ORIGINAL ARTICLE CODEN: AAJMBG

Association between knowledge, attitude and practice on cardiovascular disease among early adults of Lucknow city

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Abstract: *Introduction:* CVD has been designated as the leading cause of mortality and morbidity, representing a total of 31% of all global deaths. *Aim:* This research aimed to determine the association between Knowledge, attitude and practice regarding CVD among early adults of Lucknow city. *Methods:* Using descriptive statistics and Pearson's coefficients correlation, a convenience sample of 250 adults was used. Data was collected using a standardized questionnaire. *Results:* Majority belonged to low level knowledge category (65.20%) to the least falling in High category (12.40%). The total mean score for knowledge associated with other risk factors is 9.060 ± 4.805 scores ranging from 0 to 20. The mean score for attitude was 11.82±5.032, 37.6% score ranging from 0 to 19 and for practice, scores ranged from 3 to 15 (mean=8.93; SD=2.2), 87.60% of the respondents scored in the poor practice range. None of the respondents fell in the category of Good practice. There was a significant correlation between all the three components that is Knowledge, attitude and practice at p<.01 level of significance. *Conclusion:* The positive results obtained in this study can give future scope to policy implementers to work in this area for eradicating disease by working on these areas.
Keywords: Knowledge, Attitude, Practice, CVD.

Introduction

In India, CVD has been designated as the leading cause of mortality and morbidity, representing a total of 31% of all global deaths [1]. With the growing incidences and presence of CVD in both urban and rural area among male and females, it gets necessary to look into the depth and quote the causes for the growing condition. According to a report published by World Health Report 2002, India by 2020 will experience the largest cause of death and disability due to CVD. Estimates suggest that around 2.6 million Indians are at the stake of death due to CVD which means 54.1 % of all CVD deaths.

The behavioural model states that a person who has a willingness (motivation) to perform and availability of conducive environment, there will be a higher probability that the changes of practice will occur [2]. So a person with a positive attitude will divert himself to change his behaviour to practice good things as the existing studies prove that there is significantly low proportion of people having good knowledge [3-4], Positive attitude [5-6] and fair practice [7-8]. Therefore the assessment of knowledge, attitude and practice on CVD and the association of these 3 components are considerably the most important factors in order to prevent CVD problem since it is fatal, as most of the cases occurring are somewhere associated to lack of knowledge, ignorant attitude or poor practices. The involvement of patients or an individual in managing their disease, along with the effort to reduce the RFs is important in the overall treatment strategy. This is only possible if the person is well aware of his own state thus, giving him a better ability to perceive their risk.

Purpose and significance: Assuming that all the three components knowledge, attitude and practice are interlinked with each other and even a slight change in any of the one area, the other may experience a significant change. The main purpose of this study was to assess the association between knowledge, attitude and practice among early adulthood in Lucknow city. Specifically this research paper answers two questions:

1) What is the percentage of KAP existing among the early adults of Lucknow city?
2) What is the association between KAP regarding CVD among early adults?

Various review of literature has been gone through and no such study has been conducted in the Lucknow city. This study will act as a baseline for future researches that will target the KAP of individuals and how each of them s associated with each other, because it is quite evident that a person with a positive willingness in either of three areas I'e, KAP will eventually bring a descent change in a person's life.

Material and Methods

Design, sample and setting: The present study was a descriptive one. The criteria included in the study were 1) Selected individuals belonging to the age group of 20-40 years), 2) Literate individuals not diagnosed with CVD and a Lucknow citizen. The study was conducted in the city of Lucknow, participants were approached personally and permission was obtained from them by telling the gist of the study. Participants were recruited from university and houses. A convenience sample of 250 was recruited in the present study.

Data collection procedures: The participants were made aware of the study, with the participation being totally voluntary, withdrawal from the research by any subject at any time of the study was accepted. The names of the subjects were not revealed at any part of the study nor was it noted down anywhere for any future reference, instead of names coding of the subjects was done. Each and every data was kept strictly personal pre and post research.

Data collection tools: The data collection tool was divided in to two parts. The first part consisted of questions related to demographic data such as age, sex, and education, marital status, type of family and family history of disease. The second part was solely KAP based, during development of the questionnaire, account was taken of previous KAP related surveys on CVD [9-13]. These provide an ongoing source of information about the KAP questions to be intervened to the subjects.In this section questions related to knowledge of people on personal attributes termed as KPA and knowledge associated with other risk factors such as morbidity patter, dietary pattern, addiction pattern and physical activity pattern termed as KOTHER were asked. A total of 40 questions for KPA and 20 questions for KOTHER were asked, each question had the responses of Yes, and No.

Attitude on Cardio Vascular Diseases: In this section questions related to attitude of people on personal attributes, morbidity patter, dietary pattern, addiction pattern and physical activity pattern were asked. A total of 20 questions were asked, each question has the responses of Agree, Neutral and Not Agree.

Practice related to Cardio Vascular Diseases: In this section questions related to knowledge of people on personal attributes, morbidity patter, dietary pattern, addiction pattern and physical activity pattern were asked. A total of 20 questions were asked, each question has the responses of Never, seldom, always. The internal consistency for the questionnaire has been summarized below:

KAP scale item	Cronbach's alpha (95% CI)
KPA	0.953 (0.944-0.961)
Kother	0.849 (0.821-0.875)
Attitude	0.909 (0.892-0.925)
Practice	0.712 (0.648-0.771)

Data Analysis: Data was analysed using SPSS (version 20), descriptive statistics was used to describe the study variables by reporting their frequencies and percentages. Data was analysed by reporting their means and SD. To answer the first research questions percentage and SD was applied whereas for the second question to associate between KAP Pearson's coefficients correlations was used.

Results

Sample descriptions: Two hundred and fifty respondents completed the questionnaire, thus depicting a 100% response rate. The average age of the respondents was 27.42 ± 6.7 (20-40 years), of which 129 (51.60%) belonged to the age group of 20 to 25 years, 53 (21.20%) belonged to the age group of 25 to 30 years,

24 (9.60%) were from the age group of 30 to 35 years and 44 (17.60%) were found between the age group of 35 to 40 years. The study consisted of 143 (57.20%) female and 107 (42.80%) male respondents mostly living in joint family (21.60%), followed by grandparent family (4.00%), single parenting (3.60%), childless (1.20%) and step family (.80%). The percentage of professional and self-employed respondents was 16.40% and 18.40% with housewives and retired respondents being 3.20% and 9.60% only. All study variables are reported in Table1.

Table-1: Correlation of Knowledge, Attitude and Practice scores

		KPA score	KOther score	Attitude score	Practice score
KPA score	Pearson Correlation	1	.642***	.616***	.234***
	Sig. (2-tailed)		.000	.000	.000
	N	250	250	250	250
KOther score	Pearson Correlation	.642***	1	.613***	.107
	Sig. (2-tailed)	.000		.000	.090
	N	250	250	250	250
Attitude score	Pearson Correlation	.616***	.613***	1	.297***
	Sig. (2-tailed)	.000	.000		.000
	N	250	250	250	250
Practice score	Pearson Correlation	.234***	.107	.297***	1
	Sig. (2-tailed)	.000	.090	.000	
	N	250	250	250	250

***. Correlation is significant at the 0.01 level (2-tailed).

KAP among respondents: The present study revealed lesser number of respondents' knowledge. On the basis of scoring the division was done into high, moderate and low level knowledge category for KPA and KOther of which the majority belonging to low level (65.20%) to the least falling in High category (12.40%). The scores ranged from 0 to 38 with a mean and SD of 17.092±10.66 for KPA category higher than the results obtained by [18].

Whereas in Kother category majority belonged to low level (69.20%,) to the least falling in High category level (9.20%,), the total mean score for knowledge associated with other risk factors is 9.060±4.805 scores ranging from 0 to 20. The CVD associated attitude score of the respondents was classified as positive, Neutral and negative with the mean score of 11.82±5.032, 37.6% individuals had a negative attitude, followed by 35.2% with a neutral and 27.2% having a positive attitude.

The scores ranged from 0 to 19 for attitude among respondents. The practice scores ranged from 3 to 15 (mean=8.93; SD=2.2; n=250), 87.60% (n=219) of the respondents scored in the poor practice range while 12.40% (n=31) followed fair practice. None of the respondents fell in the category of Good practice.

Fig-1: Correlation between Total KPA and Attitude Score

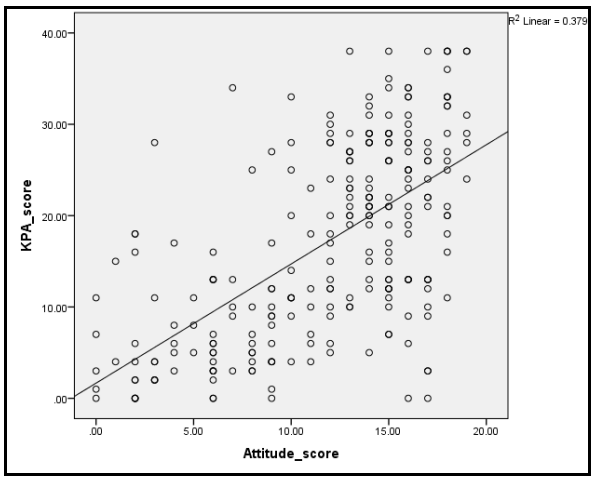


Fig-2: Correlation between Total kother and practice Score

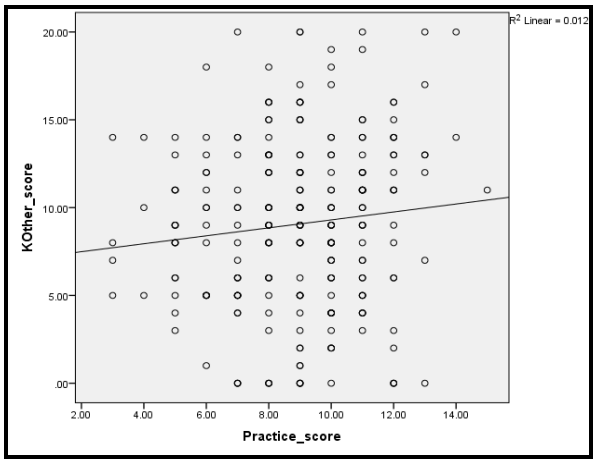


Fig-3: Correlation between Total KPA and Practice Score

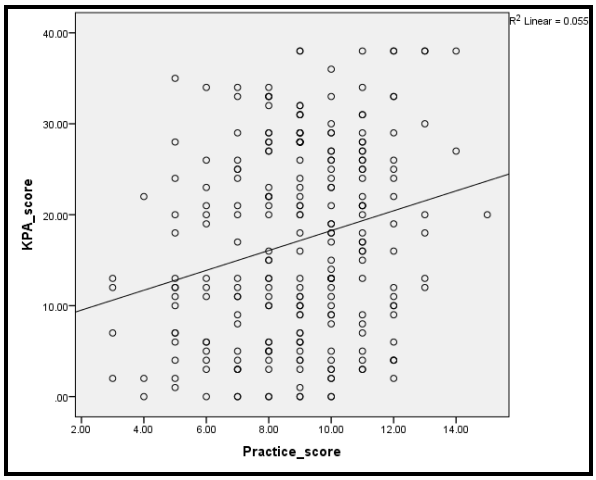


Fig-4: Correlation between Total Attitude and Practice Score

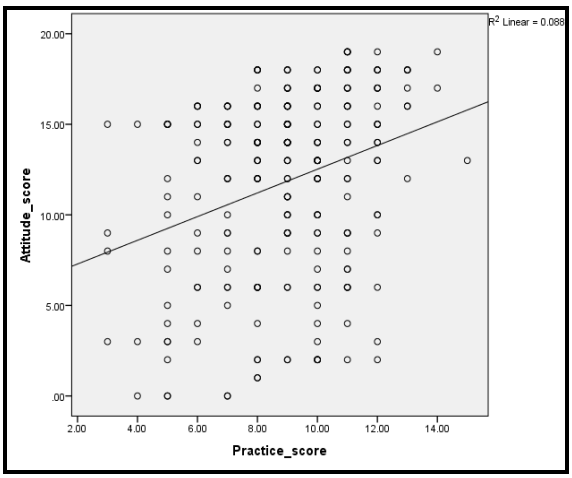
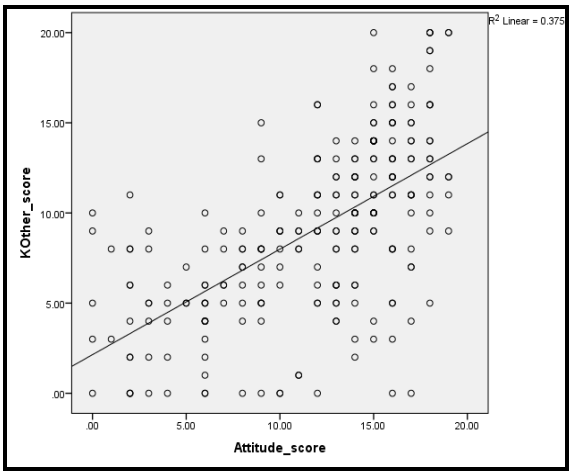


Fig-5: Correlation between Total KOTHER and Attitude Score



Correlation among KAP: As table 1 illustrates, Pearson coefficient correlation between KPA and Kother was found to be highly significant (r=0.642, p<.01) along with a strong and significant association with attitude (r=0.616, p<.01) and practice score (r=0.234, p<.01). When Kother Score was correlated with KPA and Attitude score a significant positive correlation was observed with the values (r=0.642 and r= 0.613) at p<.01 significance however its correlation with Practice was observed less significant at p<.10.

A statistically significant correlation was observed between Attitude and KPA, Kother and Practice with values as (r=0.616, r= 0.613 and r= 0.297) at p<.01 level of significance. Similar results were obtained for association

of practice score with and KPA and attitude score with values significant (r=0.234 and r= 0.297) at p<.01 level, though its association with Kother score (r=0.107) was marginally significant (p<.10), thus rejecting the above mentioned hypothesis. The values were independent of demographic variables, personal morbidity status, family history, dietary pattern and other variables. The values were interpreted in a way that for every one unit increase in either variable (KPA, KOther, Attitude and Practice) there will be a 0.1 increase in other score among respondents similar to the results described by [14].

Table-2: Demographics (n=250)

Variables	Frequency	%
Age (in years)		
20 to 25	129	51.60
25 to 30	53	21.20
30 to 35	24	9.60
35 to 40	44	17.60
Gender		
Male	107	42.80
Female	143	57.20
Employment		
Unemployed	131	52.40
Retired	8	3.20
Housewife	24	9.60
Professional	41	16.40
Self-employed	46	18.40
Type of Family		
Nuclear family	172	68.80
Joint or extended	54	21.60
Single parenting	9	3.60
Childless	3	1.20
Step family	2	0.80
Grandparent family	10	4.00

Discussion

The present study was conducted to associate the KAP of respondents regarding CVD. Most of the respondents in our study had very less knowledge regarding cardiovascular diseases such as 50% people not recognizing the important symptoms such Pain or discomfort in the jaw, neck or back (70.80), Feeling weak, light-headed, or faint (64.00), Sudden numbness or weakness of the face, arm, or leg (72.80), Sudden confusion or trouble speaking or understanding others (76.80). Whereas few conditions such as Positive family history of any one cardiovascular disease (58.00), Diabetes (58.00), and Increasing age (55.60) were less recognized by people contrary to the results suggested by [15] where age was described as the single most significant predictor for CVD risk. knowledge related to standard values for HDL, LDL, Blood sugar , Blood pressure and BMI was not known by 231 (92.4%), 231 (92.4%), 194 (77.60%), 151 (60.40%) and 193 (77.20%) people respectively contradictory to the results by [16].

Only 124 (49.60%) respondents were aware of any CVD clinic in their area in case of emergency. 181 (72.40%) were unaware that life style diseases are related to high risk of CVD, and 37.60% knew that CVD is preventable. One fifty one (60.40%) respondents agreed to the statement that "there is any relationship between exercise and heart attack", 54% and 41.20% disagreed to the statement that brisk walking is sufficient to give good health and irregular physical activity will increase the risk of having a heart disease respectively. 77.60% felt that yoga and meditation will affect their heart in a positive way differing to 39.5% respondents in a study done by [16].

Attitude as illustrated by the respondents in our study revealed that illustrates that most of the respondents had a positive approach towards dietary pattern, 69.20% agreed that diet control can act as a central pillar for CVD management, while most of them had a neutral attitude in believing modified diets as a phenomena of change for "at risk" individuals.

72.40% individuals agreed of avoiding salt in their diet similar to the results found by [5], majority of attitude question were replied with a positive answer for personal attributes such as changing lifestyle is a good sign of wellness (69.60%), however when asked about morbidity pattern associated CVD attitude such as keeping an holistic approach to treat CVD 47.20% showed a neutral

attitude quite similar to the study conducted by [6]. The practice component revealed that more than half of the respondents (62.40%) did not follow any primordial practices to delay the onset of heart diseases; while 41.20% always preferred to receive medicine treatment and very few (56.40%) reported getting their blood profile checked. Yoga or meditation was found to be practiced by only 14% respondents, and 37.20% experienced restlessness during walking or exercise.

The practice of doing physical exercise or brisk walking regularly was found among 32.40% and 31.20% respectively mush less than the results reported by [6] of 64.9% indulging in any form of exercising**.** The consumption of alcohol and smoking was seldom seeing among 40% and 45% respectively as compared to 86.3% people stated by [8]. However 69% subjects did not accept of adopting any change after knowing the harmful effects of tobacco on health whilst only 3.20% people reported of consuming any anti-depressants or sleeping drugs.

The association between knowledge attitude and practice revealed that knowledge associated with personal attributes such as knowing the types of disease, symptoms etc, was strongly associated with other knowledge factors such as physical activity , diet etc as well as with the attitude score meaning that a person who has knowledge will surely divert his attitude to a better improvement strategy. Studies conducted by [17] revealed a statistically significant relationship of knowledge and attitude with age and gender. The correlation was found to be significant when Kother was correlated with KPA and attitude, Attitude and KPA, Kother and Practice. However less significant results were obtained for practice and kother association.

Conclusion

It is quite important to understand the association of KAP among the respondents to implement any strategy. The positive results obtained in this study can give future scope to policy implementers to work in this area for eradicating disease by working on these areas. This data will prove to be quite helpful for policy makers in providing preventive programmes among early adults.

Our data indicates that educational intervention is needed among adults to enhance their KAP and increase their overall awareness. The information gained from this present study will help to further implement policies to combat the health of people who are at the risk of developing CVD or are already suffering from.

Acknowledgement

Special mention goes to the respondents who took time to complete this survey along Dr. Rakesh Pradhan Chief Medical Officer, BBAU Lucknow for providing all the needed help throughout the study.

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Cite this article as: Dayal B and Singh N. Association between knowledge, attitude and practice on cardiovascular disease among early adults of Lucknow city. *Al Ameen J Med Sci* 2018; 11(1):59-65.

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