

## A Study on Knowledge, Attitude and Practice on Risk Factors of Cardiovascular Disease among Nursing Students in Chitradurga

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### ABSTRACT

**Background:** The Cardiovascular disease(CVD) is defined as any serious, abnormal condition of the heart or blood vessels(arteries, veins).The common cardiovascular diseases include :ischemic heart disease(IHD), hypertensive heart disease, rheumatic heart disease(RHD), arotic aneurysms, cardiomyopathy, atrial fibrillation, congenital heart disease, endocarditis and peripheral artery disease(PAD).

**Objectives:** To assess the level of knowledge regarding cardiovascular disease.To assess the attitude towards cardiovascular disease.To improve the knowledge regarding cardiovascular disease.

**Materials and methods:** This is a questionnaire based prospective observational study conducted on SJM Institute of Nursing Sciences, Vivekananda College of Nursing and St.Mary's College of Nursing in Chitradurga over a period of six months.

**Results:** Three Nursing colleges from Chitradurga were selected. Among 200(n=200) subjects, 18% were males and 82% were females. Study summaries that there is sufficient improvement of knowledge in pre and post studies. Correlation between test scores with experience and area of work (SJM Institute of Nursing Sciences, Vivekananda College of Nursing and St.Mary's College of Nursing) given large insights of the study.

**Conclusion:** The study concludes that SJM Institute of Nursing Science is having high improvement. 3-4 years work experienced subjects is having high improvement in terms of knowledge.

**Keywords:** Cardiovascular disease, risk factors, awareness, knowledge

### I. INTRODUCTION

Heart is one of the body's most important organs. The general term used to cover malfunctions of the heart is Heart Disease, or

sometimes Cardiac Disease ("Cardiac") is a Latin term for heart<sup>1</sup>.The cardiovascular system is made up of the heart or blood vessels. The Cardiovascular disease (CVD) is defined as any serious, abnormal condition of the heart or blood vessels (arteries, veins)<sup>2</sup>. The common cardiovascular diseases include: ischemic heart disease (IHD), Hypertensive heart disease, rheumatic heart disease (RHD), arotic aneurysms, cardiomyopathy, atrial fibrillation, congenital heart disease, endocarditis and peripheral artery disease (PAD)<sup>3</sup>.

A "risk factor" is generally defined as a characteristic of an individual that is associated with the subsequent development of a disease. Most of the risk factors for cardiovascular disease are modifiable or entirely preventable.<sup>2</sup>

There are several risk factors for heart diseases: age, gender, tobacco use, physical inactivity, excessive alcohol consumption, unhealthy diet, obesity, family history of cardiovascular disease, hypertension, diabetes mellitus, hyperlipidaemia, psychosocial factors, poverty, educational status and air pollution<sup>9</sup>.

Modifiable risk factors include tobacco use, high blood pressure, physical inactivity, high blood cholesterol, obesity, heavy alcohol consumption, and poor nutrition. Non-modifiable risk factors are age and family history. The more risk factors one has, the higher the risk of developing disease<sup>2</sup>.

Nurses are expected to play an essential role in health promotion through delivering health education to patients. Nurses, regardless of their grade, skills, and experience, should be updated with information so as to provide better patient care.

Nurses are the main patient care takers, they provide 24 hours service to the patients. Keeping these facts in consideration the present study is conducted.

## II. MATERIALS AND METHODS

The questionnaire based prospective observational study was approved by the Institutional Ethical Committee of Sri Jagadguru Mallikarjuna Murugharajendra College of Pharmacy, Chitradurga. The study was conducted among Nursing students in Chitradurga.

- Students those who are present for pretest
- Both male and female students

**2.1 Study Procedure:** A six month questionnaire based prospective observational study was conducted among Nursing students of Chitradurga. The study was started after obtaining the consent from Institutional Ethical Committee (IEC). After obtaining informed consent, the questionnaire was distributed among Nursing students. A self-administered questionnaire on KAP towards Cardiovascular disease and its risk factors has been provided. It consisted of

Part 1. Socio-demographic data

Part 2. Basic Knowledge on CVD (12 questions were asked as multiple choice questions)

Part 3. Attitude on CVD (6 questions with option such as Strongly agree, Agree, Disagree and Strongly disagree)

Part 4. Practice on CVD (7 questions)

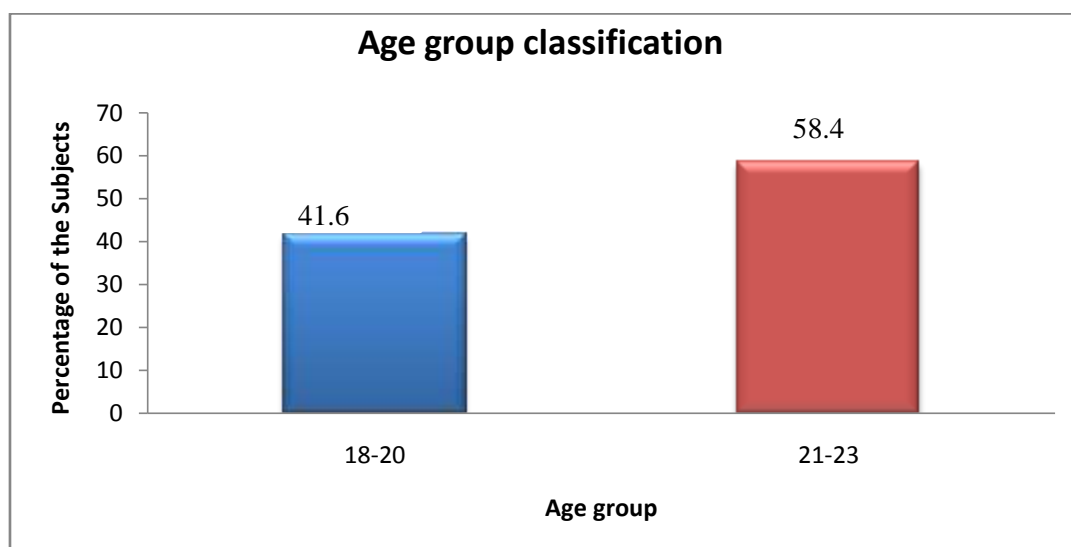
Data was collected by the investigators and confidentiality was maintained during the data collection process. After the pre test, post testing was carried out by distributing the same questionnaire of pre test and was assessed for the improvements. For each correct answer of Knowledge questionnaire was scored '1' and for each wrong answer '0' in pre and post test. The attitude and practice based questionnaire was assessed based on the frequency of options selected in pre and post test

**Statistical Analysis:** The data were analysed by using Microsoft excel-2013 and SPSS software (version 25). Categorical data was analyzed by frequency distribution method and quantitative data was analyzed by central tendency distribution and by measures of dispersion.

## III. RESULTS

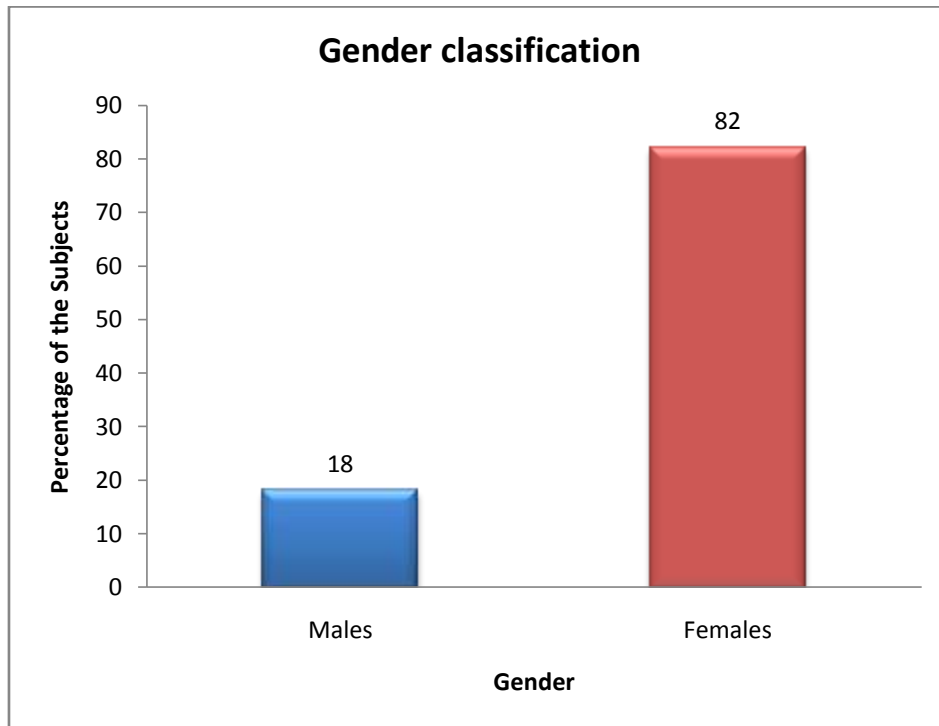
### • Details of Age Classification:

A total of 200 subjects were found during the study period. The age group among them are classified as: 18-20 (32.5%) and 21-23 (67.5%).



### • Details of Gender Classification:

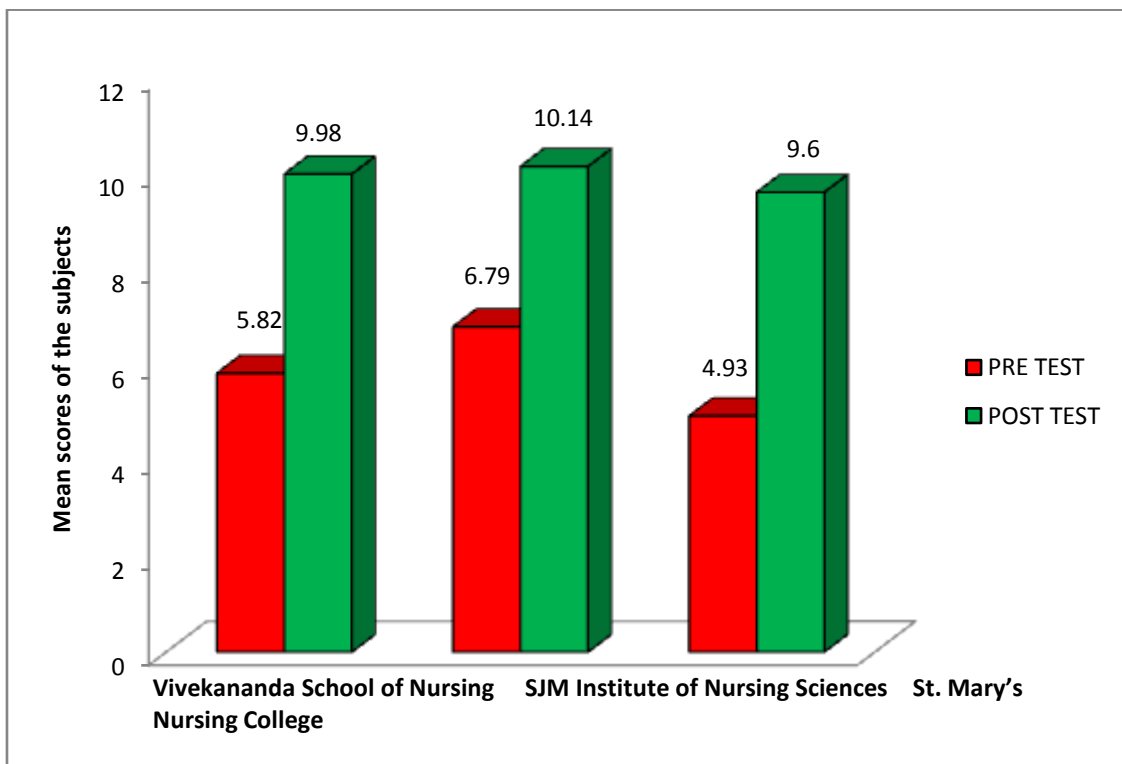
Out of 200 subjects 164 (82.0%) were Females and 36 (18.0%) were Males.



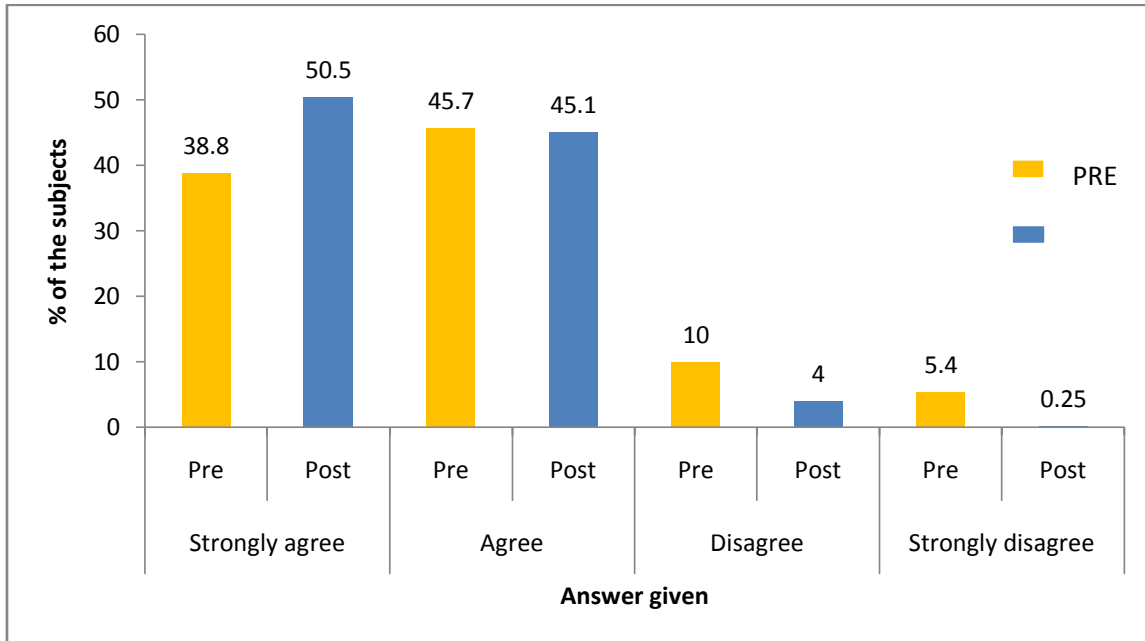
**Distribution of mean scores of knowledge assessment:**

The nursing students had a significant improvement (p=0.000) after giving the education

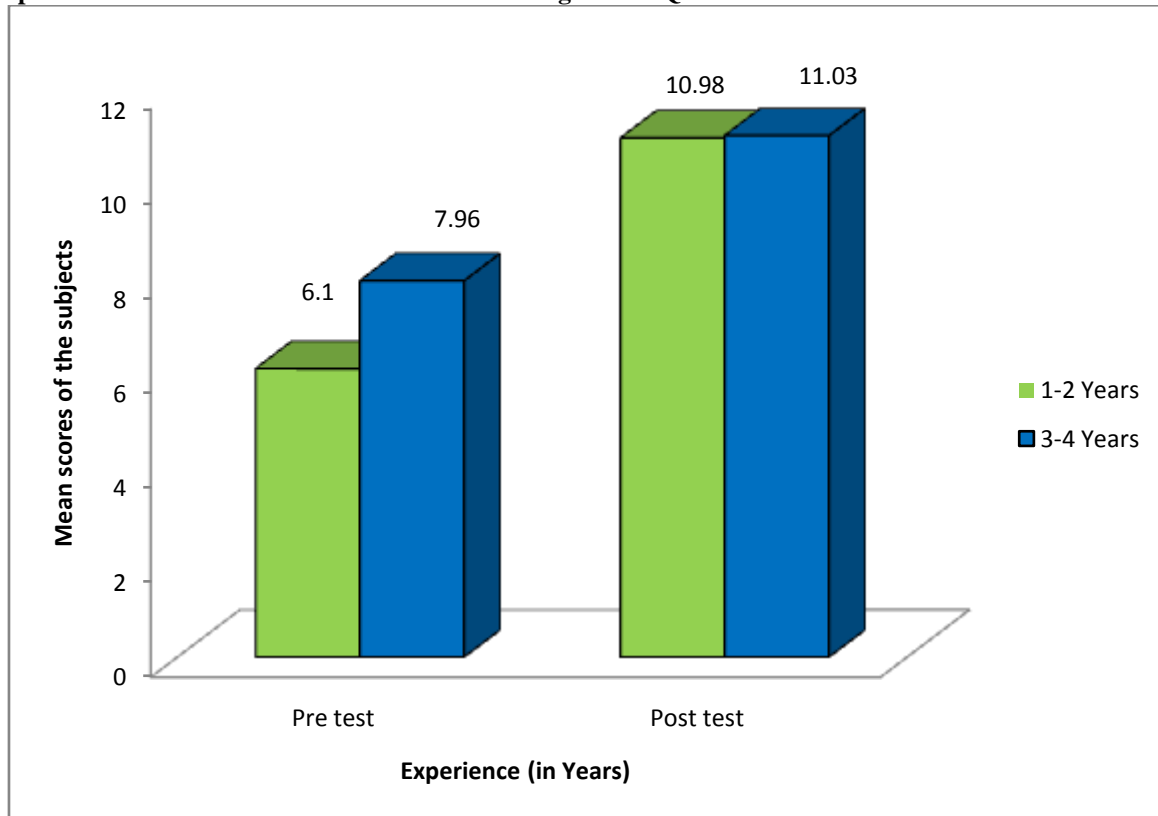
to them comparatively SJM Institute of Nursing ( $\approx 10.14$ ) is having higher improvement compared to Vivekananda School of Nursing and St. Mary's Nursing College.



**OVERALL ASSESSMENT OF ATTITUDE:**



**Experience v/s Mean score assessment of Knowledge based Questionnaires:**



#### IV. DISCUSSION

The current study was a prospective observational questionnaire survey to assess the study on KAP on CVD and its risk factors among Nursing students of Chitradurga. The objective of the study was to assess the level of knowledge regarding cardiovascular disease, to assess the attitude towards cardiovascular disease, to improve the knowledge regarding cardiovascular disease. The nursing students had a significant improvement after giving education to them. The study included total of 200 subjects and among them 36 were males and 164 were females. The current study aimed to assess the KAP on risk factors of CVD among nursing students in Chitradurga during which majority of students answered the right option in the post-test, which showed a high improvement. This research study findings is in line with **Muhammad S K et al.** They conducted a study on Knowledge of modifiable risk factors of heart disease among nursing students with acute myocardial infarction in Karachi, Pakistan. It was a cross-sectional study. Study states that, out of 1720 study subjects, 665 had good level of knowledge about the association of fatty food consumption with heart disease, 597 were able to correctly identify the association of smoking with heart disease, 302 were knowledgeable about the association of obesity with heart disease, and only 178 knew about the protective effect of exercise. In their study out of 105 students, high blood pressure (93.3%) and diabetes (93.3%) is considered as the major risk factors followed by smoking (85.7%) and overweight (60%). The study revealed that many of the study subjects are aware about CVD as well as CVD risk factors. According to the findings nursing students have a satisfactory level of knowledge on CVD and its risk factors.

#### V. CONCLUSION

Study summarises that there is sufficient improvement of knowledge in pre and post studies.

- Hence the null hypothesis is rejected and alternative hypothesis is accepted ( $p=0.00$ )
- Correlation between test scores with experience and area of work (SJM Institute of Nursing Sciences, Vivekananda College of Nursing and St. Mary's College of Nursing) given large insights of the study.
- SJM Institute of Nursing Sciences is having high improvement ( $\approx 10.14$ )

- 3-4 years work experienced subjects is having high improvement ( $\approx 11.03$ ) in terms of knowledge.
- Still much more studies yet to be done on KAP of Cardiovascular disease among nursing students to give better patient care.

#### VI. ACKNOWLEDGEMENT

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