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Study to Assess the Knowledge and Attitude Regarding Lifestyle Modifications to Prevent Hypertension among Bank Employees in Selected Banks at Delhi

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Abstract*— Hypertension is one of the most important cause of premature death worldwide and problem is growing so rapidly that in 2025 an estimated 1.56 billion adults will be living with hypertension. Hypertension kills nearly 8 million people every year, worldwide and nearly 1.5 million people each year in the south east Asian (SEA) region, approximately one third of the adult population in SEA region has high pressure. Objective: To assess the knowledge and attitude regarding lifestyle modification to prevent hypertension among bank employees. Methods and Material: Survey research design was used. 100 bank employees were included from selected banks of Delhi by convenient sampling technique. Structured knowledge questionnaire and attitude scale were used to assess the knowledge and attitude regarding lifestyle modification to prevent hypertension. Result: The mean knowledge and attitude scores were 14.34 and 13.85. Conclusion: The above findings clearly depict that the study subjects were knowledge deficit regarding lifestyle modifications to prevent hypertension.

Keywords*— Knowledge, Attitude, Lifestyle Modification, Hypertension, Bank Employees.

I. INTRODUCTION

"Healthy is not just a goal, it is a way of living".

- Natalie Cole

"The main cause of hypertension in each and every human is the pressure to achieve his goals of life

- Ashoonly

Hypertension is one of the most prevalent non-communicable diseases and the most important preventable risk factor for premature death worldwide, being responsible for an estimated 45% of death due to heart disease and 51% of deaths due to stroke globally.[1]Hypertension is becoming a public health emergency worldwide, especially in the developing country like India. The banking industry in India is very competitive and is the hub of economic activities in the country. The job of bank employee is both sedentary in nature and accompanies high levels of mental stress, thereby at a higher risk of developing hypertension. Prevalence of hypertension among bank employees and other workers with occupations with a similar sedentary pattern has been found to be higher. A study has observed a prevalence of 69.5% among bankers in a district in India. In this study, hypertension was associated with mental stress.[2] The associated risk factors of hypertension include genetic or strong family history and other factors which include increasing age, obesity, smoking/use of tobacco, diabetes mellitus, dietary consumption of high salt content and saturated fat, sedentary lifestyle, stressful life, poor sleep and pregnancy.[3]

Prevention is better than cure. Hypertension is the most important risk factor for cardiovascular disease, the consequences of which include death, stroke, and myocardial infarction. Hypertension is also an important risk factor for chronic kidney disease, left ventricular hypertrophy and congestive heart failure. Severe and acute elevations in blood pressure may cause encephalopathy, retinopathy, acute decompensate congestive heart failure, aortic dissection, and acute kidney injury. Globally, hypertension accounts for 13% of all deaths, 51% of deaths from stroke, 45% of deaths from ischemic heart disease and 4% of disability-adjusted life years lost. So, there is need to provide attention on studies on prevention of hypertension.[4]

Hypertension is one of the most important cause of premature death worldwide and problem is growing so rapidly that in 2025 an estimated 1.56 billion adults will be living with hypertension. Hypertension kills nearly 8 million people every year, worldwide and nearly 1.5 million people each year in the South East Asian (SEA) region, approximately one third of the adult population in SEA region has high pressure however, in many of these countries the control rates of high blood pressure actually slowed in the last few years.[5]

As per the findings of a study on bank employees, the prevalence of hypertension among bank employee was 31.3%, the prevalence among males was 38.2% and among females, it was 9.7%. The results of the study also signified that increase in prevalence of hypertension was statistically significant in Karnataka. The prevalence of hypertension was

39.39% among sedentary subjects, 55.10% among mild physical active subjects, 20.69% among moderate active subjects and among vigorous active subjects it was 4.92%. This difference was statistically significant.[6]

A study was conducted on Lifestyle modification and hypertension prevention show lifestyle factors such as dietary behaviours and physical activity are associated with hypertension. Several studies have indicated direct and indirect association between overweight and increased risk of hypertension. Increased consumption of grains, fruits, vegetables, and milk and reduced consumption of sodium, fat, and alcohol are effective in preventing and controlling hypertension. In addition, some studies have reported 35% reduction in risk of developing hypertension among individuals who engage in regular physical activity compared to sedentary people and it was concluded that since lifestyle- and diet-related factors are often modifiable, perceptions of their effects have specific importance in hypertension prevention and treatment.[7]

The estimate data is signifying that prevalence of hypertension may increase in countries like India. Hypertension has emerged as a major health problem in India that needs to be concerned. There is sufficient clinical and epidemiological evidence that hypertension is increasing in India, especially in bank employee. Many studies have reported prevalence of hypertension among bank employee has increased in the recent years because of several reasons. The bank employees are living under an increased risk of hypertension for them. Most of the employee's lack knowledge regarding hypertension and lifestyle modifications for prevention of hypertension. In the background of the above and keeping all the related facts in mind, it suggests that there is a need to explore the knowledge and attitude of bank employees in order to educate them about prevention and lifestyle modification for hypertension.[8]

A study was conducted on hypertension among the bank employees of Meerut district of Uttar Pradesh. The objective of this study was to evaluate the level of awareness, prevalence and management of hypertension among bankers. 100 samples were selected for the study. Questionnaire was used to collect data using purposive sampling technique. The study reported a prevalence of69.5% among bankers in a district in India. The study reported that hypertension was associated with mental stress. Job strain has also been similarly found to be significantly related to hypertension with an odds ratio of (1.18). Bank staffs are under intense pressure of work with little time to care for their bodily needs.[9]

A prospective and descriptive study was conducted on 1000 diagnosed hypertensive patients at medical outdoor department of Liaquat University of Medical and Health Sciences (LUMHS) in Pakistan. Appointed medical persons questioned the patients assessing various factors as lifestyle and risk factors. The special case sheets were prepared, containing all the information as name, age, sex, address, family history, personal history, marital status of the patients. Case sheets were containing special questionnaire to study the knowledge about hypertension, its control and complications. Results were analyzed by SPSS 10. The age of patients ranged from 19 years to 95 years with mean age of 50.5 years and median age of 47.5 years. 48% patients belonged to grade 1 education grade, 32% belonged to grade 2, 13% belonged to grade 3, and 7% belonged to grade 4. 10% patients can explain the hypertension, mostly in higher education grade. 76% patients can tell that salt is not good for hypertension. 22% patients had good compliance about the drugs. 50% can say good control is advantageous for health. 6% have knowledge about complications. The study concludes that a significant proportion of hypertensive patients have poor knowledge about hypertension.[10]

A qualitative phenomenological survey was conducted in Auchiin Niger Delta region in Nigeria with 108 randomly selected hypertensive, to determine hypertensive patients' knowledge, perceptions, attitudes and life-style practices so as to optimize their health and treatment needs. They examined by means of a self-structured questionnaire and a detailed interview. Analysis was by statistical package for social sciences (SPSS) and chi-square of the Graph Pad Prism software was used for significance tests at 0.05 level. More males 60 (55.6%) than females 48 (44.4%) were assessed. Their age range was 35 – 80 years (mean = 59.05 ± 9.06 years), the modal age group was 56 – 60years (24.1%). Sixty-six respondents (61%) knew hypertension to be high blood pressure (BP), 22 (20%) thought it meant excessive thinking and worrying while 57 (53%) claimed it was hereditary. Forty-three (40%) felt it was caused by malevolent spirits, 32 (30%) believed it was caused by bad food or poisoning. A few (18%) knew some risk factors. Symptoms attributed to hypertension were headache, restlessness, palpitation, excessive pulsation of the superficial temporal artery and "internal heat", but 80 (74%) attested to its correct diagnosis by BP measurement. Although 98 (90.7%) felt the disease indicated serious morbidity, only 36 (33.3%) were adherent with treatment and fewer practiced life-style modification. Thirty-two (30%) knew at least one antihypertensive drug they use. Psychosocial factors like depression and anxiety fear of addiction and intolerable drug adverse effects impacted negatively on patients' attitude to treatment. They conclude that patients' knowledge of hypertension in Auchi is low and their attitudes to treatment negative. Patient education, motivation and public enlightenment are imperative.[11]

A study was conducted to assess the knowledge, attitude and practices of hypertensive patients on life style modification to control hypertension at JUSH (Jimma University Specialized Hospital). A prospective cross-sectional descriptive study design was used to determine the knowledge, attitudes and practices of

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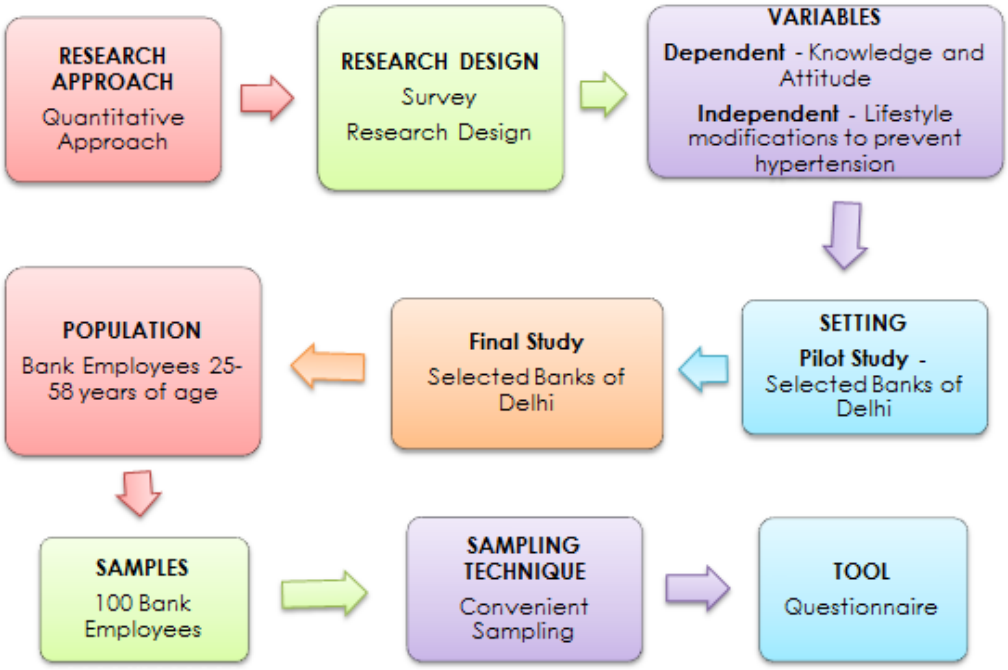
hypertensive patients with respect to importance of lifestyle modification in the management of hypertension. 130 patients with hypertension were identified and interviewed using questionnaire. The results signified that out of the 130 participants, majority (57.7%) were females. 80% of participants said they avoid salt in their diet and 15% 0f them drink alcohol. 59.2% know the ideal BP and 67.7% believe the fact that exercise reduces BP. Only 1.5% of them were smoking and large majority (94.6%) were having salt restriction. Majority (90.7%) of them reported that health care provider taught them about danger of too much salt. The results of this study indicate that although patients do receive advice on lifestyle modification, it was not enough and effective in changing patient behavior, knowledge and practice.[12]

II. MATERIAL AND METHODS



III. DATA ANALYSIS AND INTERPRETATION

SECTION A: Demographic Characteristics of Study Subjects

- This section consisted of 100 Bank employees 25-58 years of age of selected banks of Delhi. Frequency and percentage were computed for describing the sample characteristics.Age, Religion, Marital Status, Employee's Education, Employee's Occupation Place, Employee's Income (Annual Income), Ever attended any educational programme on Hypertension.

Table 1-Frequency and Percentage distribution of sample characteristics (N=100)

Sr. No.	DEMOGRAPHIC VARIABLES		DEMOGRAPHIC VARIABLES	FREQUENCY	%
1)	Age (in years)	a.	25-33	**20**	**20%**
		b.	34-41	**50**	**50%**
		c.	42-49	**20**	**20%**
		d.	50-58	**10**	**10%**
2)	Religion	a.	Hindu	**60**	**60%**
		b.	Muslim	**20**	**20%**
		c.	Christian	**20**	**20%**
		d.	Others	-	-

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3)	**Marital Status**	a.	Married	**80**	**80%**
		b.	Unmarried	**10**	**10%**
		c.	Divorced/ Separated/ Widow	**10**	**10%**
4)	**Employee's Education**	a.	Graduation	**60**	**60%**
		b.	Post-Graduation	**20**	**20%**
		c.	M. Phil	-	-
		d.	PhD	**20**	**20%**
5)	**Employee's Occupation Place**	a.	Government School	**70**	**70%**
		b.	Private School	**30**	**30%**
6)	**Employee's Income (Annual Income)**	a.	High Economic Status	**40**	**40%**
		b.	Middle Economic Status	**50**	**50%**
		c.	Low Economic Status	**10**	**10%**
7)	**Ever attended any Educational programme on Hypertension?**	a.	Yes	**10**	**10%**
		b.	No	**90**	**90%**

SECTION B: Mean, Standard Deviation, Range and Z Test values of knowledge and attitude scores of bank employees regarding lifestyle modifications to prevent Hypertension

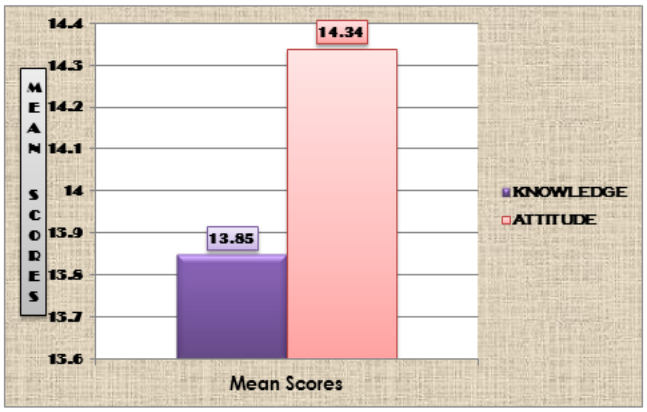

Figure 1- Knowledge and Attitude Mean Scores of Study Subjects

Figure 1 represents the mean of knowledge and attitude scores of study subjects

Table 2: Mean, Range and SD of knowledge scores regarding Hypertension

COMPONENTS	MAX. SCORE	RANGE	MEAN	SD	SE	Z_{Cal}	P Value	Z_{Tab}
Test scores (K)	20	18-8 = 10	13.85	3.15	3.18	4.5	0.05	2
Test scores (A)	20	18-10 = 8	14.34	2.3				

Table 2 - shows that the **Mean Test Knowledge Score** is **13.85** and in **Attitude**, it is **14.34**. The '**Z' Value calculated is 4.5 and** whereas **'Z' Value tabulated at 0.05 level of significance (P Value) is 2**which indicates that the **'Z' calculated** is **greater** than 'Z' Value tabulated. Hence, **null hypothesis was rejected**.

SECTION C: Association between knowledge and attitude mean scores and selected demographic variables

Figure 2: On the basis of **AGE**: **25-33: 20 Samples, 34-41: 50 Samples, 42-49: 20 Samples and 50-58: 10 Samples**

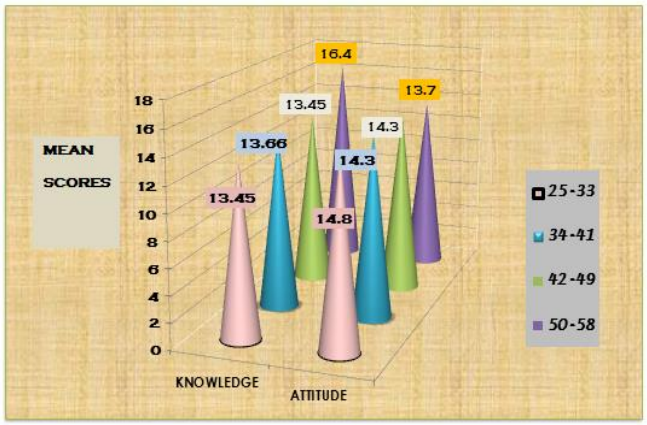

Figure 2: The knowledge mean scores regarding lifestyle modifications to prevent hypertension were **higher in Age group50-58 years** comparative to **other** age groups whereas attitude mean scores were **higher in 25-33 years** comparative to **other age groups**.

Figure 3: On the basis of **RELIGION**: **HINDU: 60 Samples, MUSLIM: 20 Samples, CHRISTIAN: 20 Samples and OTHERS: 0 Samples**

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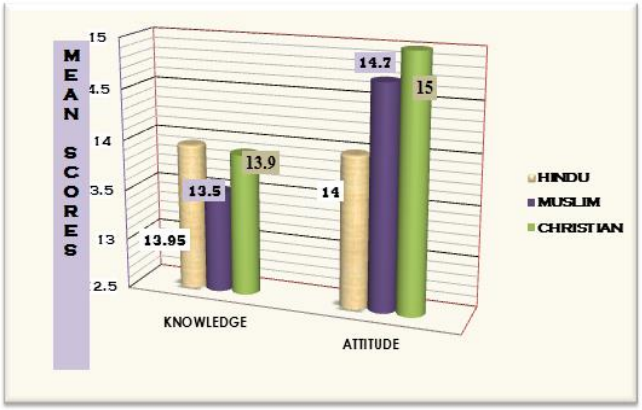

Figure 3: The knowledge mean scores regarding lifestyle modifications to prevent hypertension were **higher in Hindu** comparative to **other religions** whereas attitude mean scores were **higher in Christians** comparative to **other religions**.

Figure 4: On the basis of **MARITAL STATUS**: **Married: 80 Samples, Unmarried: 10 Samples andDivorced/ Separated/ Widow: 10 Samples**

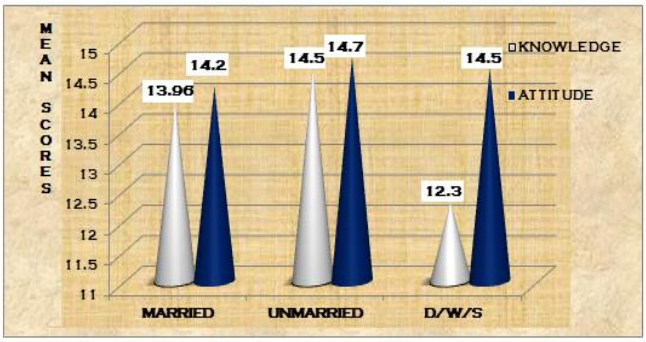

Figure 4: The knowledge and attitude mean scores regarding lifestyle modifications to prevent hypertension were **higher in Unmarried** comparative to **others**.

Figure 5: On the basis of **EMPLOYEE's EDUCATION**: **Graduate: 70 Samples, Post-Graduation: 10 Samples, M. Phil: 0 Samples and PhD: 20Samples**

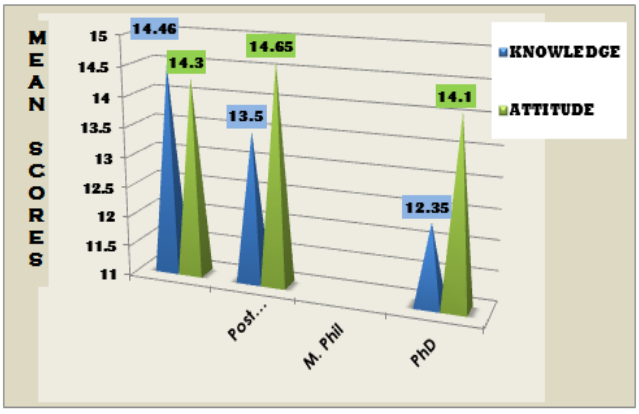

Figure 5: The knowledge mean scores regarding lifestyle modifications to prevent hypertension were **higher in Graduates** whereas attitude mean scores were **higher in Post Graduates** comparative to **others**.

Figure 6: On the basis of **EMPLOYEE's OCCUPATION PLACE**: **Government Bank: 70 Samples and Private Bank: 30 Samples**

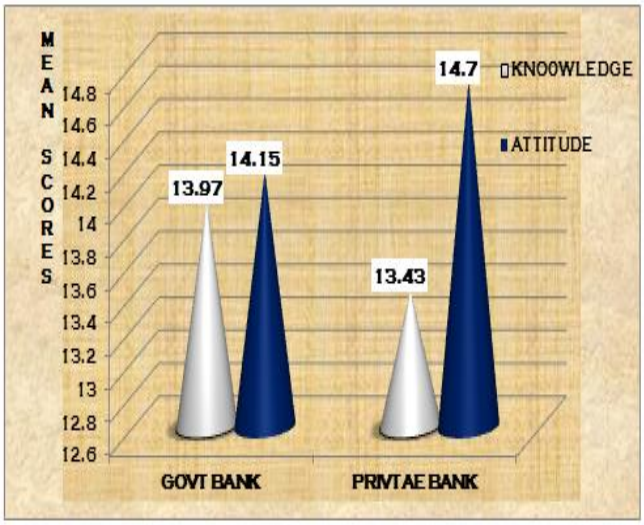

Figure 6: The knowledge mean scores regarding lifestyle modifications to prevent hypertension were **higher in those posted in Government Banks** whereas attitude mean scores were **higher in those posted in Private Banks**.

Figure 7: On the basis of **EMPLOYEE's INCOME (Annual Income)**

High Economic Group (Above Rs 10 Lac): 24 Samples

Middle Economic Group (Between Rs 5-10 Lac): 30 Samples

Low Middle Group (Below Rs 5 Lac): 6 Samples

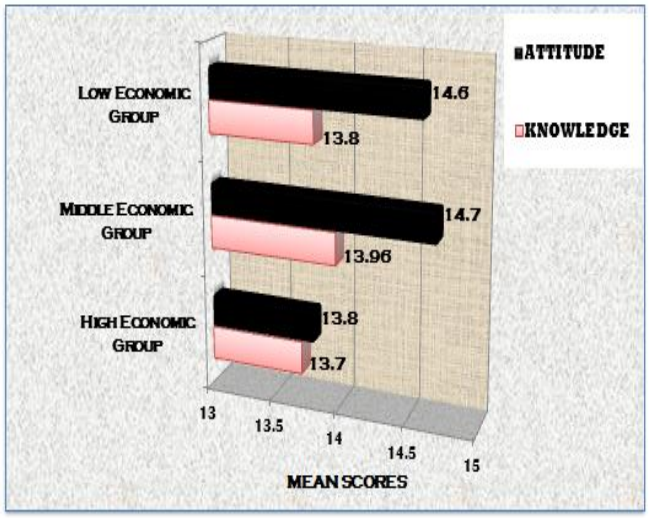

Figure 7: The knowledge and attitude mean scores regarding lifestyle modifications to prevent hypertension were **higher in those belonged to Middle-Economic Group** compare to other economic groups**.**

Figure 8: On the basis if ever **ATTENDED ANY EDUCATIONAL PROGRAM ON HYPERTENSION: Yes: 10 Samples and No: 90 Samples**

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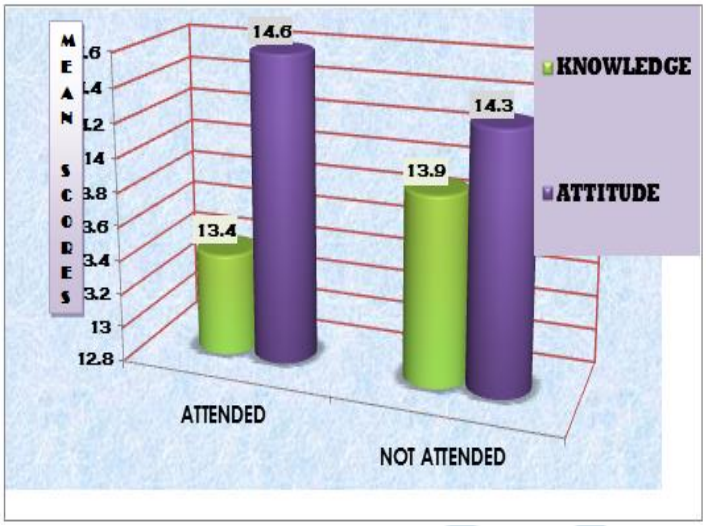

Figure 8: The knowledge mean scores were **higher in those who had attended educational program on hypertension** compare to **those who had not ever attended** whereas attitude mean scores were **higher in those who attended.**

Table 3: Mean and Chi Square of knowledge and attitude scores regarding hypertension according to selected demographic variables

A. AGE	Frequency	Scores		Mean (K)	Mean(A)	χ^2	df
		Knowledge	Attitude				
a) 25-33	20	269	296	13.45	14.8	1.69^{NS}	3
b) 34-41	50	683	715	13.66	14.3		
c) 42-49	20	269	286	13.45	14.3		
d) 50-58	10	164	137	16.4	13.7		
B. EVER ATTENDED ANY EDUCATIONAL PROGRAM ON HYPERTENSION							
a) Yes	10	134	146	13.4	14.6	0.34^{NS}	1
b) No	90	1251	1288	13.9	14.3		
C. RELIGION							
a) Hindu	60	837	840	13.95	14	1.17^{NS}	2
b) Muslim	20	270	294	13.5	14.7		
c) Christian	20	278	300	13.9	15		
D. MARITAL STATUS							
a) Married	80	1117	1142	13.96	14.2	0.89^{NS}	2
b) Unmarried	10	145	147	14.5	14.7		
c) D/W/S	10	123	145	12.3	14.5		
E. INCOME (Economic Group)							
a) High	40	549	553	13.7	13.8	0.98^{NS}	2
b) Middle	50	698	735	13.96	14.7		
c) Low	10	138	146	13.8	14.6		

NS=Non-Significant at $p<0.05$ level

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G. EDUCATIONAL STATUS							
a) Graduation	60	868	859	14.46	14.3	**1.01^{NS}**	2
b) Post-Graduation	20	270	293	13.5	14.65		
c) PhD	20	247	282	12.35	14.1		
H. PLACE OF OCCUPATION							
a) Government Bank	70	978	991	13.97	14.15	**0.44^{NS}**	1
b) Private Bank	30	403	441	13.43	14.7		

Table 3depicts that the tabled χ^2 value for 1, 2 and 3 degree of freedom was 3.84, 5.99 and 7.82 at $p<0.05$ level of significance and the calculated 'χ^2' value is less than the tabled value among all selected demographic variables and knowledge mean scores of bank employees 25-58 years of age of selected banks of Delhi regarding lifestyle modifications to prevent hypertension. The difference was found to be statistically **non-significant in all above cases**.

IV. DISCUSSION

The Study articulates that the -

→ The **Mean Test Knowledge Score is 13.85** and in **Attitude, it is 14.34**. The **'Z' Value calculated is 4.5** and whereas '**Z' Value tabulated** at 0.05 level of significance (P Value) is **2** which indicates that the '**Z' calculated is greater than 'Z' Value tabulated**. Hence, **null hypothesis was rejected.**

→ The knowledge and attitude mean scores regarding lifestyle modifications to prevent hypertension -

→ Were **higher in Age group 50-58 years** comparative to **other** age groups whereas attitude mean scores were **higher in 25-33 years** comparative to **other age groups**.

→ Were **higher in Hindu** comparative to **other religions** whereas attitude mean scores were **higher in Christians** comparative to **other religions**.

→ Were **higher in Unmarried** comparative to **others**.

→ Were **higher in Graduates** whereas attitude mean scores were **higher in Post Graduates** comparative to **others**.

→ Were **higher in those posted in Government Banks** whereas attitude mean scores were **higher in those posted in Private Banks**.

→ Were **higher in those belonged to Middle-Economic Group** compare to other economic groups**.**

→ Were **higher in those who had attended educational program on hypertension** compare to **those who had not ever attended** whereas attitude mean scores were **higher in those who attended.**

Findings in the present study revealed that the difference was found to be statistically **non-significant** among all selected demographic variables and knowledge & attitude scores of bank employees regarding lifestyle modifications to prevent hypertension.

V. SUMMARY AND CONCLUSION

The present study was conducted to assess the knowledge and attitude regarding lifestyle modifications to prevent hypertension among bank employees in selected banks at Delhi. Survey research design was used in the study using convenient sampling technique and sample size was 100. Data was collected by structured questionnaire regarding knowledge and attitude regarding lifestyle modifications to prevent hypertension among bank employees working in selected banks at Delhi. Conceptual framework of the present study was based on Health Belief Model. Literature related to incidence, causes and prevention of hypertension was retrieved. The tool was prepared and pretested for validity and reliability. The Pilot Study was conducted from 01.03.21 to 06.03.21 in selected banks of Delhi on 10 samples selected with the help of convenient sampling method to check feasibility and practicability of the study in the setting. Final study was carried out in selected banks of Delhi in the month of March and April2021. Descriptive and inferential statistics were employed to analyze the data.

The following conclusions were made on the basis of findings of the study:

- It was found that **Average knowledge and attitude score** was **69.25% and 71.7%.**
- Study subjects were **deficit** of knowledge regarding lifestyle modifications to prevent hypertension.

REFERENCES

[1] Kearney PM, Whelton M, Reynolds K et. al. Global burden of hypertension: analysis of worldwide data. The lancet. 2005 Jan 15; 365(9455):217-23.

[2] Maroof KA, Parashar P, Bansal R et. al. A study on hypertension among the bank employees of Meerut district of Uttar Pradesh. Indian journal of public health. 2007 Oct 1; 51(4):225.

[3] Jo I, Ahn Y, Lee J et. al. Prevalence, awareness, treatment, control and risk factors of hypertension in Korea. Journal of hypertension. 2001 Sep 1; 19(9):1523-32.

[4] Shakya A, Devi VR. Work stress in banking sector: An Empirical Study in Nepal. Management Insights. 2016; 12(2):40-50.

[5] Umesh U. A study on the occupational stress among selected female bank employees working in the middle level hierarchy cadre of Indian Bank (public sector) and ICICI

(private sector) in the Southern Malabar Region of Kerala State, India. International Journal of Recent Advances in Organizational Behaviour and Decision Sciences. 2016 Aug; 2(3):809-17.

[6] Gupta R, Rastogi S, Panwar RB et. al. Major coronary risk factors and coronary heart disease epidemic in India. South Asian J Prev Cardiol. 2003; 7:11-40.

[7] Rodgers A, Lawes C, MacMahon S. Reducing the global burden of blood pressure-related cardiovascular disease. Journal of hypertension. Supplement: official journal of the International Society of Hypertension. 2000 May; 18(1):S3.

[8] Shivaramakrishna HR, Wantamutte AS, Sangolli HN et. al. Risk factors of coronary heart disease among bank employees of Belgaum city-Cross-sectional study. Al Ameen J Med Sci. 2010; 3(2):152-9.

[9] Ganesh KS, Deivanai SN. Prevalence and risk factors of hypertension among bank employees in urban Pondicherry, India. The international journal of occupational and environmental medicine. 2014 Apr; 5(2):94.

[10] Denise F. Polit, Cheryl Tatano Beck. Nursing Research: Generating and Assessing Evidence for Nursing Practice. Lippincott Willams & Wilkins. 2012; 9th Ed.

[11] Analysis Group. Epidemiology of Hypertension. Journal of the Association of Physicians of India. 2013; Vol. 61:12-13.

[12] Tesema S, Disasa B, Kebamo S et. al. Knowledge, attitude and practice regarding lifestyle modification of hypertensive patients at Jimma University specialized hospital, Ethiopia. Primary Health Care: Open Access. 2016; 6(1):1-4.