GNA Journal of
Management & Technology

ISSN - 0974-572
Vol. 16 No. 2, July-December, 2025

DECODING FITNESS MOTIVATION: AN ANALYSIS OF BODY IMAGE AND SELF-CONFIDENCE IN GYM-GOERS

Ms. N. Indhupriya[1], Dr. G. Gnanaselvi [2]

[1]Research scholar (full time), PG & Research Department of Commerce, Nallamuthu Gounder Mahalingam College, (Autonomous) Pollachi- 642 001 Tamil Nadu, India.
indhupriyan12@gmail.com

[2]Assistant Professor, PG & Research Department of Commerce, Nallamuthu Gounder Mahalingam College, (Autonomous) Pollachi- 642 001 Tamil Nadu, India.
gnanaselvi2@gmail.com

Abstract

The growing trend of gym participation highlights not only the physical benefits of fitness routines but also the psychological outcomes associated with exercise. This study investigates the demographic and behavioural characteristics of gym members and explores the underlying factors influencing self-confidence, body image, and gym intervention. A survey was conducted among 110 gym members in Pollachi town, and data were analysed using SPSS. Descriptive statistics revealed that the majority of respondents were young adults aged 17–35, with a balanced gender distribution and varying levels of education, dietary habits, and gym usage duration. Social media and fitness influencers emerged as the primary motivators for joining gyms. Principal Component Analysis identified two distinct latent constructs: a combined factor of self-confidence and body image, and a separate gym intervention factor. These findings suggest that self-confidence and body image are closely linked psychological dimensions, independent of structured gym interventions. The study emphasizes the importance of designing targeted fitness programs, promoting positive body image, and refining gym interventions to enhance members' mental well-being alongside physical health. The insights contribute to bridging gaps in literature by integrating demographic, behavioural, and psychological aspects of gym participation, offering practical implications for fitness professionals, gym owners, and health organizations in creating supportive and sustainable fitness environments

Keywords: *Gym intervention, Self-confidence, Body image, Fitness motivation, Psychological well-being.*

1. INTRODUCTION

Despite the growing popularity of gym memberships and fitness routines, many gym-goers—particularly beginners—experience low self-confidence, which can negatively affect their self-worth and willingness to continue exercising. This issue is especially prominent among individuals who have not yet established regular fitness habits, feel dissatisfied with their body image,

or feel intimidated by the perceived competence of other gym members (Fox, 2000; Sabiston et al., 2019). Research indicates that social comparison, fear of negative evaluation, and body dissatisfaction are common experiences in gym environments and are strongly associated with reduced exercise motivation and higher dropout rates (Festinger, 1954; Lindwall & Palmeira, 2009). Consequently, addressing self-confidence within gym settings has emerged as an important concern for fitness professionals and mental health practitioners.

The purpose of this study is to explore how gym-based interventions can be designed and implemented to enhance self-confidence among individuals. It examines various approaches, including structured fitness programs, personal training, group exercise sessions, and social support mechanisms, to identify strategies that most effectively improve self-esteem and psychological well-being (Biddle & Asare, 2011; Teixeira et al., 2012). Additionally, the study seeks to identify individual factors—such as age, gender, and prior fitness experience—that may influence the effectiveness of gym interventions on self-confidence outcomes (McAuley et al., 2011).

Ultimately, this research aims to bridge a gap in the existing literature by providing empirical insights into the psychological effects of gym-based interventions. Understanding how exercise participation and gym environments contribute to self-confidence is essential for developing inclusive, supportive, and effective fitness programs that address both physical and mental health needs. The findings may offer valuable guidance for fitness professionals, gym owners, and health organizations in supporting individuals to build confidence, enhance mental well-being, and achieve sustainable health and fitness goals (Ekkekakis et al., 2020).

In addition to psychological factors, the structural and social characteristics of gym environments play a decisive role in shaping individuals' self-confidence. Gym culture often emphasizes physical appearance, performance outcomes, and transformation narratives, which may unintentionally reinforce unrealistic standards and intensify self-doubt among novice participants (Andreasson & Johansson, 2014). Highly competitive atmospheres, lack of beginner-friendly guidance, and limited instructor interaction can further exacerbate feelings of inadequacy, discouraging consistent participation and confidence development (Ntoumanis et al., 2021). Creating psychologically safe gym spaces that prioritize learning, gradual progress, and personal improvement is therefore essential for enhancing self-confidence and long-term engagement.

Technology-enabled fitness interventions have also emerged as promising tools for improving self-confidence among gym-goers. Wearable fitness devices, mobile applications, and virtual coaching platforms allow individuals to monitor progress, set personalized goals, and receive feedback in a non-threatening manner, thereby strengthening perceptions of competence and control (Kerner & Goodyear, 2017). Such tools can reduce reliance on social comparison by shifting focus toward self-

referenced improvement, which has been shown to positively influence exercise self-efficacy and motivation (Bandura, 1997; Michie et al., 2017). When integrated thoughtfully into gym programs, technology-based interventions can complement traditional training methods and support psychological well-being.

Furthermore, gender differences in gym-related confidence warrant careful consideration. Research indicates that women often experience higher levels of body-related anxiety and fear of judgment in gym environments, particularly in male-dominated spaces such as weight-training areas (Prichard & Tiggemann, 2008; Salvatore & Marecek, 2010). Men, on the other hand, may face pressure to demonstrate strength and muscularity, leading to performance anxiety and reduced confidence when perceived expectations are not met (Parent & Moradi, 2011). These findings underscore the importance of gender-sensitive gym interventions that acknowledge diverse experiences and promote inclusive participation.

2. REVIEW OF LITERATURE

Agustina, A., & Adhiani, R. (2023) made a study on, "The Influence of Brain Gym on Changes in the Numerical Ability of Grade I Elementary Students". This study aimed to determine the effect of brain gym exercises on improving numerical skills in first-grade elementary students. The research utilized a pre-experimental design with a one-group pretest posttest approach, using purposive sampling. Participants included 19 students who met inclusion/exclusion criteria at Public Elementary School 1 Taiwan, Bekasi, Indonesia. Data were collected before and after a 3-week brain gym intervention using the first-grade end-of year numeracy skills test. Univariate analysis employed the Shapiro-Wilk test, while bivariate analysis used a paired-samples t-test. Results demonstrated that brain gym exercises significantly improved children's numeracy skills at the school in 2018.

Sabiston et al. (2023) investigated the relationship between exercise environments, body image, and self-confidence among adult gym-goers using a mixed-method research design. The study found that individuals who perceived their gym environment as supportive and non-judgmental reported higher levels of self-confidence and lower levels of body-related anxiety. Conversely, appearance-focused gym cultures were associated with reduced confidence and increased exercise avoidance. The findings stress the importance of inclusive gym practices, instructor sensitivity, and environment design in promoting confidence and sustained engagement in fitness programs.

Ntoumanis et al. (2021) conducted a large-scale meta-analysis of self-determination theory–based interventions in health and exercise contexts. The analysis included randomized and quasi-experimental studies published across multiple countries and populations. Findings revealed that gym and exercise programs emphasizing autonomy support, positive instructor behavior, and social relatedness produced significant improvements in self-confidence, intrinsic motivation, and

psychological well-being. The authors concluded that psychologically informed gym interventions are more effective than purely performance-oriented programs, reinforcing the need for supportive and inclusive fitness environments.

Ekkekakis et al. (2020) examined affective and psychological responses to exercise, emphasizing how emotional experiences during physical activity influence confidence and long-term adherence. Drawing on experimental and observational studies across fitness and gym settings, the authors reported that positive affective responses—such as enjoyment, perceived competence, and reduced anxiety—were strongly associated with higher self-confidence and continued participation. The study highlights that gym interventions designed to minimize discomfort, fear of judgment, and excessive performance pressure can significantly enhance confidence, especially among beginners and individuals with low fitness self-efficacy.

Patel.R. (2018) made a study on, "Gym intervention for self-confidence in adolescents." The study aimed to assess the effectiveness of gym programs in improving self-confidence among adolescents aged 13–18. Longitudinal surveys were administered at baseline, mid-point, and post-intervention, alongside fitness assessments to track physical progress. The study included 100 adolescent respondents. Regression analysis was used to identify predictors of self confidence, and correlation coefficients were calculated to examine relationships between fitness gains and self-confidence. Results indicated a positive correlation between gym attendance and self-confidence, with fitness gains emerging as a significant predictor of improved self-confidence.

Taylor. L. (2011) made a study on, "The Role of Personal Trainers on Self-Confidence". The study aimed to investigate the impact of personal trainers on self-confidence in gym-goers. Participants included 30 individuals with personal trainers and 20 without. Interviews were conducted to gather insights into participants' experiences with personal trainers, and self reported confidence scales were administered pre- and post-intervention. Descriptive statistics were used to summarize confidence scores, and content analysis identified key themes from the interviews. Results indicated that participants with personal trainers showed greater improvements in self-confidence. Key themes from the interviews included personalized feedback, goal-setting, and accountability as factors contributing to enhanced confidence.

Cogan, K. D., & Petrie, T. A. (1995) made a study on "An Evaluation of a Season-Long Intervention with Female Collegiate Gymnasts." This paper describes a season-long, multimodal sport psychology intervention implemented with a collegiate women's gymnastics team. The evaluation results focus on the program's effectiveness in reducing competition state anxiety, focusing on increasing team cohesion and reducing competition anxiety. Qualitative feedback from coaches and gymnasts was analyzed. Results indicated that gymnasts in the intervention group exhibited higher levels of social

cohesion during the early competitive season compared to the control group. Additionally, intervention gymnasts reported reductions in cognitive and somatic anxiety levels from the preseason through mid-competitive season.

3. STATEMENT OF THE PROBLEM

The increasing popularity of gyms reflects a growing awareness of fitness and lifestyle among individuals, yet the factors influencing gym participation and its psychological outcomes remain underexplored. While demographic and behavioural characteristics such as age, gender, education, diet, and duration of membership shape patterns of gym usage, they do not fully explain the deeper psychological dimensions associated with fitness engagement. Self-confidence, body image, and perceptions of gym interventions play a crucial role in shaping members' motivation, satisfaction, and long-term commitment to fitness routines. However, limited research has integrated both demographic patterns and psychological constructs to provide a holistic understanding of gym members' experiences. This study addresses this gap by examining the demographic and behavioural profile of gym members and identifying the underlying factors of self-confidence, body image, and gym intervention through factor analysis.

4.OBJECTIVES OF THE STUDY

* To analyze the demographic and behavioural characteristics of gym members.
* To identify the underlying factors of self-confidence, body image, and gym intervention.

5. RESEARCH METHODOLOGY

The present study adopted a quasi-experimental research design to examine the effects of gym interventions on self-confidence among gym-goers. A quasi-experimental approach was considered appropriate as it allows the assessment of intervention outcomes in real-world settings where random assignment of participants is not feasible. This design enabled the study to compare self-confidence levels before and after gym intervention exposure and to evaluate perceived changes resulting from participation in gym-related activities.

The study was conducted exclusively in Pollachi town, and the scope of data collection was limited to this geographical area to ensure feasibility and focused analysis. Primary data were collected directly from the target population, consisting of individuals who were actively participating in gym or fitness programs during the period of data collection. Collecting primary data allowed the researcher to obtain first-hand information regarding participants' self-confidence levels, perceptions, and experiences related to gym interventions.

A structured questionnaire was used as the primary data collection instrument. The questionnaire was designed based on previous literature and standardized self-confidence measures, with suitable modifications to fit the context of gym interventions. It comprised multiple sections covering

demographic details, gym participation characteristics (such as frequency of attendance and type of intervention), and self-confidence indicators. A five-point Likert scale ranging from “strongly disagree” to “strongly agree” was employed to measure respondents' perceptions of self-confidence improvement. The instrument was reviewed for content clarity and relevance before administration.

The sample consisted of 110 respondents, selected using convenience sampling. This sampling method was chosen due to time constraints and ease of access to participants within gym facilities. Although convenience sampling limits the generalizability of findings, it is commonly used in exploratory and intervention-based studies and is appropriate for assessing trends and relationships within a specific population.

Data collection was carried out with due ethical consideration. Participation was voluntary, and respondents were informed about the purpose of the study. Confidentiality and anonymity of responses were assured, and informed consent was obtained prior to questionnaire administration.

The collected data were coded and analyzed using appropriate statistical tools. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize demographic variables and self-confidence levels. To assess the impact of gym interventions on self-confidence, inferential statistical techniques such as paired t-tests, correlation analysis, and regression analysis were employed wherever applicable. These analyses helped determine the significance and strength of the relationship between gym intervention participation and self-confidence improvement.

6. LIMITATIONS OF THE STUDY

The data collected is primary data, which is purely based on questionnaire and hence the result would bear all the limitations of primary data. Random sampling is used because it is not providing sample for an infinite population.

7. DATA ANALYSIS AND INTERPRETATION

Data analysis was conducted using SPSS. Findings were assessed in relation to various aspects of gym interventions to analyze the study's hypotheses. The Friedman test was applied to determine the primary reasons for respondents attending the gym.

8. POPULATION CHARACTERISTICS OF THE RESPONDENTS

The data presented is from a survey of 110 gym members, examining various demographic and behavioural factors related to their gym usage.

The majority of respondents were between the ages of 17 and 35, accounting for 74.5% of the total sample. Specifically, the largest age group was 17-25 years (40.9%), followed by those aged 26-35 **years** (33.6%). The remaining age groups, "Up to 18 years" and "Above 35 years," each represented a smaller portion of the sample at 12.7%.

The gender distribution was relatively balanced, with male respondents making up 53.6% of the

sample and female respondents at 46.4%. Most respondents were unmarried (57.3%) compared to those who were married (42.7%).

Regarding education, the largest group of respondents had a UG degree (39.1%), followed closely by those with a PG degree (33.6%). Those with an HSC or up to an SSLC education were less common, at 19.1% and 8.2%, respectively.

In terms of gym usage duration, the highest percentage of respondents had been using a gym for 3 to 6 months (36.4%), followed by those who had been members for 6 to 12 months (29.1%). About 19.1% were newer members (less than 3 months), and 15.5% were long-term members (more than a year).

For diet, a balanced diet was the most common type followed by respondents (54.5%). A significant number of respondents reported having no specific diet (30.9%). High-protein diets were followed by a smaller percentage (12.7%), and a very small number reported following an unhealthy diet (1.8%).

Finally, the primary factor influencing the decision to join a gym was social media/fitness influencers (33.6%), followed by personal goals (27.3%). Health-related reasons, such as a doctor's advice, were the least-cited influence among the options provided (21.8%).

9. GYM INTERVENSION- FACTOR ANALYSIS

A Principal Component Analysis with a varimax rotation was conducted on 15 items related to Self-Confidence (SC), Body Image (BI), and Gym Intervention (GI) to identify underlying factors. An initial check of the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy revealed an overall value of 0.650, which is considered acceptable, although some individual item values were low (e.g., sc1 = 0.442, GI4 = 0.408), suggesting that these items may be less suitable for this model.

Component Loadings				
	Component			
	1	**2**	**3**	**Uniqueness**
SC 4	0.777			0.381
BI 5	0.744			0.358
SC 2	0.683			0.423
BI 4	0.633			0.558
BI 3	0.619			0.557
SC 3	0.610			0.623
BI 2	0.387			0.841
SC 5	0.311			0.813
SCI		0.777		0.393
GI 1		0.667	-0.310	0.457
BI 1		0.480	0.365	0.635

GI 3	0.356	-0.403		0.677
GI 5			0.746	0.421
GI 4			0.680	0.518
GI 2	0.413		0.435	0.566
Note. 'varimax' rotation was used				

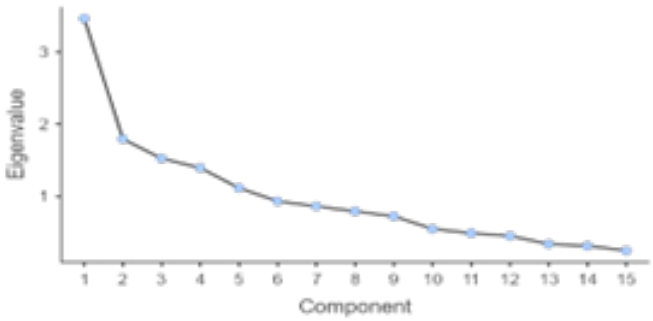
SC=Self-confidence, GI=Gym Intervention, BI=Body Image,

The analysis extracted three components, accounting for the variance among the variables. **Component 1** emerged as a strong factor, with high loadings from both **Self-Confidence** and Body Image items. Specifically, SC4 (.777), SC1 (.777), BI5 (.744), and SC2 (.683) showed the highest positive loadings on this component. This finding indicates a strong, unified relationship between a person's self-confidence and their perception of their body image.

Component 2 was defined by high loadings from two Gym Intervention items, GI5 (.746) and GI4 (.680). This suggests that Gym Intervention is a distinct latent factor, separate from the combined Self-Confidence and Body Image construct.

Component 3 was less clearly defined, with its highest loading from GI2 (.435) and a cross-loading from sc1 (.777), which loaded even more strongly on Component 1. The high uniqueness values for BI2 (.841) and sc5 (.813) indicate that a significant portion of their variance is not explained by the three extracted components, suggesting these items are not a good fit for the current model.

Figure 1: **Scree Plot**



In conclusion, the Principal Component Analysis identified two primary, distinct factors in the data: a combined **Self-Confidence and Body Image** factor, and a separate Gym Intervention factor. This suggests that for this sample, perceptions of self-worth and body image are closely linked, and this combined construct is independent of how individuals perceive or engage with gym interventions.

Suggestion

- Develop Targeted Fitness Programs: Gyms can design customized programs based on demographic characteristics (e.g., age-specific or gender-specific routines) to better meet members' needs and improve retention.
- Promote Positive Body Image and Confidence: Since self-confidence and body image are strongly interlinked, gyms should integrate motivational workshops, counselling, or group activities that enhance psychological well-being along with physical fitness.
- Leverage Social Media Strategically: With social media and fitness influencers being a major factor influencing gym membership, gyms could collaborate with influencers to create authentic, motivational content that promotes healthy lifestyles.
- Refine Gym Intervention Strategies: Based on factor analysis, interventions should focus not only on physical training but also on building supportive environments and structured programs that foster long-term commitment and psychological benefits.

10. DISCUSSION

The present study aimed to analyze the demographic and behavioural characteristics of gym members and to identify the underlying psychological factors associated with self-confidence, body image, and gym intervention among gym-goers in Pollachi town. The findings provide meaningful insights into how psychological dimensions interact with fitness participation, extending existing literature on exercise motivation and mental well-being.

The demographic analysis revealed that the majority of gym members were young adults aged 17–35 years, with a relatively balanced gender distribution. This aligns with earlier studies indicating that young adults are more likely to engage in structured fitness activities due to increased exposure to social media, body ideals, and lifestyle-related motivations (Andreasson & Johansson, 2014; Sabiston et al., 2019). The prominence of social media and fitness influencers as the primary motivators for gym enrollment further supports contemporary research suggesting that digital platforms significantly shape fitness aspirations and body-related perceptions (Kerner & Goodyear, 2017).

One of the most important findings of this study emerged from the Principal Component Analysis. The results indicated that self-confidence and body image loaded strongly onto a single latent factor, suggesting that these constructs are deeply interconnected. This finding is consistent with previous research demonstrating that individuals' perceptions of their physical appearance are closely tied to their self-worth and confidence levels (Cash et al., 2004; Fox, 2000). When gym-goers feel positive about their body image, they are more likely to experience enhanced confidence, motivation, and persistence in exercise routines. Conversely, negative body perceptions may undermine confidence and increase the likelihood of exercise avoidance or dropout.

Interestingly, gym intervention emerged as a separate and distinct factor, independent of the combined self-confidence and body image construct. This suggests that merely participating in gym programs or structured interventions does not automatically translate into improved psychological outcomes. This finding resonates with Ntoumanis et al. (2021), who emphasized that exercise interventions are most effective when they are autonomy-supportive, inclusive, and psychologically informed, rather than purely performance-driven. The separation of gym intervention from psychological constructs indicates that the quality of the gym experience may be more influential than the presence of intervention alone.

Overall, the findings reinforce the idea that psychological well-being in gym contexts is not solely determined by physical training, but is strongly influenced by internal perceptions, social environments, and motivational climates. Creating gym spaces that promote positive body image, reduce social comparison, and foster a sense of belonging may therefore be critical for enhancing self-confidence and long-term engagement.

11. CONCLUSION

The present study provides a comprehensive examination of fitness motivation by integrating demographic, behavioural, and psychological perspectives among gym-goers in Pollachi town. The findings demonstrate that self-confidence and body image are closely interrelated psychological dimensions, forming a unified construct that significantly shapes individuals' experiences within gym environments. In contrast, gym intervention emerged as a distinct factor, indicating that structured fitness programs alone may not be sufficient to enhance psychological outcomes unless they are designed with mental well-being in mind.

The study highlights that young adults constitute the dominant segment of gym participants and that social media plays a major role in motivating gym enrollment. While these platforms can encourage fitness participation, they may also contribute to unrealistic body standards, reinforcing the importance of promoting healthy, achievable, and inclusive fitness narratives.

From a practical standpoint, the findings suggest that gym interventions should move beyond a narrow focus on physical transformation and performance outcomes. Fitness professionals and gym owners should prioritize supportive environments, confidence-building strategies, and positive body image reinforcement to foster sustainable engagement. Integrating motivational counselling, group support activities, and psychologically informed training approaches may enhance both mental and physical health benefits for gym members.

Despite its contributions, the study is limited by its reliance on self-reported primary data, convenience sampling, and a geographically confined sample. These factors may restrict the generalizability of the findings. Future research could employ longitudinal designs, larger and more

diverse samples, and experimental interventions to further explore causal relationships between gym participation, self-confidence, and body image.

In conclusion, this study contributes to the growing body of literature emphasizing the psychological dimensions of fitness participation. By demonstrating the close linkage between self-confidence and body image and their independence from traditional gym interventions, the research underscores the need for holistic, person-centered fitness programs that support both mental well-being and physical health.

REFERENCE

Agustina, A., & Adhiani, R. (2023). The influence of brain gym on changes in the numericalability of grade I elementary students. *Early Childhood Education Journal, 51*(5), 789–800. https://doi.org/10.1007/s10643-022-01333-6.

Andreasson, J., & Johansson, T. (2014). The fitness revolution: Historical transformations in the global gym and fitness culture. *Sport Science Review, 23*(3–4), 91–111. https://doi.org/10.2478/ssr- 2014-0006.

Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman.

Biddle, S. J. H., & Asare, M. (2011). Physical activity and mental health in children and adolescents: A review of reviews. *British Journal of Sports Medicine, 45*(11), 886–895. https://doi.org/10.1136/bjsports-2011-090185.

Burke, S. M., Carron, A. V., Eys, M. A., Ntoumanis, N., & Estabrooks, P. A. (2006). Group versus individual approach? A meta-analysis of the effectiveness of interventions to promote physical activity. *Sport and Exercise Psychology Review, 2*(1), 19–35.

Cash, T. F., Melnyk, S. E., & Hrabosky, J. I. (2004). The assessment of body image investment: An extensive revision of the Appearance Schemas Inventory. *International Journal of Eating Disorders, 35*(3), 305–316. https://doi.org/10.1002/eat.10264.

Cogan, K. D., & Petrie, T. A. (1995). An evaluation of a season-long intervention with female collegiate gymnasts. *The Sport Psychologist, 9*(2), 156–171. https://doi.org/10.1123/tsp.9.2.156.

Dishman, R. K., McIver, K. L., Dowda, M., Saunders, R. P., & Pate, R. R. (2018). Motivation and behavioral regulation of physical activity. *American Journal of Preventive Medicine, 54*(6), 833–843. https://doi.org/10.1016/j.amepre.2018.01.035.

Ekkekakis, P., Hartman, M. E., & Ladwig, M. A. (2020). Affective responses to exercise. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (4th ed., pp. 231–253). Wiley.

Festinger, L. (1954). A theory of social comparison processes. Human Relations, 7(2), 117–140.

https://doi.org/10.1177/001872675400700202.

Fox, K. R. (2000). The effects of exercise on self-perceptions and self-esteem. In S. J. H. Biddle, K. R. Fox, & S. H. Boutcher (Eds.), Physical activity and psychological well-being (pp. 88–117). Routledge.

Kerner, C., & Goodyear, V. A. (2017). The motivational impact of wearable healthy lifestyle technologies: A self-determination perspective on Fitbits with adolescents. American Journal of Health Education, 48(5), 287–297. https://doi.org/10.1080/19325037.2017.1343161.

Lindwall, M., & Palmeira, A. (2009). Factorial validity and invariance testing of the Exercise Self-Efficacy Scale across gender and age groups. *Journal of Sport & Exercise Psychology, 31*(5), 647–662. https://doi.org/10.1123/jsep.31.5.647.

McAuley, E., Szabo, A., Gothe, N., & Olson, E. A. (2011). Self-efficacy: Implications for physical activity, function, and functional limitations in older adults. American *Journal of Lifestyle Medicine, 5*(4), 361–369. https://doi.org/10.1177/1559827610392704.

Michie, S., Yardley, L., West, R., Patrick, K., & Greaves, F. (2017). Developing and evaluating digital interventions to promote behavior change in health and health care. *Journal of Medical Internet Research, 19(*6), e232. https://doi.org/10.2196/jmir.7126.

Ntoumanis, N., Ng, J. Y. Y., Prestwich, A., Quested, E., Hancox, J. E., Thøgersen-Ntoumani, C., Deci, E. L., Ryan, R. M., Lonsdale, C., & Williams, G. C. (2021). A meta-analysis of self-theory–informed intervention studies in the health domain. *Health Psychology Review, 15*(2), determination 214–244. https://doi.org/10.1080/17437199.2020.1718529.

Parent, M. C., & Moradi, B. (2011). His biceps become him: A test of objectification theory's application to drive for muscularity. *Journal of Counseling Psychology, 58*(2), 246–256. https://doi.org/10.1037/a0021398.

Patel, R. (2018). Gym intervention for self-confidence in adolescents. *Journal of School Health, 88*(7), 522–531. https://doi.org/10.1111/josh.12642.

Prichard, I., & Tiggemann, M. (2008). Relations among exercise type, self-objectification, and body image in the fitness centre environment. *Psychology of Sport and Exercise, 9*(6), 855–866. https://doi.org/10.1016/j.psychsport.2007.11.002.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness.* Guilford Press.

Sabiston, C. M., Pila, E., Vani, M., & Thøgersen-Ntoumani, C. (2019). Body image, physical activity, and sport: A scoping review. *Psychology of Sport and Exercise, 42*, 48–57. https://doi.org/10.1016/j.psychsport.2018.12.010.

Salvatore, J., & Marecek, J. (2010). Gender in the gym: Evaluation concerns as barriers to women's

weight lifting. *Sex Roles, 63*(7–8), 556–567. https://doi.org/10.1007/s11199-010-9800-8.

Taylor, L. (2011). The role of personal trainers on self-confidence. *Personal Training Quarterly, 4*(1), 33–45.

Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: A systematic review. *International Journal of Behavioral Nutrition and Physical Activity, 9*, 78. https://doi.org/10.1186/1479-5868-9-78.

Vartanian, L. R., & Dey, S. (2013). Self-concept clarity and body image: Examining the mediating role of appearance-based social comparison. *Body Image, 10*(3), 327–334. https://doi.org/10.1016/j.bodyim.2013.01.006.