

# GENDER AS MODERATOR BETWEEN HEALTH BEHAVIOUR ON PHYSICAL ACTIVITY AND PSYCHOLOGICAL STATUS AMONG POLICE

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**Abstract.** This study examined the moderating effects of gender and the association between health behaviour (HB), physical activity status (PAS), and psychological status (PS) among police personnel (PP) in Ondo State, Nigeria. The research employed a correlational design. The study employed four instruments: the Rapid Assessment of Physical Activity Questionnaire, the Health Behaviour Questionnaire, the Standardised DASS-21 scale and a self-developed questionnaire for demographic variables. The Cronbach's alpha range was .90 to .932. A proportionate stratified sampling technique was employed to obtain a sample size of 400 police personnel from 20 police divisions in Ondo State, Nigeria. Descriptive statistics (SPSS 22) and Structural Equation Modelling (SmartPLS 4) were employed for data analysis. The final coefficient ranges from 0.95 to 0.96. Two straight pathways have a HB and PAS ( $\beta=0.468$ ,  $p<0.001$ ); and HB and PS ( $\beta=0.396$ ,  $p<0.001$ ). significant impact on the relationships outlined in the study. The moderating effect of gender was not significant in the association between HB and PAS ( $\beta=0.117$ ,  $t=0.890$ ,  $p>0.05$ ), as well as HB and PS ( $\beta=0.14$ ,  $t=0.887$ ,  $p>0.05$ ). The study offered new avenues for investigating physical activity status and psychological health, particularly within the police population. Health behaviour positively predicted PAS and PS. This study suggests that achieving total quality of life requires integrating health behaviour orientations into the training programmes of the Nigeria Police Force.

**Keywords:** *health behaviour, physical activity status, psychological status, police personnel*

## Introduction

The enhancement of officers' health and fitness can be achieved through the establishment of both occupational and general fitness standards, alongside the implementation of suitable health and conditioning procedures (Myers et al., 2019). Regardless of the frequency, PP must consistently be ready to fulfil their obligations (Orr et al., 2016). As employee health deteriorates, there is a notable increase in absenteeism, occupational injuries, workers' compensation claims, and disciplinary actions (Vukovic et al., 2019 Greco and Fishetti, 2018). Engaging in healthy behaviours, maintaining a routine of regular exercise, and adhering to a nutritious diet can help PP sustain or restore their health and fitness, thereby enhancing their job performance (Schilling, 2018). Most research concerning the relationship between

physical activity and law enforcement has focused on the fitness levels of police officers (Schilling et al., 2019). Marins et al. (2019) noted that scholarly inquiry has focused on cardiorespiratory fitness, strength, and muscular endurance, as these factors are critical health indicators required for police officers to perform operational duties, such as foot pursuits and extricating victims from accidents. It was recommended that law enforcement agencies promote fitness programs within their ranks, as officers demonstrated average fitness levels compared to the general population, necessitating greater engagement in physical activity to address perceptions of operational demands (Marins et al., 2019).

Engaging in physical activity can serve as a means of coping for individuals in law enforcement roles. Boyce et al. (2014) conducted a weight loss competition among police officers, resulting in a notable reduction in body weight. Participants collaborated in teams, and the competitive nature of the intervention was suggested to be effective, considering that police culture is fundamentally team-oriented and officers display a propensity for competitiveness. Boyce et al. (2014) provided a detailed examination of the advantages of competition, including certificates, trophies, and monetary prizes, yet they neglected to address the physical activities performed by the competitors. Previous interventions focused on physical activity status have primarily addressed police officers, while strategies aimed at reducing sedentary behaviour have been applied to office-based police staff. Brierley et al. (2022) integrated instructional sessions, team competitions, incentives, reminders, and self-monitoring tools into their intervention, resulting in improved workplace standing, positive affect, and weight loss. Previous research has established a connection between police employment and heightened levels of anticipatory, psychological, and physical stress (Jetelina et al., 2020). Law enforcement officials exhibited hesitance towards engaging in mental health therapy, notwithstanding the widespread occurrence of mental disorders that may be affected by their professional experiences.

Moreover, individuals in law enforcement face a heightened susceptibility to mental health disorders. A research investigation underscores the significance of promoting mental health and implementing initiatives aimed at enhancing the well-being of police personnel while simultaneously reducing the prevalence of mental disorders (Santre, 2024). There is a notable lack of research exploring the relationship between the physical activity levels and health behaviours of police officers in conjunction with their psychological well-being (Oliver et al., 2021). Police personnel who displayed inadequate physical activity and made poor lifestyle choices showed significantly lower levels of well-being compared to their peers who engaged in regular physical activity. This investigation will explore the direct relationship among health behaviours, physical activity, and psychological well-being, while also evaluating the moderating influence of gender. The main objective of this study is to investigate gender as a moderator between Health Behaviour (HB) and physical activity status (PAS) on psychological status (PS) among Police Personnel (PP) in Ondo State, Nigeria. The following research hypotheses were tested in this study:

H1: Health behaviour has a significant relationship with the physical activity status of PP in Ondo State, Nigeria.

H2: Health behaviour has a significant relationship with the psychological status of PP in Ondo State, Nigeria.

H3: Gender moderates the relationship between PP's health behaviour and physical activity status in Ondo State, Nigeria

H4: Gender moderates the relationship between health behaviour and psychological status of PP in Ondo State, Nigeria

## Materials and Methods

This study employed a correlational research design. The correlational study is an empirical research methodology that examines the associations among two or more variables. Research based on correlation is typically categorised as non-experimental, indicating that the researcher does not actively manipulate or control any of the factors being studied. A simple random sample method, utilising a fishbowl without replenishment, was implemented to choose 20 out of the 54 Police Divisions in Ondo State. The stratified proportionate sampling method was employed to select 400 personnel of the NPF as participants in this study.

## Results and Discussion

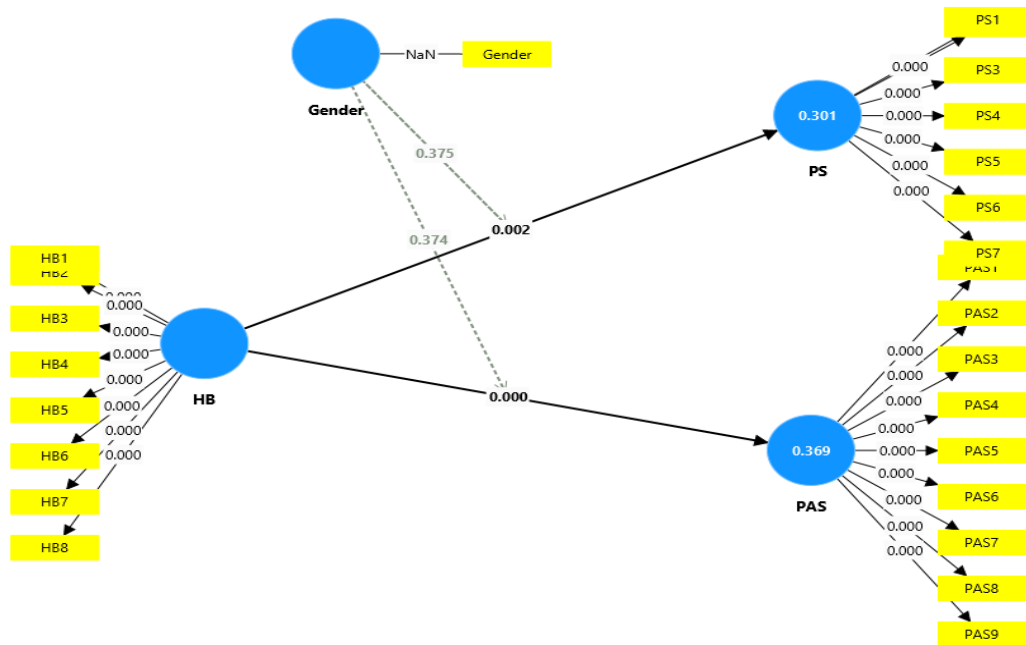
Based on *Table 1*, direct relationships were assessed (*Figure 1*). The first hypothesis examined whether health behaviour is significantly related to physical activity status. However, *Table 1* supports the alternative hypothesis, as health behaviour correlates significantly positively with physical activity status ( $\beta=0.468$ ,  $t=6.032$ ,  $p<0.001$ ). It can be concluded that health behaviour is one of the predictors of physical activity status among PP in Ondo State, Nigeria. The alternate hypothesis is supported. The second hypothesis examined whether health behaviour has a significant relationship with psychological status. However, based on *Table 1*, the alternative hypothesis is supported, as health behaviour has a significant and positive relationship with psychological status ( $\beta=0.396$ ,  $t=4.265$ ,  $p<0.001$ ). It can be concluded that health behaviour is one of the predictors of psychological status among PP in Ondo State, Nigeria. The alternate hypothesis is supported. The third hypothesis examined whether gender moderates the relationship between health behaviour and physical activity status. However, based on *Table 2*, the alternate hypothesis is rejected since gender does not significantly moderate the relationship between health behaviour and physical activity status ( $\beta=0.117$ ,  $t=0.890$ ,  $p>0.05$ ). It can be concluded that there is a non-significant moderating role of gender on the relationship between health behaviour and physical activity status among PP in Ondo State, Nigeria. The alternate hypothesis is rejected. The fourth hypothesis examined whether gender moderates the relationship between health behaviour and psychological status. However, based on *Table 1*, the alternate hypothesis is rejected since gender does not significantly moderate the relationship between health behaviour and psychological status ( $\beta=0.14$ ,  $t=0.887$ ,  $p>0.05$ ). It can be concluded that there is a non-significant moderating role of gender on the relationship between health behaviour and psychological status among PP in Ondo State, Nigeria. The alternate hypothesis is rejected.

**Table 1.** Assessment of direct relationships.

Number	Hypothesis	B	SD	t-value	Result
H1	HB -> PAS	0.468***	0.078	6.032	Supported
H2	HB -> PS	0.396***	0.093	4.265	Supported

**Table 2.** Assessment of the moderating role of gender.

Category	B	Std. Deviation	t-statistics	p-value
Gender x HB -> PAS	0.117	0.132	0.890	0.374
Gender x HB -> PS	0.174	0.196	0.887	0.375



**Figure 1.** Structural model for gender moderation.

The relationship between HB and PAS is both significant and positive. Feller et al. (2021) have also confirmed the findings, indicating a substantial impact on health behaviour and physical activity status. Numerous studies have demonstrated that an individual's health behaviour is positively impacted by regular and intensive physical activity (Fan et al., 2023; Sang et al., 2021; Saqib et al., 2020). Health behaviour is associated with consistent physical activity (Peng et al., 2022; Feil et al., 2021). Beneficial health behaviours may improve the character of physical activity status in the police demographic. This research suggests that PP in Ondo State, Nigeria, demonstrates advantageous health behaviours. The findings indicate a substantial correlation between the physical activity status of the police demographic and their health behaviour. There is a direct correlation between physical activity status and health behaviour, which implies that an active lifestyle among police personnel may be predicted by positive health behaviour. This suggests that the physical activity status of police personnel is predicted by their lifestyle, as evidenced by the findings of this study and substantiated by Gold et al. (2024) and Han et al. (2022). The primary limitation of these findings was the inability to determine whether the physical activity status of the PP was elevated, which was predominantly due to their health behavioural practices. This research has shown a positive correlation between physical activity status and health behaviour. There is a direct positive correlation between psychological status and health behaviour ( $\beta=0.396$ ,  $p<0.001$ ). The results of this investigation corroborated the hypothesis. Additionally, the results are consistent with those of Fan et al. (2023). McCallum et al. (2024) and Stroske et al. (2021) all asserted that a positive correlation

exists between psychological status and health behaviour. Mental health can be improved by discontinuing smoking, decreasing alcohol consumption, and engaging in moderate physical activity (McCallum et al., 2024). Health behaviour and psychological status were found to be positively correlated among police officers in Taiwan by Lin et al. (2025). Adopting positive health behaviours may improve the quality of life for the police population.

Furthermore, the results indicate that the relationship between health behaviour and psychological status among police personnel (PP) in Ondo State, Nigeria, is not significantly moderated by gender. The alternative hypothesis is rejected. This conclusion is corroborated by Fadero et al. (2025), who examined the role of gender, age, and years of service as moderators between physical fitness and health behaviour among police officers. The findings of this study contradict the assertion made by Lisha et al. (2011) that gender influences the relationship between alcohol consumption, moderate physical activity, and the year of service. Additionally, Lee et al. (2015) demonstrated that gender had no substantial impact on job-related characteristics. The data suggest that physical activity status, psychological status, and health behaviour did not exhibit a moderate correlation with gender among PP in Ondo State, Nigeria. This implies that the health behaviours of PP, regardless of whether they are favourable or unfavourable, may not be influenced by their gender. This is consistent with the research conducted by Craft et al. (2014), which asserted that exercise is the most significant predictor of quality of life for males. Conversely, the investigation's findings suggest that its benefits for women may be limited. Therefore, this demonstrates that the influence of health behaviour on the psychological and physical activity status of male police personnel is more important than that of female police personnel. Nevertheless, certain studies have demonstrated that women demonstrate superior health behaviours in comparison to men. This was determined through research conducted on various populations. To validate these findings, additional research may be necessary, as there is a scarcity of studies examining the moderating effect of gender on health behaviour, physical activity status, and psychological status, particularly among the police population.

## Conclusion

PP in Ondo State demonstrated greater levels of health behaviour, physical fitness, and psychological well-being. This suggests that most police personnel (PP) engage in beneficial health behaviours, which influence their physical activity levels and psychological stability. However, more can be done to encourage the PP to adopt health practices that reflect their physical and psychological well-being. The study looked at two straight paths, and both were statistically significant. This study found a strong and favourable link between health behaviour, physical activity levels, and psychological status. NPF should encourage its employees to adopt healthy habits that promote physical and mental well-being. The study found that health behaviour predicts PP's psychological condition. A positive direct link was found between HB-PS, indicating that individuals who adopt healthy habits are more likely to experience good mental health. Zhang and Liu (2024) as well as Han et al. (2022) emphasised that maintaining positive exercise habits and engaging in regular physical activity can enhance overall mental health. Gender does not appear to influence HB-PAS or HB-PS, according to the study. Health behaviour guidelines developed expressly for the police force are

required. Some observations and recommendations will be made to fill the gaps that this study did not cover. Even though Nigeria's police force is a centrally regulated organisation overseen by the Federal Government, this study only included one of the country's 36 states. As a result, it is advised that future research be done in more states. The outcomes of this study also indicate that PP has a high level of physical activity and psychological well-being, suggesting that further research should be conducted using experimental designs. The police may have evaluated themselves well based on the questions posed, but physical tests will also help determine whether they are truly fit for the job.

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### **Conflict of interest**

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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