Eksplorium *p*-ISSN 0854-1418
Volume 46 No. 2, June 2025: 242–254 *e*-ISSN 2503-426X

The Influence of Personal, Social, and Psychological Factors on Body Image Perception Among Women in Kerala: A Structural Equation Modelling Approach

[1]Lakshmy Ravindran, [2]Dr. S. Dinesh Babu

[1]Research Scholar, Department of Visual Media and Communication, Amrita Vishwa Vidyapeetham, Kochi, India

[2]Assistant Professor (Sr.Gr.), Vice Chairman, Department of Visual Media and Communication, Amrita Vishwa Vidyapeetham, Kochi, India

Article Received: 12 May 2025, Revised: 10 June 2025, Accepted: 20 June 2025

Abstract : The study examines the influence of health, social, and psychological factors on the body image perception (BIP) of women in Kerala, utilizing Structural Equation Modelling (SEM). It states that personal factors, such as health behaviour and individual experiences, influence body image, particularly the importance of physical health. Social factors, such as media portrayals and peer group influence, contribute to the norms, where idealized media images of the body increase body dissatisfaction. Factors such as self-esteem, anxiety, and emotional well-being strongly influence body image perception, especially those with low self-esteem. It highlights the complex and multifaceted concepts of body image and advocates for solutions that extend beyond the physical to encompass socio-psychological dimensions, promoting improvement in body image.

Keywords: Body Image Perception, Personal Factors, Social Factors, Psychological Factors, Structural Equation Modeling, Social Influence, Self-Esteem, Mental Health, Body Dissatisfaction, Media Influence.

BIP is a sophisticated psychological construct that encompasses an individual's sentiments, cognition, and attitude regarding their body image. Body image has a significant impact on one's mental and emotional health, influencing self-esteem, eating behavior, and social interactions (Cash, 2004). More recent studies indicate that an individual's body image is shaped not only by personal interactions but also by broader sociocultural and psychological factors (Tiggemann & Slater, 2014). The interplay among these factors may account for the rich diversity of body image phenomena across cultures, communities, and individuals. Hence, understanding the personal, social, and psychological dimensions of body image is important for tailoring body image and mental health-enhancing interventions.

Increasingly, studies focus on various determinants of body image, including personal characteristics, social media, peer influence, and psychology (Grabe et al., 2008). A gap remains in determining the interrelationships and hierarchical significance between these factors and body image perception. These intricate relationships can be studied using the Structural Equation Modeling (SEM) approach, which enables the examination of how multiple independent variables influence body image perception (BIP) (Hair et al., 2017). This study aims to analyze the effects of personal (PF), social (SF), and psychological (PS) factors on body image perception using structural equation modelling (SEM). By analysing these factors, this study intends to gain insight into how each dimension influences the construction of an individual's body image and find potential areas for intervention.

Personal Factors and Body Image Perception

In this section, age, gender, socioeconomic status, and personal health habits are examined for their impact on bodily image. Research shows that younger people and those having low socio-economic positions tend to have poor body images more frequently. Likewise, individuals who possess certain health behaviours, such as being physically inactive, purging, or binging, are likely to be dissatisfied with their bodies (Cash & Smolak,2011). Understanding and recognizing these personal attributes is crucial for identifying the most effective responders and providing targeted interventions**.**

Social Factors and Body Image Perception

Body image is shaped by family interaction, relations with peers, and exposure to media. The media, especially the entertainment industry, has placed an unwarranted emphasis on idealized body types, significantly affecting body image perception; this impact is particularly pronounced among adolescents and young adults (Tiggemann & Slater, 2014). Society as a whole is rapid to impose body expectations and ideals that stem from feedback; those are nurtured, reinforced, and at times modified through peers and family (Cohen et al., 2001). In line with social comparison theory, people assess their physical appearance against that of others, which undoubtedly affects their body image and self-worth. (Festinger,1954)

Psychological Factors and Body Image Perception

Perceptions of body image are known to be connected with self-esteem, anxiety, and depression, which are recognized psychosocial factors. Self-esteem and body image satisfaction are closely associated, and body dissatisfaction is considered to be linked with elevated anxiety and depression symptoms (Cash, 2004). Psychosocial theories suggest that negative body image may connote deep emotional and cognitive problems, such as a distorted self-concept or a captured notion of societal standards of beauty (Wade et al., 2008). These factors, along with social and personal conditions, may intensify body image dissatisfaction.

Research Questions

This study seeks to answer the following research questions:

1. What is the influence of personal factors (PF) on body image perception (BIP)?
2. How do social factors (SF) contribute to shaping body image perception (BIP)?
3. What role do psychological factors (PS) play in influencing body image perception (BIP)?
4. What are the relative strengths of personal, social, and psychological factors in shaping body image perception?

Objectives

The objectives of this study are:

1. To investigate the relationship between personal factors and body image perception.

2. To examine the impact of social factors on body image perception.
3. To assess the role of psychological factors in shaping body image perception.
4. To identify the relative contributions of these three factors in influencing body image perception.

Methodology of the Study

This study aims to investigate the influence of personal, social, and psychological factors on body image perception (BIP) among women in Kerala. The target population consists of women aged between 18 and 40 years residing in Kerala. Given the unknown population size, the sample size was determined using Cochran's formula for sample size calculation, which is commonly used in surveys when the population is unknown. Based on this formula, a sample size of 384 participants was selected to ensure a representative and statistically reliable sample.

A purposive sampling technique was employed to select the participants from Ernakulam district, which is one of the most populous and accessible districts in Kerala. This non-random sampling method was chosen because it allows for the selection of individuals who are particularly relevant to the study's objectives. The inclusion criteria for participants were women within the specified age range (18-40 years), residing in Ernakulam, and willing to participate in the survey. This approach ensured that the sample reflected the key demographic characteristics required to investigate the research questions.

The data collection process involved administering structured questionnaires that assessed personal, social, and psychological factors influencing body image perception. This methodology enabled the researchers to collect quantitative data, which was subsequently analyzed using Structural Equation Modeling (SEM) to examine the relationships among the various factors contributing to body image perception in the sample population.

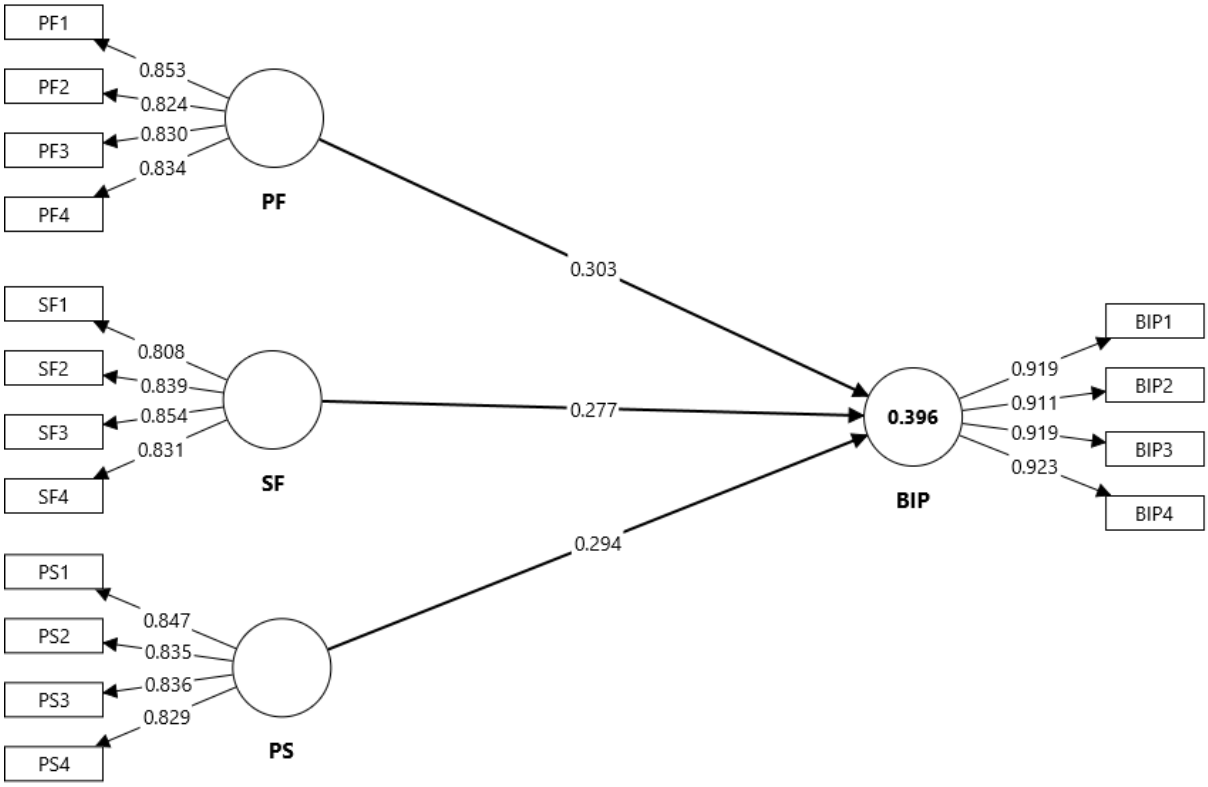
Results and Discussions

Hypothesis

H1: Personal factors (PF) significantly influence an individual's body image perception (BIP), with a positive relationship between PF and BIP.

H2: Social factors (SF) significantly influence an individual's body image perception (BIP), with a positive relationship between SF and BIP.

H3: Psychological factors (PS) significantly influence an individual's body image perception (BIP), with a positive relationship between PS and BIP.



Structural Equation Model (SEM) exploring the influence of Personal Factors (PF), Social Factors (SF), and Psychological Factors (PS) on Body Image Perception (BIP). The model suggests that PF, SF, and PS each contribute moderately to BIP, with path coefficients of 0.303, 0.277, and 0.294, respectively, indicating that these factors have a positive influence on BIP. The indicators for each factor (PF1-PF4, SF1-SF4, and PS1-PS4) show strong loadings, confirming that they are reliable measures of the latent factors. BIP, which is the central latent factor in this model, is measured by four indicators (BIP1-BIP4) with high loadings ranging from 0.919 to 0.923, indicating that the observed variables are strongly related to BIP. Overall, the model emphasizes the significant role of personal, social, and psychological factors in shaping an individual's body image perception.

Outer loadings

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
BIP1 <- BIP	0.919	0.918	0.007	131.056	0.000
BIP2 <- BIP	0.911	0.911	0.008	114.661	0.000
BIP3 <- BIP	0.919	0.919	0.007	124.397	0.000
BIP4 <- BIP	0.923	0.923	0.007	137.879	0.000

PF1 <- PF	0.853	0.852	0.013	64.543	0.000
PF2 <- PF	0.824	0.824	0.018	46.532	0.000
PF3 <- PF	0.830	0.830	0.017	48.050	0.000
PF4 <- PF	0.834	0.834	0.016	52.882	0.000
PS1 <- PS	0.847	0.848	0.014	60.741	0.000
PS2 <- PS	0.835	0.834	0.016	52.276	0.000
PS3 <- PS	0.836	0.836	0.016	52.645	0.000
PS4 <- PS	0.829	0.828	0.017	48.883	0.000
SF1 <- SF	0.808	0.808	0.019	43.456	0.000
SF2 <- SF	0.839	0.840	0.015	57.219	0.000
SF3 <- SF	0.854	0.853	0.014	62.739	0.000
SF4 <- SF	0.831	0.830	0.017	48.910	0.000

The outer loadings represent the relationships between the observed indicators and their respective latent constructs in the model. These loadings indicate the strength of the connection between the observed variables and the latent constructs they measure. All outer loadings in this study are statistically significant, with T statistics well above the threshold of 1.96, confirming that each indicator reliably measures the respective latent variable. For Body Image Perception (BIP), the indicators BIP1, BIP2, BIP3, and BIP4 show very high loadings ranging from 0.911 to 0.923, indicating a strong association with the BIP construct. Similarly, for Personal Factors (PF), the loadings for PF1 to PF4 range from 0.824 to 0.853, indicating that these indicators are reliable in capturing personal factors related to body image. The Psychological Factors (PS) indicators (PS1 to PS4) have loadings between 0.829 and 0.847, demonstrating a strong connection to the PS construct. Social Factors (SF) indicators, SF1 to SF4, also show strong loadings, ranging from 0.808 to 0.854, reflecting a robust relationship with the SF construct. These findings suggest that all indicators are well-defined and contribute significantly to the latent constructs they represent, supporting the validity of the model. The T statistics for each path are extremely high, indicating that the relationships are not due to random chance, with P-values all below 0.000, confirming the statistical significance of the loadings.

Reliability and validity of constructs

Constructs	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
BIP	0.938	0.939	0.955	0.843
PF	0.856	0.858	0.902	0.698
PS	0.858	0.869	0.903	0.700
SF	0.854	0.861	0.901	0.694

The reliability and validity of the constructs in the model are assessed through several indices: Cronbach's alpha, composite reliability (both rho_a and rho_c), and average variance extracted (AVE). The Body Image Perception (BIP) construct demonstrates excellent reliability, with a Cronbach's alpha of 0.938, composite reliabilities (rho_a and rho_c) of 0.939 and 0.955, and an AVE of 0.843, indicating strong internal consistency and high convergent validity (Hair et al., 2017). Similarly, Personal Factors (PF), Psychological Factors (PS), and Social Factors (SF) all exhibit adequate to good reliability. PF has a Cronbach's alpha of 0.856, rho_a of 0.858, rho_c of 0.902, and an AVE of 0.698, showing acceptable internal consistency and convergent validity (Fornell & Larcker, 1981). PS and SF have similar values, with Cronbach's alphas of 0.858 and 0.854, rho_a of 0.869 and 0.861, rho_c of 0.903 and 0.901, and AVEs of 0.700 and 0.694, respectively, confirming reliable constructs and adequate convergent validity. Overall, the values for composite reliability and AVE exceed the recommended thresholds, demonstrating that these constructs are both reliable and valid.

Discriminant validity - HTMT

	BIP	PF	PS	SF
BIP				
PF	0.522			
PS	0.475	0.264		
SF	0.505	0.414	0.281	

The Heterotrait-Monotrait Ratio (HTMT) values in the model demonstrate strong discriminant validity among the constructs, as all HTMT values are below the recommended threshold of 0.85. Specifically, the HTMT values for pairs of constructs such as BIP and PF (0.522), BIP and PS (0.475), BIP and SF (0.505), PF and PS (0.264), PF and SF (0.414), and PS and SF

(0.281) indicate that these constructs are sufficiently distinct from one another. These values suggest that each construct (Body Image Perception, Personal Factors, Psychological Factors, and Social Factors) captures unique aspects of the underlying theoretical framework, supporting the notion that the factors are not overly correlated or overlapping. As a result, the model exhibits good discriminant validity, confirming that the constructs measure different dimensions without significant cross-construct contamination (Henseler, Ringle, & Sarstedt, 2015).

Table Collinearity Statistics (VIF)

	VIF
BIP1	3.640
BIP2	3.485
BIP3	3.752
BIP4	3.808
PF1	2.027
PF2	1.895
PF3	1.957
PF4	1.941
PS1	1.854
PS2	2.008
PS3	2.059
PS4	2.025
SF1	1.901
SF2	1.874
SF3	2.069
SF4	1.956

The Variance Inflation Factor (VIF) values are used to assess multicollinearity in the model, indicating whether there is excessive correlation among the predictor variables. In this case, the VIF values for all indicators of the constructs (BIP, PF, PS, and SF) are below the commonly accepted threshold of 5, suggesting that multicollinearity is not a significant issue in the model.

Model Fit

	Saturated model	Estimated model
SRMR	0.049	0.049
d_ULS	0.331	0.331
d_G	0.144	0.144
Chi-square	423.553	423.553
NFI	0.911	0.911

The fit indices for the Saturated Model and the Estimated Model indicate that both models exhibit a good fit to the data. The SRMR value of 0.049 for both models is well below the commonly accepted threshold of 0.08, suggesting a good fit (Hu & Bentler, 1999). Similarly, the d_ULS (0.331) and d_G (0.144) values are consistent across both models, demonstrating minimal discrepancies between the models and a strong fit based on these distance measures (Henseler et al., 2014). The Chi-square value of 423.553 is identical for both models, which, while informative, should be interpreted with caution depending on the model's degrees of freedom (Bentler, 1990). Lastly, the NFI value of 0.911 indicates that both models have a good fit, as values above 0.90 are generally considered indicative of an adequate model fit (Bentler & Bonett, 1980). Together, these fit indices suggest that the Saturated Model and the Estimated Model both represent the data well and are robust in capturing the underlying relationships between the constructs.

	R-square	R-square adjusted
BIP	0.396	0.392

The R-squared (R^2) value of 0.396 for Body Image Perception (BIP) indicates that approximately 39.6% of the variance in BIP is explained by the independent variables in the model. This suggests a moderate level of explanatory power, meaning that while the model captures a significant portion of the variance in BIP, there is still a considerable amount of unexplained variance. The R-squared adjusted value of 0.392, which accounts for the number of predictors in the model and the sample size, is slightly lower but still indicates a similar level of explanatory power. This suggests that the model is reasonably efficient in explaining the variability in BIP, but further refinement may be needed to account for other unobserved factors influencing BIP. Overall, these R^2 values indicate a moderately good fit of the model in explaining Body Image Perception.

Path Coefficient – Bootstrapping Model

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
PF -> BIP	0.303	0.302	0.039	7.853	0.000
PS -> BIP	0.294	0.295	0.037	7.926	0.000
SF -> BIP	0.277	0.279	0.039	7.148	0.000

The path analysis results show that Personal Factors (PF), Psychological Factors (PS), and Social Factors (SF) all have significant positive effects on Body Image Perception (BIP). Specifically, the path from PF to BIP has a coefficient of 0.303, from PS to BIP a coefficient of 0.294, and from SF to BIP a coefficient of 0.277, suggesting moderate positive influences of these factors on BIP. All path coefficients are statistically significant, with T statistics exceeding the threshold of 1.96 (7.853 for PF, 7.926 for PS, and 7.148 for SF) and P-values of 0.000, indicating strong evidence that these relationships are not due to chance. These findings suggest that PF, PS, and SF each contribute significantly to shaping Body Image Perception, emphasizing their importance in understanding how different factors influence body image.

Hypothesis Result

Hypothesis	Path	Path Coefficient	P Value	Result
H1: Personal factors (PF) significantly influence body image perception (BIP)	PF -> BIP	0.303	0.000	Support (Positive and significant)

H2: Psychological factors (PS) significantly influence body image perception (BIP)	PS -> BIP	0.294	0.000	Support (Positive and significant)
H3: Social factors (SF) significantly influence body image perception (BIP)	SF -> BIP	0.277	0.000	Support (Positive and significant)

Findings and Discussion

The findings from this study indicate that personal, social, and psychological factors have a significant impact on people's perceptions of their body image. Personal, social, and psychological factors play a significant role in shaping our body image, supporting a view that incorporates various aspects of our lives. The findings suggest that personal factors, including personal health behaviours and experiences, can have a significant impact on how we perceive ourselves in a body image context. This suggests that our perceptions of how our bodies look are more than just a reflection of ourselves in the mirror; they are also a reflection of our feelings about our appearance in terms of health, lifestyle behaviors, and personal experiences. There is also an understanding of the significance of social influences on body image. We use others in our perceptions of body image. We derive much of our body perception from those with whom we associate, whether it is from family, friends, or the broader societal influences of others, particularly the media.

Specifically, the media has considerable influence and usually features idealized body proportions, which can create pressure to conform to these standards. Social comparisons with peers also play a crucial role in shaping our body image, as we often evaluate ourselves against others. The social influence is particularly apparent in today's digitized platforms, as we are constantly inundated by images via social media, each one carefully curated and showcasing

perfect images of often unattainable standards. Psychological variables such as self-esteem, quality of emotional health, and mental health are associated with our body image perceptions. A person with low self-esteem and someone with anxiety and depression has an increased risk of establishing a negative body image. Psychological conditions can distort people's self-perception, leading to increased feelings of malaise or discomfort regarding their physical appearance. This information suggests that body image is more than just one's shape or size, and is closely related to our emotional self-perception.

Practical Implications and Recommendations

One key implication of this study is the need to address personal factors such as health behaviors and individual experiences, which are strongly associated with body image perception. Programs aimed at improving body image should focus not only on physical health but also on promoting positive health behaviors. Educational campaigns can encourage physical activities like exercise and healthy eating, which can help individuals develop a more positive view of their bodies. Specifically, interventions should target vulnerable groups, such as adolescents or individuals with disordered eating patterns, and work to improve their overall self-perception through health-related goals.

The study emphasizes the significant influence of social factors, particularly media exposure and peer interactions, in shaping body image. To counteract the harmful effects of idealized body images presented in the media, organizations can collaborate with media outlets to promote more diverse and inclusive representations of body types. Social media platforms, which frequently amplify unrealistic beauty standards, should consider integrating awareness campaigns that challenge societal pressures. Additionally, peer-based programs and support networks can help foster positive body image by encouraging social comparisons that focus on individual well-being rather than appearance.

Psychological factors, particularly self-esteem, anxiety, and depression, significantly impact body image perception. Interventions should prioritize mental health support alongside physical health initiatives. Cognitive-behavioral therapy (CBT) and other evidence-based psychological treatments can be integrated into programs that address body dissatisfaction, focusing on improving self-esteem and reducing anxiety related to appearance. Schools, universities, and community centers should offer mental health resources that specifically target body image issues, helping individuals to develop healthier self-concepts. Providing accessible and inclusive mental health services can be an essential step toward reducing the negative psychological impacts of poor body image.

Conclusion

This study contributes to the growing body of literature on body image by providing empirical evidence of the significant influences of personal, social, and psychological factors on body image perception. The SEM analysis confirms that all three factors contribute positively to body image perception, with social and psychological factors showing somewhat stronger effects. These findings suggest that interventions aimed at improving body image should consider addressing not only personal factors but also the broader social and psychological

influences that shape an individual's perception of their body. Further research is needed to explore the nuanced interactions between these factors, as well as to investigate potential moderating variables that may influence the strength of these relationships.

Limitations and Future Research

Despite the valuable insights provided by this study, there are several limitations that should be acknowledged. Firstly, the use of purposive sampling limits the generalizability of the findings, as the sample was drawn from a specific geographic location Ernakulam district and may not represent the broader population of women in Kerala or other regions. Additionally, the cross-sectional nature of the study restricts the ability to infer causal relationships between the variables, as data were collected at a single point in time. Another limitation is the reliance on self-reported data, which may be subject to response biases such as social desirability or inaccurate self-perception. Future research could address these limitations by using a longitudinal design to explore changes in body image perception over time, as well as by employing a more diverse and random sampling method to enhance generalizability. Moreover, expanding the study to include a wider range of demographic factors, such as education level or rural-urban differences, would provide a more comprehensive understanding of how various factors influence body image perception. Future studies could also investigate the role of other potential moderators or mediators, such as social media use or cultural influences, in shaping body image among women in different regions or countries.

References

[1] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Sage.

[2] Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.

[3] Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.

[4] Henseler, J., Ringle, C. M., & Sarstedt, M. (2014). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.

[5] Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238-246.

[6] Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588-606.

[7] Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Lawrence Erlbaum Associates.

[8] Cash, T. F. (2004). Body image: Past, present, and future. *Body Image*, 1(1), 1-5.

[9] Cash, T. F., & Smolak, L. (2011). *Body image: A handbook of science, practice, and prevention*. Guilford Press.

[10] Cohen, L. R., et al. (2001). Social influences on body image: A review of recent research. *Psychology of Women Quarterly*, 25(3), 301-313.

[11] Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117-140.
[12] Grabe, S., Ward, L. M., & Hyde, J. S. (2008). The role of the media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin*, 134(3), 460-476.
[13] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage.
[14] Tiggemann, M., & Slater, A. (2014). NetGirls: The Internet, Facebook, and body image concern in adolescent girls. *International Journal of Eating Disorders*, 47(6), 630-643.
[15] Wade, T. D., et al. (2008). The role of psychological factors in the development of body dissatisfaction and eating disorders. *Psychological Bulletin*, 134(4), 498-520.