EFFECT OF PSYCHO EDUCATION ON EATING BEHAVIORS AND ATTITUDES IN YOUNG ADULTS

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**ABSTRACT**

Eating behaviours are usually formed during young adulthood which makes college students a particularly vulnerable group that easily can adopt unhealthy eating behaviours. Psycho-Education as an approach of health promotion enhances positive health and prevents ill health in individuals and groups. This study investigates the impact of Psycho-Education intervention on eating behaviours and Eating Attitudes in young adults. The sample consists of first-year college students, they divided into two groups. Group -1 consists of psycho education (N=64) and Group -2 is a Control Group (N=57). All participants were assessed pre-intervention, post-intervention, and at two-month follow-up on Eating behaviors and Eating Attitudes. The Three-Factor Eating Questionnaire (TFEQ) and Eating Attitudes Test (EAT-26) were administered on the subjects. To assess the impact of psycho-education a repeated measure ANOVA was used analyses the collected data. The study results showed significant positive impact of Psycho-Educational Programme in enhancing Eating Behaviours in young adults. From the results, it was inferred that Psycho educational programme was effective in enhancing healthy Eating Behaviour.

**Keywords:** Psycho-Education, Eating behavior, Eating Attitudes, Young adults
INTRODUCTION

Health behaviours research is based on the assumptions that in industrialized countries a substantial proportion of the mortality from the leading causes of death is due to a particular behaviour patterns, and that these behaviour patterns are modifiable (Stroebe and Stroebe, 1995). It is increasingly recognized that individuals can make major contributions to their own health and well-being through the adoption of particular health enhancing behaviours (e.g. exercise) and the avoidance of other health compromising behaviours (e.g. Drinking). The identification of the factors that underlie such ‘health behaviours’ has become the focus of a great deal of research in psychology and other health-related disciplines in recent years (McLeroy et al, 1993; Adler and Matthews, 1994). This research has been motivated by a desire to design interventions to change the prevalence of such behaviours and so produce improvements in individual’s health. Health behaviours have been defined as ‘Any activity undertaken by a person believing himself to be healthy for the purpose of preventing disease or detecting it at an asymptomatic stage’ (Kasl and Cobb, 1966).

Poor eating habits are an important public health issue that has large health and economic implications. Poor nutrition and obesity are among the most important health issues facing society today, not only in terms of health, but also health care expenses (Goel, 2006, Rashad& Grossman, 2004). There are a variety of predictors of obesity including genetics, physical activity, and food consumption (Goel, 2006). There are other outcomes of food choice and nutrition that also have an independent effect on health including some types of cancer, cardiovascular disease, and diabetes (Nicklas et al., 2001). For these reasons, food selection is an important consumer behavior with many long-term consequences to the individual in the form of health and longevity and to society in the form of health costs.

Some research has shown that the most important factors predicting food selection among adults are: taste, cost, nutrition, convenience, pleasure, and weight control, in that order (Glanz, Basil, Maibach, Goldberg, & Snyder 1998). Many studies have shown that people often establish these tastes and habits while they are relatively young (Birch, 1999). Evidence suggests early establishment of habits and preferences occurs for a variety of behaviors including media use (Basil, 1990) and music listening (Holbrook & Schindler, 1994), as well as food choice (Birch, 1999). Therefore it is advisable to begin establishing good eating habits when people are as young as possible. Importantly, however, for the very young many food decisions are controlled by parents and preschools (Nicklas et al., 2001). Therefore, food choice for the youngest age groups may be constrained by a number of factors.

An especially important time of life for food choice is when people step out independently for the first time and begin to make all of their own food decisions. For many people, this is the transition to college life. The transition to college or university is a critical period for young adults, who are often facing their first opportunity to make their own food decisions (Baker, 1991; Marquis, 2005) and this could have a negative impact on students’ eating behaviors (Marquis, 2005; ).
EATING BEHAVIOR OF COLLEGE STUDENTS

It is important that young people’s health is considered in its broadest sense, as encompassing physical, social and emotional wellbeing; and that, in accordance with the WHO perspective, health is viewed as a resource for everyday living, not just the absence of disease. Research into youth’s health and health behaviour and the factors that influence them is essential for the development of effective health education and health promotion policy, programmes and practice targeted at young people. Many behaviours that comprise young people’s lifestyles may directly or indirectly impinge on their health in the short or long term; consequently. Positive or health promoting behaviour needs to be studied, as well as health-damaging or risk behaviour. Certain behaviour is initiated in the adolescent years, while some patterns of behaviour, such as eating patterns, become established in earlier childhood. Taking social as opposed to a purely biomedical research perspective means studying the social, environmental and psychological influences or determinants of child and adolescent health and health behaviour. Thus family, school and peer settings and relationships need to be explored, as does the socioeconomic environment in which young people grow up, if we are to understand fully the patterns of health and health behaviour found in the adolescent population.

Eating a healthy diet and being physically active are essential to leading a healthy and long-lasting life. According to the United States Department of Health and Human Services (US DHHS), engaging in moderate physical activity can significantly reduce the risk of developing or dying from chronic diseases such as heart disease, diabetes, colon cancer, or high blood pressure (US DHHS, 2004). Studies have indicated that college students have poor nutrition habits and often exhibit at-risk weight control behaviors. College students tend to engage in a number of unhealthy eating behaviors, including extreme dieting, skipping meals, high intake of fast foods, low intake of fruits and vegetables, and minimal consumption of dairy products (Huang et al, 2003; Matvienko et al., 2001). Furthermore, when young adults begin college, the new environment may place them at increased risk for developing unhealthy eating habits and adopting a more sedentary lifestyle. Since beginning college is a period when students begin to manage their own lives and adopt and solidify their health-related habits, it is important to investigate factors associated with activities such as being physically active and choosing to consume a diet rich in fruits and vegetables.

Eating habits of young students often change when they start studying. This can have different effects on both their health and personality. It is very common that university students gain weight in their first year at university. This gain can often be explained by the inconsistent eating habits which could be the result of stress, lifestyle, and changes in food and diet patterns. Studies have also shown that university students suffer from eating disorders and skipping meals is a common habit among many. Eating habits affect the academic performance of students because study schedules or workload keep varying within and between semesters (Akdeveliglu&Gümüs, 2010; Thorsteinsdottir&Ulfarsdottir, 2008).

In order to help college students adopt more proactive approaches to health and lead longer and healthier lives, valid interventions to improve their lifestyles must be identified and implemented. Many studies focus on topics that can be applied to developing health interventions. Some researchers are studying how knowledge of diet and physical activity may affect people’s corresponding health behaviors. For example, nutritional knowledge has been positively correlated with healthy eating (Wardle, Parmenter, and Waller, 2000), and knowledge regarding physical activity has been positively correlated to being more active (Rimal, 2001). However, researchers have not yet related both nutritional and physical
activity knowledge and their corresponding behaviors to psychological factors such as self-esteem. Health promotion is a comprehensive and ambitious activity that entails a preventive approach to all factors that influence people’s quality of life. Health promotion is described as a process that enables individuals to acquire a greater degree of autonomy and responsibility for their own health. The aim of health promotion is to influence the social and natural environment with respect to health and at the same time to develop individual competence.

According to Hatfield as cited in Allen, (2001), education is designed to “develop long-term, organized bodies of knowledge and generic problem-solving skills that will help the learner solve personal problems, both in the present and in the future”. Psychoeducation is the “process of teaching clients with mental illness and their family members about the nature of the illness, including its etiology, progression, consequences, prognosis, treatment and alternatives (Barker, 2003, p. 347). Psychoeducation’s goal is to offer education and therapeutic strategies to improve the quality of life for the family while decreasing the possibility of relapse for the patient (Solomon, 1996). It also has been described as a “systematic didactic-psychotherapeutic intervention, designed to inform patients and their relatives about the disorder and to promote coping (Lincoln, Wilhelm, & Nestoriuc, 2007, p. 233). By strengthening the coping skills, communication and problem solving abilities of the family, the well-being and adaptability of the individual and family members are expected to improve. Even with limited empirical evidence suggesting the importance of psychoeducation, practical application and experience has proven its effectiveness (Creamer & Forbes, 2004). Most health promotion interventions - whether they focus on the individual, community, whole populations or the environment - seek in some way to change health behaviour by changing health-related knowledge, attitudes and/or structural barriers and facilitators (Halpern et al, 2004). Social psychological theories such as social cognition theory are commonly used in the development of interventions and the key elements of such theories include knowledge of health risks, perceived self efficacy, goals and motivations and barriers and facilitators. Most health promotion interventions include one or more of the following components: education and knowledge building (around the health issue); motivation and goal setting (e.g. alcohol brief interventions and counselling); and community-based techniques to encourage a change in behaviour or reduce structural or cultural barriers.

Review shows effectiveness of psychological interventions to promote healthy eating [Dunn Cet al 2001]. Overall there is evidence that interventions can change eating habits, at least in the short term. Reviews evaluated interventions targeted at children or young people. There is evidence of an effect of interventions aimed at increasing fruit and vegetable intake in children aged 4-10 years and interventions for youth aged 11-16 years. (Kremers SP, 2007). Three reviews evaluated community based interventions. One review reported evidence of a small effect of community interventions for people aged 4 years and above on increasing fruit and vegetable intake (CiliskaD, 1997). There is also evidence that interventions based in supermarkets are effective for promoting positive changes in shopping habits, although effectiveness was found to be confined only to the period during which the intervention took place (Roe L1997). There is evidence of a positive effect of stage-based lifestyle interventions delivered to a primary care population (Van Sluijs EMF2004), telephone based interventions (Eakin EG2007) and nutritional counselling interventions (Ammerman A2006).
NEED FOR THE PRESENT STUDY

The passage from adolescence into young adulthood is a major developmental transition during which discontinuity in life trajectories increases. This major developmental transition represents the co-occurrence of at least two major role changes: the transformation from being a high school student to a university student and from being a child living at home to an independent person living in the college. Living on one's own greatly increases opportunities for self-governance in that it allows or forces the individual to make daily decisions about time use, lifestyle choices. The passage toward adult roles, relationships, and responsibilities involves fundamental changes in every domain of life. Experiences and decisions during adolescent years have the potential to build character and competence, develop skills for coping with life's challenges, and enhance health and well-being. At the same time, normative and nonnormative developmental transitions expose adolescents to many challenges and hazards that may jeopardise their optimal development and health. A central element in the concept of health promotion is the idea of attempting to prevent the emergence of disorders and impairments to health at an early stage and to improve well-being and the quality of life. A central precise is that through greater understanding, facilitation, and support of these transitions, young adults health and well-being will be enhanced and optimal development will result.

OBJECTIVES

To evaluate the effect of Psycho-educational programme on eating behaviours and eating attitudes in young adults.

METHODS AND METERIALS

Sample

The study was conducted by using “Before and after” research design. In the study young adults from different educational and socio-economic backgrounds participated. The psycho education was given to the experimental group, while the control group received no intervention. The intervention group had 65 subjects, whose mean age was 18.4 with SD of 0.74. The control group had 65 subjects with a mean age of 18.0 years with SD of 0.29. The sample selected for the intervention were students from Physiotherapy colleges in Chennai.

Measures

Three-Factor Eating Questionnaire –R18

Eating-related behaviors were assessed using the Three-Factor Eating Questionnaire Revised 18-item version (TFEQ-R18) (Karlsson et al., 2000). The instrument is a shortened and revised version of the original 51-item TFEQ (Stunkard and Messick, 1985). The questionnaire refers to current dietary practice and measures three different aspects of eating-related behavior: cognitive restraint of eating (CR: 6 items), uncontrolled eating (UE: 9 items) and emotional eating (EE: 3 items). Each score ranges from 0 to 100, with higher score indicative of greater level in the eating behavior of interest. Internal-consistency reliability coefficients (Cronbach’s α) for each of the 3 scales were above the 0.70 standard and below the 0.90 limit recommended for individual assessment (CR: 0.84 inserm-00294741, version 1 - 10 Jul 20085 in adults, 0.80 in adolescents; UE: 0.83 in adults, 0.80 in adolescents; EE: 0.87
Eating Attitudes Test (EAT-26) - David M Garner et al (1982)

The EAT-26 an abbreviated version of the Eating Attitudes Test (EAT-40) (Garner & Garfinkel, 1997), contains 26 questions that measure attitudes and behavior patterns associated with anorexia nervosa. Research (Garner & Garfinkel; Garner, Olmsted, Bohr, & Garfinkel, 1982; Orbitello et al., 2006) identifies three subscales to the EAT-26: bulimia, dieting, and the tendency to self-control. The EAT-26 has been shown to be a valid instrument in screening for eating disorders (Jones, Bennett, Olmsted, Lawson, & Rodin, 2001). “The EAT-26 has acceptable criterion-related validity by significantly predicting group membership” (Jones et al., 2001, p. 548). Research (Desai, Miller, Staples, & Bravender, 2008) reports the EAT-26 highly correlates with the original EAT-40 instrument (r = .98). A study by Thome and Espelage (2004) reported a Cronbach’s alpha of .91 for the EAT-26 total scale. Myers and Sweeney (2005a) reported an overall wellness score alpha of .94 for the 5F-Wel. The second-order factor scores in the same study ranged from low scores of .85 (Coping Self and Social Self) to the high score of .92 (Creative Self).

PROCEDURE

The samples identified were college students in Chennai City. Two groups of students who were matched for age and socioeconomic background. They were all assessed at the base line level (Pre - test) on eating behaviours and attitude and two groups were exposed to Psycho Education Programme. The control group was not given any training or exposure to health information. After first 2 months of training, all the groups were assessed on same variables and 4 months from the pre - test period, they were all reassessed. There were no dropouts, the investigator ensured to have data on all the subjects at all the phases of intervention.

FOCUS AREA OF THE TRAINING PROGRAM:

Professionals from the field of Psychology and Health Education along with the investigator provided psycho education to the students for a period of two months. These training sessions were interactive in nature with various activities, work assessment and skills demonstration. All the training sessions were conducted in the college premises. Training conducted for 2 months Period. Totally 15 sessions were conducted and each Session was conducted for 3 hours. The Psycho-Educational Program aims to enhance Healthy Eating Behaviours and to reduce eating related health compromising behaviours. The Psycho-Educational Program consisted of the sessions on Physical Fitness & Healthy Eating, Body Self-Esteem & Image, Health Values, Health and Personal Hygiene, Nutrition & Healthy Eating, Stress Management, Emotional Management, Social support, Eating Behaviours & Dieting Beliefs

STATISTICS USED

Statistical Analyses: For the current study statistical analysis was done using SPSS version 15. The analysis was done on three levels. Level I comprised of data cleaning. This was done by doing outlier analysis. This contained box whisker diagrams which is also known as box plot analysis. Level II contained descriptive analysis. Means and standard deviations were computed. Skewness and kurtosis were also carried out to see the normality of the data. Level
III contains mean difference analysis. To assess the impact of psycho-education repeated measure ANOVA was used.

RESULTS AND DISCUSSION

The objective of the study was to investigate the impact of the Psycho educational programme on eating behaviors and eating attitudes in young adults. A One-way ANOVA with repeated measure on one factor was conducted in Experimental Group to determine whether there was a statistical significance between pre to post and follow-up assessment on eating behavior. Mauchly’s Test indicated that the assumption of sphericity had been violated for the main effect of Psycho Education $\chi^2 (2) = 122.7$, $p<0.01$ and were corrected using Greenhouse-Geisser estimates. There is significant main effect of psycho education on cognitive restrain of adults $F (1,67.6) =7.4$, $p<0.01$. Contrasts reveals that pre assessment of Cognitive restrain scores is significantly different from post $F(1,63) =8.8$ ($p<0.01$) follow-up $F(1,63) =7.1$ ($p<0.01$). The mean difference (MD= -1.5, SE=.50) shows significant improvement of cognitive restraint in the experimental group indicating impact of Psycho Education in enhancing healthy eating behavior in trained subjects than in control subjects which doesn’t show any significant different between pre to follow-up $F (1,68.7) =1.2$, $p<0.27$.

There is significant main effect of psycho education on Uncontrolled Eating of adults $F (1.1,71.8) =110.6$, $p<0.01$. Contrasts reveals that pre assessment of Uncontrolled Eating scores is significantly different from post assessment of Uncontrolled Eating $F(1,63) =112.3$ ($p<0.01$). The mean difference (MD= 7.85, SE=.74) shows significant reduction in Uncontrolled Eating in the experimental group indicating impact of Psycho Education in controlling Uncontrolled Eating behavior in trained subjects than in control subjects which shows improvement from pre to follow-up $F (2,128) = 9.8$, $p<0.01$. There is significant main effect of psycho education on Emotional Eating of adults $F (1.69) =23.9$, $p<0.01$. Contrasts reveals that pre assessment of Emotional Eating scores is significantly different from post assessment $F(1,63) =22.1$ ($p<0.01$) The mean difference (MD= 1.6, SE=.35) shows significant reduction in Emotional Eating in the experimental indicating impact of Psycho Education in controlling Emotional Eating behavior in trained subjects than in control subjects which shows improvement from pre to follow-up in Emotional Eating $F (1.6,104.4) = 7.3$, $p<0.01$. The findings of this study confirm the earlier Health-Educational studies for example, impact of nutritional knowledge on healthy eating (Wardle, Parmenter, and Waller, 2000), and knowledge regarding physical activity with activeness (Rimal, 2001).

A One-way ANOVA with repeated measure was conducted in Experimental Group to determine whether there was a statistical significance between pre to post and follow-up assessment on Eating Attitude. There is no significant main effect of psycho education on Eating attitude of adults $F (1.28, 80.7) =1.28$, $p<0.27$. The objective of this study is to understand the effect of Psycho-Educational Training Programme on eating behaviors and eating attitudes in young adults. The data obtained on the intervention group and control group at different phases were analyzed using repeated measure ANOVA. The study showed significant positive impact of Psycho-Educational Programme in enhancing Eating Behaviours in young adults. From the results, it was inferred that Psycho educational programme was effective in enhancing healthy Eating Behaviour.
CONCLUSIONS

The findings of this study reveal that there is a great need to address health related behaviours and attitude of young students since their lifestyle behaviours may have an impact on their future lives and wellbeing. For this reason, health promotion programmes at institutions of higher education may be beneficial in raising student awareness of their present and future health in relation to their lifestyle behaviours. Continuous promotion of healthy eating behaviours to students could be a way forward since peer promotion can be a powerful tool in influencing healthy lifestyle behaviour. Initiation of specific health promoting events independently or as a part of sport and other club activities could be yet another way of encouraging healthy lifestyle behaviour.

The study is, however, not without limitations. Sample size is one of the major limitations of this study. The sample consisted of students majoring in physiotherapy, studying at a small college in the south of India. The results of the study may not necessarily apply to all university students at Indian universities and possibly if investigated at larger universities the results would have been slightly different. Thus investigating student eating behaviours taking into account their age, gender and socio economic status could potentially be an interesting topic for future research. Comparative studies between different countries could be yet another interesting area for future research, where students’ national rather than ethnic differences could be investigated in relationship to lifestyle behaviours.

This study used a questionnaire as a means of data collection. While there are many positive aspects of this tool, it also contains inherent limitations associated with the use of quantitative data collection techniques, where respondents could answer certain questions without even reading it. Moreover self-reporting technique is associated with the inaccuracy of the information provided. Future studies could adopt a broader view on behavioural lifestyles through triangulation, where qualitative methods e.g. focus groups and observations could lead to collection of richer data. Yet another and potentially interesting future research project could investigate how lifestyle behaviours of students change over time, by collecting data from young professionals, which could be especially interesting taking into consideration that many firms today set healthy lifestyle as one of their strategic goals.

IMPLICATION AND FUTURE DIRECTION

In general health education programme has been focusing on adults sample and on specific clinical groups. This study applies the educational principles to promote the health among young adults. Generally the health education has been specific to single risk factor or psychological ill health factors. However, this study has incorporated all the components of health promotion using physical, psychological, social inputs in to the training. Therefore this is a comprehensive, holistic approach to health promotion, which respects the policy of World Health Organization. Thus it addresses globally, holistically the psychosocial, physiological health of young adults. Generally health researchers so far have focused on identifying diseases, negative trait, and ill health components for interventions. This study emphasis on positive approach to health in identifying the components of health and promotion of health. It is interesting to note that the training effectiveness varies in different groups, even though they are similar in many aspects. Therefore, the response to health education varies depending upon the characteristic of the receiver, ambience of the training and the context of the trainings. The future research in this direction should focus on long
term randomized group design across various age groups to evaluate the impact of psycho educational programme.

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