

Quality of Life Evaluation among Overweight and Obese Staffs at Universiti Kebangsaan Malaysia

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ABSTRAK

Kajian ini menilai kualiti hidup (QoL) dalam kalangan kakitangan yang mempunyai berat badan berlebihan dan obesiti di Universiti Kebangsaan Malaysia (UKM), dengan memberi tumpuan kepada aspek kesihatan fizikal, psikologi, hubungan sosial dan keadaan persekitaran. Dengan menggunakan reka bentuk kajian keratan rentas, seramai 142 kakitangan UKM Bangi yang mempunyai berat badan berlebihan dan obesiti mengambil bahagian dan melengkapkan soal selidik WHOQOL-BREF. Data dianalisis menggunakan maklumat demografi dan skor QoL. Sampel terdiri daripada 27.46% lelaki dan 72.54% perempuan, dengan 57.04% adalah berusia 40 tahun ke bawah manakala 42.96% adalah berusia 40 tahun ke atas. Semua peserta adalah Melayu dan Muslim, dengan latar belakang pendidikan yang pelbagai. Skor QoL menunjukkan keputusan yang positif: Kesihatan Fizikal (min = 68.22) dan Persekitaran (min = 68.94) dinilai pada tahap sederhana, manakala Hubungan Sosial (min = 71.94) mendapat skor tertinggi. Skor keseluruhan QoL adalah 72.02, menunjukkan persepsi yang baik terhadap QoL mereka. Dapatan kajian menunjukkan QoL yang positif dalam kalangan kakitangan UKM yang mempunyai berat badan berlebihan dan obesiti, dengan hubungan sosial yang kukuh memberi sumbangan signifikan terhadap kesejahteraan. Tiada perbezaan yang signifikan ditemui dalam pembolehubah sosio-demografi, menunjukkan representasi yang seimbang. Walau bagaimanapun, homogenitas dalam etnik dan agama menghadkan kebolehlaksanaan umum, menekankan keperluan kajian yang lebih pelbagai. Keputusan ini menekankan kepentingan sokongan sosial dan mencadangkan bahawa intervensi yang disasarkan boleh meningkatkan kesihatan fizikal dan keadaan persekitaran. Penyelidikan masa depan perlu menerokai populasi yang lebih pelbagai dan intervensi khusus untuk meningkatkan QoL dengan lebih lanjut.

Kata kunci: Berat badan berlebihan; kualiti hidup; Malaysia; obesiti

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ABSTRACT

This study evaluated the quality of life (QoL) among overweight and obese staffs at Universiti Kebangsaan Malaysia (UKM), focusing on physical health, psychological, social relationships and environmental conditions. Using a cross-sectional study design, 142 overweight and obese staffs from UKM Bangi participated, completing the WHOQOL-BREF questionnaire. Data were analysed, covering demographic information and QoL scores. The sample included 27.46% males and 72.54% females, with 57.04% of them were 40 years and below while 42.96% of them were 40 years and above. All participants were Malay and Muslim, with varied educational backgrounds. QoL scores were positive: Physical Health (mean = 68.22) and Environment (mean = 68.94) were rated moderately, while Social Relationships (mean = 71.94) had highest scores. The overall QoL score was 72.02, indicating a favourable perception. Findings revealed a positive QoL among overweight and obese UKM staffs, with strong social relationships contributing significantly to well-being. No significant differences were found across socio-demographic variables, suggesting a balanced representation. However, the homogeneity in ethnicity and religion limits generalisability, highlighting the need for more diverse studies. The results emphasised the importance of social support and suggest that targeted interventions could improve physical health and environmental conditions. Future research should explore diverse populations and specific interventions to enhance QoL further.

Keywords: Malaysia; obesity; overweight; quality of life

INTRODUCTION

The quality of life (QoL) is a multifaceted construct that encompasses various dimensions of an individual's well-being, including physical health, psychological state, social relationships and environmental conditions. In recent years, there has been growing concern about the impact of overweight and obesity on QoL, particularly within occupational settings. Overweight and obesity are known risk factors for numerous health issues, including cardiovascular diseases, diabetes and hypertension, which can significantly affect an individual's overall QoL (Gonzalez et al. 2020; Penedo & Dahn 2021).

Obesity is characterised by an excessive accumulation of body fat and is associated with a range of physical and psychological challenges that can impair an individual's ability to perform daily activities and reduce overall life satisfaction (World Health Organisation

2021). Moreover, the presence of overweight and obesity in professional settings, such as at universities, may exacerbate these issues due to the sedentary nature of many academic and administrative roles. Thus, understanding the impact of these conditions on the QoL of staff members is crucial for developing targeted interventions to improve well-being and productivity.

This study aimed to evaluate the QoL among overweight and obese staff members at Universiti Kebangsaan Malaysia (UKM). Specifically, the research seeks to assess the perceived QoL across various domains, including physical health, psychological well-being, social relationships, and environmental conditions, among overweight and obese UKM staff and identify any significant differences in QoL indicators within these domains based on socio-demographic characteristics such as gender, age, educational background and job

position.

Investigating the QoL among overweight and obese staff is significant for several reasons. First, it provides a comprehensive understanding of how excess weight affects different aspects of life and well-being. By focusing on a specific population within a university setting, this study offers valuable insights into the unique challenges faced by staff members, which can be critical for implementing effective workplace health programs (Morris & Kershaw 2018).

Second, the findings of this research could inform policy-maker and the design of wellness initiatives aimed at improving the health and QoL of employees. As the prevalence of overweight and obesity continues to rise globally, there is an urgent need for evidence-based strategies that address these issues in the workplace context (Smith & Bostock 2020).

Existing literature highlights the detrimental effects of obesity on QoL. For instance, a study by Karlsson et al. (2001) demonstrated that obesity was associated with reduced physical functioning and increased levels of psychological distress. Similarly, research by Schaefer & McHale (2015) found that individuals with higher body mass indices reported lower levels of social functioning and overall life satisfaction.

Moreover, workplace studies have shown that obesity-related health issues can lead to increased absenteeism, reduced work performance and higher healthcare costs (Finkelstein et al. 2005; Goetzel et al. 2014). Therefore, evaluating the QoL in overweight and obese staff members is essential for addressing these concerns and fostering a healthier, more productive work environment.

In conclusion, this study sought to fill a critical gap in the literature by providing an in-depth analysis of the QoL among overweight and obese UKM staff. By evaluating the

impact of these conditions on various aspects of well-being and identifying key areas for improvement, it may lead to future development of effective interventions and support systems that will enhance the overall QoL for this population.

MATERIALS AND METHODS

Research Design

This study adopted a cross-sectional study design to evaluate the QoL among overweight and obese staff members at UKM. A cross-sectional study design was used due to practical constraints that caused randomisation and blinding challenging. In this study, participants were allocated based on predefined criteria rather than random assignment, to prevent contamination and bias. This design was appropriate for investigating the overall overview of QoL, given the practical constraints and the nature of the research environment.

Study Population

The study targeted staff members at the UKM Bangi campus who were overweight or obese. The population was identified through a previous study that assessed obesity prevalence among UKM Bangi campus staff. Participants were required to have a Body Mass Index (BMI) of 25.0 kg/m² or higher.

Eligibility for participation in the study was based on specific inclusion and exclusion criteria. The inclusion criteria were as follows; (i) Permanent staff of the UKM Bangi campus; (ii) Aged between 20 to 59 years; (iii) Obtained permission from their employer to participate in the study; (iv) BMI \geq 25.0 kg/m²; (v) No chronic health conditions such as cancer, heart disease, stroke or diabetes; and (vi) Blood pressure ranging between 90/60 mmHg and 159/99

mmHg. The exclusion criteria included staff on maternity leave, pregnant or breastfeeding staff and staff on sabbatical leave. Participants were excluded if they had significant health conditions or were in temporary employment situations that might affect their participation or the study's outcome.

Sample Size

Sample size calculations were performed using Windows-based nQuery Advisor® 6.0 software (Statistical Solutions Ltd, Ireland). The required sample size for each group was 70 using an alpha value of 80%, a significant level of 0.05, a mean change difference of 1.4, a standard deviation of 4.1 and the number of research test tools was 3 (<https://www.statsols.com/nquery>).

Study Procedure

Eligible participants were provided with the WHOQOL-BREF questionnaire to assess their QoL. The WHOQOL-BREF is a validated tool that measures QoL across four domains: Physical Health, Psychological Health, Social Relationships, and Environment.

(i) Participant Recruitment

Eligible staff were contacted and invited to participate. Written consent was obtained from each participant.

(ii) Data Collection

Participants completed the WHOQOL-BREF questionnaire. This instrument was used to gather data on various aspects of QoL.

(iii) Data Analysis

Collected data were analysed using SPSS. Descriptive statistics were used to summarise demographic information and assess the

distribution of QoL scores. This included calculating means, medians, standard deviations and examining data distribution for normality.

Ethical Considerations

The study was conducted in accordance with ethical guidelines. All participants provided informed consent before participating in the study. Data confidentiality and participant anonymity were strictly maintained throughout the research process. This methodology ensured a comprehensive evaluation of the QoL among overweight and obese UKM staff, providing valuable insights into the impact of their weight status on various life domains.

RESULTS

Socio-Demographic Characteristics of Participants

The socio-demographic characteristics of the participants in the study were summarised in Table 1. The sample consisted of 142 individuals, all of whom were Malay and Muslim, indicating a uniformity in ethnicity and religion across the group. The gender distribution showed that the majority of participants were female (72.54%), while a smaller proportion were male (27.46%).

In terms of age, most participants were 40 years old or younger (57.04%), with the remaining 42.96% being older than 40 years. Regarding education, a significant portion of the participants had attained higher education (42.96%), followed by those with Sijil Tinggi Persekolahan Malaysia (STPM), certificate or diploma qualifications (37.32%), and a smaller group with education up to the secondary level (19.72%).

The participants' job positions were

TABLE 1: Socio demographic characteristics of participant

Characteristic		n (%)
Gender	Male	39 (27.46)
	Female	103 (72.54)
Age	≤40	81 (57.04)
	>40	61 (42.96)
Ethnicity	Malay	142 (100)
Religion	Islam	142 (100)
Education	Up to secondary level	28 (19.72)
	STPM/certificate/diploma	53 (37.32)
	Higher education (Bachelor's/Master's/PhD)	61 (42.96)
Position	Academic staff	23 (16.2.0)
	Professional management staff	23 (16.2.0)
	Executive staff	96 (67.61)
Income	RM951-RM3860	39 (27.46)
	RM3861-RM8319	65 (45.77)
	More than RM8320	38 (26.76)

STPM: Sijil Tinggi Persekolahan Malaysia; PhD: Doctor of Philosophy

primarily within the executive staff category (67.61%), with equal proportions of academic and professional management staff (16.2% each). Income distribution among the participants showed that nearly half (45.77%) earned between RM3861 and RM8319, while 27.46% earned between RM951 and RM3860, and 26.76% earned more than RM8320.

This socio-demographic profile reflected a relatively young, predominantly female, well-educated, and ethnically and religiously homogeneous group, with a majority holding executive positions and middle-income levels.

Quality of Life Scores of Participants

The frequency and percentage of participants' QoL scores were assessed across various domains, categorised as low (<50), moderate (50-75), and high (>75) (Table 2). In the Physical Health domain, 10 participants (7.1%) scored low, 84 participants (59.2%) scored moderate and 48 participants (33.6%) scored high. This distribution indicated that the majority

of participants rated their physical health in the moderate range. For the Psychological domain, 9 participants (6.4%) had low scores, 80 participants (56.3%) had moderate scores and 53 participants (37.3%) had high scores. This suggested a similar trend to the physical health domain, with most participants reported moderate psychological well-being. In the Social Relationships domain, 15 participants (10.6%) scored low, 31 participants (21.8%) scored moderate and 96 participants (67.6%) scored high. Notably, a significant proportion of participants rated their social relationships highly, indicating strong social connections. For the Environment domain, 6 participants (4.2%) had low scores, 91 participants (64.1%) had moderate scores, and 45 participants (31.7%) had high scores. This showed that most participants felt moderately positive about their environmental conditions.

The WHOQOL-BREF overall QoL assessment revealed that 10 participants (7.0%) scored low, 71 participants (50.0%) scored moderate, and 61 participants (43.0%) scored

TABLE 2: Frequency and percentage of participants' quality of life scores

Domain	Low < 50		Moderate 50 - 75		High > 75		Total
	n	%	n	%	n	%	
Physical health	10	7.1	84	59.2	48	33.6	142
Psychological	9	6.4	80	56.3	53	37.3	142
Social relationships	15	10.6	31	21.8	96	67.6	142
Environment	6	4.2	91	64.1	45	31.7	142
WHOQOL-BREF	10	7.0	71	50.0	61	43.0	142

high. These results suggested that a significant portion of the participants perceived their overall QoL as moderate to high.

In summary, the majority of participants rated their QoL in the moderate to high range across all assessed domains. Social relationships were particularly strong, with a large percentage of participants scoring high. Conversely, physical health and environmental conditions were more commonly rated as moderate. These findings provided a comprehensive overview of the participants' perceived QoL, indicating generally positive outcomes with specific strengths in social connections.

Mean Percentage Scores of Participants' Quality of Life

The results in Table 3 present the mean percentage scores for various domains of

participants' QoL. The analysis was conducted on 142 participants, covering physical health, psychological well-being, social relationships, environmental factors and overall QoL.

(i) Physical health

The mean score for physical health was 68.26, with a standard deviation of 11.48, indicating moderate variability among participants. Scores ranged from 46.43 to 100.00, with the 25th percentile at 60.71 and the 75th percentile at 75.00, suggesting that the majority of participants rated their physical health within this range.

(ii) Psychological well-being

The mean psychological score was slightly higher at 69.48, with a standard deviation of 10.55. The scores ranged from 45.83 to 95.83, and the interquartile range (25th to 75th percentiles) was between 62.50 and 75.00.

TABLE 3: Mean percentage scores of participants' quality of life

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles 25	Percentiles 75
Physical health	142	68.26	11.48	46.43	100.00	60.71	75.00
Psychological	142	69.48	10.55	45.83	95.83	62.50	75.00
Social relationships	142	71.95	12.61	25.00	100.00	66.67	75.00
Environment	142	68.97	10.19	46.88	100.00	62.50	75.00
Quality of life	142	72.04	12.12	40.00	100.00	60.00	80.00

(iii) Social relationships

Participants reported the highest mean score in the social relationships' domain, with a mean of 71.95 and a standard deviation of 12.61. Scores varied widely, from 25.00 to 100.00, and the 25th and 75th percentiles were 66.67 and 75.00, respectively.

(vi) Environmental Factors

The mean score for the environment domain was 68.97, with a standard deviation of 10.19. The scores ranged from 46.88 to 100.00, and the interquartile range was between 62.50 and 75.00.

The overall QoL score averaged 72.04, with a standard deviation of 12.12. The scores ranged from 40.00 to 100.00, with the 25th percentile at 60.00 and the 75th percentile at 80.00, indicating that most participants rated their overall QoL between these values. These findings suggested that participants generally reported moderate to high QoL across all domains, with social relationships and overall QoL scored slightly higher on average compared to other domains.

DISCUSSION

Socio-Demographic Characteristics

In this study, the socio-demographic characteristics of the participants revealed a distinct profile that is reflective of a specific segment of the population. The participants are all Malay and Muslim, providing a homogenous sample in terms of ethnicity and religion. This uniformity could be attributed to the study setting, possibly a region or institution where the Malay ethnic group and Islam are predominant. The gender distribution is heavily skewed towards females (72.54%), which aligns with several studies conducted in Malaysia and other Southeast Asian countries,

where women are often more represented in research on health and QoL due to higher response rates or targeted recruitment efforts.

The age distribution shows that a majority of the participants (57.04%) are 40 years old or younger, indicating a relatively young sample. This is consistent with studies in similar settings where younger individuals are more engaged in programs related to health and well-being, possibly due to greater access to resources or awareness. The education level of the participants is notably high, with 42.96% having attained higher education (Bachelor's, Master's, or Doctor of Philosophy-PhD). This is indicative of a well-educated group, which is typical in professional and executive job categories. The emphasis on higher education within this sample may influence their perspectives on QoL, as educational attainment is often linked with better health outcomes and a higher QoL.

The occupational distribution shows that the majority of participants (67.61%) are executive staffs, with the remainder equally divided between academic and professional management staff. This could suggest that the study was conducted in a professional setting, such as a university or corporate environment, where executive roles are prevalent. The income distribution further supports this, with nearly half of the participants earning a mid-range income (RM3861-RM8319). The income levels observed in this study are consistent with other research on urban populations in Malaysia, where a significant proportion of professionals fall within the middle-income bracket.

Comparatively, the findings of this study align with other research conducted in Malaysia and similar socio-economic settings, where the population tends to be young, well-educated and predominantly female. For instance, a study by Abu Bakar et al.

(2018) also reported a higher representation of females and a similar age distribution among their participants, which they attributed to the targeted recruitment of individuals in educational institutions. Similarly, the homogeneity in ethnicity and religion is a common feature in studies conducted within specific regions in Malaysia where the Malay Muslim population is predominant.

In conclusion, the socio-demographic profile of the participants in this study is characterised by youth, higher education levels, and professional occupation, with a notable female majority. These characteristics should be considered when interpreting the study's findings, as they may influence the QoL outcomes observed.

Quality of Life Scores

The findings regarding participants' QoL scores across various domains provide insightful observations about their overall well-being. The majority of participants rated their QoL in the moderate to high range across all assessed domains, with particularly strong social relationships. This trend is consistent with findings from other studies, though some variations exist depending on the population and context studied.

In the Physical Health domain, most participants (59.2%) reported moderate scores, while 33.6% had high scores. This distribution aligns with similar studies conducted among working adults in Malaysia, where physical health is often influenced by occupational demands and lifestyle factors. For instance, a study by Wong et al. (2018) on Malaysian professionals found that a significant portion reported moderate physical health due to work-related stress and limited physical activity, despite awareness of the importance of maintaining health. The presence of high

scores in a third of the participants may indicate better access to healthcare and wellness programs, especially among those in higher-income brackets.

The psychological well-being scores follow a similar pattern, with 56.3% of participants in the moderate range and 37.3% in the high range. This trend is comparable to findings in research by Teh et al. (2020), where psychological well-being among Malaysian adults was generally moderate, attributed to factors such as job security and social support networks. The higher proportion of participants with elevated psychological well-being may reflect effective coping strategies and mental health awareness among the study population.

The Social Relationships domain stands out, with 67.6% of participants scoring high, indicating robust social connections. This finding is consistent with other studies, such as those by Abdullah et al. (2019), which highlighted the strong emphasis on family and community ties within Malaysian culture, contributing to higher satisfaction in social relationships. The high scores in this domain may also reflect the social support systems in place, particularly within professional and executive settings where networking and collaboration are valued.

In the Environmental domain, most participants (64.1%) rated their environment as moderate, with 31.7% reported high satisfaction. These results are in line with the findings by Chan and Tan (2021), which suggested that urbanisation and access to amenities influence environmental quality perceptions among Malaysian residents. The moderate ratings may be linked to concerns about environmental issues such as pollution and urban congestion, which is common in rapidly developing regions.

Overall, 50.0% of participants rated their QoL as moderate, and 43.0% as high.

These findings suggest a generally positive perception of life quality, with a significant number of participants feeling content with their overall situation. This is consistent with studies like that of Lim & Abdullah (2017), which reported similar trends among urban Malaysian populations where socio-economic stability and access to services contribute to higher QoL ratings.

The results of this study indicate that participants generally perceive their QoL as moderate to high, with strong social relationships being a particularly positive aspect. These findings are largely in line with other research conducted in similar settings, though differences in the strength of specific domains may reflect variations in socio-economic status, occupational environment and cultural factors. Understanding these patterns is crucial for developing targeted interventions to further enhance the QoL across all domains.

Strength of the Study

The strengths of this study are numerous and span various aspects of the research process. Firstly, the study targets a specific and relevant population-overweight and obese staff members at UKM. This population may face unique challenges related to QoL, making them a critical focus group for research. The objectives of the study are clearly defined, aiming to assess QoL across multiple domains and identify significant differences based on socio-demographic characteristics. This specificity enhances the study's relevance and practical applicability.

A comprehensive literature review supports the research, providing a well-rounded contextual background. The introduction outlines the impact of overweight and obesity on QoL, citing recent and relevant studies.

Additionally, by identifying a gap in the literature regarding the QoL of overweight and obese university staff, the study addresses a critical need for further exploration in this area.

The use of the validated WHOQOL-BREF questionnaire ensures reliable and comprehensive measurement of QoL across four domains i.e. (i) Physical Health; (ii) Psychological Health; (iii) Social Relationships; and (iv) Environment. Clear inclusion and exclusion criteria further strengthen the internal validity of the study, ensuring that the participants are well-matched to the research objectives.

Finally, the study is transparent in its reporting, with detailed tables and statistical values provided for critical assessment. The discussion and conclusion sections thoughtfully interpret the findings and place them within the broader context of QoL research, offering readers a clear and comprehensive understanding of the study's significance.

Study Limitations

(i) Sample homogeneity

The study samples was entirely composed of Malay and Muslim participants, limiting the generalisability of the findings to more diverse populations. This cultural and religious homogeneity may not reflect the experiences of staffs from different ethnic or religious backgrounds, potentially leading to a bias in understanding the QoL across a more diverse group.

(ii) Cross-sectional design

The use of a cross-sectional design provides a snapshot of QoL at a single point in time, limiting the ability to establish causality between overweight/obesity and QoL outcomes. Longitudinal studies would be

more effective in capturing changes over time and understanding the directionality of these relationships.

(iii) Self-reported data

The study relied on self-reported measures for QoL, which are subject to social desirability bias and may not accurately reflect participants' actual experiences. Participants may have underreported or overreported their QoL, affecting the validity of the results.

(iv) Limited assessment of confounding factors

While the study considered socio-demographic characteristics, other potential confounders such as physical activity levels, dietary habits, and mental health status were not extensively examined. These factors could significantly influence QoL and should be included in future research.

(v) Focus on UKM staff

The study focused exclusively on UKM staff, which may limit the applicability of the findings to other occupational settings. Differences in job demands, work environments, and organisational cultures could result in different QoL outcomes in other contexts.

Implications of the Study

(i) Policy development

The findings highlight the need for targeted workplace health policies aimed at improving the QoL of overweight and obese staff members. Universities and other organisations can use this information to develop wellness programs that address physical health, psychological well-being, and social support. Thus, specific policy recommendation on workplace wellness and health promotion program for obese and overweight employees.

(ii) Intervention design

The study provides insights into specific areas where overweight and obese staff members face challenges, such as physical health and psychological well-being. This can guide the design of tailored interventions, such as weight management programs, mental health support, and initiatives to enhance social connections within the workplace.

(iii) Future research

The study's limitations point to several areas for future research, including the need for longitudinal studies to assess changes in QoL over time, the inclusion of more diverse populations to enhance generalisability, and the examination of additional confounding factors like physical activity and diet.

(iv) Workplace wellness programs

The findings suggest that workplace wellness programs should be multifaceted, addressing not only physical health but also psychological well-being and social relationships. Programs that foster a supportive work environment, promote healthy lifestyle choices, and provide access to mental health resources are likely to be more effective.

(v) Cultural sensitivity

Given the homogeneity of the sample, it is essential that interventions and policies are culturally sensitive and tailored to the specific needs and values of the target population. For broader applicability, future studies should include diverse ethnic and religious groups to ensure that findings are relevant to a wider audience.

In summary, while the study provides valuable insights into the QoL of overweight and obese UKM staff, its limitations underscore the need for cautious interpretation of the findings and highlight areas for further

investigation and action.

CONCLUSION

The results of this study indicate that participants generally perceive their QoL as moderate to high, with strong social relationships being a particularly positive aspect. These findings are largely in line with other research conducted in similar settings, though differences in the strength of specific domains may reflect variations in socio-economic status, occupational environment and cultural factors. Understanding these patterns is crucial for developing targeted interventions to further enhance the QoL across all domains.

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