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Active Lifestyle, Physical Fitness, and Teacher Charakter among Elementary and Junior High School Teachers in Pasuruan

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Abstract:
This study examined active lifestyle, physical fitness, and teacher character among elementary and junior high school teachers in Pasuruan. Teachers require adequate physical condition and positive character to perform effectively and serve as role models. A quantitative descriptive-comparative design was applied with 150 teachers. Active lifestyle was assessed using the International Physical Activity Questionnaire (IPAQ), physical fitness through a 2,400-meter run or walk test, and teacher character via a validated character scale. Data were analyzed with descriptive statistics and one-sample t-tests in Jamovi. Results indicated that teachers' active lifestyle exceeded the reference standard (M = 972 MET-minutes/week), while physical fitness remained below the expected standard (M = 17.4). Teacher character scored very high (M = 39.1). Although teachers demonstrated sufficient daily physical activity and strong character, structured exercise is still needed to improve fitness levels. Schools and education authorities are encouraged to support regular fitness programs that enhance teachers' health, work motivation, and instructional quality.

Introduction (مقدمة)

The twenty-first century has witnessed a marked decline in daily physical movement across populations worldwide. The World Health Organization (2020) reported that more than 80 percent of adolescents and roughly one-third of adults fail to meet the minimum recommended levels of physical activity. Sedentary work patterns, digitalized professional duties, and motorized transport have reduced energy expenditure and elevated the risk of non-communicable diseases such as type-2 diabetes, cardiovascular disorders, and obesity. These physical consequences also affect cognitive regulation, emotional stability, and psychological resilience (Biddle & Asare, 2011; Singh et al., 2012).

In Indonesia, national health surveys have documented similar trends. Riskesdas (2018) data indicated that approximately 33.5 percent of citizens aged ten years and older exhibit sedentary behavior (Kementerian Kesehatan Republik Indonesia, 2019). Within educational institutions, teachers—who form the backbone of knowledge transfer—frequently experience limited opportunities for structured physical activity. Heavy administrative workloads, dense curricula, and certification demands leave little time for regular exercise. Consequently, many educators display low levels of physical fitness, which in turn may reduce teaching energy, increase sick leave, and impair emotional balance when managing classroom dynamics (Haskell et al., 2007; Sallis et al., 2012).

Physical education literature consistently underscores the multidimensional contribution of physical activity to human development. Williams (1964) conceptualized physical education as education through the physical, while Bucher and Wuest (1999) emphasized its role in fostering lifelong active habits. Whitehead (2010) advanced the notion of physical literacy, highlighting motivation, confidence, and competence as essential for sustained participation. Bailey (2006) further demonstrated that quality physical education yields benefits across physical, affective, social, and cognitive domains. Graham, Holt/Hale, and Parker (2007) likewise positioned physical education as a vehicle for developing knowledge, skills, and positive attitudes toward lifelong activity. Collectively, these perspectives position active lifestyle and fitness not merely as health indicators but as foundational elements supporting professional character and instructional effectiveness.

Beyond physical capacity, teacher character constitutes a critical professional attribute. Lickona (1991) and subsequent scholarship on character education stress integrity, responsibility, empathy, and discipline as core dimensions that shape student learning climates. Empirical studies have linked teacher well-being and physical condition to the consistent display of these character traits (Darling-Hammond, 2000; Pianta et al., 2012). When teachers maintain adequate fitness, neurochemical processes involving endorphins, dopamine, and serotonin support emotional regulation and prosocial behavior, thereby reinforcing positive character manifestations in school settings. Ryan and Deci (2000, 2021) further note that autonomous motivation and psychological well-being—often enhanced by regular physical activity—underpin sustained professional engagement.

Despite growing recognition of these interconnections, research examining active lifestyle, physical fitness, and teacher character simultaneously—particularly among elementary and junior high school teachers in suburban Indonesian contexts such as Pasuruan—remains limited. Most prior investigations have treated these variables separately or have aggregated teachers without regard to instructional level (Rohani, 2023). Elementary teachers interact with children in the concrete-operational stage who require high motor engagement and visual modeling, whereas junior high teachers face adolescents experiencing formal-operational shifts and emotional turbulence (Piaget, 1972; Eccles & Roeser, 2011). These differing demands may produce distinct profiles of activity, fitness, and character expression.

The present study therefore sought to determine whether the active lifestyle, physical fitness, and character of elementary and junior high school teachers in Pasuruan meet established "good" criteria. By employing a diagnostic quantitative approach, the research aims to provide evidence that can inform school-based fitness initiatives and broader education policy supporting teacher health and professionalism. The findings are expected to enrich the scientific discourse on teacher well-being while offering practical recommendations for educational stakeholders in Pasuruan and comparable regions.

Method (منهج)

This investigation employed a quantitative approach with a descriptive-comparative design. The design allowed simultaneous description of variable levels against predetermined standards and examination of potential differences across instructional levels. The overall framework followed recommendations for educational field research outlined by Creswell and Creswell (2018) and Sugiyono (2019).

Participants. The sample comprised 150 teachers drawn from elementary (SD) and junior high (SMP) schools across Pasuruan Regency and City. Participants were selected through stratified sampling to ensure representation of both school levels and gender. Inclusion criteria required active teaching status and willingness to complete the full set of instruments and field tests. Of the total sample, approximately half taught at the elementary level and half at the junior high level, with a balanced distribution of male and female respondents.

Instruments. Three instruments were utilized. First, active lifestyle was measured with the short form of the International Physical Activity Questionnaire (IPAQ). Respondents reported frequency and duration of vigorous, moderate, and walking activities over the preceding seven days; scores were converted into MET-minutes per week following IPAQ scoring guidelines (Craig et al., 2003; International Physical Activity Questionnaire Research Committee, 2005). Categories of low, moderate, and high activity were derived according to standard cut-points. Second, physical fitness was assessed via a 2,400-meter run or walk test. Completion time was recorded and converted into a categorical fitness score (ranging from 10 to 25 points) according to age- and gender-adjusted norms commonly applied in Indonesian school settings. Higher scores indicated better cardiorespiratory endurance. Third, teacher character was evaluated with a self-report scale covering five dimensions: integrity, discipline, responsibility, empathy, and patience. Each dimension was represented by several Likert-type items; total scores were summed and classified into categories ranging from "cukup" (adequate) to "sangat baik" (very good). The scale had undergone prior content validation by experts in physical education and educational psychology and demonstrated acceptable internal consistency in pilot testing.

Procedures and Analysis. Data collection occurred in coordinated sessions at participating schools after formal permission from school principals and district education offices. After informed consent, teachers completed the IPAQ and character scale under researcher supervision to ensure completeness and clarity of responses. The 2,400-meter test was administered on school tracks or equivalent flat courses under standardized conditions, with rest periods and safety monitoring provided. Descriptive statistics (means, standard deviations, and frequency distributions) summarized the three variables. One-sample t-tests compared observed means against predetermined reference values representing the lower bound of the "good" category. Analyses were performed with Jamovi software (The jamovi project, 2025). Statistical significance was set at $\alpha = .05$.

Result (نتائج)

Descriptive outcomes for the three focal variables are presented in Table 1. The mean active-lifestyle score reached 972 MET-minutes/week (SD = 512.4), placing the sample above the moderate-activity threshold of 600 MET-minutes/week commonly cited in IPAQ guidelines. In contrast, the mean physical-fitness score of 17.4 (SD = 5.8) fell below the reference value of 20 associated with the "good" category. Teacher character yielded a mean of 39.1 (SD = 6.2), substantially exceeding the criterion of 30 for the "good" classification.

Table 1. Descriptive Statistics of Active Lifestyle, Physical Fitness, and Teacher Character (N = 150)

Variable	Mean	SD	Reference	Interpretation
Active Lifestyle (MET-min/week)	972.0	512.4	600	Above standard
Physical Fitness (score)	17.4	5.8	20	Below standard
Teacher Character (score)	39.1	6.2	30	Above standard

One-sample t-test results confirmed these patterns statistically (Table 2). Active lifestyle differed significantly and positively from the reference value, $t(149) = 8.91$, $p < .001$. Physical fitness differed significantly and negatively from its reference, $t(149) = -5.47$, $p < .001$. Teacher character likewise exceeded its reference by a large margin, $t(149) = 17.96$, $p < .001$. Effect sizes indicated medium-to-large practical significance for all three comparisons.

Table 2. One-Sample t-Test Results against Reference Standards

Variable	t	df	p	Mean Diff.	Decision
Active Lifestyle	8.91	149	< .001	+372.0	Significant (above)
Physical Fitness	–5.47	149	< .001	–2.6	Significant (below)
Teacher Character	17.96	149	< .001	+9.1	Significant (above)

Frequency distributions further illustrated the pattern (Table 3). Roughly one-third of teachers fell into the low-activity IPAQ category, while the remainder occupied the moderate or high categories, producing the elevated group mean. Fitness scores clustered predominantly in the "kurang" (poor) and "sedang" (fair) ranges, with only a minority reaching "baik" or "baik sekali." Character scores, conversely, concentrated in the "baik" and "sangat baik" categories, confirming the uniformly high professional character profile across the sample.

Table 3. Frequency Distribution of Categories for Each Variable (N = 150)

Variable / Category	n	%	Notes
Active Lifestyle – Low	48	32.0	Below 600 MET-min/week
Active Lifestyle – Moderate	62	41.3	600–1500 MET-min/week
Active Lifestyle – High	40	26.7	Above 1500 MET-min/week
Fitness – Kurang (Poor)	38	25.3	Score 10
Fitness – Sedang (Fair)	45	30.0	Score 15
Fitness – Baik (Good)	37	24.7	Score 20
Fitness – Baik Sekali (Very Good)	30	20.0	Score 25
Character – Cukup / Baik	52	34.7	Lower range of positive scores

Character – Sangat Baik	98	65.3	Highest character category

Discussion (مناقشة)

The elevated active-lifestyle scores indicate that teachers in Pasuruan accumulate substantial physical movement through occupational and daily tasks. Walking between classrooms, standing for extended periods, and commuting contribute measurable MET-minutes. Nevertheless, the concurrently low fitness scores reveal that this accumulated activity lacks the intensity, duration, or systematic progression required to enhance cardiorespiratory endurance and muscular capacity. As Caspersen et al. (1985) and Corbin and Le Masurier (2014) have emphasized, physical activity and physical fitness are related yet distinct constructs; only purposeful exercise reliably elevates fitness components.

These findings align with earlier observations that Indonesian teachers often display suboptimal fitness despite moderate occupational activity (Rohani, 2023). The discrepancy underscores the need for structured aerobic and resistance programs rather than reliance on incidental movement. Regular moderate-to-vigorous exercise of at least 150 minutes per week, as recommended by WHO (2020) and Haskell et al. (2007), remains essential for raising the fitness scores observed here. McKenzie and Lounsbery (2009) similarly argued that school environments can serve as strategic settings for promoting sustained physical activity among both students and staff.

In contrast, the very high character scores suggest that professional formation and ethical expectations within the teaching profession are functioning effectively. Teachers appear to internalize and enact integrity, responsibility, and empathy irrespective of their current fitness levels. This result resonates with character-education frameworks (Lickona, 1991) and with studies linking teacher professionalism to positive relational climates (Pianta et al., 2012; Darling-Hammond, 2017). While physical fitness may facilitate emotional regulation that supports character expression, the present data indicate that character remains robust even when fitness is suboptimal—an encouraging finding for the teaching force in Pasuruan. OECD (2019, 2021) reports on teacher quality further highlight that professional commitment and relational competence are among the strongest predictors of effective teaching, independent of physical capacity.

From a theoretical standpoint, the results support the view that teacher effectiveness rests on a constellation of physical, psychological, and moral capacities. Physical literacy (Whitehead, 2010) and self-determination theory (Ryan & Deci, 2000, 2021) together suggest that when teachers experience competence and autonomy in managing their health, both well-being and professional engagement improve. Conversely, chronic under-fitness may eventually erode the energy reserves required for consistent character display under workplace stress. Therefore, interventions that raise fitness while preserving the already strong character base are likely to yield synergistic benefits for instructional quality and student outcomes.

Taken together, the findings imply that quality teaching depends on integrated support for physical and moral capacities. Improving fitness through school-supported exercise initiatives can further enhance energy, reduce absenteeism, and reinforce the already strong character profile. Education authorities are therefore advised to integrate periodic fitness assessments and accessible activity programs into teacher professional-development frameworks. Such programs need not be elaborate; regular group aerobic sessions, walking clubs, or short resistance circuits conducted on school premises can produce meaningful gains when sustained over time.

Conclusion (خاتمة)

Active lifestyle among elementary and junior high school teachers in Pasuruan meets and exceeds the moderate-activity standard, whereas physical fitness falls short of the "good" criterion. Teacher character, however, registers at a very high level. These outcomes highlight the necessity of converting incidental activity into deliberate, progressive exercise. Schools and district education offices should establish regular fitness programs so that teachers' health, work engagement, and instructional effectiveness continue to improve. Future research may usefully incorporate additional variables such as body-mass index, sleep quality, perceived stress, and years of teaching experience to refine understanding of the pathways linking physical condition and professional character. Comparative studies across different Indonesian regions would also strengthen the generalizability of the present findings.

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