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Assessment of eating attitude of physical education students in Kerala

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Abstract
This study investigated the eating attitudes of physical education students in Kerala and assessed the significant difference in eating attitudes between male and female subjects. 349 students (218 males and 131 females) were collected purposively from different physical education institutions in Kerala. Information on college students' background, nutritional, and eating attitudes were collected using an EAT 26 scale (Eating Attitude Test). The study discovered that 96.6 percent of the 349 participants had a lower risk of eating disorders. An estimated 3.4 percent of the population is at risk of developing an eating disorder. The majority of the male and female students were of average height and weight. There was no statistically significant difference in eating attitudes between male and female individuals, nor was there a statistically significant difference in eating attitudes among Kerala physical education college students. The reason could be that physical education students are physically active and always maintain a daily routine, which is helpful for the proper metabolic functioning of the body. Another reason could be an appropriate balancing of calorie intake and expenditure.

Keywords: eating behavior, statistically, nutritional

Introduction

Nutrition is the process by which the body consumes, digests, absorbs, transports, and utilises nutrients and disposes of the waste material. Nutrition also considers how food and eating affect people's social, economic, cultural, and psychological well-being. Nutrition science is the study of how food influences human health in a nutshell.

"The importance of Nutrition in one's overall health and development cannot be overstated. Better Nutrition has been associated to improved new born, child, and maternal health, stronger immune systems, safer pregnancy and childbirth, a lower risk of non-communicable diseases (such as diabetes and cardiovascular disease), and a longer lifespan". (WHO).

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Eating disorders were not reported in India until the late twentieth century (Vaidyanathan S *et al*., 2019). "The media's adoration of the "size zero" body type, as well as a culturally sanctioned desire for thinness, body shaming, and dissatisfaction, have all contributed to the recent rise in eating disorder cases." (Singh M *et al*., 2016) [7]. Eating disorders have a multifactorial aetiology that includes psychological factors such as self-esteem, perfectionism, and mood as well as biological factors such as genetics (Sinton M and Birch L, 2005) [8].

"Anorexia Nervosa, Bulimia Nervosa, and Binge Eating Disorder are the three types of eating disorders identified by the Diagnostic and Statistical Manual of Mental Disorders-5" (American Psychiatric Association, 2013). Those with anorexia nervosa eat much less and thus have a low body weight and are dissatisfied with their body weight and shape, while people with binge eating disorder consume a great quantity in a short period and people with bulimia nervosa eat a lot and then try to get rid of the food (Kamat A *et al*., 2017) [3]. "The key distinguishing symptoms of eating disorders among adolescent include laxative misuse, self-induced vomiting, starving, over-exercising, and so on" (Nivedita N *et al*., 2018) [5].

In the context of the worldwide obesity epidemic, a greater understanding of the varied eating behaviours and their prevalence in the general population would be helpful in understanding the relationships between eating and health and developing nutritional preventative initiatives. "Dietary restriction, which appears to be common in modern countries, is thought to play a part in the onset of eating disorders and obesity" (APA, 2013).

One of the pleasures of life is the enjoyment of eating. For those who have a sufficient food supply, eating is about considerably more than survival. Eating as a family is an important component of everyday living as well as social events, celebrations, and festivals. Food is, of course, necessary for life, in addition to providing enjoyment. The amount and variety of food available locally determines how much and what nutrients the body

requires. This varies greatly depending on where you are in the world. Furthermore, everybody have their own food preferences and eating patterns.

1. Objectives of the study

1. To assess the eating attitude of physical education students of Kerala.
2. To assess the health status of physical education students.
3. To analyse whether there is a significant difference in eating attitudes between male and female students in different physical education colleges in Kerala.
4. To investigate the significant differences in eating attitudes of students at different physical education colleges in Kerala.

Materials and Methods

1. Sample Selection

Three hundred and forty-nine physical education students were selected from seven Physical Education Institutions (School of Physical Education and Sports Sciences, Government College of Physical Education, Centre for Physical Education Calicut, MG University, Christ College *Irinjalakkuda, Lakshmibai National College of Physical Education & St. Joseph College Moolamattom)* of Kerala. A convenience sampling technique was used to select the subjects. Eating Attitude test (Eat-26), A set of questionnaires, was introduced to the subjects.

2. Questionnaire Description

"The Eating Attitude Test (EAT-26) is a screening tool that can assist detect if someone has an eating disorder that requires professional help. It is the most extensively used indicator of the risk of developing an eating disorder and having disordered eating attitudes. The EAT-26 usually gives useful information on the eating symptoms and concerns that are common in eating disorders since most people give honest answers" (Kamat A *et al*., 2017) [3].

"It's a 26-item self-report questionnaire that assesses people disordered eating attitudes. The questions are on a six-point forced-choice Likert scale ranging from one (never) to six (always) (always)" (Kamat A *et al*., 2017) [3].

Table 1

Scoring for Questions 1-25		Scoring for Questions 26	
Always	3	Always	0
Usually	2	Usually	0
Often	1	Often	0
Sometimes	0	Sometimes	1
Rarely	0	Rarely	2
Never	0	Never	3

"The overall score on EAT-26 scale spans from 0 to 78. Dieting, Bulimia and Food Preoccupation, and Oral Control were the three subscales of the EAT-26 scale. Garner, Olmsted, Bohr, & Garfinkel (1982); Lee *et al*., 2002; Mintz & O'Halloran, 2000) found the Eating Attitudes Test (EAT-26) to be extremely trustworthy and valid. A score of more than 20 indicates that further examination by a qualified professional is required. Low scores (below 20) might nevertheless indicate serious eating disorders, as denial of symptoms is a common symptom of eating disorders" (Nivedita N *et al*., 2018) [5].

3. Collection of Data

A Google form was generated to collect data from subjects. Information on college students' background, nutritional, and eating behaviors were collected using a well-structured questionnaire from seven physical education institutions in Kerala.

4. Statistical Techniques

SPSS version 21 was used for statistical analysis. The statistical difference between male and female physical education students for eating attitude and its subscales was calculated using the independent‘t’ and one-way ANOVA tests.

Results and Discussions

Table 1: Gender Distribution of Selected Respondents

Gender	Frequency	Percent
Male	218	62.5%
Female	131	37.5%

Sixty-two percent of the 349 people in the study were male, while 37.5 percent were female.

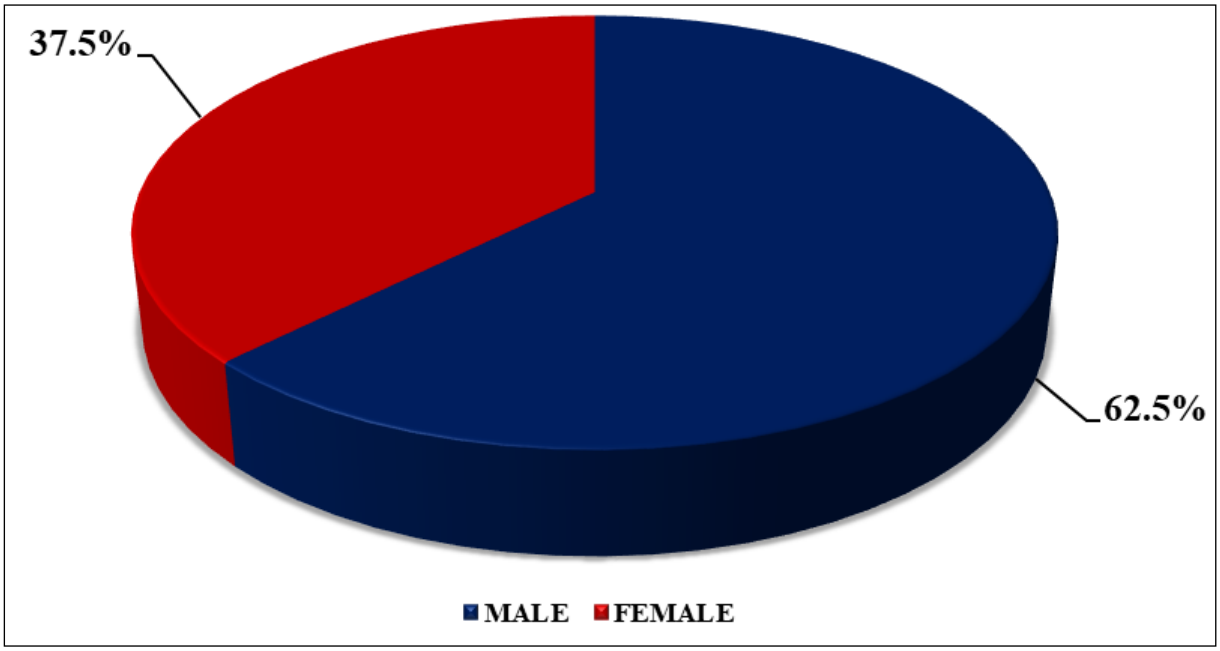

Fig 1

Table 2: Eating Attitude of Respondents

Risk of Eating Disorder	Frequency	Percent
Below 20	339	96.9
Above 20	10	03.4

Among 349 participants, 339 were shown to be at a lower risk of developing an eating disorder. Ten participants were discovered to be at risk of having an eating disorder**.**

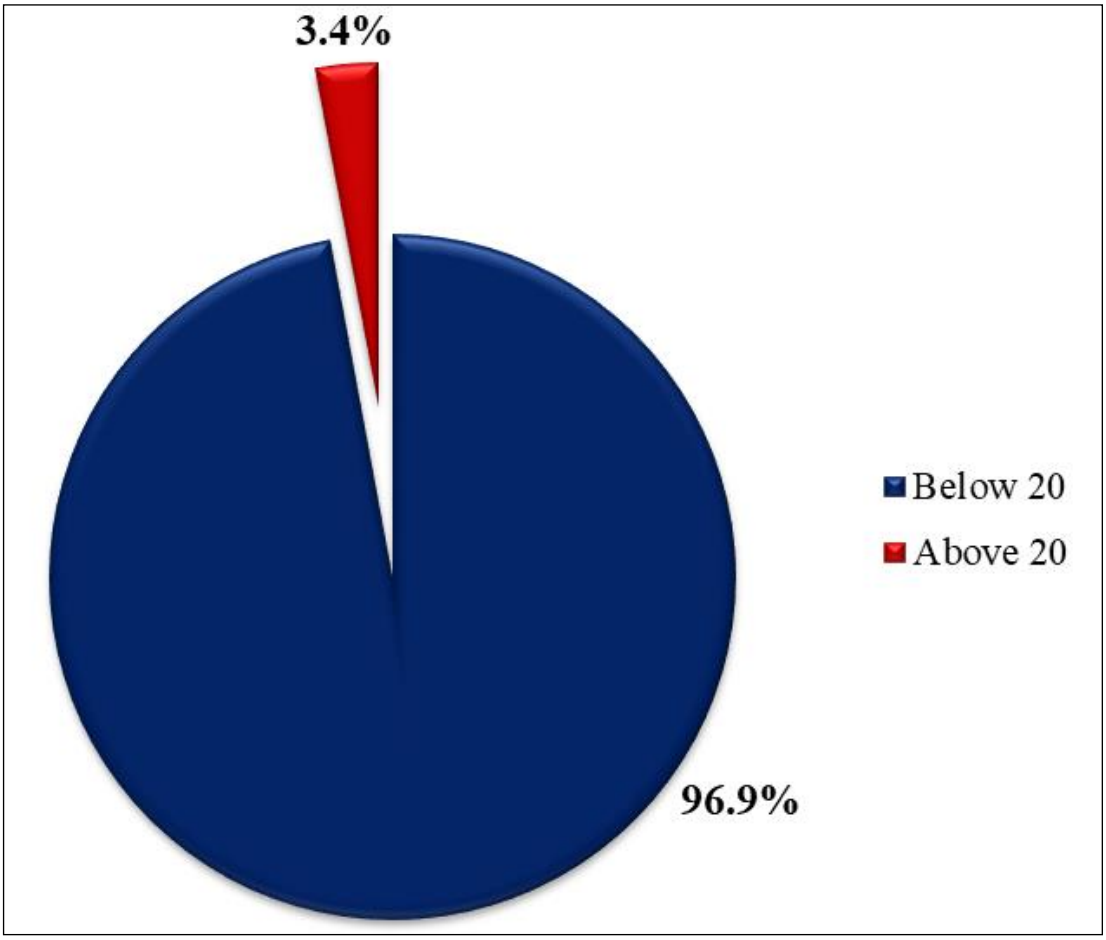

Fig 2

Table 3: Nutritional status of respondents according to BMI value and Sex

Gender	BMI			
	Under weight	Normal weight	Over weight	Obese
Male	15.1%	81.2%	03.7%	0
Female	8.4%	84.0%	07.6%	0

349 subjects were of average weight. 15.1 percent of the male subjects were found to be underweight, while 3.7 percent were found to be overweight. Eighty-four percent of the female participants were found normal weight. Following that, 8.4 percent and 7.6 percent of the female individuals were found underweight and overweight, respectively. None of the individuals, both male, and female were obese.

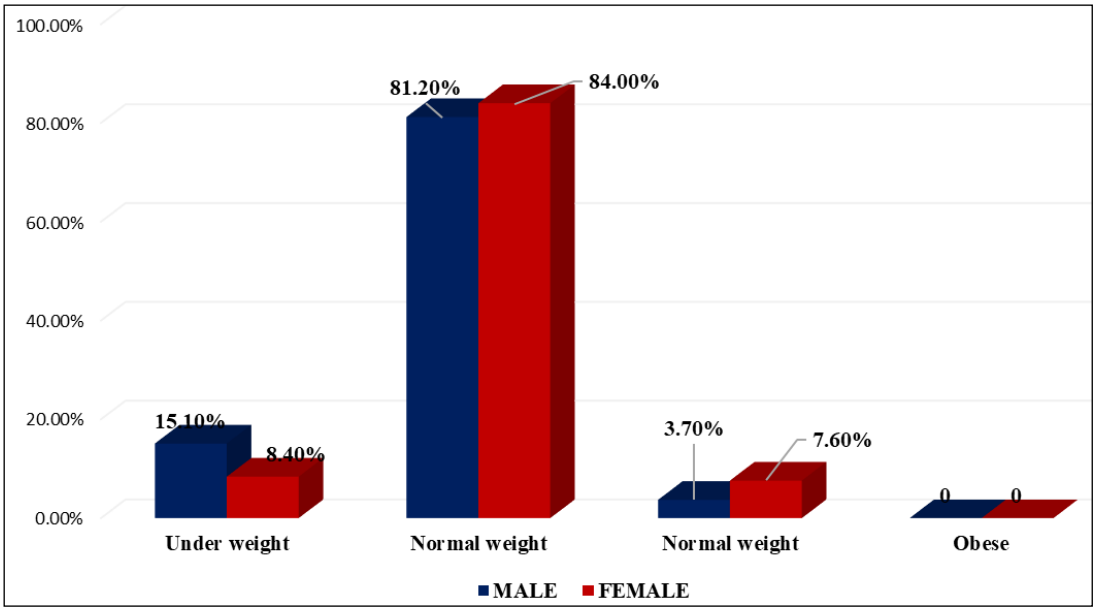

Fig 3

Table 4: Statistical difference of male and female physical education students for eating attitude and its sub scales

Subscales EAT-26	Gender	Mean ± SD	*t*-value	*p*-value
Dieting	Male	1.67±1.71	0.42	0.67
	Female	1.59±1.78		
Bulimia and Food Preoccupation	Male	1.41±2.04	-0.23	0.81
	Female	1.46±2.02		
Oral control	Male	2.60±2.17	0.17	0.54
	Female	2.45±2.38		
Eating attitude	Male	5.68±3.90	0.14	0.69
	Female	5.50±4.78		

*Significant at 0.05 level

In terms of eating attitude and its subscales, there was no statistically significant difference between male and female physical education students (Eating attitude {t = 0.14, $p > 0.05$, $p = 0.69$}).

Table 5: Analysis of Variance of Eating Attitude of Different Physical Education College Students in Kerala

Institutions	Mean± Std. Deviation				*F*-Value	*p*-Value
	Dieting	Bulimia	Oral Control	Eating Attitude		
SPESS	1.88 ±1.98	1.4±2.04	2.69±2.37	6.02±4.44	0.67	.66
GCPE	1.61±1.68	1.48±2.18	2.97±2.16	6.08±3.56		
CPE	1.96±2.00	1.34±1.94	2.38±2.28	5.73±4.40		
CHRIST	1.56±1.83	1.12±2.10	2.60±2.15	5.28±4.05		
MG	1.48±1.43	1.44±2.06	2.14±2.18	5.06± 3.83		
St. JOSEPH	1.40±1.83	1.44±1.77	2.30±2.18	5.14 ± 3.93		
LNCPE	1.60±1.75	1.73± 2.19	2.71±2.57	6.05± 5.35		

There is no significant difference in eating attitude of different physical education college students in Kerala ($F = .67$, $p = .66$, $p > 0.05$)

Discussions

The study was carried out with the objective of finding out the Nutritional Status of physical education students and to assess the significant difference in eating attitudes between male and female students in different physical education colleges in Kerala. The convenience sample technique was used to select 349 college students from seven different Kerala colleges. Information on background status, nutritional status, eating behaviours of college students were collected using a well-structured questionnaire.

Regarding the eating attitude of selected respondents, Among 349 participants, 339 were shown to be at a lower risk of developing an eating disorder. Ten participants were discovered to be at risk of having an eating disorder. This is supported by similar studies where 29.2 percent and 31.09 percent of subjects had the hassle in their eating attitude and behaviour. It might be because of gradual eater, figure consciousness, etc. One more study supported that A person with an excessive rating on the eat-26 scale has a high risk of developing eating disorders (Babu SS and Aroor AR, 2017) [2].

Regarding the Nutritional status of respondents according to BMI value and gender, the majority of the male and female students were normal weight. This finding was consistent with similar research; the prevalence of overweight and obesity was 17 percent and 5.7 percent, respectively (Rohilla R *et al*., 2014). A minority of the subjects had been underweight. This could be weight concerns, dieting behaviours, skipping breakfasts, etc.

Regarding the Nutritional status of respondents according to BMI value and gender, the majority of Regarding the statistical difference in male and female physical education students for eating attitude and its subscales, There was no statistically significant difference between the male and female eating attitudes ($p > 0.05$, $t = .14$, $p = .69$).

Regarding the analysis of variance of eating attitude of different physical education

college students There is no significant difference was found in the eating attitude of different physical education college students in Kerala ($F = .67$, $p = .66$, $p > 0.05$). The reason could be Physical education students are physically active and always maintain a daily routine, which is helpful for the proper metabolic functioning of the body. The second reason could be an appropriate balancing of calorie intake and expenditure.

Conclusions

The investigation is concluded from the study's findings that malnutrition is still prevalent among physical education students. The magnitude of overweight and obesity is very low. Ten subjects had an eating disorders risk. Eating disorders lead to detrimental effects on students' overall well-being, so it is an impelling need for the hour to make students and their parents aware.

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