

## **“How do I look?” A Study on The Sociocultural Acceptance Towards Appearance among Female University Students**

**Josephine Josli<sup>1</sup>, Patricia Pawa Pital<sup>2\*</sup>, Floranordiana Ennya Niru<sup>3</sup>**

*<sup>1,2,3</sup>Faculty of Sports Science & Recreation, Universiti Teknologi MARA Cawangan Sarawak, Kampus Samarahan, Malaysia*

*Authors' Email Address: <sup>1</sup>josephinejosli7@gmail.com, <sup>2</sup>patriciapawa@uitm.edu.my, <sup>3</sup>floranordianaennya@gmail.com*

Received Date: 29 April 2023

Accepted Date: 31 May 2023

Revised Date: 26 June 2023

Published Date: 31 July 2023

\*Corresponding Author

### **ABSTRACT**

*This study aims to explore the sociocultural acceptance towards the appearance concerning body mass index (BMI) among female university students (N = 414). The female students were selected from various faculties using a stratified sampling technique through an online platform in a cross-sectional study. The Sociocultural Attitudes Towards Appearance Questionnaire – 4 was employed to measure the internalisation of appearance ideals and appearance-related pressure, such as internalised muscular-athletic, internalised thin-low body fat, as well as pressures from family, peers, and media. Sociodemographic and body weight and height were also reported. The factor of internalised thin-low body fat has the highest mean score, while the lowest mean score was pressure from peers. Pressures from family, peers, and media were significantly different among the BMI categories. However, the finding contradicted with internalised muscular-athletic and internalised thin-low body fat. There should be concerns as significant differences were found in the pressures of family, peers, and media, in which obese females perceived the highest in those variables compared to other weight categories. The results suggest that the use of media among females warrants extra control as it has the highest among obese females towards their appearance. Educational actions are strongly advised so that family and friends would be more supportive in body weight management among females instead of pressuring them on their appearance. These findings suggest that other sociodemographic should be investigated to understand their influence in the internalisation of appearance ideals and appearance-related pressure among females.*

**Keywords:** body dissatisfaction, body mass index, female university students, sociocultural attitudes

### **INTRODUCTION**

The prevalence of body image concerns and BMI among university students are well documented (Eow & Gan, 2018; Jamani et al., 2020; Khalaf et al., 2021; Kuan et al., 2011; Sidek & Ali Hanapiah, 2018; Zainuddin et al., 2014; Zhang et al., 2018) reporting on body dissatisfaction and body weight issues. Recent research has explored the pressures from the sociocultural aspect and the internalisation of thin ideal and muscularity as the potential risk factors for greater body image concerns (Du, 2015; You & Shin, 2020). Body dissatisfaction has been examined mostly in females due to the need for social

acceptability over how one looks and whether one's body is considered beautiful (Benton & Karazsia, 2015; Izydorczyk, 2015).

The emergence of body dissatisfaction can be explained by the tripartite influence model (Thompson et al., 1999; Harditt & Hannum, 2012). This theory suggests that appearance-related pressures from three primary sociocultural factors—peers, family, and media—interactively affect the development of body image disturbances, which leads to pathological eating. In addition, the model proposed that the effects of the three sociocultural factors are mediated via two additional mechanisms: (1) appearance-ideal internalisation (i.e., an individual accepts societal ideals of appearance as his/her ideal) and (2) appearance comparison (i.e., an individual compares his/her appearance to someone else's).

Young women are significantly influenced by mass media that glorify thin appearance ideals through magazines, television, movies, and the internet (Shen et al., 2022; Jiotsa et al., 2021). Peers have a strong influence on the eating behavior and body image of adolescents. Young women often receive critical, harsh, or teasing comments regarding their body and weight from peers, which can contribute to body image disturbance and restricted eating (Cohrdes et al., 2021). Families can also influence females' body image through various means, including appearance-related feedback and commentary, teasing and criticism (Puhl et al., 2017) modeling of weight and appearance-related attitudes and behaviors (Akbar et al., 2022) and direct pressures to diet or lose weight (Lawrence et al., 2022).

While the existing literature provides valuable insights into the prevalence of body image concerns and the role of sociocultural factors in body dissatisfaction among university students, there is a theoretical gap in understanding the nuanced influence of intersectional factors on body image perception. Most literatures primarily focused on body dissatisfaction in females due to the societal pressures to conform to beauty standards and ideals (Benton & Karazsia, 2015; Izydorczyk, 2015). However, it is essential to investigate how body image concerns manifest and are experienced among females by considering their body weight categories, specifically using BMI (Du, 2015; You & Shin, 2020). BMI is commonly used as a measure of body weight and is often associated with societal judgments and perceptions of attractiveness. Research has shown that individuals with higher BMIs may face stigmatization, discrimination, and negative body image due to the cultural idealization of thinness (Mills et al., 2017). Conversely, individuals with lower BMIs may also experience body dissatisfaction as they may strive for a more muscular or curvier appearance, which may be idealized in certain cultural contexts.

Exploring the influence of BMI on body image concerns can provide a deeper understanding of how societal beauty standards affect individuals across different body weight categories. By considering the experiences of individuals with varying BMIs, researchers can gain insights into the unique challenges and pressures faced by individuals who do not conform to the societal norms of body size and shape. Addressing the theoretical gap by considering the influence of BMI on body image concerns among females can contribute to a more comprehensive understanding of the factors that contribute to body dissatisfaction (Pop, 2018). This knowledge can inform the development of interventions and support systems that promote positive body image and well-being across diverse body weight categories.

Body image research has identified body dissatisfaction and accepting societal standards regarding the ideal body shape or size as key factors contributing to body image disturbances. Therefore, this study explored the sociocultural acceptance towards appearance using the Sociocultural Attitudes Towards Appearance Questionnaire – 4 (Schaefer et al., 2015) to examine the influence of BMI on body image concerns among female university students, focusing on the internalization of appearance ideals and appearance-related pressures, such as internalized muscular-athletic and internalized thin-low body fat, as well as pressures from family, peers, and media.

## LITERATURE REVIEW

**Internalized Thin-Ideal (IT):** Internalized Thin-Ideal refers to the extent to which individuals internalize the societal standards of thinness as the ideal body shape or size. Past studies have shown that individuals who internalized thin ideal are more likely to engage in body dissatisfaction and engage in unhealthy weight control behaviors (e.g., extreme dieting, excessive exercise) to achieve or maintain a lower BMI (Thompson et al., 1999; Du, 2015). They may develop negative body image perceptions and have a higher risk of developing disordered eating patterns, such as restrictive eating or excessive preoccupation with weight and shape.

**Internalized Muscular-Ideal (IM):** Internalized Muscular-Ideal refers to the extent to which individuals internalize the societal standards of muscularity as the ideal body shape or size. Research suggests that individuals who internalize the muscular ideal may engage in behaviors such as excessive exercising or using performance-enhancing substances to achieve a more muscular physique (You & Shin, 2020). These behaviors can be associated with an increased risk of body dissatisfaction and may influence BMI by affecting dietary choices and exercise patterns.

**Pressures from Family (PF):** Family influences can significantly impact body image perceptions and BMI. Studies have shown that when families place an emphasis on appearance, particularly regarding weight and body shape, individuals may experience increased body dissatisfaction and engage in weight-related behaviors (Neumark-Sztainer et al., 2010). Negative comments or pressures from family members to lose weight or diet can contribute to body dissatisfaction and potentially influence BMI through the adoption of unhealthy weight control practices or disordered eating behaviors.

**Pressures from Peers (PP):** Peers play a crucial role in shaping body image perceptions and influencing BMI. Adolescents and young adults are particularly vulnerable to the influence of their peers on body image concerns. Harsh or teasing comments from peers about weight or body shape can contribute to body image disturbance and may lead individuals to engage in unhealthy weight control practices or have a distorted perception of their body (Lie et al., 2019). Peer pressure to conform to societal beauty standards can also affect dietary choices and physical activity patterns, which in turn can influence BMI.

**Pressures from Media (PM):** Media, including magazines, television, movies, and the internet, often promote unrealistic beauty standards and ideals. Exposure to such media can lead to body dissatisfaction and an increased desire to achieve a specific body shape or size. Research has shown that media exposure emphasizing thinness and muscularity is associated with negative body image and increased risk of disordered eating behaviors (Aparicio-Martinez et al., 2019; Uchôa et al., 2019). This influence from media can contribute to individuals' body image concerns and may impact BMI through the adoption of unhealthy weight control practices or the pursuit of an unrealistic body shape.

Overall, these factors (IT, IM, PF, PP, and PM) have been found to have a significant influence on BMI by affecting individuals' body image perceptions, body dissatisfaction, and engagement in weight-related behaviors. The interplay between these factors can contribute to the development of unhealthy weight control practices, disordered eating patterns, and potentially impact individuals' BMI.

## METHODS

### Participants and procedures

The sample for this study consists of 414 undergraduate full-time female students from various programmes in UiTM Sarawak (Samarahan Campus and Samarahan Campus 2). A stratified random sampling method was employed to ensure that each subgroup of the population was adequately represented within the whole sample population of the research study (Taherdoost, 2016). The

stratification was made based on the courses offered in both campuses to ensure that the sample size of each stratum was proportionate to the population size of the stratum.

The sample size was calculated based on Krejcie and Morgan's formula (Krejcie & Morgan, 1970), which determined that a minimum sample size of 357 was needed. To reduce the non-response rate, 20% was added to the target sample size, resulting in a sample size of 428. The strata sample size was calculated by dividing the total population of each stratum by the total population of every course and multiplying by the target sample size (Taherdoost, 2016). For instance, the total female students for Diploma in Sports Studies were 64, so the strata sample size was calculated as  $(64/428) \times 5318 = 5$ . The same calculation method was used for the other courses to estimate the number of participants to be selected. There were 19 diploma courses and 12 bachelor's degree courses offered during the data collection time.

Potential participants were invited to participate in the study via WhatsApp messaging. The researchers obtained phone numbers of eligible participants from the academic and international affairs department. An introductory message was sent, providing information about the study, and inviting them to participate. Participants who agreed to participate were provided with a link to the online survey, which was hosted on a secure online platform. The survey was conducted online in March 2020 - April 2020 in a cross-sectional setting. The returned rate was 96.7%, which equaled 414 respondents. The final sample size acquired was sufficient to represent the population,  $N = 414$ .

The UiTM Research Ethics Committee approved the study (REC/01/2020 (UG/MR/4)), which was conducted following the ICH Good Clinical Practice Guidelines, Malaysia Good Clinical Practice Guidelines, and the Declaration of Helsinki. Informed consent was obtained from all participants, and confidentiality and privacy were ensured throughout the study.

## Measures

Demographic data, including body weight and height, were collected as part of the survey. Self-reported measurements were used to gather this information, as previous research has demonstrated the reliability of this approach for weight classification purposes (Olfert et al., 2018). Given the fully online nature of the present study, this method was deemed appropriate and effective.

To assess sociocultural attitudes towards appearance, the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-4) (Schaefer et al., 2015) was administered. This 22-item questionnaire measures five factors, including internalization of the muscular-athletic body, internalization of thin-low body fat, pressure from family, pressure from peers, and pressure from media. Participants provided responses on a 5-point Likert scale, with higher scores indicating a greater tendency to conform to sociocultural expectations. The instrument demonstrated high internal consistency, as evidenced by a Cronbach's alpha coefficient of  $\alpha = 0.917$ , which exceeds the threshold of 0.70 recommended for adequate internal consistency (George & Mallery, 2019).

## Statistical analysis

The Statistical Package for Social Science (SPSS) (version 25.0, Chicago, USA) was used for data analysis. Descriptive statistics, including means, standard deviations, frequencies, and percentages, were calculated. Normality was assessed by evaluating skewness and kurtosis, which fall within acceptable ranges of -1 to +1 and -2 to +2, respectively (George & Mallery, 2019), and revealed a normal distribution of scores. To determine significant differences in the five factors across BMI categories, a one-way analysis of variance (ANOVA) was conducted. Pearson correlation was utilized to examine the associations between the five factors and BMI, with  $r$ -values closer to 1 indicating a stronger relationship (Dancey & Reidy, 2007). The threshold for statistical significance was set at  $p \leq 0.05$ .

## Results

Table 1 outlines the participants' demographic information. The following are the findings for the age range: 18 to 20 years old (62.3%), 21 to 23 years old (33.3%), and 24 to 26 years old (4.3%). The BMI ranged from 14.4 to 42.7 kg/m<sup>2</sup> with the majority were in normal weight (54.6%) and some were underweighted (20.3%). The overweight and obese respondents were 15.2% and 9.9%, respectively. There were 263 respondents with a diploma (63.5%) and 151 of them have a bachelor's degree (36.5%), and they are from different ethnic backgrounds.

The one-way ANOVA showed that pressures from family, peers, and media were significantly different for the different BMI categories (Table 2). Post hoc Tukey comparisons was performed to evaluate the differences and found that the obese categories were significant with other BMI categories in pressure from family ( $p < .05$ ) but not with pressure from peers and media ( $p > .05$ ). As for the pressure from peers and media, the obese categories were significantly different with the underweight and normal weight category ( $p < .05$ ) but not with the overweight category ( $p > .05$ ). Overall, the internalisation of thin-low body fat has the highest mean score, while pressure from family has the lowest mean score.

**Table 1: Participants' demographic information (N = 414)**

Variables		n (%)
Age group (years)	18 – 20	258 (62.3%)
	21 – 23	138 (33.3%)
	24 – 26	18 (4.3%)
Study level	Diploma	263 (63.5%)
	Degree	151 (36.5%)
Race	Malay	158 (38.2%)
	Bumiputera Sarawak	208 (50.2%)
	Bumiputera Sabah	44 (10.6%)
	Others	4 (1.0%)
BMI categories M (SD) = 22.71 (5.36) kg/m <sup>2</sup> Min = 14.4, Max = 42.7	Underweight	84 (20.3%)
	Normal weight	226 (54.6%)
	Overweight	63 (15.2%)
	Obese	41 (9.9%)

Note. BMI classification: Underweight <18.5 kg/m<sup>2</sup>, Normal 18.5-24.9 kg/m<sup>2</sup>, Overweight 25-29.9 kg/m<sup>2</sup>, Obese ≥ 30 kg/m<sup>2</sup> (WHO, 2000)

**Table 2: Differences of sociocultural attitudes towards appearance by BMI categories**

Subscale	Overall	BMI categories				F	p
		UW n = 84	NW n = 225	OW n = 63	OB n = 41		
		Mean (SD)					
IT	3.07 (0.66)	3.02 (0.62)	3.02 (0.66)	3.16 (0.68)	3.31 (0.66)	2.657	.060
IM	2.86 (0.79)	2.83 (0.76)	2.83 (0.79)	2.96 (0.79)	2.98 (0.79)	0.843	.471
PF	2.67 (1.03)	2.52 (0.95) <sup>d</sup>	2.60 (0.94) <sup>o</sup>	2.72 (1.17) <sup>u</sup>	3.35 (1.18) <sup>dou</sup>	7.234	.001*
PP	2.63 (1.03)	2.46 (0.99) <sup>d</sup>	2.54 (0.97) <sup>o</sup>	2.79 (1/04)	3.15 (1.19) <sup>do</sup>	5.478	.001*
PM	3.01 (1.21)	2.72 (1.16) <sup>d</sup>	2.98 (1.20) <sup>o</sup>	3.11 (1.15)	3.62 (1.29) <sup>do</sup>	5.463	.001*

IT = Internalization of thin-low body fat, IM = Internalization of muscular-athletic, PF = Pressure from family, PP = Pressure from peers, PM = Pressure from media

\*significant difference at .05 level ( $p < .05$ )

<sup>†</sup>significant difference between UW and OB at .05 level ( $p < .05$ )

<sup>‡</sup>significant difference between NW and OB at .05 level ( $p < .05$ )

<sup>§</sup>significant difference between OW and OB at .05 level ( $p < .05$ )

Pressure from family ( $r = 0.225, p = 0.001$ ), peers ( $r = 0.183, p = .001$ ), and media ( $r = 0.196, p = 0.001$ ), and the internalisation of thin/low body fat ( $r = 0.159, p = 0.001$ ) had a significant relationship with the BMI continuous score ( $p < .05$ ) (Table 3). The relationships were in small strength. No significant relationship was revealed between internalisation of muscular/athletic and BMI continuous score ( $p > .05$ ).

**Table 3: Correlations between sociocultural acceptance toward appearance subscales and BMI**

Subscale	r-value
IT	.159*
IM	.055
PF	.225*
PP	.183*
PM	.196*

*Note.* IT = Internalisation of thin-low body fat, IM = Internalisation of muscular-athletic, PF = Pressure from family, PP = Pressure from peers, PM = Pressure from media

\*Correlation is significant at .05 ( $p < .05$ )

## DISCUSSION

There were 26.1% of the females who were overweight and obese, and the majority were in the normal weight and underweight categories. This portion is comparable to those reported among female university students in Malaysia in past studies (Gopalakrishnan et al., 2012; Koo et al., 2019). The findings could be explained by the drastic changes of lifestyle among the university students where the force distance learning (FDL) was applied due to the COVID-19 pandemic during the data collection. Substantial weight gain has been reported among adults, including university students during the pandemic lockdown (Tan et al., 2021).

Overall, the mean score of the sociocultural acceptance towards appearance among the females was considered a less concerning issue. The internalisation of thin-low body fat was the highest, indicating that females were internalised to be thinner or slimmer. In Asia, it was once believed that thinness was a sign of poverty (Sharps et al., 2001); but in the modern world, it is an ideal sign of beauty (Wu et al., 2021). The present study's sample might have fallen into this idea too. The portion of underweight respondents in this study sample was 20%, confirming that the belief in thinness or slimmest is the ideal appearance. Body dissatisfaction might be experienced by these students as a previous study found that females who internalised thin-low body fat were more dissatisfied with their general physical appearance (Silva et al., 2020).

In the comparison of the subscales, obese females faced significantly greater pressure from family than other weight categories. The most apparent was when obese females scored greater than underweight and normal weight but not with the overweight females who were under pressure by their peers and media. Pressure from family was significantly greater among obese females than other weight categories, indicating that staying close to one's family could influence this situation. FDL could be responsible for this situation; as previously, females spent more time with their peers in the university.

This present finding is unique because past studies found that pressure from the family had less contribution to the body dissatisfaction of females (Javier & Belgrave, 2015; Lim, 2016). Studies found that pressure from peers was greater among females on the attitude towards appearance (Eshak et al., 2020; Zhang et al., 2018).

Whilst obese females reported significantly greater pressure from peers and media than underweight and normal-weight females, the mean score in pressure from media was the highest. High exposure to social media due to movement restrictions has contributed to this finding. Females have been reported to experience more appearance-related pressures on social media than males (Åberg et al., 2020). This study posited that high use of social media caused appearance-related pressures among obese females.

BMI was correlated with the three types of pressure and the internalisation of thin-low body fat among females. They were read as the pressures and internalized thin-low body fat were higher with the increase of BMI. These findings validated the past literature (Jeffers et al., 2013; Moreno-Domínguez et al., 2019; Stojcic et al., 2020), indicating a positive correlation between sociocultural pressures and BMI, in which overweight and obese females may experience greater pressure from other people and the media to change their bodies. The internalisation of thin-low body fat was also associated with the search for the ideal body among these females. This finding is supported by a theory by Cash and Smolak (Cash & Smolak, 2011).

Previous studies demonstrated that all subscales of sociocultural acceptance towards appearance had been associated with BMI (Eshak et al., 2020; Hsu et al., 2021) and the present study reported a limited internalisation of muscular-athletic body appearance. The somewhat not-thin body shape of most famous female athletic figures can partially explain this phenomenon.

The strengths of the study include the data collection timeline, which was during the movement control order, and the stratified sampling technique employed in recruiting participants. The data obtained during this time was unique than another timeframe, where the sample spent the longest time at home, away from peers and the university environment. In addition, the participants were from all courses offered in the university; thus, the data represent female university students. The findings can be generalised to other university settings. There is a possibility of reporting bias as the researchers cannot guarantee the accuracy of participants' answers for the online survey, and the high usage of the online platform during the timeframe may improve the accuracy of the answers. Future studies should consider the effects of other factors, such as family sociodemographic and physical activity, on the sociocultural acceptance towards appearance.

## **CONCLUSION**

The linkage between sociocultural attitudes towards appearance and BMI categories has not been exclusively examined in the literature and is added in the present study. In this study, the results demonstrated that sociocultural attitudes towards appearance varied for different BMI categories in terms of internalising thin/low body fat or pressures from other people and media. Since sociocultural acceptance towards appearance is increased with BMI, family support is highly needed by females to prevent body dissatisfaction and unhealthy lifestyle practice, such as eating disorder. Social media should be used with care so that it will not pressure other females on appearance-related matters. Universities can offer peer counselling or support groups online, which is a new norm nowadays. Promoting self-love regardless of body shape and size should be encouraged through health campaigns by using inspiring and empowering techniques to improve body image. Additionally, intervention programmes should be organised by the university counsellors in targeting to improve students' self-esteem and self-love.

## ACKNOWLEDGEMENTS

The authors would like to express their gratitude to the research committee from the Faculty of Sports Science and Recreation, UiTM Sarawak for approving this research, the students' academic affairs for providing us with ample information, the Research Management Unit, UiTM Sarawak for overseeing the ethical application process, and the Research Ethical Committee, UiTM Shah Alam for granting ethical clearance. Furthermore, we extend our thanks to the female students who participated in this study, and we appreciate everyone who contributed to the realization of this study.

## FUNDING

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

## AUTHORS' CONTRIBUTION

Josephine Josli designed the study, analyzed the data, and wrote the manuscript. Floradiana Enya Niru and Patricia Pawa Ptil assisted with data analysis and contributed to writing the manuscript. All authors read and approved the final version of the manuscript.

## CONFLICT OF INTEREST DECLARATION

We certify that the article is the Authors' and Co-Authors' original work. The article has not received prior publication and is not under consideration for publication elsewhere. This research/manuscript has not been submitted for publication nor has it been published in whole or in part elsewhere. We testify to the fact that all Authors have contributed significantly to the work, validity and legitimacy of the data and its interpretation for submission to Jurnal Intelek.

## REFERENCES

- Åberg, E., Koivula, A., & Kukkonen, I. (2020). A feminine burden of perfection? Appearance-related pressures on social networking sites. *Telematics and Informatics*, 46, 101319. <https://doi.org/10.1016/j.tele.2019.101319>
- Akbar, M., Nasir, F., Aslam, M., & Qasim, I. (2022). Effect of family pressure, peer pressure, and media pressure on body image dissatisfaction among women. *Journal of Business and Social Review in Emerging Economies*, 8(2), 325-330. <https://doi.org/10.26710/jbsee.v8i2.2249>
- Aparicio-Martinez, P., Perea-Moreno, A. J., Martinez-Jimenez, M. P., Redel-Macías, M. D., Pagliari, C., & Vaquero-Abellan, M. (2019). Social media, thin-ideal, body dissatisfaction and disordered eating attitudes: an exploratory analysis. *International Journal Of Environmental Research and Public Health*, 16(21), 4177. <https://doi.org/10.3390/ijerph16214177>
- Benton, C., & Karazsia, B. T. (2015). The effect of thin and muscular images on women's body satisfaction. *Body image*, 13, 22-27. <https://doi.org/10.1016/j.bodyim.2014.11.001>
- Cash, T. F., & Smolak, L. (2011). *Body image: A handbook of science, practice, and prevention*. Guilford press.
- Cohrdes, C., Santos-Hövenner, C., Kajikhina, K., & Hölling, H. (2021). The role of weight-and appearance-related discrimination on eating disorder symptoms among adolescents and emerging adults. *BMC Public Health*, 21, 1-14. <https://doi.org/10.1186/s12889-021-11756-y>
- Dancey, C. P., & Reidy, J. (2007). *Statistics without maths for psychology*. Pearson education.
- Du, Y. (2015). Media influences on body image dissatisfaction: The moderating role of collectivism vs. individualism. *Journal of Student Research*, 4(2), 73-87. <https://doi.org/10.47611/jsr.v4i2.254>



- Eow, S. Y., & Gan, W. Y. (2018). Social media use, body image, and body weight status: comparison between university students with and without disordered eating in Universiti Putra Malaysia. *International Journal of Public Health and Clinical Sciences*, 5(1), 129-145.
- Eshak, E. S., Ghazawy, E. R., & Mohammed, E. S. (2020). Sociocultural attitudes toward appearance and body shape dissatisfaction in adolescent Egyptian females: association and moderators. *Health promotion international*, 35(6), 1283-1290. <https://doi.org/10.1093/heapro/daz126>
- George, D., & Mallery, P. (2019). *IBM SPSS statistics 26 step by step: A simple guide and reference*. Routledge.
- Hardit, S. K., & Hannum, J. W. (2012). Attachment, the tripartite influence model, and the development of body dissatisfaction. *Body image*, 9(4), 469-475. <https://doi.org/10.1016/j.bodyim.2012.06.003>
- Hsu, J. L., Hung, R. T.-L., & Antoine, M. (2021). Investigating the linkages between BMI, body image, and SATAQ among young Asian females. *International Journal of Environmental Research and Public Health*, 18(14), 7460. <https://doi.org/10.3390/ijerph18147460>
- Izydorczyk, B. (2015). Psychological and socio-cultural risk factors for developing negative attitude and anti-health behaviour toward the body in young women. *Polish Psychological Bulletin*, 46(4), 555-572. <https://doi.org/10.3389/fpsyg.2018.00429>
- Jamani, N. A., MFamMed, A. H. S., MFamMed, K. H. A. A., & Abd Rahman, A. (2020). Agreement between body weight perception and body weight status among late adolescents in Kuantan, Malaysia. *Medical Journal of Malaysia*, 75(2), 159.
- Javier, S. J., & Belgrave, F. Z. (2015). An examination of influences on body dissatisfaction among Asian American college females: Do family, media, or peers play a role? *Journal of American College Health*, 63(8), 579-583. <https://doi.org/10.1080/07448481.2015.1031240>
- Jeffers, A. J., Cotter, E. W., Snipes, D. J., & Benotsch, E. G. (2013). BMI and depressive symptoms: The role of media pressures. *Eating Behaviors*, 14(4), 468-471. <https://doi.org/10.1016/j.eatbeh.2013.08.007>
- Jiotsa, B., Naccache, B., Duval, M., Rocher, B., & Grall-Bronnec, M. (2021). Social media use and body image disorders: association between frequency of comparing one's own physical appearance to that of people being followed on social media and body dissatisfaction and drive for thinness. *International Journal of Environmental Research and Public Health*, 18(6), 2880. <https://doi.org/10.3390/ijerph18062880>
- Khalaf, A., Al Hashmi, I., & Al Omari, O. (2021). The relationship between body appreciation and self-esteem and associated factors among Omani university students: an online cross-sectional survey. *Journal of Obesity*. 5523184. <https://doi.org/10.1155/2021/5523184>
- Kuan, P. X., Ho, H. L., Shuhaili, M. S., Siti, A. A., & Gudum, H. R. (2011). Gender differences in body mass index, body weight perception and weight loss strategies among undergraduates in Universiti Malaysia Sarawak. *Malaysian Journal of Nutrition*, 17(1).
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Lawrence, S. E., Puhl, R. M., Schwartz, M. B., Watson, R. J., & Foster, G. D. (2022). "The most hurtful thing I've ever experienced": A qualitative examination of the nature of experiences of weight stigma by family members. *SSM-Qualitative Research in Health*, 2, 100073.
- Lie, S. Ø., Rø, Ø., & Bang, L. (2019). Is bullying and teasing associated with eating disorders? A systematic review and meta-analysis. *International Journal of Eating Disorders*, 52(5), 497-514. <https://doi.org/10.1002/eat.23035>
- Lim, D. (2016). *Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised in Asian Americans* (Doctoral dissertation, Loma Linda University).
- Mills, J. S., Shannon, A., & Hogue, J. (2017). Beauty, body image, and the media. In *Perception of beauty* (pp. 145-157). IntechOpen.
- Moreno-Domínguez, S., Rutzstein, G., Geist, T. A., Pomichter, E. E., & Cepeda-Benito, A. (2019). Body mass index and nationality (Argentine vs. Spanish) moderate the relationship between internalization of the thin ideal and body dissatisfaction: a conditional mediation model. *Frontiers in psychology*, 10, 582. <https://doi.org/10.3389/fpsyg.2019.00582>

- Neumark-Sztainer, D., Bauer, K. W., Friend, S., Hannan, P. J., Story, M., & Berge, J. M. (2010). Family weight talk and dieting: how much do they matter for body dissatisfaction and disordered eating behaviors in adolescent girls?. *The Journal of Adolescent Health : official publication of the Society for Adolescent Medicine*, 47(3), 270–276.  
<https://doi.org/10.1016/j.jadohealth.2010.02.001>
- Olfert, M. D., Barr, M. L., Charlier, C. M., Famodu, O. A., Zhou, W., Mathews, A. E., Byrd-Bredbenner, C., & Colby, S. E. (2018). Self-reported vs. measured height, weight, and BMI in young adults. *International Journal of Environmental Research and Public Health*, 15(10), 2216.  
<https://doi.org/10.3390/ijerph15102216>
- Pop, C. L. (2018). Body mass index and body image anxiety in a sample of undergraduate students. *Physical Education of Students*, 22(2), 77–82.  
<https://doi.org/10.15561/20755279.2018.0204>
- Puhl, R. M., Wall, M. M., Chen, C., Austin, S. B., Eisenberg, M. E., & Neumark-Sztainer, D. (2017). Experiences of weight teasing in adolescence and weight-related outcomes in adulthood: A 15-year longitudinal study. *Preventive medicine*, 100, 173-179.  
<https://doi.org/10.1016/j.ypmed.2017.04.023>
- Schaefer, L. M., Burke, N. L., Thompson, J. K., Dedrick, R. F., Heinberg, L. J., Calogero, R. M., Bardone-Cone, A. M., Higgins, M. K., Frederick, D. A., & Kelly, M. (2015). Development and validation of the Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4). *Psychological Assessment*, 27(1), 54. <https://doi.org/10.1037/a0037917>
- Sharps, M. J., Price-Sharps, J. L., & Hanson, J. (2001). Body image preference in the United States and rural Thailand: An exploratory study. *The Journal of Psychology*, 135(5), 518-526.  
<https://doi.org/10.1080/00223980109603716>
- Shen, J., Chen, J., Tang, X., & Bao, S. (2022). The effects of media and peers on negative body image among Chinese college students: a chained indirect influence model of appearance comparison and internalization of the thin ideal. *Journal of Eating Disorders*, 10(1), 1-9.  
<https://doi.org/10.1186/s40337-022-00575-0>
- Sidek, S., & Ali Hanapiah, N. N. (2018). Body image perceptions and weight loss behavior among young adults. *International Journal of Allied Health Sciences*, 2(3), 426–434.  
<https://journals.iium.edu.my/ijahs/index.php/IJAHS/article/view/125>
- Silva, W. R. d., Barra, J. V., Neves, A. N., Marôco, J., & Campos, J. A. D. B. (2020). Sociocultural pressure: a model of body dissatisfaction for young women. *Cadernos de Saúde Pública*, 36.  
<https://doi.org/10.1590/0102-311X00059220>
- Stojcic, I., Dong, X., & Ren, X. (2020). Body image and sociocultural predictors of body image dissatisfaction in Croatian and Chinese women. *Frontiers in Psychology*, 11, 731.  
<https://doi.org/10.3389/fpsyg.2020.00731>
- Taherdoost, H. (2016). Sampling methods in research methodology; how to choose a sampling technique for research. *SSRN Electron. J.* 5, 18–27
- Tan, S. T., Tan, C. X., & Tan, S. S. (2021). Physical activity, sedentary behavior, and weight status of university students during the COVID-19 lockdown: a cross-national comparative study. *International Journal of Environmental Research and Public Health*, 18(13), 7125.  
<https://doi.org/10.3390/ijerph18137125>
- Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. American Psychological Association.
- Uchôa, F. N. M., Uchôa, N. M., Daniele, T. M. D. C., Lustosa, R. P., Garrido, N. D., Deana, N. F., Aranha, Á. C. M., & Alves, N. (2019). Influence of the mass media and body dissatisfaction on the risk in adolescents of developing eating disorders. *International Journal of Environmental Research and Public Health*, 16(9), 1508. <https://doi.org/10.3390/ijerph16091508>
- WHO. (2000). Obesity: preventing and managing the global epidemic.
- Wu, H. X., Ching, B. H.-H., He, C. C., & Li, Y. (2021). “Thinness is beauty”: Predictors of anti-fat attitudes among young Chinese women. *Current Psychology*, 1-12.  
<https://doi.org/10.1007/s12144-021-02021-x>

- You, S., & Shin, K. (2020). Sociocultural influences, drive for thinness, drive for muscularity, and body dissatisfaction among Korean undergraduates. *International Journal of Environmental Research and Public Health*, 17(14), 5260. <https://doi.org/10.3390/ijerph17145260>
- Zainuddin, A. A., Manickam, M. A., Baharudin, A., Omar, A., Cheong, S. M., Ambak, R., & Ghaffar, S. A. (2014). Self-perception of body weight status and weight control practices among adolescents in Malaysia. *Asia Pacific Journal of Public Health*, 26, 18S-26S. <https://doi.org/10.1177/1010539514542422>
- Zhang, L., Qian, H., & Fu, H. (2018). To be thin but not healthy-The body-image dilemma may affect health among female university students in China. *PloS one*, 13(10), e0205282. <https://doi.org/10.1371/journal.pone.0205282>