



Research Article

## IMPACT OF KNOWLEDGE, ATTITUDE, PRACTICE ON OBESITY AMONG PHARMACY STUDENTS

M. Aruna and G. Sathyaprabha

KMCH College of Pharmacy, Coimbatore, TN 641048, India

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Obesity, Awareness, Body Mass Index, KAP Study, Overweight

### ABSTRACT

**Background and Objective:** Obesity is one of the most prevalent forms of malnutrition in both developed and developing countries and affecting both children as well as adults. Awareness level is the basic necessity to effect a change in behaviour. The objectives of the study were to determine the knowledge, attitude, and practices (KAP) regarding obesity among pharmacy students. **Methods:** The study was a prospective observational study type carried out on 153 students of the pharmacy college after obtaining proper informed consent. The validated questionnaire was used and it consists of 42 items under three domains it has five options designed on a Likert scale. **Conclusions:** This study helped to increase awareness among students and educating them increased their level of knowledge in the post-test. This KAP will be helpful in education interventions in Indian scenario in the field of obesity. It has satisfactory validity and internal consistency.

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### INTRODUCTION

Obesity is a complex, multifactorial and largely preventable disease affecting along with overweight, over a third of the world's population today.<sup>[1]</sup> According to World Health Organization (WHO), statistics report on 2012 states that globally one in six adults were obese and nearly 2.8 million individuals die due to overweight or obesity. In India, the incidence of obesity continues to increase and prevalence among adolescents varies between 10% and 30%.<sup>[2,3]</sup> Obesity is calculated by body mass index (BMI). WHO has developed different BMI guidelines for the global population and South Asia.<sup>[4]</sup> A knowledge, attitude and practices (KAP) survey is a representative study of a specific population to collect information on what is known, believed and done in relation to a particular topic. A KAP survey that provides access to quantitative and qualitative information in quantitative method (predefined questions formatted in standardized questionnaires).<sup>[5, 6]</sup>

#### Important reasons for conducting KAP surveys

1. To identify the baseline knowledge, myths, misconceptions, attitudes, beliefs and behaviours in relation to a specific health-related topic.
2. To understand, analyse and communicate about topics or situations of interest in the field.
3. To provide information on needs, issues, and barriers related to the development of effective, locally relevant public health interventions.
4. To measure post-intervention changes, and thus, the effectiveness of intervention programs that were

aimed at correcting and changing health-related knowledge, attitudes, behaviours and practice.<sup>[7]</sup>

#### Tool components

- Constructing the survey protocol.
- Preparing the survey.
- Course of the KAP survey in the field.
- Data analysis and presentation of the survey report.
- Conclusion, references and abbreviations.<sup>[8]</sup>

### METHODOLOGY

1. **Study design:** A prospective observational study.
2. **Study site:** The study conducted at the KMCH College of Pharmacy.
3. **Study period:** The study conducted for the period of 6 months.
4. **Sample size:** Sample size was calculated using online sample size calculator with Population size is 542; Confidence level is 85%; Margin of error is 5%; Population proportion is 50%; and sample size was found to be 153.

#### Inclusion criteria

Students who volunteered to give information about their knowledge, attitude and practice towards obesity were included in the study.

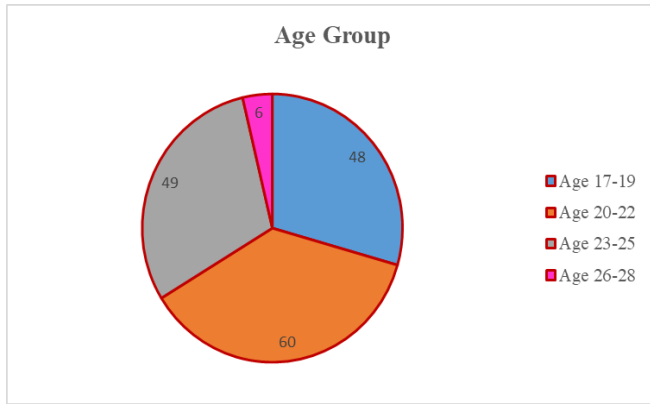
#### Exclusion criteria

Students unable to provide the appropriate information were excluded. Person unable to cooperate with the study were excluded.

\*Corresponding author: M. Aruna

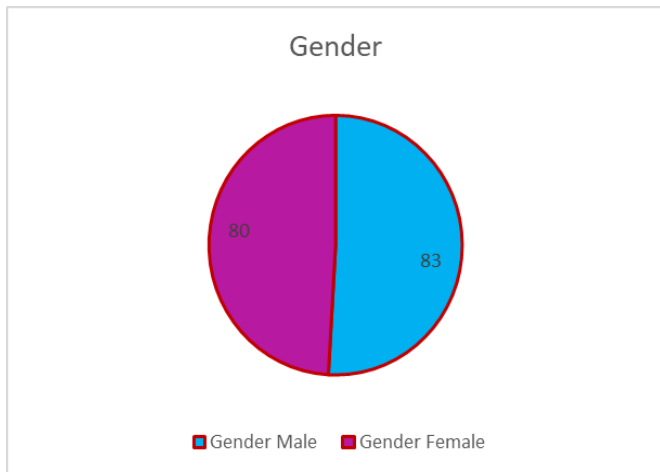
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**RESULTS**



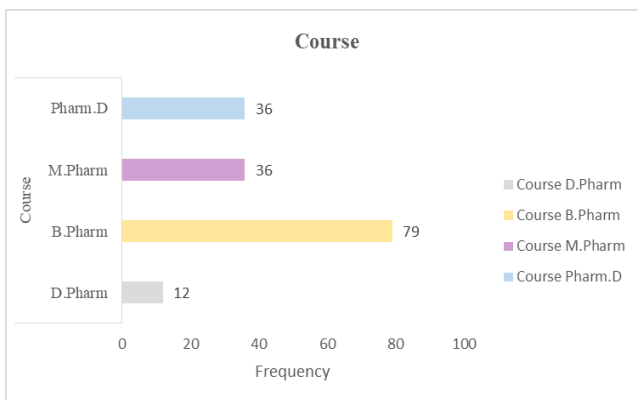
**Figure 1** Pre- and post-test result of age wise distribution

According to the demographic data with respect to age group and as shown in figure the study population's highest age range was identified as 20–22 years (36.8%), the average age range of the respondents was identified as 23–25 years (30.1%), and the lowest age range of the people who responded was identified as 26–28 years (3.7%).



**Figure 2** Pre- and post-test result of gender.

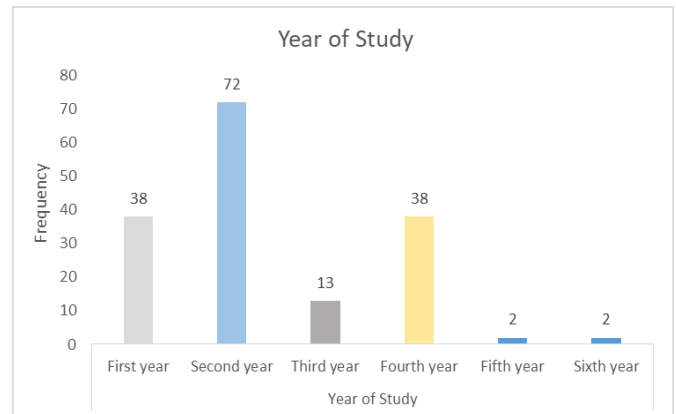
As per population's highest range recognized under the gender categorization **male (50.9%)** than female (49.1%) in the statistical data as shown in this figure.



**Figure 3** Pre- and post-test result of course of study

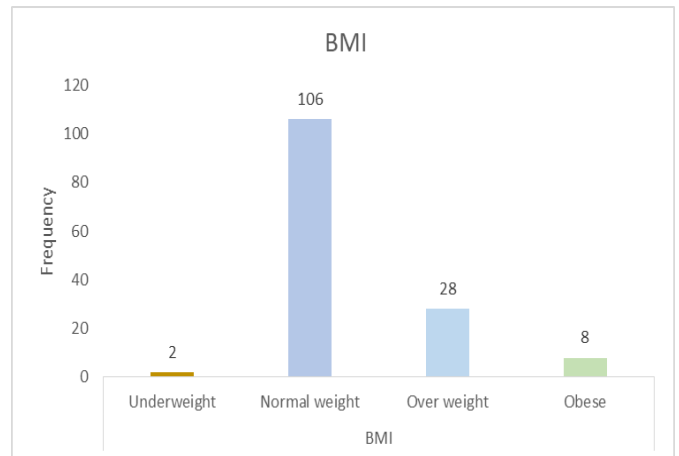
As per the course demographic data, the study population's highest range of respondents was noted as **B. Pharm program (48.5%)**, the average range of respondents was

observed as M. Pharm and Pharm. D Program (22.1%), and the lowest range of respondents was recognized as D. Pharm program (7.4%) as shown in figure.



**Figure 4** Pre- and post-test result of year of study

According with year of study demographic data, the study population's highest range of respondents was identified as **second-year students (44.2%)**, the average range of respondents was identified as first-year and fourth-year students (23.3%), and the lowest range of respondents was identified as fifth-year students (0%) as shown in figure.



**Figure 5** Pre- and post-test result of body mass index (BMI)

As per the BMI demographic data, the study population's highest range has been identified as normal-weight students (65.0%) and the lowest range has been identified as underweight and obese students (4.9% and 0%). In our study, pharmacy students have low level of physical activity. Because, after the result of post-practice questionnaire, the students have negative ranking on practice. Therefore, the negative ranking and positive ranking has *P* value of 0.000.

**Descriptive Analysis of the Pre-Test and Post-Test Scores Of Knowledge, Attitude and Practices of Obesity among Students**

Pre-test and post-tests scores are used to evaluate the knowledge, attitude, and practice of obesity among students and the findings are given in the table.

Based on frequency analysis the three chief characteristic attributes are further categorized into three types low, average and high are shown in figure and their findings are as follows:

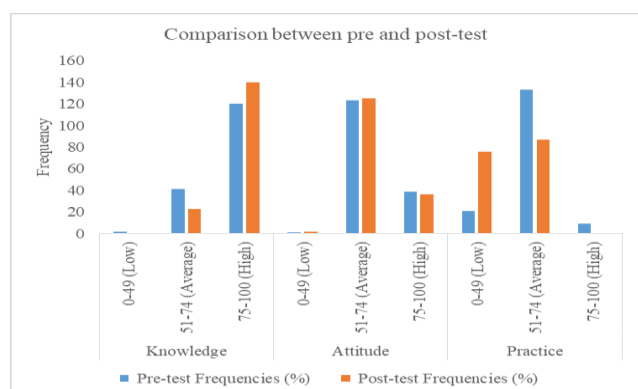
**Table 1** Contingency table on scores and characteristic attributes

| Characteristics |                 | Pre-test frequencies (%) | Post-test frequencies (%) |
|-----------------|-----------------|--------------------------|---------------------------|
| Knowledge       | 0-49 (low)      | 2 (1.2)                  | 0 (0)                     |
|                 | 51-74 (average) | 41 (25.2)                | 23 (14.1)                 |
|                 | 75-100 (high)   | 120 (73.6)               | 140 (85.9)                |
| Attitude        | 0-49 (low)      | 1 (0.6)                  | 2 (1.2)                   |
|                 | 51-74 (average) | 123 (75.5)               | 125 (76.7)                |
|                 | 75-100 (high)   | 39 (23.9)                | 36 (22.1)                 |
| Practice        | 0-49 (low)      | 21 (12.9)                | 76 (46.6)                 |
|                 | 51-74 (average) | 133 (81.6)               | 87 (53.4)                 |
|                 | 75-100 (high)   | 9 (5.5)                  | 0 (0)                     |

**Table 2** Difference between of pre-test and post-test knowledge, attitude and practice based questions

|                                |                | N   | Mean rank | Sum of ranks | WS rank test value | p-value  |
|--------------------------------|----------------|-----|-----------|--------------|--------------------|----------|
| Pre-knowledge – Post-knowledge | Negative ranks | 14  | 24.50     | 343.00       | -3.051             | 0.002*** |
|                                | Positive ranks | 35  | 25.20     | 882.00       |                    |          |
|                                | Ties           | 114 | —         | —            |                    |          |
|                                | Total          | 163 | —         | —            |                    |          |
| Pre-attitude – Post-attitude   | Negative ranks | 31  | 30.45     | 944.00       | -0.508             | 0.611    |
|                                | Positive ranks | 28  | 29.50     | 826.00       |                    |          |
|                                | Ties           | 104 | —         | —            |                    |          |
|                                | Total          | 163 | —         | —            |                    |          |
| Pre-practice – Post-practice   | Negative ranks | 72  | 43.45     | 3128.50      | -6.39.             | 0.000*** |
|                                | Positive ranks | 13  | 40.50     | 526.50       |                    |          |
|                                | Ties           | 78  | —         | —            |                    |          |
|                                | Total          | 163 | —         | —            |                    |          |

Note: This table shows that there is a significant difference between the pre-test and post-test scores for the attributes of knowledge and practice; since their p-value is <0.05.



**Figure 6** descriptive analyses of the pre-test and post-test scores of knowledge, attitude and practices of obesity among students.

1. The respondent's scores for pre-test based on knowledge, compared to pre-test (73.6%), post-test (85.9%), was found to be high. On evaluating these scores it can be shown that education after the pre-test is effective and helps in increasing the students' high-level knowledge.
2. When pre-test and post-test scores on attitudes are compared, it is shown that instruction following the pre-test is effective and enhances the students' moderate level attitude slightly.

3. The respondent's scores for pre-test based on practice were as follows high (5.5%), average (81.6%) and low (0.5%), and their corresponding scores for post-test was high (0%), average (53.4%) and low (46.6).

By this, we can understand that there is poor practice which is observed after post-test.

## DISCUSSION

As per population's highest range recognized under the gender categorization male (50.9%) than female (49.1%) in the statistical data. According to Jaydip Sen et al, the prevalence of overweight and obesity was documented to be 22.00% and 19.5%, respectively, the prevalence of obesity was distinctively higher among females as compared to males. In our study the high response was males as compared to females.

As per the BMI demographic data, the study population's highest range has been identified as normal-weight students (65.0%) and the lowest range has been identified as underweight and obese students (4.9% and 0%). In our study, pharmacy students have low levels of physical activity. Because, after the result of post-practice questionnaire, the students have a negative ranking on practice. Therefore, the negative ranking and positive ranking has *p* a value of 0.000. According to TrushnaShah et al, among medical students, a

high proportion of students had low levels of physical activity and 68.08% of obese and overweight students were not involved in any physical activity while the remaining were walking for 30 min daily. Similarly according to Ali et al, Based on BMI classification of weight status, the finding of this study indicate that more than half of students 55.3% were of normal weight.

The respondent's scores for pre-test based on knowledge, compared to pre-test (73.6%), post-test (85.9%), was found to be high. On evaluating these scores it can be shown that education after the pre-test is effective and helps in increasing the students 'high-level knowledge. In our study, good knowledge gained among pharmacy students. Similarly, According to Waghmare *et al.*, good and fair knowledge among medical students as compared to non-medical student's population.

The respondent's scores for pre-test based on practice were are as follows high (5.5%), average (81.6%), and low (0.5%), and their corresponding scores for post-test was high (0%), average (53.4%), and low (46.6). By this, we can understand that there is poor practice which is observed after post-test. According to Waghmare *et al*; a poor practice was also observed in overall student's population. A KAP study done in south India also found that in spite of good or fair knowledge the attitudes and practices of the study participants were relatively poor.

## CONCLUSION

This study helped to increase awareness among students, students don't have adequate knowledge or a healthy lifestyle as they filled in the questionnaire, educating them had increased their level of knowledge in post-test. Improved knowledge regarding obesity and about the cause of this disorder are not enough to defeat against the disease. For prevention of obesity in young adults require a perfect attitude toward obesity and good practice which can be developed by inspiration, awareness and stressing the importance of lifestyle modifications. Then only self-drive will build up toward proper attitude and practice to prevent obesity from the very beginning.

This present study analysis the knowledge and attitudinal data on physical activity and dietary intake in individuals who are all little overweight and investigates the factors that may be mediators of behavior change in these students.

This KAP will be helpful in education interventions in Indian scenario in the field of obesity. It has satisfactory validity and internal consistency.

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