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Comparative Analysis of Lifestyle and Physical Activity Motivation Among Urban and Rural Adults in Indonesia

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ABSTRACT

Changes in lifestyle driven by technological development, urbanization, and modernization have significantly influenced physical activity levels. Urban communities tend to adopt more sedentary lifestyles compared to rural communities, which still engage in more physical activity in daily life. These environmental differences are expected to affect motivation for physical activity among adults. This study aimed to examine differences in lifestyle and physical activity motivation between urban and rural communities based on place of residence. A quantitative comparative method was employed involving 100 respondents, consisting of 50 urban residents and 50 rural residents selected through purposive sampling. Data were collected using lifestyle and physical activity motivation questionnaires and analyzed using descriptive statistics, normality tests, homogeneity tests, and Independent Samples t-tests. The results showed that rural communities demonstrated higher active lifestyle scores ($M = 76.82$, $SD = 6.48$) and physical activity motivation scores ($M = 78.96$, $SD = 7.12$) than urban communities ($M = 68.24$, $SD = 7.15$; $M = 72.54$, $SD = 6.84$, respectively). Independent Samples t-test analysis revealed a statistically significant difference in physical activity motivation between urban and rural adults, $t(98) = -4.596$, $p < 0.001$, with a mean difference of 6.42 points. Furthermore, the effect size analysis indicated a large practical effect (Cohen's $d = 0.92$), suggesting that place of residence substantially influences physical activity motivation. Higher motivation among rural residents was associated with more active daily routines, supportive social environments, and occupations requiring greater physical effort. In contrast, urban residents tended to exhibit lower physical activity motivation due to sedentary work patterns, greater technology use, and dependence on motorized transportation. In conclusion, place of residence plays an important role in shaping adults' physical activity motivation, highlighting the need for context-specific and sustainable intervention programs to promote public health.

KEY WORDS

Lifestyle, Physical Activity, Motivation, Urban Community, Rural Community.

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A. Introduction

Physical activity is a fundamental component of human life, as it plays a crucial role in maintaining physical, mental, and social health (Habibah et al., 2026). Physical activity is defined as any bodily movement produced by skeletal muscles that requires energy expenditure (Zainuddin et al., 2024). Among adults, physical activity plays a significant role in preventing degenerative diseases such as obesity, diabetes mellitus, hypertension, and coronary heart disease. Furthermore, physical activity contributes to improving quality of life, work productivity, and individuals' psychological well-being (Setiawan et al., 2021). However, technological advancements and modernization have transformed people's lifestyles into increasingly sedentary ones, leading to a decline in daily physical activity. This situation has made physical activity not only a health necessity but also a social challenge in the modern era (Prakoso, 2021).

This lifestyle transformation has occurred in both urban and rural areas. Urban communities are generally characterized by a fast-paced, competitive way of life and a high dependence on technology (Indrayogi et al., 2022). Many daily activities are carried out with the assistance of motorized vehicles, digital devices, and occupations that involve prolonged sitting. These conditions contribute to lower levels of physical activity among urban populations. A study by Manta et al., (2019) found that urbanization and technological advancement are closely associated with an increase in sedentary behavior among adults.

On the other hand, rural communities have traditionally exhibited higher levels of physical activity through activities such as farming, gardening, walking, and performing manual household tasks. These activities naturally increase daily energy expenditure (Nengah S et al., 2020). However, the processes of modernization and digitalization have begun to alter the lifestyles of rural populations. The increasing use of motorized vehicles, modern agricultural equipment, and digital technologies has contributed to a decline in traditional forms of physical activity. This trend indicates that lifestyle changes are not confined to urban areas but are also increasingly affecting rural communities (Marlita et al., 2022).

These differences in environmental characteristics have implications for health-related behaviors, particularly physical activity motivation. Physical activity motivation refers to the internal and external drives that encourage individuals to engage in physical activity consistently (Dalene et al., 2018). This motivation may be influenced by health needs, enjoyment, social support, and occupational demands. Individuals with higher levels of motivation tend to be more active and consistent in participating in physical activity compared to those with lower levels of motivation (Beckmann & Kossak, 2025).

Physical activity motivation among adults is influenced by various factors, including age, education, occupation, culture, living environment, and lifestyle (Goswami, 2020). Urban residents generally have better access to sports and recreational facilities, such as fitness centers, public parks, and sports communities. However, limited time, high work-related stress, and sedentary lifestyles often serve as major barriers to regular physical activity. In contrast, rural populations may have limited access to formal sports facilities but tend to remain physically active through their daily occupational and household activities (Nick Cavill, 2019). These contrasting conditions suggest disparities in physical activity patterns that warrant further investigation.

Globally, low levels of physical activity have become a serious public health concern. Chaput et al., (2020) stated that insufficient physical activity is one of the leading risk factors for global mortality. In Indonesia, lifestyle changes driven by urbanization and technological advancement have also contributed to declining levels of physical activity across various age groups. People increasingly engage in sedentary behaviors such as using social media, watching television, and working with digital devices for extended periods (Aulia et al., 2024).

Several previous studies have examined the relationship between lifestyle and physical activity. Koole et al., (2019) demonstrated that social environments and residential settings significantly influence individuals' physical activity behaviors. Similarly, Sallis et al., (2001) found that urban populations tend to engage in higher levels of recreational physical activity but lower levels of daily physical activity compared to rural populations. However, most of these studies have primarily focused on physical activity levels without exploring motivational aspects in depth, particularly within the context of the adult population in Indonesia.

Furthermore, research on physical activity in Indonesia has predominantly focused on students, university students, and athletes. Comparative studies that specifically examine differences in physical activity

motivation between urban and rural adult populations remain limited. Another research gap lies in the ongoing transformation of rural communities, which are increasingly adopting modern lifestyles. Consequently, the assumption that rural populations are always more physically active is no longer entirely relevant.

Previous studies have extensively examined the influence of environmental and lifestyle factors on physical activity behavior. Research conducted by Sallis et al. (2001) reported differences in physical activity patterns between urban and rural populations, while Koole et al. (2019) emphasized the role of social environments in shaping health-related behaviors. Other studies have primarily focused on physical activity participation, sedentary behavior, or access to recreational facilities. In Indonesia, studies such as Zainuddin et al. (2024) have compared physical activity levels based on place of residence. However, these studies largely concentrated on physical activity outcomes and did not comprehensively investigate the motivational dimensions underlying individuals' participation in physical activity.

A significant research gap remains regarding how lifestyle differences between urban and rural communities influence physical activity motivation, particularly among adults in the Indonesian context. To the best of the authors' knowledge, this study is the first comparative study that examines the relationship between lifestyle and physical activity motivation among urban and rural adult communities in Indonesia by considering both intrinsic and extrinsic dimensions of motivation. This research is important because rapid urbanization, technological advancement, and lifestyle transformation have altered physical activity patterns across both urban and rural settings. Understanding these differences is essential for designing evidence-based and context-specific physical activity promotion strategies that address the unique characteristics of each community and contribute to improving public health outcomes.

Based on these gaps, this study offers several novel contributions. First, it provides a comprehensive comparison of lifestyle characteristics and physical activity motivation between urban and rural adult populations in Indonesia. Second, unlike previous studies that mainly focused on physical activity levels, this study examines both intrinsic and extrinsic motivational dimensions underlying participation in physical activity. Third, the study contributes empirical evidence from the Indonesian context, where urbanization and modernization are rapidly transforming traditional lifestyle patterns. Finally, this study proposes a more integrated understanding of how residential environments shape lifestyle and motivational factors that influence physical activity behavior among adults.

This study is important because it provides empirical evidence regarding differences in physical activity motivation based on residential environments. The findings are expected to serve as a foundation for developing more context-specific health promotion programs, as physical activity interventions may not be equally effective for both urban and rural populations. In addition to its practical implications, this study contributes theoretically to the fields of physical education, public health, and sport psychology by enriching the understanding of the relationships among lifestyle, environment, and physical activity motivation.

Adults were selected as the target population because they typically face substantial social and occupational responsibilities, making them particularly vulnerable to declines in physical activity. If this condition persists over time, it may increase the risk of various health problems in the future (Aulia et al., 2024). Therefore, this study aims to empirically and comparatively analyze the differences between urban and rural lifestyles in relation to physical activity motivation among adult.

Research Hypotheses

Based on the theoretical framework and previous empirical findings, the following hypotheses were formulated:

H1: There is a significant difference in lifestyle patterns between urban and rural communities.

H2: There is a significant difference in physical activity motivation between urban and rural communities.

These hypotheses were developed to examine whether differences in residential environments are associated with variations in lifestyle characteristics and physical activity motivation among adults.

B. Methods

This study was conducted over a two-month period, from May to June 2026. The research was carried out in rural areas of Cirebon and the Pantai Indah Kapuk (PIK) 2 area of Jakarta, which represent rural and urban settings in Indonesia, respectively. The selection of Pantai Indah Kapuk (PIK) 2 as the urban research site was based on its characteristics as one of the fastest-growing urban development areas in the Jakarta Metropolitan Region. According to Statistics Indonesia (BPS DKI Jakarta, 2025), Jakarta has one of the highest population densities in Indonesia, exceeding 16,000 inhabitants per square kilometer, and is characterized by intensive urban infrastructure, high mobility, modern transportation systems, and widespread technology utilization. PIK 2 specifically reflects these urban characteristics through its mixed-use residential, commercial, and recreational developments that support a modern urban lifestyle.

Meanwhile, Cirebon Regency was selected to represent a rural setting because a substantial proportion of its population resides in agricultural and semi-rural areas. According to BPS Kabupaten Cirebon (2025), agricultural activities remain an important economic sector in many districts of Cirebon Regency. Rural communities in this area continue to engage in farming, small-scale agriculture, and physically demanding occupations, which contribute to higher levels of daily physical activity. Therefore, the contrasting socioeconomic and environmental characteristics of PIK 2 and Cirebon Regency provide an appropriate basis for comparing lifestyle and physical activity motivation between urban and rural populations. A quantitative approach was employed using a comparative cross-sectional research design. The quantitative approach was selected to obtain objective, measurable data that could be analyzed statistically (Surahman; Rachmat M; Supari, 2016; Sugiyono, 2018). The comparative design was used to compare two groups—urban and rural communities—based on lifestyle and physical activity motivation variables without providing any treatment or intervention. The cross-sectional approach involved collecting data at a single point in time.

The study consisted of an independent variable, namely the lifestyle characteristics of urban and rural communities, and a dependent variable, namely physical activity motivation among adults. Lifestyle was assessed through indicators such as daily activities, mobility patterns, leisure-time utilization, and sedentary behavior.

Table 1. Operational Definition of Variables

Variable	Dimension	Indicator	Number of Items	Scale
Lifestyle	Daily Activities	Physical activities performed in daily life	5	Likert 1–5
Lifestyle	Mobility Patterns	Walking habits and transportation use	5	Likert 1–5
Lifestyle	Leisure-Time Utilization	Use of leisure time for physical activity	5	Likert 1–5
Lifestyle	Sedentary Behavior	Sitting time and screen-based activities	5	Likert 1–5
Physical Activity Motivation	Intrinsic Motivation	Enjoyment, health awareness, personal satisfaction	10	Likert 1–5
Physical Activity Motivation	Extrinsic Motivation	Social support, rewards, environmental influence	10	Likert 1–5

Physical activity motivation was measured through both intrinsic and extrinsic motivational dimensions. The study population comprised adults aged 18–35 years residing in the selected urban and rural areas. The target population consisted of all adults aged 18–35 years residing in the selected urban and rural areas. Considering the large population size in both locations, a sample of 100 respondents was considered adequate for comparative statistical analysis. The sample size was determined based on recommendations for Independent Samples t-test analysis, which suggest a minimum of 30 participants per group to achieve sufficient statistical power and normal distribution assumptions. To increase the robustness of the analysis and improve representativeness, the study included 50 respondents from each group.

Purposive sampling was employed because the study required respondents who met specific criteria relevant to the research objectives. Participants were selected based on age, length of residence, willingness to participate, and health status. This sampling technique ensured that all respondents possessed similar demographic characteristics and sufficient exposure to the environmental conditions of their respective residential settings, thereby enhancing the validity of comparisons between urban and rural groups. A total of 100 respondents participated in the study, including 50 respondents from urban areas and 50 respondents from rural areas. The sampling technique used was purposive sampling, with inclusion criteria requiring participants to be between 18 and 35 years old, have resided in the study area for at least three years, be willing to participate in the study, and be in good health at the time of data collection.

Data were collected using a structured closed-ended questionnaire employing a five-point Likert scale, ranging from strongly agree to strongly disagree (Husna, Asmaul; Suryana, 2017). The instrument was developed based on the indicators of each research variable and consisted of both positively and negatively worded statements. In addition to the questionnaire, documentation techniques were utilized to obtain supporting data relevant to the study. Instrument validity was assessed using the Pearson Product-Moment correlation test,

Table 2. Instrument Validity Test Results

Variable	Number of Items	r-count Range	r-table (n=30; $\alpha=0.05$)	Result
Lifestyle	20	0.421–0.782	0.361	Valid
Physical Activity Motivation	20	0.438–0.811	0.361	Valid

The validity test results indicated that all questionnaire items had corrected item-total correlation coefficients exceeding the critical r-table value of 0.361. Therefore, all items were declared valid and suitable for use in the main study.

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Criterion	Interpretation
Lifestyle	0.887	> 0.70	Reliable
Physical Activity Motivation	0.912	> 0.70	Highly Reliable

The reliability analysis showed that both instruments exceeded the minimum Cronbach's Alpha threshold of 0.70, indicating satisfactory internal consistency and reliability.

while reliability was evaluated through Cronbach's Alpha analysis (Sugiyono, 2018). Prior to the main data collection, the instrument was pilot-tested on respondents with characteristics similar to those of the target population but who were not included in the research sample. This procedure was conducted to ensure the validity and reliability of the measurement instrument. Data analysis was performed using both descriptive and inferential statistical techniques with the assistance of SPSS software Maksum, (2018). Descriptive statistics were used to summarize the characteristics of the respondents and the distribution of research variables. Before hypothesis testing, prerequisite tests were conducted, including tests of normality and homogeneity, to verify that the data met the assumptions required for parametric analysis. Subsequently, an Independent Samples t-test was employed to determine whether there were significant differences in physical activity motivation between adults living in urban and rural communities.

C. Result and Discussion

Result

Respondent Characteristics

This study involved a total of 100 respondents, consisting of 50 participants from an urban area (PIK 2 Jakarta) and 50 participants from a rural area (Cirebon Regency). Based on gender distribution, 54% of the respondents were male, while 46% were female. The respondents ranged in age from 18 to 35 years, representing the adult population targeted in this study. The age distribution was relatively balanced across both the urban and rural groups, indicating that the demographic characteristics of the two groups were comparable. Such comparability is important in comparative research, as it helps minimize the influence of demographic differences on the study outcomes. Therefore, any differences observed in lifestyle patterns and

physical activity motivation between urban and rural respondents are more likely to reflect variations associated with residential environments rather than differences in demographic characteristics. Overall, the respondent profile provides an adequate basis for comparing physical activity motivation between adults living in urban and rural settings. The balanced representation of gender and age groups enhances the validity of the comparative analysis and supports the interpretation of the study findings within the context of lifestyle and environmental influences on physical activity motivation.

Table 4. Distribution of Respondents by Gender

Group	Male	Female	Total
Urban	28	22	50
Rural	26	24	50
Total	54	46	100

Based on Table 4, there were 54 male respondents (54%) and 46 female respondents (46%). These findings indicate that male respondents constituted a slightly larger proportion of the sample than female respondents. Nevertheless, the distribution of respondents by gender was relatively balanced, ensuring adequate representation of both males and females in the study. This balance contributes to the credibility of the comparative analysis conducted between the urban and rural groups.

Table 5. Distribution of Respondents by Age

Age	Urban	Rural
18–22 Years	15	13
23–27 Years	14	15
28–31 Years	11	12
32–35 Years	10	10
Total	50	50

Based on Table 5, the age distribution of respondents was relatively balanced across the two study groups. In the urban group, the largest proportion of respondents was found in the 18–22-year age category (15 respondents), followed by the 23–27-year age group (14 respondents), the 28–31-year age group (11 respondents), and the 32–35-year age group (10 respondents). Similarly, in the rural group, respondents were distributed relatively evenly across all age categories, with 13 respondents aged 18–22 years, 15 respondents aged 23–27 years, 12 respondents aged 28–31 years, and 10 respondents aged 32–35 years.

These findings indicate that the age composition of respondents was comparable between the urban and rural groups. Such a balanced distribution is beneficial for comparative analysis because it reduces the likelihood that differences in physical activity motivation are influenced by age-related factors. Therefore, the observed differences between the two groups can be more confidently attributed to variations in lifestyle and residential environment rather than demographic disparities.

Lifestyle Characteristics of Urban and Rural Communities

The descriptive analysis revealed that rural residents had a higher mean lifestyle score ($M = 76.82$; $SD = 6.48$) than urban residents ($M = 68.24$; $SD = 7.15$). This finding suggests that individuals living in rural areas tend to adopt a more physically active lifestyle than those residing in urban environments. Based on the categorization results, the majority of urban respondents were classified within the moderate lifestyle category (40%), whereas most rural respondents were categorized within the high lifestyle category (46%). Furthermore, a small proportion of urban respondents (6%) fell into the low lifestyle category, while no respondents from the rural group were classified in the very low category. When examined according to lifestyle indicators, rural respondents demonstrated higher scores across all dimensions, including daily activities, mobility patterns, leisure-time utilization, and sedentary behavior. These results indicate that the overall level of physical activity embedded in daily lifestyle practices is higher among rural communities than among urban communities.

Table 6. Descriptive Statistics of the Lifestyle Variable

Group	N	Mean	SD	Minimum	Maximum
Urban	50	68,24	7,15	54	82
Rural	50	76,82	6,48	62	89

Based on Table 6, the mean lifestyle score of rural respondents (76.82) was higher than that of urban respondents (68.24). This finding indicates that rural communities tend to maintain a more active lifestyle. The higher mean score among rural residents may be attributed to the nature of their daily activities, which often involve greater physical movement, active transportation, and lower dependence on technology compared with urban populations. In contrast, urban lifestyles are more frequently characterized by sedentary occupations, motorized transportation, and greater reliance on digital technologies, which may contribute to lower overall levels of physical activity.

The categorization of lifestyle and physical activity motivation scores was based on the theoretical score interval method. Each questionnaire consisted of 20 items measured on a five-point Likert scale, resulting in a minimum theoretical score of 20 and a maximum theoretical score of 100. The score range (80 points) was divided into five categories using equal interval classification. The resulting categories were: Very Low (≤ 56), Low (57–64), Moderate (65–72), High (73–80), and Very High (≥ 81). This categorization was employed to facilitate interpretation of respondents' lifestyle and physical activity motivation levels.

Table 7. Lifestyle Categories of Urban Respondents

Category	Score Interval	Frequency	Percentage
Very High	≥ 81	4	8%
High	73–80	12	24%
Moderat	65–72	20	40%
Low	57–64	11	22%
Very Low	≤ 56	3	6%
Total		50	100%

Based on Table 7, the majority of urban respondents were classified within the moderate lifestyle category (40%). Meanwhile, 24% of respondents were categorized as having a high lifestyle level, and 8% were classified in the very high category. Conversely, 22% of respondents fell into the low category and 6% into the very low category. These findings suggest that although some urban residents maintain active lifestyles, a substantial proportion still exhibit lifestyle patterns characterized by lower levels of physical activity, likely influenced by sedentary occupations, motorized transportation, and extensive use of digital technologies.

Table 8. Lifestyle Categories of Rural Respondents

Category	Score Interval	Frequency	Percentage
Very High	≥ 81	10	20%
High	73–80	23	46%
Moderat	65–72	13	26%
Low	57–64	4	8%
Very Low	≤ 56	0	0%
Total		50	100%

Table 8 indicates that the largest proportion of rural respondents was classified within the high lifestyle category (46%), followed by the moderate category (26%) and the very high category (20%). Only 8% of respondents were categorized as having a low lifestyle level, while no respondents were classified in the very low category. These results demonstrate that rural residents generally maintain more active lifestyles and engage in greater levels of physical activity in their daily routines compared with their urban counterparts.

Table 9. Mean Scores of Lifestyle Indicators

Indicator	Urban	Rural
Daily Activities	17,42	20,36
Mobility Patterns	16,85	19,42
Leisure-Time Utilization	18,21	19,84
Sedentary Behavior	15,76	17,20
Total Mean	68,24	76,82

Based on Table 9, all lifestyle indicators recorded higher mean scores among rural respondents than among urban respondents. The largest difference was observed in the daily activities indicator, where rural respondents achieved a mean score of 20.36 compared with 17.42 among urban respondents. Similar patterns were evident for mobility patterns, leisure-time utilization, and sedentary behavior. These findings suggest that rural communities engage in more physically demanding daily activities, maintain more active mobility habits, and make greater use of leisure time for physically active pursuits. Overall, the results reinforce the conclusion that rural residents exhibit healthier and more active lifestyle patterns than urban residents.

Physical Activity Motivation

Table 10. Descriptive Statistics of the Physical Activity Motivation Variable

Group	N	Mean	SD	Minimum	Maximum
Urban	50	72,54	6,84	60	86
Rural	50	78,96	7,12	65	92

Table 10 shows that rural respondents demonstrated a higher level of physical activity motivation ($M = 78.96$; $SD = 7.12$) than urban respondents ($M = 72.54$; $SD = 6.84$). The higher mean score among rural residents suggests that they possess stronger motivation to engage in regular physical activity. In addition, the broader score range observed among rural respondents indicates a generally positive motivational profile across the group.

Table 11. Physical Activity Motivation Categories of Urban Respondents

Category	Score Interval	Frequency	Percentage
Very High	≥ 85	6	12%
High	77–84	16	32%
Moderat	69–76	20	40%
Low	61–68	8	16%
Very Low	≤ 60	0	0%
Total		50	100%

Based on Table 11, most urban respondents were classified within the moderate motivation category (40%). Furthermore, 32% were categorized as having high motivation and 12% as having very high motivation. Meanwhile, 16% of respondents were classified within the low motivation category. These findings indicate that although many urban residents are motivated to engage in physical activity, a considerable proportion still demonstrate moderate or low motivational levels.

Table 12. Physical Activity Motivation Categories of Rural Respondents

Category	Score Interval	Frequency	Percentage
Very High	≥ 85	14	28%
High	77–84	21	42%
Moderat	69–76	12	24%
Low	61–68	3	6%

Category	Score Interval	Frequency	Percentage
Very Low	≤ 60	0	0%
Total		50	100%

Table 12 demonstrates that the majority of rural respondents were categorized as having high (42%) or very high (28%) levels of physical activity motivation. Only 6% of respondents fell into the low motivation category, and none were classified in the very low category. These results suggest that rural communities generally possess stronger motivation to participate in physical activity compared with urban communities.

Table 13. Mean Scores of Physical Activity Motivation Indicators

Indicator	Urban	Rural
Intrinsic Motivation	38,42	41,63
Extrinsic Motivation	34,12	37,33
Total Mean	72,54	78,96

Table 13 shows that rural respondents obtained higher mean scores on both intrinsic and extrinsic motivation dimensions. For intrinsic motivation, rural respondents achieved a mean score of 41.63, compared with 38.42 among urban respondents. Likewise, for extrinsic motivation, the rural group recorded a mean score of 37.33, exceeding the urban group's score of 34.12.

Overall, the findings indicate that physical activity motivation among rural residents ($M = 78.96$; $SD = 7.12$) was higher than that of urban residents ($M = 72.54$; $SD = 6.84$). This result suggests the existence of differences in motivational levels based on residential environment. Categorically, most rural respondents were classified within the high to very high motivation categories (70%), whereas urban respondents were predominantly categorized within the moderate motivation category (40%). These findings demonstrate that rural communities tend to possess stronger motivation to engage in physical activity.

Furthermore, rural respondents scored higher on both intrinsic and extrinsic motivation indicators. This suggests that their participation in physical activity is driven not only by internal factors, such as health awareness, personal satisfaction, and enjoyment, but also by external influences, including social support, community norms, and occupational demands. Consequently, the rural environment appears to provide conditions that foster stronger and more sustained motivation toward physical activity participation.

Assumption Testing

Table 14. Results of the Normality Test

Group	Kolmogorov-Smirnov	Sig.
Urban	0,091	0,200
Rural	0,103	0,158

The results of the Kolmogorov–Smirnov normality test indicate that the significance values for both groups were greater than 0.05. Specifically, the urban group obtained a significance value of 0.200, while the rural group obtained a significance value of 0.158. These findings indicate that the data for both groups were normally distributed and met the normality assumption required for parametric statistical analysis.

Table 15. Results of the Homogeneity Test

Levene Statistic	df1	df2	Sig.
1,342	1	98	0,249

The homogeneity test was conducted using Levene's Test. The results showed a significance value of 0.249, which is greater than the significance threshold of 0.05. Therefore, the variances of the two groups can be considered homogeneous. Since both the normality and homogeneity assumptions were satisfied, the data were deemed suitable for further analysis using parametric statistical procedures, specifically the Independent Samples t-test.

Hypothesis Testing

Table 16. Group Statistics

Group	N	Mean	Std. Deviation	Std. Error Mean
Urban	50	72,54	6,84	0,968
Rural	50	78,96	7,12	1,007

Table 16 presents the descriptive statistics of physical activity motivation for both groups. The mean score of the rural group (78.96) was higher than that of the urban group (72.54), suggesting that rural respondents exhibited stronger motivation toward physical activity.

Table 17. Results of the Independent Samples t-Test

Variable	t	df	Sig. (2-tailed)	Mean Difference
Physical Activity Motivation	-4,596	98	0	-6,42

The Independent Samples t-test revealed a statistically significant difference in physical activity motivation between urban and rural respondents, $t(98) = -4.596$, $p < 0.001$. The mean score of the rural group ($M = 78.96$, $SD = 7.12$) was significantly higher than that of the urban group ($M = 72.54$, $SD = 6.84$), with a mean difference of 6.42 points. The 95% confidence interval for the mean difference ranged from -9.19 to -3.65, indicating a stable and reliable estimate of the group difference. Additionally, the effect size analysis yielded Cohen's $d = 0.92$, demonstrating a large practical effect of residential environment on physical activity motivation.

Table 18. Effect Size and Confidence Interval

Variable	Mean Difference	95% CI	Cohen's d	Interpretation
Physical Activity Motivation	-6.42	-9.19 to -3.65	0.92	Large Effect

To evaluate the practical significance of the findings, Cohen's d effect size was calculated. The analysis produced a Cohen's d value of 0.92, indicating a large effect size according to Cohen's classification (small = 0.20, medium = 0.50, large = 0.80). This result suggests that the difference in physical activity motivation between urban and rural adults is not only statistically significant but also practically meaningful.

Furthermore, the 95% confidence interval (CI) for the mean difference ranged from -9.19 to -3.65. Since the confidence interval does not include zero, the result provides additional evidence supporting a significant difference in physical activity motivation between the two groups.

The mean difference of -6.420 indicates that the average physical activity motivation score of rural respondents was 6.42 points higher than that of urban respondents. This finding demonstrates that adults residing in rural areas tend to possess stronger motivation to engage in physical activity than those living in urban environments.

Overall, these results suggest that residential environment and lifestyle characteristics play a significant role in shaping physical activity motivation among adults. The more active lifestyle patterns commonly observed in rural communities may contribute to stronger intrinsic and extrinsic motivational factors, which in turn encourage greater participation in physical activity. Consequently, the findings support the view that environmental and lifestyle factors are important determinants of physical activity motivation within the adult population.

Discussion

The findings of this study revealed that rural communities exhibited higher levels of both lifestyle scores and physical activity motivation compared to urban communities. The statistical results further demonstrated that the observed difference was substantial, as indicated by a large effect size (Cohen's $d = 0.92$). This finding suggests that the influence of residential environment extends beyond statistical significance and represents a meaningful practical difference in physical activity motivation between urban and rural adults. These results suggest that the residential environment plays a significant role in shaping physical activity behavior and

motivation among adults. In general, these differences can be explained through the interaction of physical, social, and environmental factors that influence daily activity patterns in both settings.

The differences in lifestyle observed between urban and rural populations are consistent with the concept of the physical activity environment, which emphasizes that environmental characteristics directly influence individuals' levels of physical activity (Salvo et al., 2014). Rural residents are more likely to engage in occupations and daily activities that require physical movement, such as farming, gardening, manual labor, and active transportation. Consequently, their daily energy expenditure tends to be higher. This finding is consistent with the study of Sallis et al., (2001) which reported that individuals living in environments with limited reliance on modern transportation tend to accumulate higher levels of daily physical activity than those residing in urban areas.

In contrast, urban respondents demonstrated a more sedentary lifestyle pattern. This condition may be attributed to the rapid growth of technology and urbanization, which facilitate efficiency through motorized transportation, digital devices, and occupations characterized by prolonged sitting. These findings support the results of Manta et al., (2019) who reported a positive association between urbanization and sedentary behavior among adults. Similarly Aulia et al., (2024) highlighted that increased dependence on digital technology contributes to declining physical activity levels in modern societies. Although technological advancement provides convenience and productivity benefits, it may simultaneously reduce opportunities for routine physical movement.

Regarding physical activity motivation, rural residents also achieved significantly higher scores than urban residents. This finding indicates that motivation is influenced not only by individual awareness but also by environmental conditions that support physical activity participation. According to Self-Determination Theory, both intrinsic and extrinsic motivation develop through the fulfillment of fundamental psychological needs, including competence, autonomy, and relatedness (Ryan & Deci, 2020). The higher physical activity motivation observed among rural residents can be further explained through the three basic psychological needs proposed by Self-Determination Theory. First, autonomy is reflected in the ability of rural residents to engage in physical activities naturally as part of their daily routines, such as farming, gardening, walking, and household tasks, without external pressure or formal exercise programs. These activities are often self-directed and integrated into everyday life, creating a stronger sense of personal control over physical activity behavior. Second, competence develops because rural residents regularly perform physically demanding tasks that reinforce perceptions of physical capability and effectiveness. Repeated success in completing such activities may strengthen self-efficacy and confidence, which are important determinants of sustained motivation. Third, relatedness is fostered through stronger social cohesion and community interactions commonly found in rural settings. Collective activities, social support, and shared cultural practices may enhance feelings of belonging, thereby encouraging continued participation in physically active behaviors. Consequently, the simultaneous fulfillment of autonomy, competence, and relatedness may explain why rural adults demonstrate stronger motivation toward physical activity than urban adults. In the context of the present study, rural residents are more frequently exposed to physically active routines as part of their everyday lives. Such experiences may strengthen intrinsic motivation by fostering enjoyment, self-efficacy, and habitual engagement in physical activity.

Furthermore, extrinsic motivational factors, including social support and occupational demands, appear to be more prominent among rural populations. Rural communities often maintain stronger social cohesion and collective lifestyles, creating environments that encourage participation in physically active behaviors. These

findings support Goswami, (2020) who identified social environment and occupational characteristics as important determinants of physical activity motivation among adults. Conversely, despite having greater access to sports and recreational facilities, urban residents frequently encounter barriers such as limited leisure time, demanding work schedules, and elevated stress levels, which reduce their ability to engage consistently in physical activity (Zainuddin et al., 2024).

An important finding of this study is the discrepancy between the availability of sports facilities and actual participation in physical activity among urban residents. Although urban communities generally have better access to fitness centers, parks, and recreational facilities, these resources do not automatically translate into higher motivation or participation rates. This result suggests that facility availability alone is insufficient to promote physical activity without supportive social norms, behavioral habits, and adequate time resources. Similar conclusions were reported by Koole et al., (2019), who argued that social environmental factors exert a stronger influence on physical activity behavior than the mere presence of physical infrastructure. Likewise, Sulistyana et al., (2024) emphasized that sustainable participation in physical activity requires a combination of environmental support, behavioral commitment, and social encouragement.

Nevertheless, the findings of the present study differ from several previous studies that reported higher physical activity participation among urban populations. Research conducted in developed countries has shown that urban residents often engage in greater levels of recreational physical activity due to better access to fitness centers, sports clubs, public parks, bicycle lanes, and organized exercise programs. These facilities can increase opportunities for structured physical activity and support healthier lifestyles. However, the current findings suggest that the availability of facilities alone does not guarantee higher motivation or participation. In the Indonesian context, particularly among adults with demanding occupational responsibilities, factors such as time constraints, work-related stress, traffic congestion, and prolonged sedentary work may reduce opportunities to utilize available sports facilities. Therefore, the influence of environmental and social factors appears to be more substantial than infrastructure availability alone in shaping physical activity motivation.

Overall, the present study strengthens existing evidence that residential environment significantly influences both lifestyle patterns and physical activity motivation among adults. The differences identified between urban and rural populations are not merely structural but also reflect distinct behavioral and psychological processes that shape individuals' willingness to engage in physical activity. These findings highlight the complex relationship between environment, lifestyle, and motivational factors in determining health-related behaviors.

The large effect size obtained in this study (Cohen's $d = 0.92$) further indicates that residential environment exerts a meaningful influence on physical activity motivation. This finding suggests that interventions aimed at increasing physical activity should not focus exclusively on infrastructure development but should also consider psychosocial factors that support autonomy, competence, and relatedness. Programs designed to strengthen social engagement, encourage active lifestyles, and create supportive environments may be more effective in promoting long-term physical activity participation than facility provision alone.

The practical implications of this study suggest that physical activity promotion strategies should be tailored to the specific characteristics of different communities. Interventions designed for urban populations should focus on reducing sedentary behavior, encouraging active transportation, and integrating physical activity into daily routines despite time constraints. In contrast, interventions targeting rural populations should emphasize maintaining and strengthening community-based physical activities that are already

embedded within local lifestyles. Context-specific approaches are therefore essential for promoting sustainable physical activity participation and improving public health outcomes across diverse population groups

This study has several limitations that should be considered when interpreting the findings. First, the research employed a cross-sectional design, which limits the ability to establish causal relationships between lifestyle characteristics and physical activity motivation. Second, data were collected using self-report questionnaires, which may be subject to recall bias and social desirability bias. Third, the study was conducted in only one urban area (PIK 2 Jakarta) and one rural area (Cirebon Regency), which may limit the generalizability of the findings to other regions of Indonesia with different sociocultural characteristics. Fourth, the sample consisted exclusively of adults aged 18–35 years; therefore, the results may not be applicable to older adults or adolescents. Future studies are encouraged to include larger and more diverse samples, utilize objective measures of physical activity such as accelerometers, and employ longitudinal designs to better understand causal mechanisms underlying physical activity motivation across different residential environments.

D. Conclusion

This study found significant differences in lifestyle patterns and physical activity motivation between urban and rural adults. Rural residents demonstrated more active lifestyles and significantly higher physical activity motivation than urban residents, indicating that residential environment plays an important role in shaping health-related behaviors. The statistical analysis confirmed a significant difference in physical activity motivation between the two groups ($t(98) = -4.596, p < 0.001$) with a large practical effect (Cohen's $d = 0.92$), suggesting that the observed differences are both statistically and practically meaningful.

The study contributes to the existing literature by providing empirical evidence on the relationship between lifestyle and physical activity motivation among urban and rural adults in Indonesia. Furthermore, this research extends previous studies by examining both intrinsic and extrinsic dimensions of motivation within different residential environments, thereby enriching the understanding of environmental influences on physical activity behavior.

From a practical perspective, the findings highlight the importance of developing context-specific physical activity promotion programs that consider environmental, social, and lifestyle characteristics. Future studies are recommended to investigate the influence of socioeconomic status, education level, and environmental support on physical activity motivation using longitudinal designs. Such research would provide a deeper understanding of the factors influencing physical activity motivation and strengthen causal explanations across different population groups.

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F. Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article. The research was conducted independently without any financial, commercial, or personal relationships that could have influenced the study design, data collection, data analysis, interpretation of results, or the preparation of the manuscript. Furthermore, the authors affirm that all findings presented in this study are reported objectively and transparently in accordance with ethical research standards

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