AND MATERIALS

The study adopted pre-experimental research design of one group pretest and posttest with pre-experimental evaluative

approach. Purposive sampling technique was used to select 60 cardiac patients. A structured questionnaire was used to assess the knowledge and Five Point Likert Scale to assess the attitude. A written consent was obtained from the subjects and pretest done. On the same day after the pretest, information booklet was provided to each patient. Posttest was conducted on the 8th day using the same structured questionnaire and Five Point Likert Scale regarding heatwaves.

FINDINGS

Section I:

Table 1: Assess the pretest knowledge and attitude scores regarding heatwaves among cardiac patients.

Aspects	Statements	Max. Score	Respondents scores (n=60)		
			Mean	SD	Mean(%)
Knowledge	25	25	13.57	2.0	54.3
Attitude	10	50	24.43	4.2	48.9

The above table depicts pretest mean, standard deviation regarding knowledge and attitude regarding heatwaves among cardiac patients. The mean knowledge score is 13.57 (54%) with standard deviation 2.0 (8.1%) and attitude score 24.43 (48.9%) with standard deviation 4.2 (8.4%) indicating inadequate knowledge and unfavourable attitude.

Table 2: Evaluate the effectiveness of information booklet on knowledge regarding heatwaves among cardiac patients.

Aspects	Max. Score	Respondents Knowledge (n=60)				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	25	13.57	2.0	54.3	8.1	27.06*
Post test	25	20.47	2.2	81.9	8.7	
Enhancement	25	6.90	2.0	27.6	7.9	

*Significant at 5% level,

$t(0.05, 59df) = 1.96$

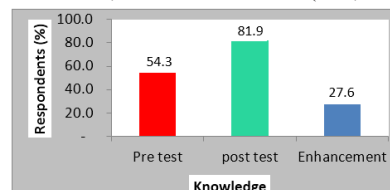


Table 2 shows the overall pre test and post test knowledge of respondents regarding heat waves. The finding reveals that the post test knowledge scores were 81.9% which is significantly higher than pre test score 54.3%. The difference in the mean enhancement score was 27.6% as observed. Further 't' value of the pre test and post test knowledge of the sample was found to be significant at 5% level ($t=27.06^*$). The findings reveal that the information booklet on heat

waves among cardiac patients was effective strategy by the statistical results.

Table 3: Evaluate the effectiveness of information booklet on attitude regarding heatwaves among cardiac patients

Aspects	Max. Score	Respondents Attitude (n=60)				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	50	24.43	4.2	48.9	8.4	35.27*
Post test	50	39.25	3.2	78.5	6.4	
Enhancement	50	14.82	3.3	29.6	6.5	

* Significant at 5% level

t (0.05, 59df) = 1.96

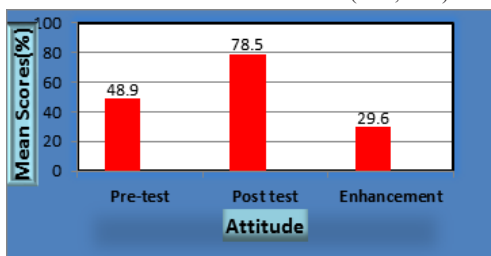


Table 3 shows the overall pre test and post test attitude level of respondents on heat waves. The finding reveals that the mean post test attitude scores were 78.5% which is significantly higher than the pre test score 48.9%. The difference in the mean enhancement score was 29.6% as observed. Further 't' value of the pre test and post test attitude level of the sample was found to be significant at 5% level ($t=35.27^*$).

The findings reveal that the information booklet on heat waves among cardiac patients was an effective strategy by the statistical results.

Table 4: Determine the association between Demographic variables and Post test Knowledge level on Heat waves among Cardiac patients

Demographic Variables	Category	Sample (n=60)	Knowledge Level				χ^2 Value	P Value
			Moderate		Adequate			
			N	%	N	%		
Age group	25-35	18	8	27.8	13	72.2	0.87 NS	P>0.05
	36-45	25	10	40.0	15	60.0		
	46 and above	17	5	29.4	12	70.6		
Gender	Male	42	10	23.8	32	76.2	5.71*	P<0.05
	Female	18	10	55.6	8	44.4		
Religion	Hindu	45	16	35.6	29	64.4	7.60*	P<0.05
	Christian	6	4	66.7	2	33.3		
	Muslim	9	0	0.0	9	100.0		
Educational status	Illiterate	6	3	50.0	3	50.0	8.19*	P<0.05
	Secondary	27	9	33.3	18	66.7		
	Higher secondary	17	8	47.1	9	52.9		
	Graduate	10	0	0.0	10	100.0		
Occupation	Unemployed	14	6	42.9	8	57.1	1.16 NS	P>0.05
	Government	12	4	33.3	8	66.7		
	Self employed	23	6	26.1	17	73.9		
	Others	11	4	36.4	7	63.6		
Type of Family	Joint	11	6	54.6	5	45.4	2.74 NS	P>0.05
	Nuclear	39	11	28.2	28	71.8		
	Extended	10	3	30.0	7	70.0		
Family income/ month	Rs.10,000-20,000	39	12	30.8	27	69.2	1.30 NS	P>0.05
	Rs.20,001-30,000	16	7	43.8	9	56.2		
	Rs.30,001-40,000	5	1	20.0	4	80.0		
Exposure under sun light /day	1-2 hours	40	17	42.5	23	57.5	4.54*	P<0.05
	3-4 hours	20	3	15.0	17	85.0		
Previous knowledge on cardiac disease and heat waves	Yes	10	6	60.0	4	40.0	3.85*	P<0.05
	No	50	14	28.0	36	72.0		

Source of information	Friends	3	0	0.0	3	100.0	11.64* P<0.05
	Mass media	4	4	100.0	0	0.0	
	Others	3	2	66.7	1	33.3	
	Nil	50	14	28.0	36	72.0	
Combined		60	20	33.3	40	66.7	

* Significant at 5% Level,

NS: Non-significant

The association between gender, religion, educational status, exposure under sun light, previous knowledge on cardiac disease and heatwaves, source of information and knowledge was found to be significant.

Table 5: Determine the association between Demographic variables and Post test Attitude level on Heat waves among Cardiac patients

Demographic Variables	Category	Sample (n=60)	Attitude Level				χ^2 Value	P Value
			Moderate		Favourable			
			N	%	N	%		
Age group	25-35	18	7	38.9	11	61.1	0.22 NS	P>0.05
	36-45	25	8	32.0	17	68.0		
	46 and above	17	6	35.3	11	64.7		
Gender	Male	42	11	26.2	31	73.8	4.78*	P<0.05
	Female	18	10	55.6	8	44.4		
Religion	Hindu	45	16	35.6	29	64.4	1.25 NS	P>0.05
	Christian	6	3	50.0	3	50.0		
	Muslim	9	2	22.2	7	77.8		
Educational status	Illiterate	6	6	100.0	0	0.0	16.81*	P<0.05
	Secondary	27	10	37.0	17	63.0		
	Higher secondary	17	5	29.4	12	70.6		
	Graduate	10	0	0.0	10	100.0		
Occupation	Unemployed	14	6	42.9	8	57.1	1.37 NS	P>0.05
	Government	12	3	25.0	9	75.0		
	Self employed	23	9	39.1	14	80.9		
	Others	11	3	27.3	8	72.7		
Type of Family	Joint	11	5	45.5	6	54.5	1.53 NS	P>0.05
	Nuclear	39	14	35.9	25	64.1		
	Extended	10	2	20.0	8	80.0		
Family income/ month	Rs.10,000-20,000	39	15	38.5	24	61.5	2.94 NS	P>0.05
	Rs.20,001-30,000	16	6	37.5	10	62.5		
	Rs.30,001-40,000	5	0	0.0	2	100.0		
Exposure under sun light /day	1-2 hours	40	10	25.0	30	75.0	5.28*	P<0.05
	3-4 hours	20	11	55.0	9	45.0		
Previous knowledge on cardiac disease and heat waves	Yes	10	7	70.0	3	30.0	6.46*	P<0.05
	No	50	14	28.0	36	72.0		
Source of information	Friends	3	3	100.0	0	0.0	9.47*	P<0.05
	Mass media	4	3	75.0	1	25.0		
	Others	3	1	33.3	2	66.7		
	Nil	50	14	28.0	36	72.0		
Combined		60	21	35.0	39	65.0		

* Significant at 5% Level,

NS: Non-significant

The association between gender, educational status exposure under sunlight, previous knowledge on cardiac disease and heatwaves, source of information and attitude was found to be significant.

Table 6: Find the correlation between knowledge and attitude of cardiac patients regarding heatwaves

Aspects	Max. Score	Respondents Scores (n=60)				Correlation coefficient (r)
		Mean	SD	Mean (%)	SD (%)	
Pre test	Knowledge	25	13.57	2.0	54.3	+ 0.604*
	Attitude	50	24.43	4.2	48.9	
Post test	Knowledge	25	20.47	2.2	81.9	+ 0.536*
	Attitude	50	39.25	3.2	78.5	

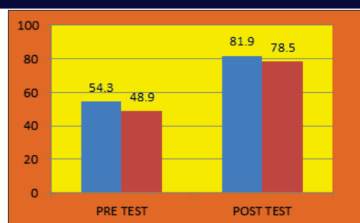


Table 6 shows that there exist a positive significant relationship between knowledge and attitude scores in both pretest and posttest. The finding implies that an increase in knowledge brings about positive change in attitude.

DISCUSSION

Section I: The demographic characteristics of cardiac patients that shows highest percentage with 41.7% in the age group of 36-45years, 70% male respondents, 75% belonging to hindu community, 45% from secondary class, 38.3% self employed, 65% nuclear family, 65% income ranges from Rs.10,000-20,000, 66.7% exposed to sunlight, (83.3%) no previous knowledge and 83.3% receives no information regarding heatwaves.

Section II: There is a significant difference between pretest and posttest knowledge (Pretest 54%, Posttest 81.9%) with 27.6% enhancement of knowledge, paired 't' value of 27.06, found to be highly significant at the level of $p < 0.05$ and attitude (Pretest 48.9%, Posttest 78.5%) with enhancement of 29.6%, paired 't' value of 35.27 and found to be highly significant at the level of $p < 0.05$. Hence, hypothesis (H1) is accepted.

Section III: Certain demographic variables like gender, religion, educational qualification, hours of exposure under sunlight, previous knowledge regarding cardiac disease and heat waves and source of information was significant at 5% level. Certain demographic variables like gender, educational qualification, hours of exposure under sunlight, previous knowledge regarding cardiac disease and heat waves and source of information was significant at 5% level. Hence hypothesis (H2) is accepted for these variables.

Section IV: there exist a positive significant relation between knowledge and attitude score in both pretest ($r = +0.604$) and posttest ($r = +0.536$). Hence hypothesis (H3) is accepted.

CONCLUSION:

From the end result of the study, we concluded that information booklet on knowledge and attitude regarding heatwaves among cardiac is an effective method in improving the knowledge and attitude of cardiac patients regarding heatwaves. Nurses have to emphasize and act as a facilitator to improve the knowledge and attitude of the patients regarding heatwaves. Nursing education should emphasize more on preparing prospective nurses to impart health education by equipping the nursing curriculum with knowledge and attitude regarding dissemination of health information using various educational technology. Nursing administrator can take part in developing protocols regarding health education programmes and encourage innovative ideas, organise sufficient manpower, money and material for disseminating health information.

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