

Role of Regular Physical Exercise in Perceived Stress and Psychological Well-Being Among Young Adults: A Quantitative Comparative Study

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Abstract

Regular physical exercise has been recognized as an important lifestyle behaviour that contributes to psychological health. The present study examined differences in perceived stress and psychological well-being between young adults who regularly engaged in physical exercise and those who did not. This paper investigated the relationship between perceived stress and psychological well-being.

A cross-sectional comparative research design was employed. A total of 286 participants aged 18–25 years participated in the study, including 143 individuals who exercised for at least 45 minutes on five or more days per week and 143 individuals who did not meet this criterion. Participants were recruited using convenience sampling. Perceived stress was assessed using the Perceived Stress Scale (PSS-10), whereas psychological well-being was measured using the Psychological General Well-Being Index (PGWBI). Independent-samples *t* tests and Pearson's product-moment correlation were conducted using IBM SPSS Statistics.

Participants who engaged in regular exercise reported significantly lower perceived stress than non-exercisers, $t(284) = -3.49, p = .001$. Exercisers also demonstrated significantly higher psychological well-being than non-exercisers, $t(284) = 4.88, p < .001$. Furthermore, perceived stress was moderately and negatively associated with psychological well-being ($r = -.56, p < .001$), indicating that higher stress levels were associated with lower psychological well-being.

The findings suggest that regular physical exercise is associated with reduced perceived stress and enhanced psychological well-being among young adults. Promoting regular physical activity within educational settings may contribute to improved mental health and overall quality of life. Future research employing longitudinal designs and probability sampling is recommended to further examine the causal relationship between exercise and psychological well-being.

Keywords: physical exercise, perceived stress, psychological well-being, young adults, mental health, psychological health

Introduction

Mental health has become a major public health concern among young adults, particularly university students who experience multiple academic, social, financial, and interpersonal challenges during a critical developmental period. The transition to higher education is often accompanied by increased academic workload, career uncertainty, changing social relationships, and greater independence which may contribute to elevated levels of psychological stress. Although moderate levels of stress may enhance motivation and adaptive functioning, chronic or excessive stress is associated with impaired cognitive performance, emotional dysregulation, poor physical health, reduced academic achievement, and diminished quality of life (Cohen et al., 1983; Lazarus & Folkman, 1984). Consequently, identifying modifiable lifestyle factors that protect against stress and promote psychological well-being has become an important priority in psychological and public health research.

Regular physical exercise is widely recognized as one of the most effective non-pharmacological strategies for improving both physical and psychological health. Beyond its well-established benefits for cardiovascular fitness, metabolic functioning, and musculoskeletal health, regular physical activity has consistently been associated with lower psychological distress, enhanced emotional regulation, improved cognitive functioning, and greater psychological well-being (Mandolesi et al., 2018; Stults-Kolehmainen & Sinha, 2014). The beneficial effects of exercise are mediated through several physiological and psychological mechanisms, including increased release of endorphins, modulation of serotonergic and dopaminergic neurotransmission, enhanced neuroplasticity, reduced inflammatory responses, and improved regulation of the hypothalamic-pituitary-adrenal (HPA) axis, resulting in lower physiological responses to stress (Mandolesi et al., 2018; Strehli et al., 2021). Also, regular physical activity promotes self-efficacy, resilience, positive affect, and adaptive coping strategies, thereby reducing vulnerability to stress-related psychological difficulties (Bandura, 1997; Mandolesi et al., 2018).

Perceived stress refers to an individual's subjective appraisal of life situations as unpredictable, uncontrollable, or overwhelming rather than the objective occurrence of stressful events themselves. According to the Transactional Model of Stress and Coping, psychological stress arises from the interaction between environmental demands and an individual's perceived coping resources (Lazarus & Folkman, 1984). Individuals who perceive environmental demands as exceeding their coping capacity are more likely to experience psychological distress and adverse health outcomes. Research has consistently demonstrated that higher perceived stress is associated with anxiety, depressive symptoms, sleep disturbances, poorer academic performance, reduced life satisfaction, and lower psychological well-being (Cohen et al., 1983; Cohen & Williamson, 1988).

Psychological well-being is a multidimensional construct encompassing positive emotional functioning, autonomy, environmental mastery, personal growth, positive interpersonal relationships, purpose in life, and self-acceptance (Ryff, 1989). Unlike traditional models that define mental health merely as the absence of psychological illness, Ryff's model conceptualizes psychological well-being as optimal psychological functioning and effective adaptation to life's challenges. Individuals with higher levels of psychological well-being generally demonstrate greater emotional resilience, healthier coping strategies, stronger interpersonal relationships, and greater life satisfaction, which contribute to improved overall mental health (Ryff, 1989).

The relationship between physical exercise and mental health has been extensively investigated across diverse populations. Previous systematic reviews and meta-analyses have consistently demonstrated that regular physical activity is associated with lower levels of perceived stress, reduced symptoms of anxiety and depression, improved cognitive functioning, and enhanced psychological well-being (Stults-

Kolehmainen & Sinha, 2014; Hale et al., 2021). Mandolesi et al. (2018) suggested that exercise-induced neurobiological adaptations, including improved brain plasticity and enhanced executive functioning, may explain many of the psychological benefits associated with regular physical activity. These findings support the growing consensus that physical exercise represents an effective behavioural strategy for promoting mental health across the lifespan.

Recent evidence has further strengthened the association between physical activity and positive mental health outcomes. Contemporary systematic reviews have reported that regular engagement in physical activity is consistently associated with improved affective well-being, lower psychological distress, greater resilience, and enhanced quality of life across different age groups (Groves et al., 2024; Timm et al., 2024). Furthermore, physical activity interventions have demonstrated beneficial effects on mental health and well-being among adolescents and young adults, particularly in educational settings where stress levels are often elevated (Hale et al., 2021). Collectively, these findings suggest that regular physical exercise represents an accessible, low-cost, and sustainable strategy for promoting psychological well-being and reducing stress.

Despite the growing international evidence supporting the psychological benefits of physical exercise, relatively limited empirical research has simultaneously examined perceived stress and psychological well-being among Indian young adults using standardized psychological assessment measures. Cultural norms, educational expectations, lifestyle patterns, and socioeconomic factors may influence both physical activity participation and mental health outcomes, highlighting the importance of examining these relationships within the Indian context. Moreover, much of the available Indian literature has focused primarily on physical health outcomes, with comparatively fewer studies investigating the combined associations among regular physical exercise, perceived stress, and psychological well-being in university-aged populations.

Accordingly, the present study aims to compare perceived stress and psychological well-being between young adults who regularly engage in physical exercise and those who do not. It examines the relationship between perceived stress and psychological well-being across the overall sample. By providing empirical evidence from an Indian young adult population, the study seeks to contribute to the growing body of literature supporting regular physical exercise as a protective lifestyle factor for psychological health. The findings may also inform the development of mental health promotion programmes within higher educational institutions and contribute to public health initiatives aimed at fostering psychological well-being among young adults.

Objectives

1. To compare perceived stress between individuals who regularly engage in physical exercise and those who do not.
2. To compare psychological well-being between exercise and non-exercise groups.
3. To examine the relationship between perceived stress and psychological well-being among young adults.

Hypotheses

H1: Individuals who regularly engage in physical exercise will report significantly lower perceived stress than non-exercisers.

H2: Individuals who regularly engage in physical exercise will report significantly higher psychological well-being than non-exercisers.

H3: Perceived stress will be significantly and negatively correlated with psychological well-being.

Literature Review

Relationship Between Physical Exercise and Perceived Stress

Perceived stress is one of the most extensively investigated psychological constructs because of its significant influence on physical health, emotional functioning, cognitive performance, and academic achievement. University students and young adults are particularly susceptible to elevated stress owing to academic demands, career uncertainty, financial pressures, interpersonal challenges, and the transition to independent living. Persistent exposure to these stressors has been associated with increased psychological distress, impaired coping, and poorer mental health outcomes (Cohen et al., 1983; Lazarus & Folkman, 1984). Consequently, identifying modifiable lifestyle factors that mitigate perceived stress has become an important focus of contemporary psychological and public health research.

Regular physical exercise has consistently been identified as an effective behavioural strategy for reducing perceived stress through multiple physiological and psychological pathways. Physiologically, exercise promotes regulation of the hypothalamic–pituitary–adrenal (HPA) axis, decreases cortisol reactivity, stimulates the release of endorphins and monoamine neurotransmitters, and enhances autonomic nervous system functioning. These neurobiological adaptations contribute to improved emotional regulation, reduced physiological responses to stress, and enhanced resilience to everyday stressors (Stults-Kolehmainen & Sinha, 2014; Mandolesi et al., 2018; Strehli et al., 2021). From a psychological perspective, regular physical activity enhances self-efficacy, perceived competence, positive affect, and adaptive coping strategies, thereby enabling individuals to manage stressful situations more effectively (Bandura, 1997; Mandolesi et al., 2018).

Stults-Kolehmainen and Sinha (2014) proposed a bidirectional relationship between stress and physical activity, suggesting that chronic psychological stress may reduce participation in exercise, while regular physical activity simultaneously buffers the adverse psychological consequences of stress. This reciprocal relationship has received considerable empirical support and indicates that stress and physical activity influence one another through behavioural, physiological, and psychological mechanisms. Individuals who engage in regular exercise generally report lower levels of perceived stress than sedentary individuals, whereas highly stressed individuals are often less likely to initiate or maintain regular physical activity (Stults-Kolehmainen & Sinha, 2014).

Recent evidence has further strengthened the association between physical activity and stress reduction. A systematic review by Hale et al. (2021) concluded that physical activity interventions are associated with improvements in psychological well-being and reductions in stress-related outcomes among adolescents and young adults, although intervention effectiveness varies according to exercise intensity, duration, and programme characteristics. More recent systematic reviews conducted following the COVID-19 pandemic have similarly reported that university students who engage in regular moderate-to-vigorous physical activity consistently experience lower perceived stress, anxiety, and depressive symptoms than physically inactive individuals (Strehli et al., 2021; Timm et al., 2024). Furthermore, evidence suggests that the psychological benefits of exercise are enhanced when combined with other healthy lifestyle behaviours, including adequate sleep, balanced nutrition, and effective stress-management practices (Groves et al., 2024).

Despite substantial international evidence supporting the protective role of physical exercise against psychological stress, relatively limited empirical research has examined these relationships among Indian

university students using standardized psychological assessment instruments. Cultural values, educational expectations, socioeconomic circumstances, and lifestyle patterns may influence both exercise participation and perceptions of stress, limiting the generalisability of findings obtained from Western populations. Therefore, further research within the Indian context is warranted to better understand the relationship between regular physical exercise and perceived stress among young adults and to inform culturally relevant mental health promotion strategies.

Physical Exercise and Psychological Well-Being

Psychological well-being extends beyond the absence of psychological illness and encompasses optimal psychological functioning, positive emotional experiences, life satisfaction, autonomy, environmental mastery, purpose in life, personal growth, self-acceptance, and positive interpersonal relationships. Ryff's multidimensional model of psychological well-being has become one of the most influential theoretical frameworks within positive psychology because it conceptualizes well-being as a dynamic process of human flourishing rather than merely the absence of psychopathology (Ryff, 1989).

Regular physical exercise contributes to psychological well-being through multiple interrelated physiological and psychological mechanisms. Physiologically, physical activity enhances neuroplasticity, improves serotonergic and dopaminergic neurotransmission, stimulates brain-derived neurotrophic factor (BDNF), and reduces chronic inflammation associated with psychological distress. Psychologically, regular exercise promotes self-esteem, self-confidence, resilience, perceived competence, social connectedness, and positive affect, thereby facilitating healthier emotional adjustment and greater overall life satisfaction (Mandolesi et al., 2018; Biddle et al., 2019). These findings suggest that exercise not only improves physical health but also functions as an important protective factor for maintaining positive mental health.

Early evidence highlighting the psychological benefits of physical activity was provided by Fox (1999), who argued that regular exercise enhances mood, self-perceptions, and emotional functioning across different age groups. More recently, Mandolesi et al. (2018) demonstrated that physical exercise positively influences cognitive functioning, emotional regulation, and healthy ageing through complex neurobiological mechanisms involving structural and functional adaptations within the brain. Collectively, these findings support the growing consensus that regular physical activity contributes substantially to psychological well-being throughout adulthood.

A systematic review by Biddle et al. (2019) concluded that regular physical activity is consistently associated with improved subjective well-being, self-esteem, and positive mental health while reducing symptoms of anxiety and depression among adolescents and young adults. Similarly, Hale et al. (2021) reported that physical activity interventions produce meaningful improvements in psychological well-being and emotional functioning among young people, although intervention effectiveness varies according to programme duration, exercise intensity, and participant characteristics. More recent evidence further indicates that physically active university students report higher levels of psychological well-being, resilience, and quality of life than their physically inactive counterparts, reinforcing the importance of promoting regular exercise within higher educational settings (Timm et al., 2024; Groves et al., 2024).

Despite substantial international evidence supporting the beneficial relationship between physical exercise and psychological well-being, empirical studies examining these associations among Indian university students remain comparatively limited. Existing research conducted within the Indian context has frequently focused on physical fitness, obesity, or lifestyle-related health outcomes, whereas comparatively fewer investigations have examined multidimensional psychological well-being using standardized psychological assessment instruments. Hence, further research is required to better understand how regular physical exercise contributes to psychological well-being among Indian young adults and to inform culturally appropriate mental health promotion strategies within higher education institutions.

Relationship Between Perceived Stress and Psychological Well-Being

Perceived stress and psychological well-being are conceptually distinct yet closely related constructs within psychological research. Perceived stress reflects an individual's cognitive appraisal of environmental demands in relation to their available coping resources, whereas psychological well-being represents positive psychological functioning, encompassing self-acceptance, autonomy, environmental mastery, purpose in life, personal growth, and positive interpersonal relationships (Cohen et al., 1983; Ryff, 1989). Theoretical and empirical evidence consistently suggests that elevated levels of perceived stress are associated with diminished emotional functioning, reduced life satisfaction, impaired psychological adjustment, and poorer overall well-being (Lazarus & Folkman, 1984; Ryff, 1989).

The Transactional Model of Stress and Coping proposed by Lazarus and Folkman (1984) provides a theoretical framework for understanding this relationship. According to the model, psychological outcomes are determined not only by exposure to stressful events but also by individuals' cognitive appraisal of those events and the coping resources available to manage them. Individuals who perceive themselves as possessing adequate coping resources are more likely to maintain positive psychological well-being despite encountering stressful life circumstances, whereas those who perceive environmental demands as exceeding their coping capacity are more vulnerable to psychological distress (Lazarus & Folkman, 1984).

Empirical research has demonstrated a moderate to strong negative association between perceived stress and psychological well-being across diverse populations. Higher levels of perceived stress have been associated with poorer emotional adjustment, lower life satisfaction, impaired academic functioning, increased symptoms of anxiety and depression, and reduced overall psychological well-being (Cohen et al., 1983; Cohen & Williamson, 1988; Ryff, 1989). Conversely, individuals with higher psychological well-being generally exhibit greater emotional resilience, more adaptive coping strategies, and enhanced psychological adjustment when confronted with stressful life events (Ryff, 1989; van Agteren et al., 2021).

Recent systematic reviews and longitudinal studies have further strengthened evidence supporting this inverse relationship. Contemporary research indicates that higher perceived stress is consistently associated with lower emotional well-being and poorer mental health among university students and young adults across diverse cultural settings (Hale et al., 2021; Timm et al., 2024). Accumulating evidence suggests that regular physical activity may partially buffer the adverse psychological effects of stress by improving emotional regulation, strengthening resilience, and enhancing overall psychological well-being (Mandolesi et al., 2018; Stults-Kolehmainen & Sinha, 2014). These findings highlight physical exercise as an important protective behavioural factor that may reduce perceived stress while simultaneously promoting positive mental health outcomes.

Biological mechanisms, including improved neuroendocrine regulation and enhanced brain plasticity, together with psychological processes such as increased self-efficacy, resilience, and adaptive coping, provide plausible explanations for these associations (Bandura, 1997; Mandolesi et al., 2018). Nevertheless, relatively limited empirical research has simultaneously examined perceived stress and psychological well-being among Indian university students using standardized psychological assessment measures. The present study therefore seeks to address this gap by comparing young adults who regularly engage in physical exercise with those who do not and by examining the relationship between perceived stress and psychological well-being within the Indian higher education context.

Results

Preliminary Analysis

Data obtained from 286 participants were screened for completeness prior to statistical analysis. Responses from all eligible participants were included in the final analysis. Descriptive statistics, including means and standard deviations, were computed for perceived stress and psychological well-being. Independent-samples *t* tests were performed to compare participants who regularly engaged in physical exercise with those who did not. Pearson's product-moment correlation coefficient was calculated to examine the relationship between perceived stress and psychological well-being.

Differences in Perceived Stress Between Exercise and Non-Exercise Groups

An independent-samples *t* test was conducted to determine whether perceived stress differed significantly between participants who regularly engaged in physical exercise and those who did not.

The results indicated a statistically significant difference in perceived stress between the two groups, $t(284) = -3.488$, $p = .001$. Participants in the exercise group ($M = 19.64$, $SD = 8.31$) reported significantly lower levels of perceived stress than participants in the non-exercise group ($M = 23.09$, $SD = 8.41$).

These findings support the first hypothesis and suggest that regular participation in physical exercise is associated with reduced perceived stress among young adults.

Table 1

Comparison of Perceived Stress Between Exercise and Non-Exercise Groups

Variable	Group	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Perceived Stress	Exercise	143	19.64	8.31			
	Non-Exercise	143	23.09	8.41	-3.488	284	.001

Differences in Psychological Well-Being Between Exercise and Non-Exercise Groups

An independent-samples *t* test was conducted to compare psychological well-being scores between participants who regularly exercised and those who did not.

The analysis revealed a statistically significant difference in psychological well-being between the two groups, $t(284) = 4.876$, $p < .001$. Participants who engaged in regular physical exercise demonstrated significantly higher psychological well-being ($M = 77.31$, $SD = 12.96$) than participants who did not exercise regularly ($M = 69.43$, $SD = 14.31$).

The findings support the second hypothesis and indicate that regular physical exercise is positively associated with psychological well-being among young adults.

Table 2

Comparison of Psychological Well-Being Between Exercise and Non-Exercise Groups

Variable	Group	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Psychological Well-Being	Exercise	143	77.31	12.96			
	Non-Exercise	143	69.43	14.31	4.876	284	< .001

Relationship Between Perceived Stress and Psychological Well-Being

Pearson's product-moment correlation coefficient was computed to examine the relationship between perceived stress and psychological well-being across the entire sample.

The analysis revealed a statistically significant moderate negative correlation between perceived stress and psychological well-being, $r = -.563$, $p < .001$. This finding indicates that participants reporting higher levels of perceived stress tended to report lower levels of psychological well-being. Conversely, lower perceived stress was associated with better psychological well-being.

The results support the third hypothesis and suggest that perceived stress is inversely related to psychological well-being among young adults.

Table 3

Pearson Correlation Between Perceived Stress and Psychological Well-Being

Variables	1	2
1. Perceived Stress	—	
2. Psychological Well-Being	-.563	—

Note. $N = 286$. $**p < .001$.

The findings of the present study indicate that regular physical exercise is significantly associated with lower perceived stress and higher psychological well-being among young adults. Participants who engaged in regular physical exercise reported significantly lower stress scores and significantly greater psychological well-being than those who did not exercise regularly. Furthermore, perceived stress demonstrated a significant moderate negative correlation with psychological well-being, indicating that increases in perceived stress were associated with reductions in overall psychological well-being.

Discussion

The present study examined differences in perceived stress and psychological well-being between young adults who regularly engaged in physical exercise and those who did not. In addition, the study investigated the relationship between perceived stress and psychological well-being among the participants. The findings demonstrated that individuals who participated in regular physical exercise reported significantly lower levels of perceived stress and significantly higher levels of psychological well-being than those who did not engage in regular exercise. Furthermore, perceived stress was found to be moderately and negatively correlated with psychological well-being, indicating that higher perceived stress was associated with lower

levels of psychological well-being. Overall, the findings supported all three hypotheses proposed in the study.

The first objective of the study was to compare perceived stress between individuals who regularly exercised and those who did not. The results indicated that participants in the exercise group reported significantly lower perceived stress than participants in the non-exercise group. This finding is consistent with previous research demonstrating that regular physical activity functions as an effective protective factor against psychological stress. Regular exercise has been shown to improve emotional regulation, reduce physiological responses to stress, and promote adaptive coping strategies. Exercise also influences the regulation of the hypothalamic-pituitary-adrenal (HPA) axis, resulting in lower cortisol levels and improved resilience to stressful life events. Consequently, individuals who maintain regular exercise routines may be better equipped to manage academic, occupational, and personal stressors.

The present findings are consistent with previous empirical studies that have reported lower stress levels among physically active individuals. Earlier work by Stults-Kolehmainen and Sinha (2014) highlighted the reciprocal relationship between stress and physical activity, suggesting that while chronic stress may reduce participation in exercise, regular exercise can also buffer the adverse psychological effects of stress. Similarly, Mandolesi et al. (2018) reported that physical exercise positively influences cognitive functioning and emotional regulation through both physiological and psychological mechanisms. More recent evidence has continued to demonstrate that physically active young adults generally experience lower levels of perceived stress and better overall mental health than their inactive counterparts.

The second objective of the study was to compare psychological well-being between exercise and non-exercise groups. Participants who engaged in regular physical exercise demonstrated significantly higher psychological well-being than those who did not exercise regularly. This finding supports the growing body of literature indicating that exercise contributes not only to physical fitness but also to positive psychological functioning. Regular physical activity may improve psychological well-being by enhancing self-esteem, increasing self-efficacy, promoting social interaction, improving sleep quality, and reducing negative emotional states such as anxiety and sadness. Collectively, these psychological and physiological benefits contribute to greater life satisfaction and overall well-being.

The present findings are in agreement with Ryff's multidimensional model of psychological well-being, which emphasizes that positive psychological functioning involves autonomy, personal growth, environmental mastery, purpose in life, positive relationships, and self-acceptance. Individuals who participate in regular exercise often develop greater confidence in their abilities, improved emotional regulation, and healthier lifestyle habits, all of which may contribute to enhanced psychological well-being.

The third objective was to examine the relationship between perceived stress and psychological well-being. The results demonstrated a statistically significant moderate negative correlation between the two variables, indicating that participants experiencing higher levels of perceived stress tended to report lower psychological well-being. This finding is theoretically consistent with the Transactional Model of Stress and Coping proposed by Lazarus and Folkman (1984), which suggests that psychological outcomes are influenced by the way individuals perceive and cope with environmental demands. Individuals who perceive stressful situations as overwhelming are more likely to experience emotional distress, whereas those with effective coping resources are more likely to maintain positive psychological functioning.

The findings also suggest that regular physical exercise may serve as an important protective lifestyle behaviour that contributes to improved psychological health. Although the present study employed a cross-sectional design and cannot establish causality, the observed associations indicate that physically active

individuals generally experience better psychological outcomes than those who lead relatively inactive lifestyles. These findings highlight the importance of promoting regular physical activity among young adults, particularly within educational institutions where academic stress is common.

From an applied perspective, the findings have important implications for mental health promotion. Colleges and universities may benefit from incorporating structured physical activity programmes, recreational sports, fitness facilities, and health promotion initiatives into student support services. Mental health professionals, counsellors, and educators may also encourage regular physical exercise as a complementary strategy for reducing perceived stress and enhancing psychological well-being. Public health initiatives that promote physically active lifestyles may contribute to improved mental health outcomes among young adults.

Despite these contributions, the present study has certain limitations. First, convenience sampling was employed, which may limit the generalisability of the findings to broader populations. Second, the cross-sectional design precludes conclusions regarding causal relationships between exercise, perceived stress, and psychological well-being. Third, the study relied exclusively on self-report questionnaires, which may be influenced by response bias or social desirability. Finally, the sample consisted of young adults within a limited age range; therefore, the findings may not be generalisable to adolescents, older adults, or clinical populations.

Future research should employ longitudinal and experimental designs to examine causal relationships between regular physical exercise and psychological health. Researchers may also investigate the influence of exercise intensity, frequency, duration, and type of physical activity on psychological outcomes. Additionally, future studies should include more diverse and representative samples drawn from different geographical regions and socio-cultural backgrounds. Examining potential mediating variables such as resilience, self-efficacy, coping strategies, and sleep quality may further improve understanding of the mechanisms through which exercise influences psychological well-being.

In conclusion, the present study provides empirical evidence that regular physical exercise is associated with lower perceived stress and higher psychological well-being among young adults. The observed negative relationship between perceived stress and psychological well-being further emphasises the importance of promoting healthy lifestyle behaviours that support psychological functioning. Although further research employing more rigorous designs is warranted, the present findings contribute to the growing body of literature supporting physical exercise as a valuable component of mental health promotion and psychological well-being.

The present study contributes to the existing literature by providing empirical evidence on the relationship between regular physical exercise, perceived stress, and psychological well-being among Indian young adults using standardized psychological assessment instruments. While numerous international studies have reported similar associations, relatively limited empirical evidence have simultaneously examined these variables within the Indian context using a comparative research design. By comparing exercisers and non-exercisers, the study demonstrates that regular physical exercise is associated with significantly lower perceived stress and higher psychological well-being in young adults. Furthermore, the observed negative relationship between perceived stress and psychological well-being supports established psychological theories and reinforces the importance of physical activity as a protective factor for mental health. The findings provide context-specific evidence that may assist psychologists, educators, university administrators, counsellors, and public health professionals in designing interventions aimed at promoting psychological well-being through regular physical activity among young adults.

Conclusion

The present study examined the relationship between regular physical exercise, perceived stress, and psychological well-being among young adults by comparing individuals who engaged in regular physical exercise with those who did not. The findings demonstrated that participants who exercised regularly reported lower levels of perceived stress and higher levels of psychological well-being than non-exercisers. In addition, perceived stress was found to be significantly and negatively associated with psychological well-being, indicating that individuals experiencing higher levels of stress were more likely to report lower psychological well-being. Collectively, these findings support the proposed hypotheses and reinforce the importance of regular physical exercise as a positive lifestyle behaviour associated with better psychological health.

The findings are consistent with established psychological theories, including the Transactional Model of Stress and Coping and Ryff's multidimensional model of psychological well-being, which suggest that effective coping resources and positive psychological functioning contribute to improved mental health outcomes. Regular physical exercise may enhance psychological well-being through multiple physiological and psychological mechanisms, including improved emotional regulation, greater self-efficacy, healthier coping strategies, and reduced physiological responses to stress.

The present study also contributes to the existing literature by providing empirical evidence from an Indian young adult population using standardized measures of perceived stress and psychological well-being. Although previous international research has consistently reported beneficial associations between physical activity and mental health, evidence from Indian university-aged populations remains comparatively limited. The findings therefore provide context-specific evidence that supports the promotion of regular physical exercise as an important component of psychological health and well-being.

From a practical perspective, the findings have important implications for higher education institutions, mental health professionals, counsellors, and public health policymakers. Educational institutions should encourage regular participation in physical activity through structured fitness programmes, recreational sports, wellness initiatives, and health promotion campaigns. Integrating physical activity into student support services may help reduce perceived stress while promoting resilience, emotional well-being, and overall quality of life.

Despite its contributions, the study should be interpreted in light of certain limitations, including the use of convenience sampling, a cross-sectional research design, and reliance on self-report measures. Consequently, causal inferences cannot be established, and the generalisability of the findings may be limited. Future research employing longitudinal and experimental designs, larger and more diverse samples, and objective measures of physical activity is recommended to further clarify the relationship between exercise, perceived stress, and psychological well-being.

In conclusion, the present study provides evidence that regular physical exercise is associated with lower perceived stress and enhanced psychological well-being among young adults. Promoting physically active lifestyles may represent a practical, accessible, and cost-effective strategy for improving mental health and fostering psychological resilience. The findings underscore the importance of integrating regular physical activity into everyday life and support its inclusion as an essential component of mental health promotion and preventive psychological care.

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