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RISK STATUS OF HYPERTENSION AND LEVEL OF KNOWLEDGE REGARDING PREVENTION OF HYPERTENSION AMONG TEACHING FACULTY WITH A VIEW TO DEVELOP A SELF INSTRUCTION MODULE

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ABSTRACT

The study was undertaken to determine the risk status of hypertension and level of knowledge regarding prevention of hypertension among teaching faculty with a view to develop a self instruction module in selected colleges. This descriptive study reveals that as the level of knowledge regarding prevention of hypertension among the teaching faculty increases, the risk status of hypertension will decrease. The nurses can utilize the self instruction module prepared by the investigator to provide good health teaching promoting life style practices to prevent hypertension.

INTRODUCTION

Hypertension is an iceberg disease. It became evident in the early 1970 itself that only about half of the hypertensive subjects in the general population of most developed countries were aware of the condition, only about half of those aware of the problem were being treated. If this is the situation with highly developed medical services, the proportion treated in developing countries would naturally be far too less. Many risk factors have been identified for hypertension. One of the important elements in the hypertension control is early diagnosis [1].

Need and significance of the study

Epidemiological research has suggested that the work environment, especially work stress, plays an important role in the development of hypertension.

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Long work hours are thought to be linked to hypertension risk related lifestyles and behaviors, including smoking, unhealthy diet and sedentary lifestyle. Furthermore, long work hours expose workers for longer periods of time to noxious psychosocial factors in the work environment, such as job strain and effort-reward imbalance, which are believed to be biological arousal. These risk factors, in turn may lead to permanent physiological changes such as hypertension [2].

About 600 million people were affected with hypertension in World Wide and it causes 5 million premature deaths each year. Cardiovascular diseases will be the largest cause of death and disability by 2020 in India. In 2020 AD, 2.6 million Indians are predicted to die due to coronary heart disease which constitutes 54.1% of all cardiovascular disease deaths.

High blood pressure is now also a global problem. Researchers in a study published recently in Lancet medical journal predicted that one billion people would have high BP by 2027. In 2000 the number of people with blood pressure reading exceeding 140/90 mm

stood at 972 million.

India is now the country with the most people with high blood pressure in the world. Over 10 crore Indian adults presently suffer from high BP the measure of the force of blood against the wall of the arteries. A silent killer that has become the single most important factor causing strokes, heart attacks, diabetes, blindness and paralysis, high BP affects 30% of the country's urban population and 10% of the rural folk [3].

Hypertension awareness, treatment and control are major health promotion initiatives spurred on by the Joint National Committee for Detection, Evaluation and Treatment of High Blood Pressure. Treating hypertension almost always involves making lifestyle changes to control risk factors.

In a primary care practice or other health care provider the Nurse practitioner can have a positive impact on prevention and management of hypertension through patient education and counseling. The Nurse practitioner performs the initial evaluation and sets up a care plan that includes primary and secondary prevention strategies (American Heart Association, 2000).

STATEMENT OF THE PROBLEM

A study to determine the risk status of hypertension and level of knowledge regarding prevention of hypertension among teaching faculty with a view to develop a self instructional module in selected colleges, kanyakumari District.

REVIEW OF LITERATURE

Oparil, et al. (2000) compared hypertension control rates and the distribution of hypertensive subtypes observed in physician's Assessment of the Treatment of hypertension survey (PATH) with results from the Third National Health and Nutritionexamination survey (NHANES III).

Yekken, et al. (2003) undertook a study to determine the proportions of patients with hypertension are obese and have elevated serum cholesterol. The data of two hundred and fifty patients who attended the outpatient clinics of the university college Hospital, Ibadan from January 1998 to December 2001 were analyzed.

Yang, et al. (2006) by California Health Interview survey analyzed the work hours and self reported hypertension among the working population in California. The logistic regression analysis shows a positive association between hours worked per week and likelihood of having self-reported hypertension.

Vlcek, et al. (2008) determined the association between hypertensive urgencies and subsequent cardiovascular events in patients with hypertension. Over all 384 patients were with hypertensive urgency and 295 control patients were followed up for at least 2 years. Here hypertensive urgency was defined as a systolic blood pressure above 220 mm Hg and / or a diastolic blood pressure above 120mm Hg with out any evidence of acute end organ damage.

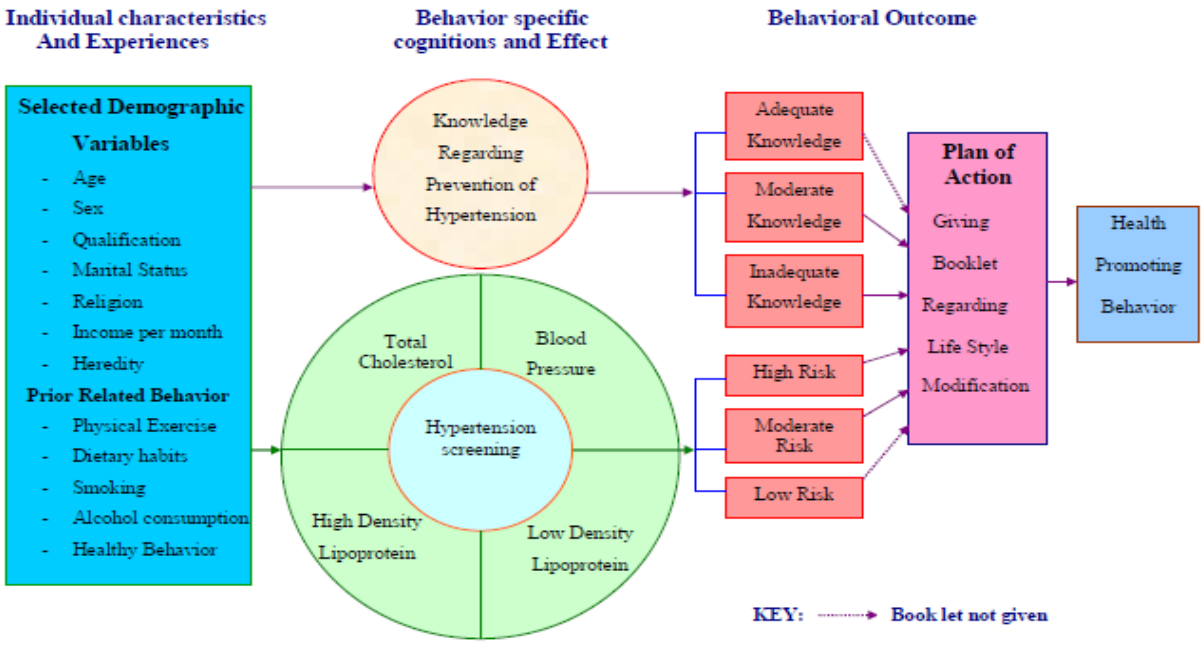

Figure 1. Conceptual Frame Work of N.J.Pender, C.L.Murdaugh and M.A.Parsons, (2002) Modified Health Promotion Model

SECTION I

Data on selected demographic variables of the teaching faculty.

Table 1. Frequency and percentage distribution of selected demographic variables.

(n = 30)

Sl. No	Selected Demographic Variables	Frequency	Percentage
1.	**Age**		
	Below 45 years	18	60%
	45 – 55 years	11	37%
	Above 55 years	1	3%
2.	**Sex**		
	Female	9	30%
	Male	21	70%
3.	**Qualification**		
	Graduate	0	0%
	Post graduate	26	87%
	Doctorate	4	13%
4.	**Marital Status**		
	Single	6	20%
	Married	24	80%
5.	**Religion**		
	Christian	12	40%
	Hindu	17	57%
	Muslim	1	3%
6.	**Income per month**		
	Below 5 thousand	0	0%
	5 thousand – 10 thousand	8	27%
	11 thousand - 15 thousand	10	33%
	Above 15 thousand	12	40%
7.	**Heredity**		
	Family history of hypertension	11	37%
	No family history of hypertension	19	63%
8.	**Physical Exercise**		
	Exercise regularly	7	23%
	No regular Exercise	23	77%
9.	**Dietary Habits**		
	Vegetarian	2	7%
	Non Vegetarian	28	93%
10.	**Smoking**		
	Chain smoker	0	0%
	Smoker	11	37%
	Non Smoker	19	63%
11.	**Alcohol consumption**		
	Alcoholic	0	0%
	Occasionally	5	17%
	Non Alcoholic	25	23%
12.	**Healthy Behavior (**Like regular medical checkup, reading and hearing health tips)		
	Health seeking behavior	15	50%
	No Health seeking behavior	15	50%

Table 1 shows that out of 30 samples selected for study, majority (60%) of the samples were in the age group of below 45 years, 70% of the samples were male, 87% of the samples were post graduates, 80% of the samples were married, 57% belongs to Hindu religion, 40% of them had their income above 15 thousand, 63% had no family history of hypertension, 77% had no regular exercise, 93% were non vegetarian,63% of them were non smokes, 83% were non alcoholic and 50% of them had health seeking behavior and 50% of them had no health seeking behavior.

SECTION II

Figure 2 shows that 63% of the samples had low risk for hypertension and 7% of the sa 40 id high risk for hypertension.

SECTION IV

Table 2. Association between Risk status of hypertension and selected demographic variables

Category	Risk status of Hypertension						Total		χ^2	Table value
	Low Risk		Moderate Risk		High Risk					
	F	%	F	%	F	%	F	%		
1. Age										
Below 45 years	12	40	6	20	0	0	18	60		
45 – 55 years	6	20	3	10	2	7	11	37	4.226#	9.49
Above 55 years	1	3	0	0	0	0	1	3		
2. Sex										
Female	6	20	1	3	2	7	9	30	6.218*	5.99
Male	13	43	8	27	0	0	21	70		
3. Qualification										
Graduate	0	0	0	0	0	0	0	0		
Post graduate	15	50	9	30	2	7	26	87	2.672#	9.49
Doctorate	4	13	0	0	0	0	4	13		
4. Marital Status										
Single	3	10	2	7	1	3	6	20	1.363#	5.99
Married	16	53	7	23	1	3	24	80		
5. Religion										
Christian	7	23	4	13	1	3	12	40		
Hindu	12	40	4	13	1	3	17	57	2.869#	9.49
Muslim	0	0	1	3	0	0	1	3		
6. Income Per month										
Below 5, 000	0	0	0	0	0	0	0	0		
5,000 to 10,000	4	13	3	10	1	3	8	27	2.125#	12.59
11,000 to 15,000	6	20	3	10	1	3	10	33		
Above 15,000	9	30	3	10	0	0	12	40		
7. Heredity										
* Family History of Hypertension	7	23	4	13	0	0	11	37	1.393#	5.99
* No family history of hypertension	12	40	5	17	2	7	19	63		
8. Physical Exercise										5.99
* Exercise regularly	4	13	3	10	0	0	7	23		
* No regular Exercise	15	50	6	20	2	7	23	77	1.167#	

9. DietaryHabits										
* Vegetarían										
* Non Vegetarían	1 18	3 60	1 8	3 27	0 2	0 7	2 28	7 93	0.489#	5.99
10. Smoking										
* Chain smoker	0	0	0	0	0	0	0	0		
* Smoker	0	0	9	30	2	7	11	37	30.000*	9.49
* Non smoker	19	63	0	0	0	0	19	63		
11. Alcohol consumption										
* Alcoholic	0	0	0	0	0	0	0	0		
* Occasionally	3	10	2	7	0	0	5	17	0.611#	9.49
* Non - Occasionally	16	53	7	23	2	7	25	83		
12. Healthy Behavior										
* Health seeking behavior	9	30	5	17	1	3	15	50		
* No health seeking behavior	10	33	4	13	1	3	15	50	0.164#	5.99

Note:

Healthy behavior includes regular medical checkup, reading and hearing health tips

* Significant at 0.05 level.

Not significant at 0.05 level.

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SECTION V

Table 3. Association between level of knowledge regarding prevention of hypertension and demographic variables (n = 30)

Category	Risk status of Hypertension						Total		χ^2	Table value
	Low Risk		Moderate Risk		*High Risk*					
	F	%	F	%	F	%	F	%		
1. Age										
35 – 45 years	4	13.3	11	37	3	10	18	60		
45 – 55 years	6	20	4	13	1	3	11	37	4.862#	9.49
Above 55 years	1	3.3	0	0	0	0	1	3		
2. Sex										
Female	7	23.3	1	3	1	3	9	30	9.863*	5.99
Male	4	13.3	14	47	3	10	21	70		
3. Qualification										
Graduate	0	0	0	0	0	0	0	0		
Post graduate	9	30	13	43	4	13	26	87	0.839#	9.49
Doctorate	2	7	2	7	0	0	4	13		
4. Marital Status										
Single	1	3.3	4	13.3	1	3	6	20	1.297#	5.99
Married	10 16	33.3 53	10 7	12 23	3 1	10 3	24	20 80	1.363#	5.99
5. Religion										
Christian	4	13.3	7	23	1	3	12	40	2.431#	9.49
Hindu	6	20	8	27	3	10	17	57		
Muslim	1	3.3	0	0	0	0	1	3		

6. Income Per month										
Below 5, 000	0	0	0	0	0	0	0	0		
5,000 to 10,000	3	10	4	13.3	1	3	8	27	1.486#	
11,000 to 15,000	5	17	4	13.3	1	3	10	33		12.59
Above 15,000	3	10	7	23	2	7	12	40		
7. Heredity										
* Family History of Hypertension	7	23.3	3	10	1	3	11	37		
* No family history of hypertension	4	13.3	12	40	3	10	19	63	5.474#	5.99
8. Physical Exercise										
* Exercise regularly	2	7	3	10	2	7	7	23	1.846#	5.99
* No regular Exercise	9	30	12	40	2	7	23	77		
9. DietaryHabits										
* Vegetarían	0	0	2	7	0	0	2	7	2.143#	
* Non Vegetarían	11	37	13	43	4	13	28	93		5.99
10. Smoking										
* Chain smoker	0	0	0	0	0	0	0	0		
* Smoker	2	7	6	20	3	10	11	37	4.221#	9.49
* Non smoker	9	30	9	30	1	3	19	63		
11. Alcohol consumption										
* Alcoholic	0	0	0	0	0	0	0	0		
* Occasionally	0	0	5	17	0	0	5	17	6.000#	9.49
* Non - Occasionally	11	37	10	33	4	13	25	83		
12. Healthy Behavior										
* Health seeking behavior	5	7	23	3	10	15		50	1.158#	
* No health seeking behavior	6	8	7	1	3	15		50		5.99

Note: Healthy behavior includes regular medical checkup, reading and hearing health tips

* Significant at 0.05 level.

Not significant at 0.05 level.

Table 3 shows that only sex had a significant association with the level of knowledge regarding prevention of hypertension.

SECTION VI

Table 4. Relationship between risk status of hypertension and level of knowledge regarding prevention of hypertension. (n=30)

Risk status of Hypertension		Level of knowledge		CoefficientofCorrelation
Mean	**S.D**	**Mean**	**S.D**	
6.4	2.8479	14.1	3.3667	-0.472

Table-4 shows that there exist perfect negative correlations between level of knowledge regarding prevention of hypertension and risk status of hypertension.

Figure 2. Percentage distribution of risk status of hypertension

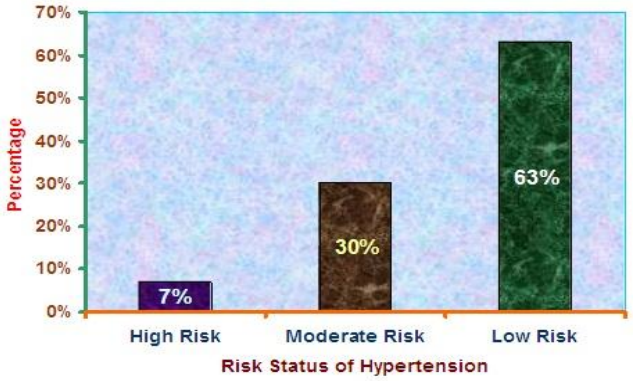
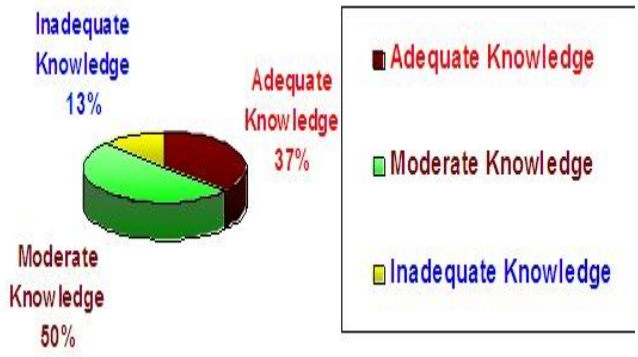


Figure 3. Percentage distribution of the level of knowledge regarding prevention of hypertension



SIGNIFICANT FINDINGS AND DISCUSSION

Sample characteristics of the teaching faculty

The data obtained from table(1) shows that majority of the sample characteristics of the teaching faculty was 60% belongs to the age group below 45 years, 70% of the samples were males, 87% of the samples were postgraduates, 80% of the samples were married, 57% of them belongs to Hindu religion, 40% of them had their income above 15 thousand, 63% of the samples had no family history of hypertension, 77% of the samples had no regular exercise, 93% of them were non-vegetarian, 63% of them were non smokers, 83% of them were non alcoholic and 50% of them had health seeking behaviors and no health seeking behaviors like regular medical checkup, watching, hearing and reading health tips.

The first objective of this study was to determine the risk status of hypertension among teaching faculty in selected colleges.

On analyzing the data on risk status of hypertension among teaching faculty, figure (2) reveals that 63% of the samples had low risk for hypertension, 30% of the samples had moderate risk for hypertension and 7% of the samples had high risk for hypertension.

The second objective of this study was to assess the level of knowledge regarding prevention of hypertension among teaching faculty in selected colleges.

On analyzing the data on level of knowledge regarding prevention of hypertension among teaching faculty, figure (3) reveals that 50% of the samples had moderate knowledge, 37% of the samples had adequate knowledge and 13% of the samples had inadequate knowledge.

The third objective of this study was to find out the association between the selected demographic variables and risk status of hypertension among teaching faculty in selected colleges.

The data obtained from the table (2) shows the association between risk status of hypertension and selected demographic variables. In the association between risk status of hypertension and age, chi-squarevalue is 4.24 with 4df, P>0.05 level, hence there was no significant association between age and risk status of hypertension. In the association between risk status of hypertension and sex, chi-square value is 6.218 with 2df, P<0.05 level, hence there exist a significant association between sex and risk status of hypertension.

The fourth objective of this study was to find out the association between the selected demographic variables and the level of knowledge regarding prevention of hypertension among teaching faculty in selected colleges.

The association between level of knowledge regarding prevention of hypertension and selected demographic variable were listed in table (3). In the association between age and level of knowledge regarding prevention of hypertension, chi-squarevalue is 4.862 with 4df, P>0.05 level, hence there exist no association between age and level of knowledge regarding prevention of hypertension. In the association between sex and level of knowledge, the calculated chi-squarevalue is 9.863 with 2df, P<0.05 level, hence there exist a significant association between sex and level of knowledge regarding prevention of hypertension.

The fifth objective of this study was to find out the relationship between the level of knowledge regarding prevention of hypertension and the risk status of hypertension among teaching faculty in selected colleges.

Coefficient of correlation was used to find the relationship between risk status of hypertension and level

of knowledge regarding prevention of hypertension which was listed in the table (4). The mean value of the level of knowledge is 14.1 and the standard deviation is 3.3667, where as the mean value of risk status of hypertension is 6.4 and the standard deviation is 2.8479. The coefficient of correlation between risk status of hypertension and level of knowledge regarding prevention of hypertension is – 0.472.

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