

Assessment on Relevance, Fairness, Performance, and Challenges in the Implementation of Tactical Fitness Test

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Abstract

This study examined the effectiveness of the Tactical Fitness Test (TFT) among Philippine National Police – Special Action Force (PNP-SAF) personnel by analyzing socio-demographic characteristics, perceptions of relevance and fairness, performance outcomes, experienced challenges, and relationships between demographic variables and performance. Guided by Self-Determination Theory, Functional Movement Theory, and an Input–Process–Output framework, the study employed a quantitative descriptive-correlational design. Data were collected from 310 respondents selected through stratified random sampling using a structured, self-administered questionnaire with high reliability (Cronbach's $\alpha = 0.892$). Findings showed that respondents generally perceived the TFT as relevant, fairly designed, and aligned with operational duties, with positive views on training adequacy and policy communication. Self-reported performance across muscular strength, cardiovascular endurance, grip and core strength, and agility and coordination was rated as good, with agility emerging as the strongest domain and strength-related tasks showing relatively lower consistency. Respondents also identified challenges related to physical demands, limited training resources, psychological pressure, and environmental conditions. Significant relationships were observed between selected demographic variables and performance outcomes, indicating variability in readiness across personnel groups. The study concludes that while the TFT is a useful assessment tool, improvements in policy clarity, fairness, technical training, and implementation support are necessary. It recommends strengthening policy communication, enhancing training programs, improving testing conditions, and incorporating objective performance measures. This study aligns with SDG 3 (Good Health and Well-Being), SDG 8 (Decent Work and Economic Growth), and SDG 16 (Peace, Justice, and Strong Institutions) by promoting physical readiness, safe working conditions, and effective law enforcement systems. Its sustainability impact lies in supporting institutional, socio-economic, and community sustainability through improved operational performance, workforce health, and public safety outcomes.

Keywords: Agility and Coordination, Demographic Variables, Performance Outcomes, Tactical Fitness Test, Training Adequacy, Workplace Challenges

1. Introduction

Law enforcement and special operations require personnel to maintain high levels of physical readiness due to exposure to high-risk, time-sensitive, and physically demanding missions (Dössegger et al., 2025; NATO, 2024). Tactical fitness assessments, such as the Tactical Fitness Test (TFT), are therefore essential tools for evaluating operational preparedness. However, challenges related to fairness, relevance, and implementation persist, particularly within the Philippine National Police – Special Action Force (PNP-SAF). This study examines the effectiveness of the TFT by analyzing personnel perceptions, performance outcomes, implementation challenges, and the influence of socio-demographic factors, with the aim of improving tactical fitness evaluation systems and operational readiness.

1.1 Background of the Tactical Fitness Test among PNP-SAF Personnel

Operational effectiveness in law enforcement depends heavily on physical fitness, particularly in high-risk functions such as counterterrorism and hostage rescue (Dössegger et al., 2025; NATO, 2024). Globally, tactical fitness assessments have evolved to reflect real operational demands. The U.S. Army Combat Fitness Test emphasizes strength, stamina, and mobility aligned with modern warfare (Hicks et al., 2025), while programs in Europe and Canada highlight performance improvement, injury prevention, and long-term health (Rasteiro et al., 2023). Asian countries have similarly adopted role-specific fitness systems. South Korea incorporates simulated high-stress pursuit conditions (Zulfiqar et al., 2021), China emphasizes functional movement (Huang & Liu, 2022), and Singapore integrates tactical drills into assessments (Orr et al., 2021). In the Philippines, the PNP-SAF utilizes the Tactical Fitness Test to measure strength, endurance, and agility in operational contexts (Elgario, 2024). Despite its relevance, implementation issues exist, including inconsistent scoring, unequal access to training resources, psychological barriers such as test anxiety, and injury risks during testing (Elgario,

2024). These concerns raise questions about fairness, inclusivity, and alignment with actual job demands, emphasizing the need for evaluation and refinement of the TFT.

1.2 Themes and Insights from Tactical Fitness Testing, Performance, and Implementation Literature

Literature consistently shows that tactical fitness tests are most effective when aligned with occupational demands. Physical attributes such as strength, endurance, agility, and aerobic capacity are strongly associated with job performance (Orr et al., 2021; Massuça, Santos, and Monteiro, 2023). Validated fitness protocols demonstrate high reliability and predictive value for operational tasks (Freitas, Ramos, and Massuça, 2025; Lockie et al., 2024). Fitness testing also plays a role in injury prediction and prevention. Aerobic capacity and functional strength tests are strong predictors of injury risk and performance outcomes (Orr et al. 2021; Johnson et al., 2021; Martinez et al., 2023). However, no universal standard exists due to varying job demands, requiring localized adaptation and validation (Massuça et al., 2023; Mantilla-Rodríguez et al., 2021). Implementation challenges include time constraints, inadequate training design, limited resources, and lack of institutional support (Police1, 2022; Dawes et al., 2023; MDPI, 2023; Lockie, Dawes, and Orr, 2022). Psychological and health-related barriers, including low motivation, fatigue, and injuries, further hinder program effectiveness (Wagner, Harper, Rockwell, & Wells, 2023). Environmental factors such as climate and infrastructure limitations also affect performance and training consistency (Environmental Stress in Military Settings, 2021; Total Military Insight, 2023). Performance studies confirm that tactical fitness tests can track readiness, predict operational capability, and reflect physiological stress (Poirier et al., 2023; Shen et al., 2023; Sutton et al., 2024; Gonzales et al., 2024; McCarty et al., 2022). However, inconsistencies in predictive strength across fitness components and limited diversity in study populations highlight the need for further research (Poirier et al., 2023; Tonchaiyaphum, 2025).

1.3 Local, National, and Global Context of Tactical Fitness Standards and Readiness

Globally, tactical fitness standards have shifted toward task-specific and evidence-based approaches. The U.S. Army's adoption of the Army Fitness Test reflects efforts to align assessments with operational demands while reducing injury risks (Army.mil, 2025). Similar reforms emphasize functional performance, predictive validity, and integration with health and wellness systems (RAND, 2025; Health.mil, 2024). Debates on sex-neutral and role-based standards highlight the need to balance fairness, inclusivity, and operational requirements (The Guardian; AP News, 2025; Towns, 2024). National police organizations have also implemented structured fitness programs to enhance readiness and reduce health risks (Police1; PNP Pulisteniks, 2025; PNP, 2025; Inquirer, 2025). In the Philippines, initiatives such as "Pulisteniks" demonstrate efforts to institutionalize physical fitness within law enforcement. However, regional gaps remain, particularly in Southeast Asia, where localized validation and context-specific studies are limited (Towns, 2024). These gaps underscore the importance of examining the TFT within the PNP-SAF context.

1.4 Theoretical and Conceptual Basis of Tactical Fitness Assessment

This study is grounded in Self-Determination Theory (SDT) and Functional Movement Theory (FMT). SDT explains motivation through autonomy, competence, and relatedness, suggesting that perceived fairness, relevance, and support enhance engagement and performance in fitness assessments (Deci and Ryan, 1985; Cherry, 2024). FMT emphasizes that physical assessments should reflect real-life or occupational movements, ensuring integration of strength, endurance, flexibility, and coordination (Whittaker, 2025; Wang et al., 2025). This supports the design of tactical fitness tests that simulate operational tasks. The study adopts an Input–Process–Output (IPO) framework, where inputs include socio-demographic factors, perceptions, challenges, and performance metrics; processes involve data collection and analysis; and outputs focus on recommendations to improve TFT implementation.

1.5 Research Gaps and Rationale in Evaluating TFT Performance and Fairness

Despite the established importance of tactical fitness testing, gaps remain in assessing whether existing tests fully capture operational readiness. There is limited evidence on how socio-demographic factors influence TFT performance and whether current scoring systems ensure fairness and inclusivity (Elgario, 2024). Additionally, disparities in training resources, inconsistencies in test implementation, and concerns about relevance to actual duties indicate the need for systematic evaluation. Existing studies often focus on recruits rather than active personnel, limiting applicability to experienced officers. This study addresses these gaps by examining perceptions of relevance and fairness, identifying implementation challenges, and analyzing the relationship between socio-demographic factors and performance outcomes. The findings aim to inform improvements in tactical fitness systems within PNP-SAF.

1.6 Alignment with Relevant Sustainable Development Goals (SDGs)

This study aligns with several Sustainable Development Goals, particularly SDG 3 – Good Health and Well-Being, SDG 8 – Decent Work and Economic Growth, and SDG 16 – Peace, Justice, and Strong Institutions. By examining and improving the Tactical Fitness Test (TFT), the research contributes to promoting the physical health, safety, and overall well-being of law enforcement personnel, which is essential in high-risk occupations. Enhancing fitness standards and addressing implementation challenges supports the creation of safer and more productive working environments, directly

contributing to decent work conditions. Furthermore, strengthening the physical readiness and effectiveness of the Philippine National Police – Special Action Force (PNP-SAF) enhances institutional performance and public trust, thereby supporting the development of strong, accountable, and resilient institutions.

1.7 Importance of the Study to Multidisciplinary Sustainability

This study contributes to multidisciplinary sustainability by addressing key aspects of public health, socio-economic stability, institutional effectiveness, and community well-being. Improving the Tactical Fitness Test promotes public health sustainability by reducing injury risks and enhancing the physical fitness of personnel. It also supports socio-economic sustainability by improving workforce efficiency and operational performance in law enforcement. From an institutional perspective, the study provides evidence-based insights that can guide policy development, ensuring fair and effective evaluation systems that strengthen organizational sustainability. Additionally, by enhancing the preparedness and performance of law enforcement personnel, the study indirectly contributes to community sustainability through improved public safety, service delivery, and trust in protective institutions.

2. Material and methods

2.1 Research Design

The study employed a descriptive correlational research design, a quantitative approach used to describe existing conditions and determine relationships among variables without manipulation (Devi et al., 2022). This design integrates descriptive analysis, which provides a detailed account of respondents' characteristics, perceptions, and performance, and correlational analysis, which examines associations between selected variables (Bhandari, 2021). It is appropriate for identifying patterns and relationships in real-world settings where experimental control is not feasible. In this study, the descriptive component focused on socio-demographic profiles, perceptions of the TFT, and experienced challenges, while the correlational component examined the relationship between demographic factors and TFT performance outcomes.

2.2 Locale of the Study

The study was conducted within the Philippine National Police – Special Action Force (PNP-SAF), specifically involving personnel from the Headquarters and selected Line Units. These locations were chosen as they represent operational environments where the Tactical Fitness Test is implemented and where personnel directly engage in maintaining physical readiness.

2.3 Respondents of the Study

The respondents consisted of active PNP-SAF personnel assigned to both Headquarters and Line Units who had undergone the Tactical Fitness Test. These individuals were directly involved in operational activities and physical fitness programs, making them suitable sources of data regarding the relevance, fairness, and challenges of the TFT. Their firsthand experiences provided essential insights into evaluating and improving the organization's fitness assessment system.

2.4 Sample and Sampling Procedure

The study population comprised approximately 4,000 PNP-SAF personnel. Using Raosoft's sample size calculator with a 5% margin of error and 95% confidence level, a sample size of 310 respondents was determined. Stratified random sampling was employed to ensure representative coverage across Headquarters and Line Units. The population was divided into strata based on organizational assignment, and samples were proportionally allocated according to the size of each group. Within each stratum, respondents were randomly selected from updated personnel lists to minimize bias. Provisions were made to address nonresponse through replacement sampling within the same stratum. Inclusion criteria required participants to be active personnel who had undergone the TFT and consented to participate. This approach ensured representativeness and generalizability of the findings.

2.5 Research Instrument

The study utilized a structured, self-administered survey questionnaire designed to collect quantitative data aligned with the research objectives. The instrument followed a 4-point Likert scale ranging from Strongly Agree to Strongly Disagree to ensure objective measurement. It consisted of four sections: socio-demographic profile, perceptions of the TFT, performance indicators, and experienced challenges. The first section collected demographic data such as age, gender, rank, designation, office/unit, and years in service to analyze potential influences on perceptions and performance. The second section assessed perceptions of relevance and fairness through indicators such as operational alignment, test design, training adequacy, and organizational communication. The third section measured self-reported performance based on TFT components, including muscular strength, cardiovascular endurance, grip and core strength, and agility and coordination. The fourth section identified challenges categorized into physical demands, training barriers, psychological factors, and environmental conditions. This structure ensured comprehensive coverage of variables related to the Tactical Fitness Test and supported systematic data analysis.

2.6 Data Gathering Procedure

Data collection began with securing approval from relevant PNP authorities and unit heads to ensure compliance with institutional and ethical standards. Eligible participants were identified with the assistance of designated personnel, and an orientation was conducted to explain the study's purpose, voluntary participation, and confidentiality measures. Informed consent was obtained prior to participation. The survey questionnaire was distributed in both printed and digital formats to ensure accessibility. Respondents were given sufficient time to complete the instrument, and completed questionnaires were collected securely to maintain confidentiality. Retrieved data were checked for completeness and accuracy, and only valid responses were included. The data were then encoded and prepared for statistical analysis to address the research objectives.

2.7 Data Analysis Techniques

Data were analyzed using SPSS version 26. Descriptive statistics, including frequency distributions, percentages, means, and standard deviations, were used to summarize socio-demographic profiles, perceptions, challenges, and performance indicators. Composite mean scores were calculated to evaluate grouped variables related to TFT relevance, fairness, and challenges. Reliability testing using Cronbach's alpha ensured internal consistency, with a threshold of 0.70 considered acceptable. Inferential statistics were applied to examine differences and relationships among variables. Analysis of Variance (ANOVA) and t-tests were used to identify significant differences across demographic groups. Spearman's rho was employed to determine relationships between variables, while multiple linear regression identified predictors influencing perceptions, challenges, and performance. Cross-tabulation and chi-square tests were used for categorical data analysis. All statistical tests were conducted at a 0.05 level of significance.

2.8 Ethical Considerations

The study adhered to strict ethical standards to protect participants' rights and privacy. Approval was obtained from relevant authorities, including institutional endorsement and permission from the PNP-SAF leadership. Participants were informed of the study's purpose and procedures, and voluntary participation was emphasized, with the option to withdraw at any time. Confidentiality was maintained by ensuring anonymity and excluding identifying information from the questionnaire. Data were securely stored and used solely for academic purposes, in compliance with the Data Privacy Act of 2012 (Republic Act No. 10173). Ethical principles such as voluntary participation, confidentiality, non-maleficence, and data integrity were strictly observed throughout the research process.

3. Results and Discussion

3.1 Socio-Demographic Profile of Respondents

3.1.1 Gender Distribution of Respondents

The results show that the sample is predominantly male, with 89.4% male and 10.6% female respondents. This indicates a strongly male-dominated participant pool, suggesting that overall findings largely reflect male perspectives. This imbalance implies that interpretations of TFT perceptions and performance are heavily influenced by male experiences, while female representation remains limited. Research indicates that sex differences in fitness outcomes and injury profiles are common in tactical settings, and small subgroup sizes can limit statistical reliability for comparisons (Dawes et al., 2023). Thus, gender-based interpretations should be approached cautiously, emphasizing fairness and occupational relevance (Orr et al., 2021).

3.1.2 Age Distribution of Respondents

The majority of respondents fall within the 31–35 age group (46.1%), followed by 26–30 (23.5%) and 36–40 (20.0%), with smaller proportions in older age brackets. This concentration suggests that findings are primarily reflective of early to mid-career personnel who are actively engaged in physically demanding roles. Fitness research indicates that performance and perceptions vary across career stages, with mid-career personnel often demonstrating stable readiness profiles (Lockie et al., 2022; Poirier et al., 2023). Older groups, though smaller, highlight the need for programs supporting long-term fitness sustainability (Dössegger et al., 2025).

3.1.3 Rank Distribution of Respondents

Most respondents belong to non-commissioned ranks, particularly Police Corporals (56.5%) and Patrolman/Patrolwoman (20.3%), with minimal representation from higher-ranking officers. This distribution suggests that results primarily reflect personnel directly engaged in operational duties. Literature emphasizes that frontline personnel provide critical insights into tactical fitness relevance since their roles involve consistent physical demands (Elgario, 2024). However, limited representation of higher ranks may restrict insights on policy-level perspectives (Towns, 2024).

3.1.4 Designation Distribution of Respondents

Respondents are largely concentrated in operational roles, particularly operatives (41.6%), with representation from administrative, intelligence, and support functions. This distribution indicates that the dataset reflects diverse functional roles, though heavily weighted toward frontline operations. Tactical fitness literature highlights that readiness must apply across varying job functions, reinforcing the need for adaptable and inclusive testing systems (Orr et al., 2021; Zulfiqar et al., 2021).

3.1.5 Years in Service Distribution

Most respondents have 6–10 years of service (57.1%), followed by 11–15 years (22.6%), with fewer in early or late career stages. This pattern suggests that findings reflect personnel with substantial operational experience. Research indicates that sustained exposure to occupational demands influences fitness maintenance and readiness (Lockie et al., 2022; Dawes et al., 2023). Limited representation of long-tenured personnel highlights potential gaps in understanding career longevity factors.

3.1.6 Office/Unit Distribution

Respondents are distributed across multiple units, with notable representation from 2SAB, HSAF, and FSB, alongside some undisclosed affiliations. This distribution reflects organizational diversity, suggesting that findings capture varied operational environments. Literature supports that unit-specific training culture and exposure influence fitness outcomes and readiness (Gonzales et al., 2024; Dössegger et al., 2025).

3.2 Perceptions of the Tactical Fitness Test

3.2.1 Alignment with Operational Duties

Respondents generally agree that the TFT reflects operational demands, with an overall mean of 3.31, indicating perceived relevance to real-world tasks. This suggests that personnel view the TFT as job-related rather than generic. Perceived relevance is critical for acceptance and effectiveness of fitness assessments, as alignment with occupational tasks enhances legitimacy and engagement (Orr et al., 2021; Towns, 2024).

3.2.2 Test Design and Components

Respondents consistently agree (mean = 3.29) that the TFT design is logical, balanced, and appropriate for evaluating tactical fitness. This indicates that the test structure is perceived as comprehensive and multidimensional. Research supports that multi-component fitness tests provide more accurate assessments of readiness compared to single measures (Zulfiqar et al., 2021; Shen et al., 2023).

3.2.3 Training Adequacy

Respondents report agreement (mean = 3.31) that training adequately prepares them for the TFT and aligns with its requirements. This suggests that training systems are generally effective in supporting readiness and confidence. Literature emphasizes that alignment between training and assessment improves both performance outcomes and perceived competence (Martinez et al., 2023; Lockie et al., 2024).

3.2.4 Organizational Policy and Communication

Respondents express positive perceptions of policy clarity and communication, indicating consistent understanding of TFT objectives and procedures. This reflects effective governance and communication structures. Studies show that clear policies and consistent communication enhance fairness perception and program acceptance in tactical environments (Orr et al., 2021; Shen et al., 2023).

3.3 Performance Levels in Tactical Fitness Test

3.3.1 Muscular Strength Performance

Respondents report good performance (mean = 3.18) in muscular strength, particularly in maintaining consistent lifting ability. This indicates adequate strength capacity, though variability suggests differences in technique and fatigue management. Research highlights that proper lifting mechanics and repeated strength output are critical for operational safety and performance (Hicks et al., 2025; Dössegger et al., 2025).

3.3.2 Cardiovascular Endurance Performance

Cardiovascular endurance is rated as good (mean = 3.19), with respondents able to sustain effort during circuit-based activities. This reflects sufficient aerobic capacity for task demands. Studies confirm that endurance performance is a key predictor of operational capability and sustained physical activity (Poirier et al., 2023; Campbell et al., 2024).

3.3.3 Grip and Core Strength Performance

Respondents demonstrate good performance (mean = 3.17) in grip and core strength during repetitive lifting tasks. This suggests adequate functional strength, though variability indicates room for improvement in endurance and control.

Research shows that grip and core strength are essential for repeated occupational tasks and injury prevention (Orr et al., 2021; Mantilla Rodríguez et al., 2021).

3.3.4 Agility and Coordination Performance

Agility and coordination performance is rated good (mean = 3.27), with strong ability in multi-phase movement tasks. This indicates that respondents are capable of performing complex tactical movements. Literature emphasizes that agility and coordination are essential for real-world operational tasks involving rapid movement and load handling (Zulfikar et al., 2021; Davis & Thompson, 2022).

3.4 Challenges Affecting Tactical Fitness Test Performance

3.4.1 Physical Demands and Fatigue

Respondents agree that physical demands (mean = 3.29) present challenges, particularly in endurance, strength, and fatigue management. This indicates that the TFT effectively reflects real operational stress. Research confirms that multi-component tests increase physiological strain and reveal performance limitations (McCarty et al., 2022; Zulfikar et al., 2021).

3.4.2 Training and Preparation Barriers

Respondents identify barriers such as limited time, resources, and structured programs (mean = 3.28). This suggests that readiness is influenced by external constraints rather than motivation alone. Literature highlights that organizational factors such as time and facility access significantly impact fitness outcomes (Wagner et al., 2023; Melton et al., 2024).

3.4.3 Psychological Barriers

Respondents report psychological challenges (mean = 3.28), including anxiety, stress, and self-doubt. This indicates that mental readiness is a critical factor in performance. Research shows that stress and perceived competence influence task execution in high-pressure environments (Cherry, 2024; McCarty et al., 2022).

3.4.4 Environmental Factors

Environmental conditions such as weather, space, and distractions are perceived as challenges (mean = 3.27). This highlights the influence of testing conditions on performance. Studies confirm that environmental stressors significantly affect physical and cognitive performance (Environmental Stress in Military Settings, 2021; Orr et al., 2021).

3.5 Relationship Between Demographic Variables and Performance

The results show significant relationships between demographic variables and performance, particularly strong correlations between gender and strength-related performance, and between years of service and agility ($p = 0.992$). These findings suggest that demographic factors influence fitness outcomes, with experience contributing to improved coordination and movement efficiency. Literature supports that occupational exposure enhances task-specific performance, while demographic differences can affect physical capacity (Zulfikar et al., 2021; Shen et al., 2023; Gonzales et al., 2024). However, small sample sizes in correlation analysis require cautious interpretation.

3.6 Reliability of the Research Instrument

The instrument demonstrates high reliability with a Cronbach's alpha of 0.892. This indicates strong internal consistency, suggesting that the questionnaire effectively measures the intended constructs. High reliability supports the validity of findings and aligns with standard thresholds for acceptable measurement consistency in research.

4. Conclusion and Recommendations

The study found that the Tactical Fitness Test is generally perceived as relevant, fair, and aligned with operational demands, particularly among the predominantly male, mid-career, non-commissioned operational personnel who comprised the majority of respondents. Participants reported good performance across all fitness domains, with strengths in agility and coordination but relatively lower consistency in strength-related tasks such as grip, core endurance, and technical execution. While training adequacy was viewed positively, respondents identified challenges related to physical demands, time constraints, access to training resources, psychological pressure, and environmental conditions. Additionally, demographic factors showed associations with performance outcomes, suggesting variability in readiness across personnel groups. Overall, the Tactical Fitness Test is a useful assessment tool, but improvements are needed in policy communication, fairness, technical training, and implementation support to enhance consistency and credibility.

It is recommended that organizational leadership strengthen the policy framework of the Tactical Fitness Test by improving clarity, consistency, and communication to ensure fairness and transparency across all units. Training programs should focus on improving identified weaker areas such as strength technique, repetition control, and grip and core endurance, while maintaining strengths in agility and coordination. Unit commanders should provide more structured and accessible

training opportunities, integrate training into work routines, and ensure proper management of recovery and resources. Test administrators should also improve testing conditions by addressing environmental and procedural concerns to ensure consistent implementation. Furthermore, future assessments should incorporate objective performance measures to complement self-reported data and support more accurate evaluation of personnel readiness.

The study is limited by its reliance on self-reported data, which may not fully reflect actual performance outcomes. The sample is predominantly composed of male, mid-career, non-commissioned personnel, resulting in underrepresentation of female personnel, older age groups, higher-ranking officers, and specialized roles, which limits the generalizability of findings across all personnel categories. Additionally, the study focuses only on selected variables such as socio-demographic factors, perceptions, challenges, and self-reported performance, and does not include other possible influencing factors such as physical health conditions, prior training background, or objective fitness measures.

Compliance with ethical standards

The authors declare no conflict of interest, and this study received no external funding. The research was conducted with the approval of appropriate authorities within the Philippine National Police – Special Action Force, and the participation of respondents is gratefully acknowledged. Participation was voluntary, and informed consent was obtained prior to data collection using non-invasive survey methods. All responses were treated with strict confidentiality, and no identifying information was collected or disclosed in accordance with data privacy regulations.

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