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Assessment of Physical Activity Levels and Dietary Practices Among Young Adults

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Abstract: ***Physical activity and proper nutrition are essential for maintaining overall health and well-being. This study aimed to assess the physical activity patterns and nutritional habits of individuals aged 18–22 years and above. A survey was conducted among 120 participants to gather information on demographic characteristics, exercise preferences, workout intensity, indoor and outdoor activities, dietary practices, protein and fiber intake, supplement usage, grocery expenditure, motivations for physical activity, barriers to exercise, and sources of fitness-related information. The findings revealed that maintaining weight was the primary reason for engaging in regular physical activity, followed by stress reduction and improvement of cardiovascular health. Most participants reported consuming protein-rich foods several times per week, indicating awareness of the importance of nutrition in supporting health and fitness. The study also identified various barriers to maintaining physical activity and highlighted the strategies adopted by participants to overcome these challenges. Regular physical activity was found to be associated with both physical and mental health benefits, including improved fitness, stress management, and overall quality of life.***

The study concludes that physical activity and balanced nutrition play a vital role in promoting physical health, mental well-being, and disease prevention. Increasing awareness and encouraging healthy lifestyle behaviors can help individuals adopt sustainable habits that contribute to long-term health and improved quality of life.

Keywords:Physical Activity, Nutrition, Health, Exercise, Stress Management, Dietary Habits, Young Adults, Well-being.

I. INTRODUCTION

In the continuous pace of modern life, stress has emerged as a common and often debilitating force affecting millions worldwide. From the pressures of work deadlines and financial obligations to the complexes of interpersonal relationships and health concerns, stress manifests in myriad forms, exacting a toll on both mental well-being and physical health. Amidst this backdrop, the role of physical activity as a potent antidote to stress has garnered increasing attention from researchers, healthcare professionals, and individuals seeking effective strategies for resilience and well-being.

There is no doubt that the public is more aware of the importance of exercise and fitness programs. Most people believe that regular exercise is important for health and well-being, yet they do not exercise at all. A physically active lifestyle can prevent disease and promote health and wellness. Regular physical activity is associated with a wide range of physical, psychological and physiological benefits and has an exceptional role in the prevention of various diseases. There are three main ways that regular physical activity and good form contribute to optimal health and well-being. First, they can help prevent illness/disease. There is considerable evidence that the risk of hypokinetic states can be significantly reduced in people who engage in regular physical activity and achieve good physical fitness.

Mental health problems affect the education of young adults, health development, social relationships and quality of life. Students lack stress coping skills and many students generally use ineffective stress management methods. Lynch and Soukup (2016) showed in their study that social health can be improved by playing games or participating in group physical activity. Activities can affect students' social-emotional and academic success. A study by Mandoles and Poverino (2018) shows that young people's cognitive abilities improved when they participated in regular physical activity with benefits beyond the classroom.

Physical activity encompasses a spectrum of movements that engage the body’s muscles and cardiovascular system, encompassing activities ranging from brisk walks to intense strength training sessions and everything in between. Beyond its well-established benefits for physical health, including cardiovascular fitness, muscular strength, and metabolic health, research increasingly highlights its profound impact on mental and emotional well-being, particularly in alleviating stress and promoting overall psychological resilience.

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To comprehend the intricate relationship between physical activity and stress management, it is essential to delve into the underlying physiological and psychological mechanisms at play. At a fundamental level, engaging in physical activity triggers a cascade of physiological responses that contribute to stress reduction and mental well-being. Aerobic exercises such as jogging, swimming, or cycling elevate heart rate and increase oxygen consumption, leading to the release of endorphins—natural chemicals renowned for their moodenhancing properties. These endorphins not only induce feelings of euphoria and happiness but also act as natural stress relievers, countering the negative effects of cortisol, it is the primary stress hormone.

Moreover, regular participation in physical activity contributes to the regulation of other physiological processes implicated in stress response. It helps maintain healthy blood pressure levels, improves cardiovascular function, and enhances immune system efficiency— all of which play critical roles in mitigating the detrimental effects of chronic stress on the body. By promoting these physiological adaptations, physical activity fosters a robust foundation for stress resilience, enabling individuals to cope more effectively with the demands and challenges of daily life.

Beyond its immediate physiological effects, physical activity exerts profound influences on mental and emotional well-being. Engaging in exercise routines cultivates a sense of accomplishment and self-efficacy as individuals set and achieve fitness goals. This sense of mastery not only bolsters self-esteem but also enhances resilience in confronting stressors encountered in various facets of life. Furthermore, physical activity serves as a potent outlet for emotional tension and psychological stress. Whether through solo activities like running or swimming, or communal pursuits such as team sports or group fitness classes, the act of exercising provides a constructive channel for releasing pent-up energy, reducing feelings of anxiety, and restoring emotional equilibrium.

The benefits of physical activity in stress management extend beyond aerobic exercises to encompass a diversity of modalities, each offering unique advantages in promoting mental and emotional well-being. Strength training, for instance, not only enhances muscular strength and endurance but also contributes to improved body composition and metabolic health—factors that can influence overall stress resilience. Similarly, mind-body practices such as yoga and tai chi emphasize mindfulness, relaxation, and deep breathing techniques, which are instrumental in reducing physiological arousal and promoting emotional stability.

Furthermore, the social dimensions of physical activity play a pivotal role in stress management. Participation in group-based exercises or team sports fosters social connections and a sense of community, which are vital in buffering against stress and enhancing mental health. The camaraderie and mutual support inherent in group activities provide emotional reassurance and a sense of belonging, factors that contribute significantly to stress reduction and overall well-being.

In addition to its immediate benefits for stress management, integrating regular physical activity into one's lifestyle confers long-term advantages that extend well beyond the gym or sports field. Adopting a physically active lifestyle is associated with reduced risks of chronic diseases such as cardiovascular disease, diabetes, and obesity—conditions that not only exacerbate stress but also contribute to its onset. By improving overall health and resilience,physical activity serves as a proactive approach to stress management, addressing both the symptoms and underlying causes of stress-related disorders.

Moreover, the benefits of physical activity in stress management are inclusive and applicable across diverse demographic groups and age ranges. From children navigating academic pressures to older adults coping with the challenges of aging, physical activity offers a universal pathway to enhancing resilience and improving quality of life. In children and adolescents, regular participation in physical activities not only promotes physical health and development but also in positive habits that can persist into adulthood. For older adults, maintaining an active lifestyle preserves mobility, cognitive function, and independence, factors that are crucial in maintaining a sense of control and well-being in later life stages.

The integration of physical activity into stress management strategies is further supported by its cost-effectiveness and accessibility. Unlike pharmaceutical interventions or specialized therapies, engaging in physical activities requires minimal financial investment and can be tailored to suit individual preferences and capabilities. Whether through outdoor recreational pursuits, home-based exercise routines, or structured fitness programs, individuals have the flexibility to choose activities that align with their interests and lifestyle, thereby enhancing motivation and adherence to exercise regimens.

Furthermore, the cumulative benefits of physical activity in stress management extend beyond individual health outcomes to encompass broader societal implications. By promoting healthier lifestyles and reducing the burden of stress-related illnesses, physical activity contributes to enhanced productivity, reduced healthcare costs, and improved social cohesion within communities. The promotion of physical activity through public health initiatives, workplace wellness programs, and educational campaigns thus holds promise in fostering a culture of health and well-being across diverse populations.

The relationship between physical activity and stress management represents a dynamic interplay between mind and body.

As scientific evidence continues to underscore the multifaceted benefits of exercise in promoting mental health and resilience, the integration of physical activity into everyday routines emerges as a cornerstone of effective stress management strategies. By harnessing the physiological, psychological, and social dimensions of physical activity, individuals can empower themselves to combat stress, enhance their quality of life, and cultivate a resilient mindset that withstands the challenges of modern living. As we navigate the complexities of an increasingly interconnected world, the role of physical activity in stress management remains indispensable, offering a pathway to vitality, well-being, and holistic health.

II. PHYSICAL ACTIVITY BENEFITS

Regular exercise provides numerous physical health benefits and plays an important role in maintaining overall well-being. It improves cardiovascular health by strengthening the heart, enhancing blood circulation, lowering blood pressure, and improving cholesterol levels, thereby reducing the risk of heart disease. Aerobic activities such as running, swimming, and cycling are especially effective for heart health. Exercise also helps with weight management by burning calories and increasing metabolism, which aids in controlling body weight and reducing the risk of obesity-related conditions. In addition, resistance and strength-training exercises improve muscle strength, flexibility, and joint mobility, helping to prevent injuries and support everyday physical activities.

Furthermore, regular physical activity contributes to better bone health by stimulating bone formation and slowing age-related bone loss, which reduces the risk of osteoporosis. Exercise also strengthens the immune system, enabling the body to better fight infections and lowering the risk of certain chronic diseases. Another important benefit is improved sleep quality, as physical activity helps individuals fall asleep more easily and enjoy deeper, more restful sleep. It also reduces stress and anxiety, further promoting both physical and mental well-being. Overall, regular exercise is essential for maintaining a healthy body and improving quality of life.

In the long term, regular physical activity helps prevent chronic diseases such as type 2 diabetes, stroke, and certain cancers. It is associated with increased life expectancy and an improved quality of life by enhancing physical fitness, mental health, and social connectedness.

III. STRESS: CAUSES AND MANAGEMENT

Stress is a common response to challenging situations. External causes of stress include work-related pressures such as high job demands and poor work-life balance, financial problems like debt and economic uncertainty, health-related issues such as illness and medical expenses, and major life changes including relationship problems, relocation, or significant life events. Effective stress management involves maintaining a healthy lifestyle, regular physical activity, relaxation techniques, proper time management, and seeking support from family, friends, or professionals when needed. Internal causes of stress arise from an individual's thoughts, emotions, and behaviors. These include personality traits such as perfectionism, pessimism, and lack of assertiveness. Mental health conditions like anxiety, depression, and PTSD can also contribute to stress. Unhealthy lifestyle choices, including poor diet, lack of exercise, and substance abuse, increase stress levels. Additionally, cognitive factors such as overthinking and catastrophizing can make stressful situations seem worse than they are.

It can be managed through healthy lifestyle changes, relaxation techniques, and positive thinking. Regular exercise, a balanced diet, adequate sleep, and good time management help reduce stress and improve overall well-being. Relaxation methods such as deep breathing, meditation, progressive muscle relaxation, yoga, and Tai Chi help calm the mind and body. Cognitive strategies, including positive thinking, problem-solving, setting healthy boundaries, and practicing mindfulness, can help individuals cope with stress more effectively and maintain better mental health.Cognitive strategies help individuals manage stress by changing negative thought patterns and improving coping skills. Positive thinking, problem-solving, setting healthy boundaries, and practicing mindfulness can reduce stress and improve emotional well-being. When stress becomes difficult to manage, professional help may be beneficial. Therapy, such as Cognitive Behavioral Therapy (CBT), support groups, and appropriate medication prescribed by healthcare professionals can help individuals effectively manage stress, anxiety, and depression.

A strong support system is important for managing stress. Friends, family, and colleagues can provide emotional support, encouragement, and practical help during difficult times. Sharing concerns with trusted people can reduce feelings of stress and improve overall well-being. By understanding the causes of stress and using effective management strategies, individuals can lead healthier and more balanced lives.

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IV. METHODOLOGY

A survey was conducted to assess the physical activity and nutritional habits of individuals aged 18–22 years and above, with a total of 120 participants taking part in the study. The survey aimed to understand lifestyle patterns related to exercise and nutrition among young adults. It collected basic demographic information and explored various aspects of physical activity, including exercise preferences, workout intensity, frequency of exercise, and participation in indoor and outdoor activities. The study also investigated participants' motivations for engaging in physical activity, the challenges they faced in maintaining an active lifestyle, and the sources from which they obtained fitness-related information.

In addition to physical activity, the survey examined nutritional habits by analyzing meal frequency, dietary patterns, protein and fiber intake, supplement usage, and monthly grocery expenses. Understanding these factors provides valuable insights into the relationship between nutrition and overall health. Proper nutrition, combined with regular physical activity, plays a vital role in maintaining physical fitness, supporting growth and development, improving energy levels, and reducing the risk of various health conditions.

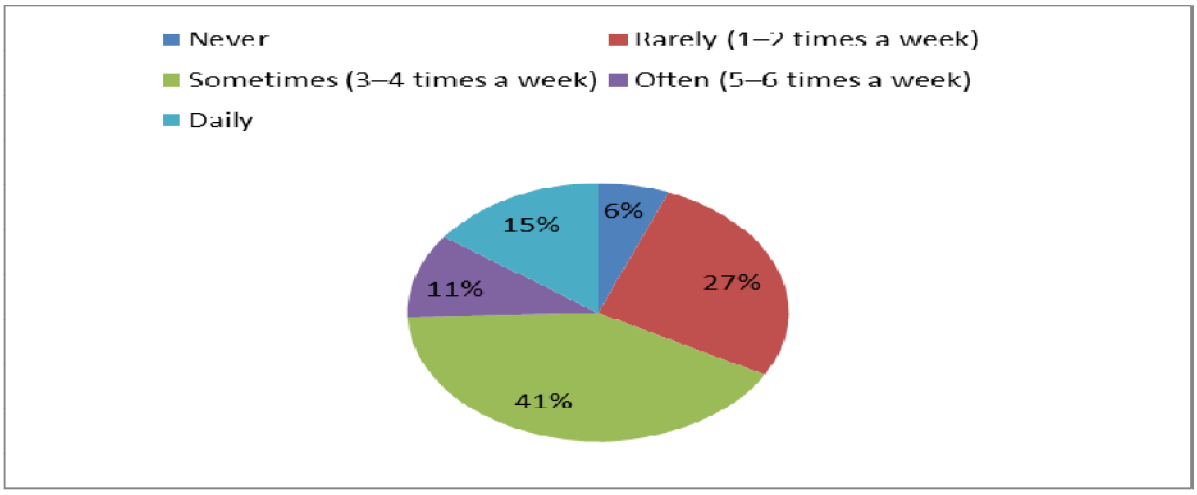
According to the World Health Organization, physical activity is one of the key determinants of good health and well-being. Regular exercise helps prevent and manage non-communicable diseases such as cardiovascular diseases, type 2 diabetes, obesity, and certain types of cancer. It also contributes to improved mental health by reducing stress, anxiety, and symptoms of depression through the release of endorphins and other beneficial neurotransmitters. Furthermore, physical activity enhances muscle strength, bone health, cardiovascular fitness, and overall quality of life.

The WHO recommends that children and adolescents aged 5–17 years engage in at least 60 minutes of moderate-to-vigorous physical activity daily. For adults, it recommends 150–300 minutes of moderate-intensity aerobic physical activity or 75–150 minutes of vigorous-intensity aerobic physical activity per week, along with muscle-strengthening activities on two or more days each week. Meeting these recommendations can significantly improve physical, mental, and social well-being. The findings of this survey provide valuable information about the current physical activity and nutritional practices of young adults and help identify areas where health education and lifestyle interventions may be needed. By understanding existing behaviors, motivations, and barriers, effective strategies can be developed to promote healthier lifestyles and improve overall health outcomes among this population.

V. RESULTS

Protein is a fairly important nutrient in the diets of individuals engaging in physical activities. It is crucial as it helps in muscle recovery by providing the body with essential amino acids that work to repair wear and tears of muscles, it is also vital for increasing muscle mass and strength overtime. It is a must to incorporate protein rich foods like pulses, legumes, lean meats in the diet.

1) How often do you consume foods rich in protein (e.g., meat, fish, beans, nuts)?

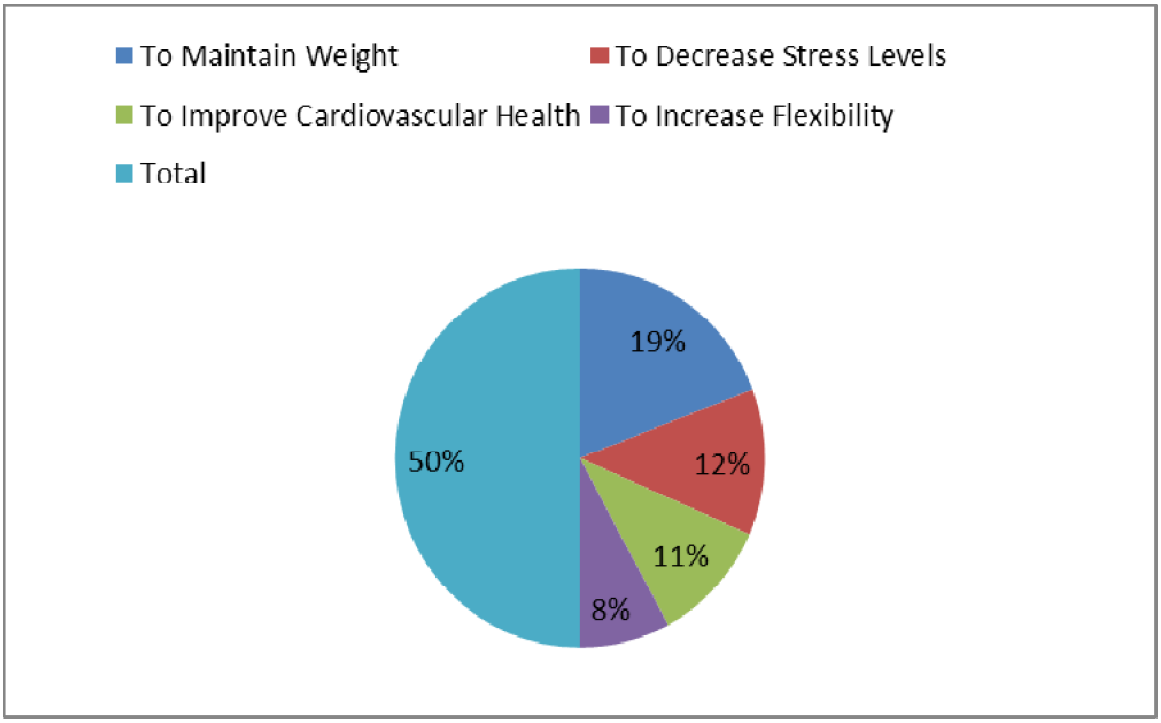


For the above surveyed question, the majority of respondents fall into the category of frequent consumption of proteins with around 41.4% which indicates a moderate yet consistent intake.

The other set of respondents have a fairly low level of protein consumption with 27.1% of individual's only consuming proteins 1-2 times a week, these individuals require an increase in protein intake in order to support the increased demands required to carry out higher physical activity levels. The least percentage of respondents; 6% claim to never include protein in their diets, this is very unhealthy as it may lead to protein deficiencies causing muscle loss, reduce in the strength of individual's and the body may take longer durations to recover from damage, these individuals are advised to intake at least the minimum requirements in order to maintain a healthy lifestyle. We then see a group of individuals with high protein intake, with 10.5% having protein rich foods around 5 - 6 times every week. These respondents are more likely to have improved muscle strength, increased endurance and their muscles take quicker time to recover. Lastly, we have around 15% of respondents who consume protein foods on a daily basis. Their bodies have a constant supply of proteins ensuring optimum muscle repair and growth.

2) What is one of the primary purposes of engaging in regular physical activity?

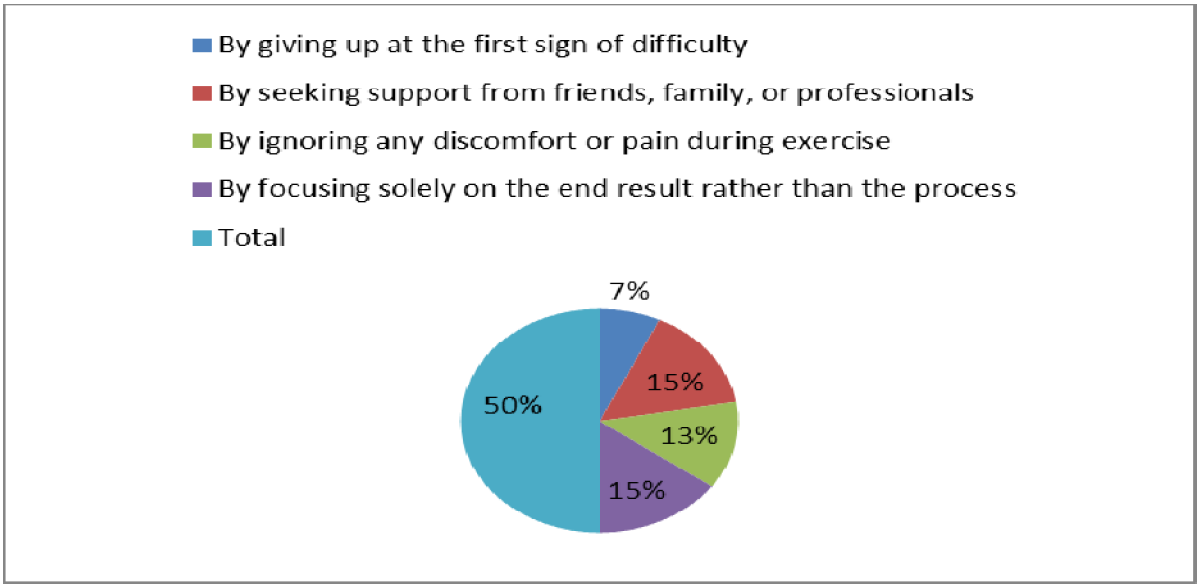
Regular physical activity is important for maintaining overall health and well-being. People engage in physical activity for various reasons, including weight management, stress reduction, improving cardiovascular health, and increasing flexibility. Understanding the primary purpose of exercise helps identify the motivations that encourage individuals to adopt and maintain an active lifestyle. The results of this survey highlight the main reasons participants engage in regular physical activity.



The results indicate that maintaining weight was the primary reason for engaging in regular physical activity among the participants, accounting for 38.3% of responses. This suggests that many individuals are motivated to exercise to achieve or maintain a healthy body weight. Reducing stress levels was the second most common reason (24.8%), highlighting the importance of physical activity in supporting mental and emotional well-being. Additionally, 21.1% of participants reported exercising to improve cardiovascular health, reflecting awareness of the role of physical activity in preventing heart-related diseases and promoting overall fitness. The least common reason was increasing flexibility (15.8%). Overall, the findings suggest that participants recognize both the physical and mental health benefits of regular physical activity, with weight management being the strongest motivating factor.

3) How do you overcome barriers to maintaining physical activity?

Maintaining regular physical activity can be challenging due to factors such as lack of motivation, time constraints, physical discomfort, and other personal barriers. This question aimed to identify the strategies participants use to overcome these challenges and continue engaging in physical activity. Understanding these approaches can help promote healthier and more sustainable exercise habits.



The results shows that **50%** of participants overcome barriers to maintaining physical activity by **focusing on the end result rather than the process**, making it the most commonly reported strategy. **15%** of participants reported **seeking support from friends, family, or professionals**, while another **15%** indicated **other approaches**. About **13%** stated that they **ignore discomfort or pain during exercise**, and **7%** reported **giving up at the first sign of difficulty**. These findings suggest that most participants are motivated by achieving their fitness goals, while a smaller proportion rely on social support or persistence strategies to maintain regular physical activity.

VI. CONCLUSION

Physical activity and proper nutrition are essential components of a healthy lifestyle and contribute significantly to overall well-being. Regular participation in physical activity helps maintain a healthy body weight, improves cardiovascular fitness, strengthens muscles and bones, and reduces the risk of chronic diseases such as obesity, diabetes, and hypertension. In addition to its physical benefits, exercise plays a crucial role in promoting mental health by reducing stress, anxiety, and depression while enhancing self-esteem, confidence, and emotional well-being. The findings of this survey indicate that participants recognize the importance of physical activity for various reasons, including weight management, stress reduction, and cardiovascular health. However, barriers such as lack of motivation, time constraints, and physical discomfort may affect regular participation in exercise. Adopting effective coping strategies, seeking social support, and maintaining a balanced diet can help individuals overcome these challenges and sustain healthy habits. Therefore, increasing awareness about the benefits of physical activity and nutrition is essential for encouraging healthier lifestyle choices and improving long-term health outcomes.

VII. SUMMARY

The present survey was conducted among 120 individuals aged 18–22 years and above to assess their physical activity patterns and nutritional habits. The study collected demographic information and explored various aspects of physical activity, including exercise preferences, workout intensity, frequency of participation, and indoor versus outdoor activities. It also examined dietary practices such as meal frequency, protein and fiber intake, supplement usage, and grocery expenditure. Additionally, the survey investigated participants' motivations for exercising, barriers to maintaining physical activity, and sources of fitness-related information. The results showed that maintaining weight was the primary reason for engaging in regular physical activity, followed by stress reduction and improvement of cardiovascular health. Most participants reported consuming protein-rich foods several times per week, indicating awareness of the importance of nutrition in supporting health and fitness. The survey also revealed different strategies used to overcome barriers to physical activity, highlighting the role of motivation, social support, and personal commitment in maintaining an active lifestyle. Overall, the findings emphasize the strong relationship between physical activity, nutrition, and overall health.

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Regular exercise combined with balanced dietary habits contributes to improved physical fitness, better mental health, and enhanced quality of life. Promoting healthy behaviors and increasing awareness of their benefits can help individuals lead healthier, happier, and more productive lives.

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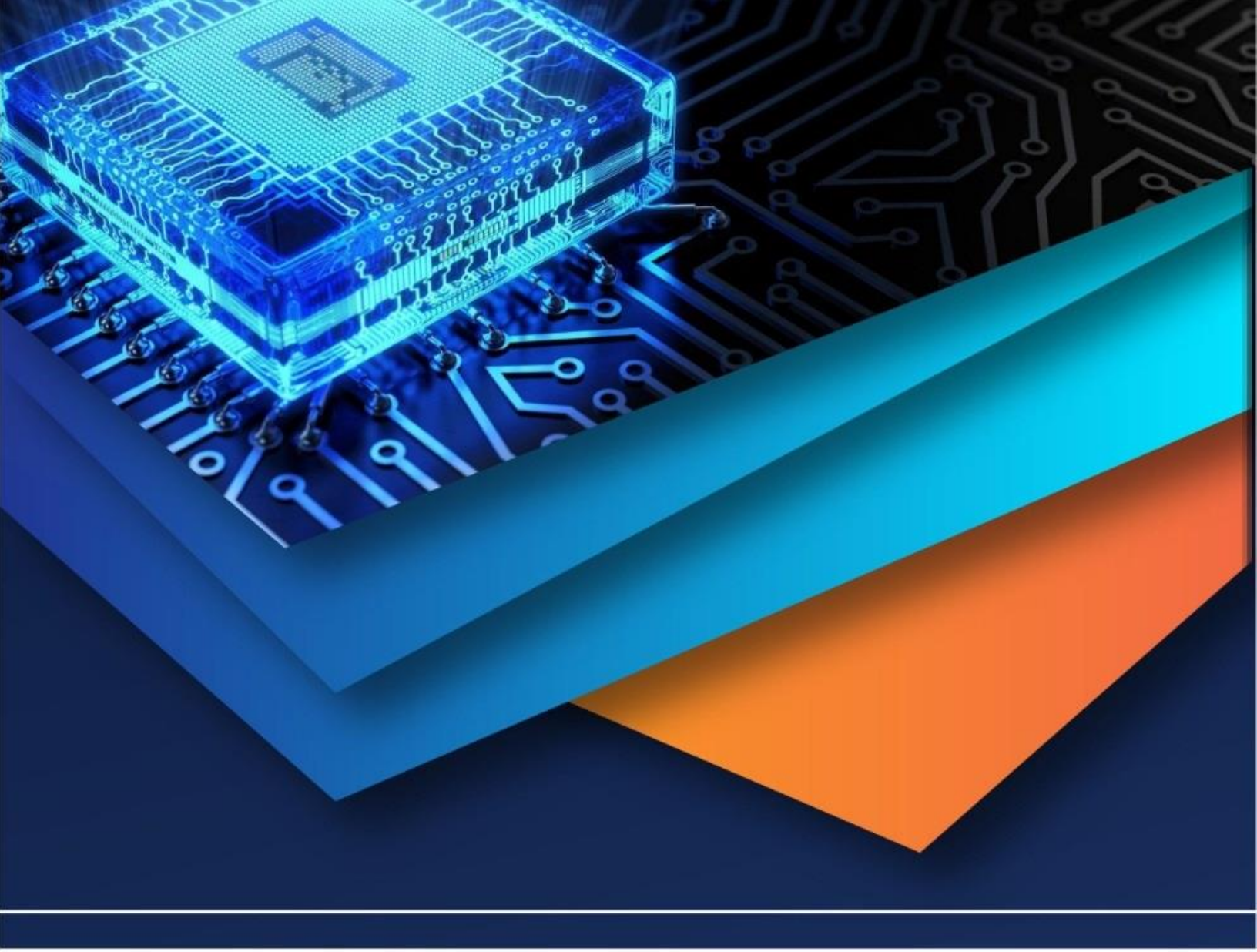

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