International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Comparing Self-Efficacy, Resilience, and Perceived Loneliness Among Young Men Who Lift Weights in Gym and Who Don't

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Abstract

This study aims to compare self-efficacy, resilience and perceived loneliness among young men aged 18-30 years who lift weights in the gym and young men who don't lift weights or perform any other kind of resistance training. From a sample (N=98) of young men aged 18-30, 48 have been lifting weights in the gym consistently for at least 4 days a week for last 12 months, while 50 have never lifted weights or performed any form of resistance training in last 12 months nor have even gone to gym consistently for more than 3 months ever. Using independent sample t test to assess the difference in the means, the result shows young men who lift weights in the gym exhibit significantly higher self-efficacy (p=0.08), higher resilience (p=0.29), but also tend to perceive more loneliness (p=0.15).

Although the research doesn't explore causation, the discipline and hard work required to stay consistent with rigorous exercise protocol for more than a year might contribute in self-efficacy and resilience. Higher perceived loneliness may be attributed to the fact that friendships formed in the gym tend to lack depth, people in the gym are more focused on themselves over building deep connections or spending a lot of time in the gym lifting weights might be more appealing to more lonely men. Further research is needed to explain these findings.

Keywords: men, lifting weights, resistance training, weight training, gym, self-efficacy, resilience, loneliness.

Introduction

"Lifting weights" refers to the concept of resistance training or physical exercise that involves using free weights (barbells, dumbbells and kettlebells) and weight machines (e.g., lat-pulldown machine or seated leg extension machine). Typically performed in a gym, it is a exercise or training system and not a competitive sports like in powerlifting or various weight lifting competitions in the Olympics. For most individuals that lift weights in the gym, it is a medium to stay fit and healthy, develop or maintain strength and/or a form of recreation or hobby. (Stojiljkovic, et al., 2013)

The veneration of a well-proportioned and symmetrical physique has roots tracing back to the ancient civilizations of Greece and Egypt. Among these, the Greeks held physical exercise in high regard, viewing it as integral to their educational, economic, social, and political spheres. The gymnasiums and the "palaestras", where young Greeks trained, served as hubs for free citizens of Athens to gather and hone their bodies and minds. These activities not only prepared them for events such as the Olympics but also

for military service. In ancient Greece, attributes like a broad back, muscular arms and shoulders, and a slim waist were emblematic of masculinity and robust health. This notion is evidenced by the plethora of statues depicting gods and Olympic victors, as well as depictions on vases from that era, which continue to endure across the globe to this day. (Stojiljkovic, et al., 2013)

The advantages of engaging in weightlifting or resistance training are varied and encompass more than just the evident enhancements in strength and muscle mass. They also include enhanced muscle stamina, heightened bone density, an elevated resting metabolic rate that aids in weight management, better posture, a slight boost in aerobic capacity, and improved flexibility. Collectively, these diverse benefits lead to enhanced athletic performance, reduced risk of injury in sports, work, and everyday tasks, a lower incidence of falls, and an overall increase in spontaneous physical activity among older adults, contributing to improved health overall. (Kraemer, 2004)

In the past 20 years, more and more people have been doing resistance training. This type of exercise is especially popular with athletes because it helps them in many ways. It makes their muscles stronger, faster, and more powerful. It also helps them build muscle mass, last longer during exercise, and move more skillfully. On top of that, resistance training can improve their balance and coordination. (Kraemer, 2004)

According to Wayne L Westcott (2012), engaging in resistance training for a period of ten weeks can lead to several positive outcomes. These include an increase in lean weight by 1.4 kg, a rise in resting metabolic rate by 7%, and a reduction in fat weight by 1.8 kg. The advantages of resistance training extend beyond physical changes to encompass enhancements in various aspects of health and well-being. It improves physical performance, enhances control over movement, boosts walking speed, fosters functional independence, enhances cognitive abilities, and bolsters self-esteem.

Moreover, resistance training can play a significant role in the prevention and management of type 2 diabetes. It achieves this by decreasing visceral fat, lowering HbA1c levels, increasing the density of glucose transporter type 4, and improving insulin sensitivity. Additionally, resistance training contributes to cardiovascular health by reducing resting blood pressure, lowering levels of low-density lipoprotein cholesterol and triglycerides, and increasing levels of high-density lipoprotein cholesterol. (Westcott, 2012)

Furthermore, resistance training promotes bone development, as evidenced by studies showing a 1% to 3% increase in bone mineral density. It also proves effective in reducing low back pain and alleviating discomfort associated with arthritis and fibromyalgia. Additionally, resistance training has demonstrated the ability to reverse specific aging factors in skeletal muscle. (Westcott, 2012)

Owing to the abundance of research studies proving the significance of weight training in general wellbeing, disease and injury prevention, and graceful aging, many medical organizations throughout the world to recommend it for the general population.

Big majority of the people who lift weights in the gym are men. The idea of developing more strength and bigger muscle size is more appealing to men as they want to feel and project physical strength. Many men aspire to a self-image focused on muscularity, embodying well-developed arms, abdominals, and chest muscles, along with broad shoulders and a slender waistline. (Beagan & Saunders, 2005) A muscular body is often seen as a key indicator of masculinity, linked to male achievement, dominance, and social standing. The pursuit of physical strength in men can be said to be innate as well as social learned. (Morrison, Morrison, & Hopkins, 2003, p. 117)

Self-efficacy: Self-efficacy pertains to an individual's confidence in their ability to carry out actions required to achieve particular performance goals. It encompasses a person's unique set of beliefs that influence their capability to effectively execute a plan of action in any anticipated circumstances. (Bandura, 1977) It can be psychometrically measured by using The General Self-Efficacy Scale (GSE), developed by Ralf Schwarzer and Matthias Jerusalem.

Resilience: Resilience can be described as the process and result of effectively adjusting to demanding or tough life situations, particularly by displaying mental, emotional, and behavioral adaptability to both internal and external pressures. Various factors influence individuals' ability to adapt to challenges, including their perspectives on and interactions with the world, the presence and caliber of social support, and the utilization of specific coping mechanisms. Resilience can be quantitatively assessed using the Resilience Scale (RS), developed by Wagnild and Young. (Wagnild, 2009)

Loneliness: Loneliness is equated with the feeling of being socially isolated as perceived by individuals, rather than being solely determined by their actual social circumstances. It's possible for individuals to lead relatively solitary lives without experiencing loneliness, while others, despite engaging in seemingly active social lives, may still feel lonely. Loneliness is characterized by a distressing sensation that arises when individuals perceive that their social needs are not adequately fulfilled, whether in terms of quantity or, more significantly, quality of their social connections. (Hawkley & Cacioppo, 2010) (Pinquart & Sorensen, 2001) It can be quantitatively assessed using the UCLA Loneliness Scale (Version 3), devised by D. Russell.

Review of Literature

An umbrella review done in 2023 by Singh, B. et al. of University of South Australia which included ninety-seven reviews (1039 trials and 128,119 participants), found that engaging in physical activity offers significant advantages in alleviating symptoms of depression, anxiety, and distress among various adult groups, such as the general populace, individuals diagnosed with mental health conditions, and those living with chronic illnesses. They also concluded that higher intensity of physical activity was linked to greater improvements in the symptoms.

A nine-month longitudinal study on 431 initially healthy adults done by Neumann, R. J et al. (2022) found muscle strength and personal perception of fitness were found to have a beneficial link with the ability to withstand stress. Moreover, it was discovered that the connection between muscle strength and resilience is partially influenced by one's belief in their own capabilities. This suggests that self-belief plays a crucial role in promoting mental well-being. Interestingly, while regular physical activity and cardiovascular fitness didn't directly predict resilience in the future, muscle strength and self-perceived fitness emerged as important indicators for predicting stress resilience.

Gordon, B. R. et al. (2020) in their random controlled trial found that resistance training significantly improves anxiety symptoms among healthy young adults. This study aimed to measure the impact of ecologically-valid resistance exercise training (RET) on anxiety and worry symptoms in young adults. Participants who did not meet criteria for subclinical or analogue Generalized Anxiety Disorder (AGAD) were randomly assigned to either an eight-week RET intervention or an eight-week wait-list group. This study investigated if a specific type of weightlifting program (ecologically-valid resistance exercise training) could help young adults feel less anxious. Participants with normal anxiety levels were randomly assigned to either do this weightlifting program for 8 weeks or be in a waiting list group. Anxiety levels were measured before and after the program. The weightlifting program followed recommended

guidelines and significantly reduced anxiety symptoms in the participants who did it. However, it did not have a significant effect on worry levels. Overall, the study suggests that this type of weightlifting program can be a helpful way for young adults to manage anxiety.

Currier, et al. (2020) conducted a study aimed to investigate the levels and intensity of physical activity associated with lower depression rates in Australian men. Utilizing baseline data from 13,884 participants in the Australian Longitudinal Study on Male Health, they compared the prevalence of current depression between men who achieved the recommended 150 minutes of physical activity per week and those who did not. They found men who engaged in at least 150 minutes per week of physical activity demonstrated reduced odds of experiencing moderate to severe depression symptoms. The duration of activity showed an inverse relationship with moderate to severe depression symptoms. Additionally, among physically active men, each additional hour of moderate activity replaced with vigorous activity corresponded to lower odds of depression.

Childs, E. and de Wit, H. (2014) of University of Chicago in their research examined how people's psychophysiological reactions to a sudden psychological stressor differed between those who engaged in regular physical exercise and those who did not. A group of 111 healthy men and women took part in two experimental sessions: one involving the Trier Social Stress Test (TSST), a stress-inducing task, and another with a non-stressful control task. They assessed various indicators including heart rate, blood pressure, cortisol levels, and self-reported mood before and at intervals after the tasks. Those who reported engaging in physical exercise at least once a week showed lower resting heart rates compared to non-exercisers.

O'Connor, P. J, et al. (2010) summarized the results of randomized controlled trials to find the impact of strength training on anxiety, cognition, depression, fatigue symptoms, and self-esteem. They concluded that: strength training is shown to consistently reduce anxiety symptoms among healthy adults, significant decrease the symptoms of depression among depressed adults, and have a beneficial impact on the overall self-esteem of both young and older healthy individuals, as well as various patient demographics such as those dealing with depression, cancer and cardiac issues.

Boardman, J. D., et al. (2008) investigated how genes influence a person's ability to bounce back from stress (psychological resilience) in a large sample of American adults aged 25 to 74. The researchers analyzed data from identical twins (who share all their genes) and fraternal same-sex twins (who share half their genes) who participated in a national survey. They found that experiencing positive emotions (positive affect) is equally influenced by genes in both men and women. They then considered how much stress people experience in their social lives and relationships. By accounting for this stress, they were able to estimate the influence of genes on resilience (the ability to maintain positive emotions despite stress). This analysis showed a stronger genetic influence on resilience in men compared to women. The researchers also identified self-acceptance as a key factor explaining why some people are more resilient than others, and this was important for both men and women. However, men seemed to benefit more from feeling in control of their environment (environmental mastery), which may help them to be more resilient overall.

Robinson, M. et al. (2015) presented the outcomes of an assessment conducted on a mental health resilience intervention targeting unemployed men aged 45-60. The study explores the role of activities within a comprehensive men's mental health initiative and investigates the interplay between social context factors and models of change. The study utilizes pre- and post-intervention survey data along with qualitative interviews to discuss the effectiveness of the intervention in enhancing men's perceived

resilience. It also examines the processes involved in the intervention, including activities, social support mechanisms, and coping strategies, placing them within broader contextual frameworks. The intervention led to a significant improvement in participants' perceived resilience. Activities proved to be engaging for the men involved, and the intricate interconnections between activities, social networks, and coping mechanisms offered opportunities for resilience development in alignment with participants' masculine identities. The paper underscores the importance of adopting gender-sensitive approaches to resilience building, emphasizing activities and communication that resonate with men's life experiences. It suggests focusing on embodied identities rather than abstract mental states and facilitating social support to address challenges such as stigma, reluctance to discuss emotions, and progression barriers. Gender-aware programs have the potential to foster sustainable positive changes by fostering peer support networks, offering male-friendly activities, and tailoring interventions to specific social contexts.

Ratcliffe, J. et al (2023) explored how gender influences men's experiences of loneliness. They interviewed 20 men in the UK and found that men's ideas about loneliness are influenced by expectations about masculinity. examining how gender shapes men's understandings and experiences of loneliness through interviews with 20 men in the UK. Theoretical thematic analysis led to the development of a new conceptualization of loneliness, consisting of four interconnected themes: socially negotiated self-worth (a mentally constructed state influenced by social interactions); being meaningfully occupied (a state of engaged focus or action); the importance of social connections in maintaining these mental states consistently; and the ability to establish social connections. A secondary layer of findings reveals how cultural norms of masculinity affect loneliness as defined in this study. Notions of invulnerability and social comparison may hinder men from forming intimate and supportive connections or seeking help for loneliness, yet they could also promote self-worth and facilitate social connections despite these challenges. Similarly, masculine roles, particularly family roles, serve as a normative framework for mitigating loneliness, with outcomes varying depending on individual circumstances, identity, and needs. This research sheds light on how men navigate loneliness within a complex framework influenced by diverse gender norms, values, and structures. Policy and practice interventions could benefit from recognizing and addressing the risks associated with non-conformity, promoting mental states of self-worth and engagement, and challenging masculine norms and values where appropriate.

McKenzie, S. K., et al. (2018) challenged the idea that all men struggle with emotional support. Through interviews, researchers found men have diverse approaches to social support. Some men compartmentalize friendships by gender, while others struggle to seek help from existing friends. There's also a range in how much support men desire, with some valuing independence and others actively building support networks. This study highlights the need to move beyond stereotypes. Men aren't all the same when it comes to social connections, and some may be quite comfortable with emotional support. Understanding these differences is crucial for promoting men's mental health and creating better support systems for them.

A correlational study by Tanya, R (2023) examined the link between self-efficacy and mental well-being in 98 university students. They found a positive correlation, meaning that students with higher self-efficacy (belief in their capabilities) also reported greater mental well-being. For this study, self-efficacy was measured using the "Generalized Self-Efficacy Scale" and mental well-being was measured using the "Warwick-Edinburgh Mental Well-being Scale". The correlation coefficient was 0.428, indicating a moderate positive relationship.

Hawkley, L. C and Cacioppo, J. T (2010), examines loneliness from theoretical and empirical perspectives to better understand and combat it. The study looks at the physical and mental health problems loneliness

can cause, how it affects us, and what interventions have been successful so far. A key idea explored is the "loneliness regulatory loop" which explains how loneliness can become self-perpetuating. The paper argues that interventions should address not just the social aspects of loneliness, but also the negative ways our brains can focus on and remember things when we're lonely. Feeling alone for a long time (chronic loneliness) isn't just a sad state of mind. It can actually hurt our bodies and minds in many ways. Loneliness can make it harder to focus, think clearly, and regulate our emotions and behaviors. These problems can even lead to serious health issues and even death. The reason for this connection might be rooted in our biology. As social creatures, humans evolved to thrive in connection with others. When we feel isolated, it goes against our basic needs, and our bodies react accordingly. The future of helping people who feel lonely needs to consider this evolutionary perspective. Interventions should focus not just on social connection, but also on how to support our bodies' natural response to feeling alone.

A cohort study by Holloway, J. B., et al. (1988) investigated whether an increase in self-belief regarding strength training could extend to other aspects of life and have a positive impact on self-esteem. A group of 59 untrained adolescent female volunteers underwent testing before and after engaging in 12 weeks of strength training. They were compared with volunteer controls who were either nonactive or mildly active. The pre-test and post-test results for the group undergoing strength training showed significant improvements in strength (by +40%), efficacy in weight training, efficacy in facing challenges, and overall efficacy across 11 tasks. Additionally, there were correlated positive changes in perceived physical ability, confidence in physical appearance, and overall effectiveness in various life domains. The group undergoing strength training showed improvements in all these areas compared to the controls, who either remained unchanged or experienced a decline. These findings suggest initial evidence that strength training can enhance confidence in various life domains for adolescent girls, indicating the potential for new therapeutic approaches to address low self-esteem.

Musich, S. et al. (2022) studied a sample of 6,652 adults aged 65 and older who had completed a health survey in 2018-2019. Among the survey participants, the prevalence rates of low, moderate, and high physical activity levels were 29%, 31%, and 41%, respectively. Moderate and high levels of physical activity were linked to a 15% to 30% reduced likelihood of experiencing loneliness and social isolation, as well as a 27% to 150% increase in protective factors. Furthermore, engagement in physical activity was associated with a decrease in healthcare expenditures related to loneliness, social isolation, and low levels of protective factors. Consequently, physical activity may serve as an intervention to alleviate feelings of loneliness and social isolation, enhance protective factors, and mitigate excessive healthcare costs.

Shrivastava, A. and Desousa, A. (2016) conducted study to investigate whether resilience serves as a psychopathological construct in the context of mental disorders. Resilience is not a binary concept but rather a continuous one. Additionally, it is evident that resilience plays a role in preventing the progression of psychopathology, such as the transition from an ultra-high-risk (UHR) state to a fully psychotic state. They concluded that although it remains uncertain whether resilience is a factor that can be modified or not, studies indicate that pharmacological interventions, such as antidepressant medications, can impact resilience. These findings open up new avenues for the treatment of mental disorders. Understanding the psychological and neurobiological mechanisms underlying resilience will aid in developing strategies aimed at preventing psychopathology following exposure to severe adversity. However, individual differences exist, influencing the nature of psychopathology, response to treatment, and treatment outcomes. The reasons for these differences are complex and have hindered efforts to achieve the best possible quality of life despite similar treatments and treatment environments.

Research Gap: There is however a lack of research data on the effect or relationship between consistent resistance training on mental well-being attributes like resilience, self-efficacy, and perceived loneliness among young adult males. This research aims to fill the gap and find the difference between the men who have been lifting weights and who don't in terms of three mental well-being parameters: resilience, self-efficacy, and perceived loneliness. This research aims to create further insights on the potential benefits of incorporating physical exercise like lifting weights into a more holistic therapeutic approach.

Methodology

Aim: To compare self-efficacy, resilience, and perceived loneliness among young men who lift weights in gym and who don't.

Objectives:

To examine the difference between the self-efficacy, resilience, and perceived loneliness among young men who lift weights in gym and who don't.

- To provide insights into the interplay between self-efficacy, resilience, and perceived loneliness and lifting weights in the gym.
- To provide insights into the mechanisms through lifting weights in the gym might impact self-efficacy, resilience, and perceived loneliness among young men.

Sample:

Total sample size: 98

Gender: All males

Criteria:

- **Age group:** 18-30
- **Gender:** Biological males.
- Fluent in English.
- Are not diagnosed with any mental disorder.
- Are not taking any prescribed psychiatric medication.
- Are not physically or mentally disabled.
- Belong to the middle class.

Sample 1: Men who have been lifting weights in the gym consistently for at least 4 days a week for last 12 months.

Sample size**:** n1=48

Excluding criteria:

- Men who took break of more than 15 consecutive days in last 12 months.
- Men who are professional bodybuilders.

Sample 2: Men who never lifted weights or performed any form of resistance training in last 12 months and have never gone to gym consistently for more than 3 months ever. Nor do they perform any form of resistance training like calisthenics.

Sample size: n2=50

Excluding criteria:

- Men who play sports professionally.

Sampling design:

- The sample will be collected using google forms and using printed questionnaires.
- Purposive sampling method is used.
- Convenience sampling method is used.

Hypothesis:

- **For self-efficacy:**

Null Hypothesis (H0): There is no significant difference in self-efficacy among young men who lift weights in gym and who don't.
Alternative Hypothesis (H1): There is significant difference in self-efficacy among young men who lift weights in gym and who don't.

- **For Resilience:**

Null Hypothesis (H0): There is no significant difference in resilience among young men who lift weights in gym and who don't.
Alternative Hypothesis (H1): There is significant difference in resilience among young men who lift weights in gym and who don't.

- **For Perceived Loneliness:**

Null Hypothesis (H0): There is no significant difference in perceived loneliness among young men who lift weights in gym and who don't.
Alternative Hypothesis (H1): There is significant difference in perceived loneliness among young men who lift weights in gym and who don't.

Variables:
Independent Variable: Physical activity: either lifting weights in the gym, or not lifting weights in the gym.
Dependent Variable: Self-efficacy, resilience, and perceived loneliness.

Research Design:
The research is an explorative study based on a quantitative method research design. The research is a comparative study to examine the quantitative difference between the self-efficacy, resilience, and perceived loneliness among young men who lift weights in gym and who don't.
After the screening procedure, volunteering participants who satisfied the inclusion criteria of the samples were selected and asked to participate in study after informed on purpose of the study, their consent and privacy.
Quantitative date is collected using three questionnaires. Qualitative data is collected using closed and open-ended questions to gain better insight on the result.
Instruments:

- **The General Self-Efficacy Scale (GSE)** by Ralf Schwarzer & Matthias Jerusalem.
  The General Self-Efficacy Scale (GSE), developed by Ralf Schwarzer and Matthias Jerusalem, is a psychometric tool measuring individuals' belief in their ability to handle various challenges and succeed in different domains of life. It consists of 10 items rated on a Likert scale, providing a

quantitative assessment of perceived self-efficacy across a wide range of situations. Its reliability and validity make it a valuable instrument in research and practical applications, facilitating the understanding of self-efficacy and its implications.

The GSE demonstrated strong internal reliability, with a Cronbach's alpha coefficient of .83. To assess its validity, the instrument underwent scrutiny via CPS, revealing positive associations with efficacy, confidence, self-concept, and emotional stability, and negative associations with anxiety. Exploratory and confirmatory factor analyses affirmed the scale's unidimensional nature. (Juárez, 2008)

- **The Resilience Scale** by Wagnild & Young

  The Resilience Scale assesses one's ability to adapt and thrive despite adversity. Developed by Wagnild and Young, it measures personal strengths such as self-reliance, optimism, and perseverance. With 25 items rated on a Likert scale, it provides insights into an individual's resilience levels, aiding in interventions and support strategies to bolster coping mechanisms and foster resilience.

  The tool has been translated and validated in numerous languages and utilized by more than 3 million individuals across 150 countries worldwide, establishing it as the most extensively employed gauge of resilience. (Cajada, et al., 2023)

  The RS had a Cronbach's alpha of 0.89 and a test-retest reliability of 0.72, Making it a reliable and valid tool. (Shi, et al., 2021)

- **UCLA loneliness scale (Version 3)** by D. Russell

  The UCLA Loneliness Scale (Version 3), devised by D. Russell, is a widely used tool for assessing feelings of loneliness. Consisting of 20 items, it measures perceived social isolation and dissatisfaction with one's social interactions. Respondents rate statements such as "I feel isolated from others" on a scale from 1 (never) to 4 (often). The scale's reliability and validity make it valuable in psychological research and clinical practice. Its multidimensional approach captures various aspects of loneliness, aiding in understanding and addressing the complex nature of social connectedness and its impact on individuals' well-being.

  The findings showed that the assessment displayed strong reliability, evident through both its internal consistency (with coefficient alpha ranging from .89 to .94) and its consistency over a 1-year period ($r = .73$). The scale demonstrated convergent validity as it correlated significantly with other loneliness measures. Furthermore, its construct validity was affirmed through significant associations with assessments of the quality of the person's social connections. (Russell, 1996)

- **IBM SPSS Statistics 21**

  IBM SPSS Statistics 21 is used to organize, compile and compute the quantitative data collected.

Data Analysis:

The IBM SPSS Statistics 21 was used to analyze the quantitative data by running independent sample t test to analyze the difference between the means of two groups.

Results:

The mean age of all 98 participants is 23.53 years.

The mean age of 48 young men who lift weights in the gym (Gym goers) is 24.5 years.

The mean age of 50 young men who don’t lift weights in the gym (non-Gym goers) is 22.6 years.

Group Statistics:

Variables	Activity	N	Mean ($\bar{x}$)	Std. Deviation (SD)	Std. Error Mean
Resilience	Gym goers	48	138.56	15.904	2.296
	Non-Gym goers	50	130.94	18.067	2.555
Self-Efficacy	Gym goers	48	32.42	3.847	.555
	Non-Gym goers	50	30.38	3.608	.510
Perceived Loneliness	Gym goers	48	48.25	10.060	1.452
	Non-Gym goers	50	43.26	9.862	1.395

t-test for Equality of Means

	t value	Df (degree of freedom)	p value	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Resilience	2.213	96	.029	7.623	3.444	.787	14.458
Self-Efficacy	2.704	96	.008	2.037	.753	.542	3.532
Perceived Loneliness	2.479	96	.015	4.990	2.013	.995	8.985

Young men who lift weights showed higher mean resiliency, self-efficacy and perceived loneliness than young men who don't lift weights.

The p value for the independent t test at 95% confidence was:

- **Resilience:** .029 (<0.05)
- **Self-Efficacy:** .008 (<0.05)
- **Perceived Loneliness:** .015 (<0.05)

All the p values are less than 0.05 which signifies that there is significant difference of means of self-efficacy, resilience, and perceived loneliness with young men who lift scoring higher in all three parameters. Thus, we reject null hypothesis (H0) for all three variables and accept the alternate hypothesis (H1) for all three variables.

Discussion

The study provides significant difference in resilience, self-efficacy and perceived loneliness among young men who lift weights in the gym and who don't. Young men who lift weights in the gym for at least 4 days a week for at least last 12 months tend to higher self-efficacy, resilience and perceive themselves as more lonely than young men who don't lift weights or do any kind of resistance training.

Regular weightlifting builds physical strength and fitness, which can lead to a sense of accomplishment and confidence in one's abilities. Achieving progress in lifting heavier weights or improving endurance can boost self-esteem and self-efficacy. Weightlifting involves setting specific goals, such as increasing the weight lifted or achieving a certain physique. Achieving these goals through consistent effort and dedication, facing physical challenges, and overcoming them, such as pushing through fatigue or breaking through plateaus, might enhance feelings of competence, self-efficacy and resilience. Another possibility is it might require self-efficacy and resilience to stay with rigorous training regiment in the gym to succeed and get results. (Collins, et al., 2019; Fitzsimmons, et al., 1991; Holloway, et al., 1988)

The high perceived loneliness among young men who lift weights does seem counterintuitive given the social environment of gyms and the camaraderie often found among gym-goers. Older adults engaging in forms of physical exercises have shown to have reduced feeling of loneliness. (Musich, et al., 2022; Sebastião, et al, 2021)

However, there are several potential factors that could contribute to this phenomenon:

1. **Individual Focus**: While gyms offer a social setting, weightlifting is often an individual activity where focus is primarily on personal goals and performance. 43 out of the 48 participants reported to prioritize their workouts and personal progress over social interaction.
2. **Lack of Meaningful Connection**: While gyms provide opportunities for casual socialization, they may not always foster deep or meaningful connections. Young men who lift weights may still crave genuine connection and emotional support that goes beyond surface-level interactions found in the gym environment. Even though 45 out of the 48 participants who were interviewed reported making new friends in the gym, 38 of them said those friendships aren't close. Only 2 men had a romantic partner who accompanies them to the gym.

Suggestions for future research

The higher resiliency, self-efficacy and perceived loneliness among young men who lift weights is an interesting finding and needs further research to explain the causations. The higher resiliency and self-efficacy among young men who lift weights also demands more research as there is a potential of incorporating weight training as part of the holistic therapeutic approach could benefit young men more.

Limitations

The findings of this study would be more relevant and generalizable if a larger sample of young adults is selected using a simple random sampling technique from a larger population, and if a longitudinal study is conducted assessing resiliency, self-efficacy and perceived loneliness both before and after engaging in weight training protocol for a long duration of time. This would allow for the examination of effect of consistent weight training on resiliency, self-efficacy and perceived loneliness in young men.

Conclusion

The research shows that young men aged 18-30 who lift weights in the gym consistently at least four days a week for at least twelve months have significantly higher mean resiliency, self-efficacy and perceived loneliness than young men who don't lift weights.

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