

Relation of Overweight (BMI) and Health-Related Quality of Life among Adults

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^{1, 2 & 3} Conception and design, ^{4,5 & 6}Collection and assembly of data, analysis and interpretation of the data, ^{1&2}Critical revision of the article for important intellectual content, Statistical expertise ^{2&3}Final approval and guarantor of the article.

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A B S T R A C T

Background: Overweight is an excessive amount of body fat than normal. BMI is used as a screening tool to identify which weight category a person is in. Health-related quality of life (HRQOL) includes physical, mental, emotional, and social functioning. The prevalence of overweight weighted to the general Pakistani population is 25.0% and the Prevalence of obesity is 10.3%.

Objectives: The purpose of this study was to find out the relation of obesity with health-related quality of life (HRQOL).

Methodology: This correlation study was conducted at Rawalpindi and Islamabad. The study duration was 6 months from February 2018 - July 2018. A total of 500 overweight males and females were selected through Purposive Sampling. Self-structured questionnaire for demographics and Quality of Life was assessed through the health-related quality of life questionnaire (HRQOL). Data were analyzed using SPSS version 21.0.

Results: A total of 500 individuals responded to a survey with a mean age of 20.43 ± 1.485 . Out of 500, 55% (275) were female and 45% (225) were male. There is an indirect significant correlation between overweight (BMI) and HRQOL with r value -1.05 and p-value 0.19. Psychosocial outcomes are negatively correlated with Overweight.

Conclusion: This study concluded that there is an inverse relationship between overweight and quality of life, both in males and females. All psychosocial aspects of life are affected by elevated BMI. The study will bring awareness in health care worker about physical and mental stress related to High BMI score which needs it to be improved for the betterment of health.

Keywords: Body mass index, Health-related Quality of life and psychosocial outcome, Overweight.

Introduction

Health Organization expresses that health is a state of overall physical, psychological, or community wellbeing and not merely absence of sickness or illness. Practical status and prosperity are regularly alluded to as health-related quality of life (QOL) and the effect of illnesses, for example, heftiness, ecological and financial factors, for example, pay and training would all be able to impact the

quality of life.¹ An investigation was led as Meta-analysis of the relationship between Body mass and health-related quality of life among grown-ups "adults", evaluated by the SF-36. This reasoned that Adults with higher than typical BMI record had fundamentally diminished actual quality of life with the clear dose-response relationship over all classes. Various examples were noticed for physical and

mental health-related Quality of life (HRQOL), however, both were disabled in stout people. This meta-analysis gives additional proof on the effect of corpulence on the two parts of health-related quality of life.²

A study was conducted in china identified body mass and HRQOL association in young adult, proposed that increase BMI straightforwardly impact on the actual strength of the individual and gradually it impacts compasses to mental prosperity too.³ Low actual movement can prompt stoutness in both male and female orientations. Physiological activity ought to be urged paying little mind to sexes to maintain a strategic distance from fatness related problems. Routinely checkups after a specific interval in school and collages can help in keeping a check on sedentary and physically inactive individuals.⁴

The examination was directed to gauge the free effect of Body Mass Index (BMI) on health-related qualitative lifestyle. The best negative effects of the different BMI classes on QOL were on physical as opposed to mental viewpoints, particularly for those in the underweight, hefty and extremely chubby classifications, more so than numerous other persistent conditions.⁵ The relationship of BMI with Functional Status and Self-Rated Health in US Adults is essentially related across ages and genders. The varieties in the relationship of BMI with useful status and self-rated health propose that a solitary "ideal body weight group" may not be proper for all people or all health results.⁶ when we say overweight, Overweight specifically refers to associate degree excess weight compared to line standards, whereas fat is to own associate degree abnormally high proportion of total body fat. One of the studies says increased BMI has a much greater impact on physical.⁷ There are additionally psychosocial reasons that add to the connection between fatty and compromised sexual active. Distress might be one of the most widely recognized contemplations. A few examinations have recognized a connection between BMI and distress. For instance, in an ongoing report dependent on the National Health and Nutrition Examination Survey, ladies with a BMI >40 kg/m² were multiple times bound to be discouraged.

The connection of Body mass and HRQOL among Australian grown-up persons in 2010 inferred that high BMIs were related with diminishing degrees of both

physical and passionate prosperity, however, the weakening in health status was more predictable in the physical than in different measurements.⁸ The essential point of this prognostic examination was to recognize standard elements related to physical HRQOL in patients after a femoral neck crack. The optional points were to recognize standard elements related to mental HRQL, hip capacity, and health utility.⁹ HRQOL is a character's emotional view of every certain and antagonistic part of life that region unit affected by health standing. It's a multidimensional origination that regularly incorporates abstract assessments of actual working, mental state, and social/job working. The relationship between chubbiness and HRQOL demonstrated heftiness have the biggest relationship with actual capacity measures. Late public principles, which have brought down the limit for characterizing overweight, distinguish patients who are bound to have clinically critical decreases in HRQOL and useful debilitation.¹⁰

The fundamental targets of this examination were to discover the connection of over-weight BMI on HRQOL. Most of the previous studies in this region were held on the childhood population.

Methodology

Cross-section study was conducted at universities of Rawalpindi and Islamabad (Riphah International University WISH Campus Islamabad, Punjab school, Government degree school, Fast college and Comsats University). Participants in the study were 500 calculated through sample size was calculated through the formula:

$$n = \frac{z_{1-\frac{\alpha}{2}}^2 (SD^2)}{d^2}$$

Where α is the confidence level; SD = Standard deviation of outcome measure from the previous study and d = Absolute error.

Duration of study was 6 months from February 2018 - July 2018. Inclusion criteria were male and Females about BMI 24-30, age 18-25 years of students. Exclusion criteria were any physical disability, mental retardation, life-threatening disease, an endocrine disorder. Purposive sampling technique was used. Ethical approval was taken from Riphah ethical committee. The questionnaire used was a standard Health-related quality of life questionnaire

(HRQOL), it is most regularly use to evaluate QOL. HRQOL including general mental health physical functioning, role emotional problems, social functioning. Top scores on each measurement point-out the additional +ve HRQOL. After taking consent from each participant, data was collected and analyzed statistically on SPSS 21.

Results

A total of 500 individuals responded to a survey with a mean± S.D age of 20.43 ± 1.485, (Table I). Out of 500, 55% (275) were female and 45% (225) were male (Figure no 1).

Table I: Mean and Standard Deviation of Age		
Variable	N	Mean ±SD
Age	500	20.43 ± 1.485

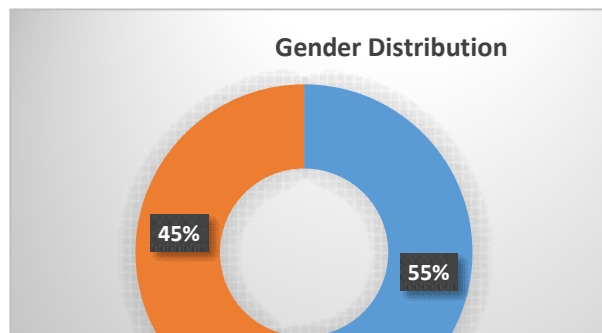


Figure 1: Male and female percentage.

As a rule, there was a backward relationship between Overweight (BMI) and psychosocial factor. The different close end, questions of the binary qualitative variable were asked. Questions where do you feel down the dumps (1), do you feel your life had a purpose (2), have you felt hopeful about your (3), do your life was worthwhile (4) and Do you feel life in control (5), for correlation between over-weighted individuals and questions, indirect correlation coefficient, was found overall. When assessing Quality of Life Assessment Manual testes and self-structured questionnaire through the chi square test between Overweight (BMI) and Quality of life is -0.85 which is a Strong indirect correlation coefficient. As Overweight (BMI) and HRQOL are indirect

they are, inversely related to each other, as much BMI is elevated the rate of quality of life is decreases.

A statistical suggestion testing, the probability value is the probability of obtaining a test is 0.019 is highly significant. (Table II)

Discussion

The study was directed to define the link between BMI and QOL. There are a few studies that uphold the topic and idea of our study. The current study focused on Overweight (BMI) and quality of life as they are strongly related to each other. As the value of BMI moved away from the normal limits the quality of life decreases hence both show negative relation with each other. Most of the recent literature comes to a point that Overweight (BMI) decreases the quality of life¹¹ and physical function is also affected by high body weight.¹² Not only get this but self-esteem affected negatively as well.¹³ In the present study, it was found that psychosocial outcomes (PSO) and BMI are negatively linked and excess weight had a bad impact on health and psychosocial factors. But these findings oppose the results of the previous research study in which they reported no significant relationship between BMI and PSO in adolescences, this may be due to regional/population and sample size difference.^{14,15}

A study was conducted in 2007 on the relation between BMI and HRQOL suggested a point that if the value of BMI deviates from the normal ranges that are associated with poorer HRQOL. As the study shows that the prevalence of elevated BMI and poorer HRQOL is associated more in females than males. Similarly, in the present study, the trend agrees with the past published study that female participants are more overweighted then men.^{16,17}

A research conducted by Zia ul Haq at el. In 2012 added that the investigation noticed a diverse example of physical and psychological wellness related quality of life comparable to the BMI. When contrasted and the typical weight, grown-ups the one with higher BMI ranges had

Table II: Relation of overweight (BMI) with QOL and Psychosocial outcomes.						
BMI	Do you feel down the dumps	Do you feel your life had a purpose	Have you felt hopeful about your	Do your life was worthwhile	Do you feel like in control	QOL
r value	-0.70	-0.60	-0.45	-0.19	-0.59	-0.85
p-value	0.11	0.178	0.314	0.674	0.187	0.019

essentially diminished HRQOL which shows a solid connection between both the spaces.¹⁸ In favor of our results, a study shows a slight significant effect on mental health in overweight patients then the physical effects. Excessive weight is an alarming sign for society in many ways it can cause some serious chronic sickness like cardiovascular disease, diabetes mellitus type II (DM), high blood pressure, stroke, an abnormal amount of lipids, bony-arthritis, and some tumors¹⁹ further studies should be done to identify the cause, prevalence and prevention so the maximum number of people could be saved.

The limitation of our study was that data was not collected from a homogeneous environment. Mostly individuals showed non-cooperative behaviour in filling the questionnaire this may be due to lack of awareness in public about research and its importance.

Conclusion

The study concluded that there's an inverse correlation between overweight and QOL, both in males and females. All psychosocial aspects of life are affected by elevated BMI. The study will bring awareness in health care worker about physical and mental stress related to high BMI score which needs it to be improved for the betterment of health. This study will have a beneficial impact on society in terms of education and information. More studies with increasing sample size, different population and age groups should be conducted to get a better understanding of this relationship.

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