

Research article

DETERMINANTS OF RECREATIONAL ACTIVITY PARTICIPATION AMONG ACADEMIC STAFF OF UNIVERSITIES IN CROSS RIVER STATE, NIGERIA

Igah, Isor Ikara^{1*}; Agbor, Cassidy Etta¹; & Anake, Clement Bekongfe¹

¹ Department of Hospitality and Tourism Management, University of Calabar, Nigeria

*Corresponding author: igahisor@gmail.com

ABSTRACT

This study examined determinants of recreational activity participation among academic staff of universities in Cross River State, Nigeria. The objective was to assess how socio-demographic characteristics, economic conditions, recreational facilities, workload/time constraints and social-psychological factors shape participation. A descriptive survey design was adopted. The population comprised academic staff in selected universities, while 384 respondents were selected using the Taro Yamane sample-size procedure and simple random sampling. Data were collected through a structured questionnaire and analysed with frequencies, percentages, mean scores and chi-square goodness-of-fit tests at the 0.05 significance level. Findings showed that socio-demographic factors, low income, high facility cost, facility availability and accessibility, workload, lack of time, peer influence, self-interest and attitude significantly influenced participation. Workload/time constraints produced the highest mean rating ($M = 3.38$), followed by facility-related factors ($M = 3.31$) and economic factors ($M = 3.28$). The study contributes university-based evidence on staff recreation, wellbeing and productivity in a Nigerian context. It recommends facility improvement, subsidised wellness programmes, workload-sensitive scheduling and institutional recreation policies.

KEYWORDS

Recreational activities; participation; academic staff; universities; Cross River State; workload; institutional support; staff wellbeing

LICENSE STATEMENT:

All articles are published under Creative Commons Attribution 4.0 International License (CC BY 4.0). Users may share, adapt, and distribute the work provided appropriate credit is given to the authors and JESBER.

Introduction

Recreational activity participation has become an important issue in higher education because universities increasingly depend on academic staff who are healthy, motivated and capable of sustaining teaching, research, supervision, community service and institutional administration. Recreation refers to voluntary leisure-time activities undertaken for relaxation, enjoyment, physical fitness, social interaction and psychological renewal. It includes organised and informal activities such as walking, jogging, games, sports, dancing, swimming, gardening, tourism, indoor games, social events and wellness programmes. Although recreation is sometimes treated as a non-essential activity, contemporary health and workplace scholarship shows that leisure-time physical and social activity contributes to physical health, mental wellbeing, stress reduction, social connectedness and productivity (World Health Organization, 2020; Elmoose-Osterlund et al., 2023; Eneyo, 2025a; Eneyo & Archibong, 2025). For academic staff, the issue is particularly significant because university work is cognitively demanding and often extends beyond official working hours. Lecturers are expected to teach, assess students, supervise projects, publish research, attend conferences, participate in accreditation processes, provide mentoring, serve on committees and respond to administrative requests. These responsibilities create pressure that may reduce leisure time and weaken participation in recreational activities. Where academics are

unable to participate in recreation, they may experience fatigue, sedentary behaviour, stress, burnout and poor work-life balance. The institutional implications are also serious because poor wellbeing may reduce productivity, creativity, job satisfaction and collegial relationships.

In many university environments in Nigeria, recreation is not yet fully institutionalised as part of staff development and occupational wellbeing. Recreational facilities may be inadequate, poorly maintained, distant from staff offices or used mainly by students. Some staff may also lack disposable income, motivation, time or social support for regular participation. Others may view recreation as less important than professional achievement, promotion requirements and family obligations. The result is that awareness of the benefits of recreation does not always translate into actual participation. This gap between knowledge and behaviour is central to the present study. The problem is especially relevant in Cross River State, where universities such as the University of Calabar, the University of Cross River State and Arthur Jarvis University employ academic staff who operate within demanding institutional environments. Despite the tourism and leisure identity of the state, there is still limited empirical evidence on how academic staff participate in recreational activities and what factors constrain or encourage their participation. Existing literature identifies age, gender, marital status, income, facility access, workload, social support, motivation and attitude as important determinants, but the relative importance of these factors differs across locations and institutional contexts (Ogunsile et al., 2023; Snelgrove et al., 2022; Yoshida et al., 2022; Eneyo, 2025b; Eneyo & Archibong, 2024).

The present study therefore examines the factors affecting recreational activity participation among academic staff of universities in Cross River State, Nigeria. It focuses on five groups of determinants: socio-demographic characteristics, economic factors, recreational facilities, workload and time constraints, and social/psychological determinants. The article is guided by five objectives: to examine the relationship between socio-demographic factors and participation; to determine the influence of economic factors; to investigate the effect of recreational facilities; to examine the influence of workload and time constraints; and to determine the influence of social and psychological determinants. The study is significant because it provides evidence that can guide university administrators, staff unions, health professionals and policymakers in designing inclusive staff recreation and wellness programmes. The contribution of the article lies in its integration of staff recreation, workplace wellbeing and institutional support within a university context. Rather than treating participation as a purely personal decision, the study views it as an outcome of interacting personal, social, economic and organisational conditions. This position is consistent with the Health Belief Model, which explains that health-related behaviour is shaped by perceived benefits, perceived barriers, self-efficacy and cues to action (Rosenstock, 1974). In the context of academic staff, recreation will be more likely when individuals perceive its value, believe they can participate, receive institutional cues and face fewer practical barriers.

Literature review

Recreation is a broad concept that refers to activities voluntarily undertaken during leisure time for enjoyment, refreshment, fitness, social interaction and psychological recovery. It can be active, passive, individual, group-based, indoor or outdoor. Active forms include walking, jogging, football, swimming, dancing, cycling and gym-based exercise. Passive or social forms include reading, tourism, relaxation, table games, music, social visits and cultural events. The unifying feature is that recreation provides recovery from routine obligations and contributes to quality of life. In the work environment, recreation is increasingly connected to wellness, work-life balance and employee productivity. The World Health Organization (2020) emphasises that regular physical activity reduces the risk of non-communicable diseases and supports mental health. Although not every recreational activity is physically vigorous, many forms of recreation reduce sedentary behaviour and provide psychological relief. For academic staff whose work often involves prolonged sitting, screen use, reading and writing, recreation can counterbalance sedentary occupational patterns. The benefits include improved energy, better

mood, reduced stress, stronger social networks and enhanced coping capacity. These benefits justify the study of recreation as a workplace and institutional issue rather than as a private lifestyle preference.

Participation in recreational activities refers to the extent to which individuals take part in leisure and recreation. It can be assessed through frequency, duration, intensity, type of activity and level of involvement. Participation is rarely determined by a single factor. It is shaped by personal characteristics, social expectations, income, available time, accessibility of facilities, institutional culture, safety, motivation and knowledge. Snelgrove et al. (2022) show that knowledge and motivation can distinguish participants from non-participants in campus recreation settings, while Ogunsile et al. (2023) found that knowledge and attitude were related to recreation participation among staff in a Nigerian tertiary institution. These findings indicate that participation is behavioural, social and institutional at the same time. Socio-demographic variables remain important because they influence ability, preference and opportunity. Age may affect physical capacity and leisure preference. Younger academics may be more willing to participate in vigorous activities, while older staff may prefer walking, relaxation, low-impact exercise or social recreation. Gender may influence activity type, perceived safety, domestic responsibilities and social expectations. Marital status may determine available leisure time, especially where family and childcare responsibilities compete with recreation. Academic rank and years of experience may also influence participation because senior academics often combine teaching, research leadership and administrative duties. Therefore, recreation programmes that ignore demographic differences may fail to attract diverse staff groups.

Economic factors are equally important. Organised recreation often requires money for registration, transport, equipment, clothing, facility access or club membership. Academic staff with lower disposable income may prioritise household needs over recreation, especially in contexts of rising living costs. Kim et al. (2023) reported that leisure participation and quality of life were related after the COVID-19 period, while Yoshida et al. (2022) connected recreational sport participation with social capital and wellbeing. These studies show that economic resources can either enable or restrict access to recreation. In Nigerian universities, subsidised facilities and staff wellness programmes can reduce the effect of cost and encourage wider participation. The availability and accessibility of recreational facilities are central determinants of participation. Facilities include sports fields, gymnasiums, fitness centres, swimming pools, walking tracks, indoor games rooms, relaxation parks and multi-purpose recreation spaces. Availability refers to the existence of facilities, while accessibility refers to how easily staff can use them. A facility may exist but remain inaccessible if it is far away, poorly maintained, overcrowded, expensive or scheduled at inconvenient times. Newsome and Garcia (2025) emphasise the relevance of constraints and negotiation strategies in campus recreation engagement. For universities in Cross River State, facility improvement requires not only physical provision but also maintenance, safety, staff-friendly scheduling and inclusive programming.

Workload and time constraints are among the most persistent barriers to recreational participation among academic staff. University work is often elastic; lectures, marking, supervision, research writing, grant applications and committee assignments frequently extend beyond normal hours. The pressure to publish, meet promotion requirements and respond to institutional deadlines can reduce leisure time. García-Hermoso et al. (2025) identify barriers and interventions related to physical activity and sedentary time among academics, showing that institutional schedules and work pressure affect participation. In the present study, workload and lack of time are expected to be strong predictors because academic staff often prioritise professional obligations over personal wellbeing. Social and psychological determinants include peer influence, self-interest, attitude, awareness, motivation, stress, self-efficacy and perceived benefits. Recreation is more likely when colleagues participate together, when staff feel encouraged by peers, when the activity is enjoyable and when individuals believe they can sustain participation. Song and Ahn (2023) show that outdoor leisure activity participation affects leisure attitude, serious leisure and satisfaction. Ntovoli et al. (2025) also emphasise the role of social

support in overcoming leisure constraints. These findings are important for university staff because peer groups, departmental culture and institutional campaigns can provide cues to action.

The Health Belief Model provides the theoretical foundation for the study. The model explains health-related behaviour through perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self-efficacy. Academic staff may participate in recreation if they believe that inactivity exposes them to stress or health risks, that such risks are serious, that recreation can produce meaningful benefits, and that barriers such as workload, cost or lack of facilities can be managed. Cues to action may include wellness campaigns, staff sports days, medical advice, peer encouragement and institutional policy. Self-efficacy is also important because staff must believe they can participate despite competing responsibilities. The conceptual framework in Figure 1 shows the logic of the study. Socio-demographic characteristics, economic conditions, facility availability, workload/time constraints and social-psychological determinants interact to shape recreational activity participation. Participation then influences staff wellbeing, stress reduction and productivity. The framework also recognises that these relationships are not purely individual. Institutions can reduce barriers through policies, facilities, incentives, scheduling and supportive culture. In this sense, recreation participation is both a personal health behaviour and an organisational wellbeing outcome.

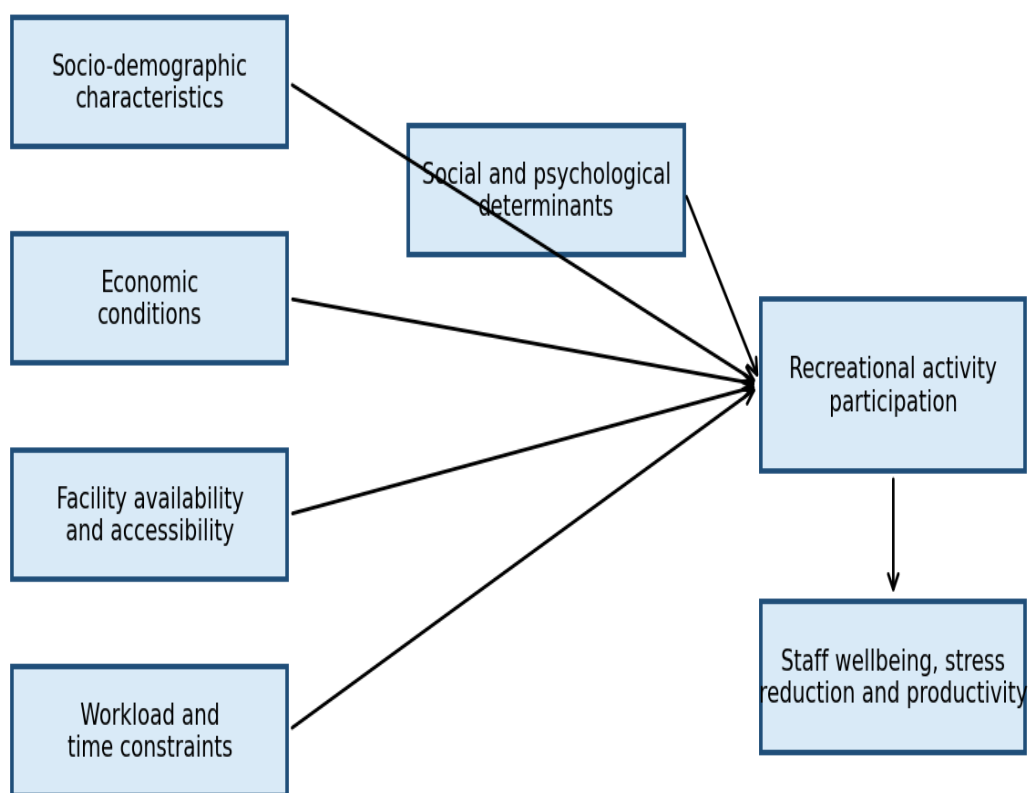


Figure 1. Conceptual framework for recreational activity participation among academic staff.

Source: Authors' conceptualisation based on the Health Belief Model and reviewed literature.

Methodology

The study adopted a descriptive survey research design. This design was appropriate because the research sought to obtain systematic information from academic staff regarding the factors affecting their participation in recreational activities. A descriptive survey is useful where a researcher intends to describe existing characteristics, opinions, behaviours and perceived barriers in a defined population without manipulating the

study variables (Creswell & Plano Clark, 2017). It also allows quantitative analysis of questionnaire responses through frequencies, percentages, mean scores and inferential tests. The study was conducted in Cross River State, Nigeria, with attention to universities where academic staff are engaged in teaching, research and administrative responsibilities. The institutions considered in the original survey context included the University of Calabar, the University of Cross River State and Arthur Jarvis University. These institutions provide a relevant setting because academic work in them involves lectures, supervision, research, publication, departmental service, committee responsibilities and student engagement. The state context is also important because Cross River is known for tourism and leisure resources, yet staff recreation within university workplaces still requires empirical attention.

The population comprised approximately 3,000 academic staff drawn from selected universities in Cross River State. A sample size of 384 respondents was determined using the Taro Yamane formula for finite populations at a 95% confidence level and 5% margin of error (Yamane, 1967). Simple random sampling was used to give eligible academic staff an opportunity of inclusion. This procedure was considered appropriate because the study sought broad staff-level perceptions across the selected universities rather than specialised expert interviews only. Primary data were collected using a structured questionnaire. The instrument contained sections on demographic characteristics, socio-demographic determinants, economic factors, recreational facilities, workload and time constraints, and social/psychological determinants. Responses were measured using a four-point Likert scale: Strongly Agree, Agree, Disagree and Strongly Disagree. The scale enabled the computation of mean scores and frequency distributions. A criterion mean of 2.50 was used: mean scores of 2.50 and above were interpreted as agreement, while scores below 2.50 were interpreted as disagreement.

The validity of the instrument was strengthened through face and content review. Experts in physical and health education, tourism and research methodology examined the questionnaire for clarity, relevance and coverage of the study objectives. Their corrections were incorporated before final administration. Reliability was determined through a test-retest procedure involving a small group outside the study area. The responses were correlated using Pearson Product Moment Correlation, and a reliability coefficient of 0.82 was obtained. This coefficient indicated that the instrument was sufficiently reliable for the study. Data were analysed using descriptive and inferential statistics. Frequencies and percentages were used to present demographic characteristics and response distributions. Mean scores were used to evaluate the level of agreement with each determinant. Chi-square goodness-of-fit tests were used to examine whether the observed response distributions differed significantly from an equal distribution across the four response categories. The tests were interpreted at the 0.05 level of significance. Because the available data were summary Likert frequencies rather than individual-level cross-tabulations, the chi-square tests are interpreted as evidence that responses were significantly tilted toward agreement or disagreement, not as causal proof. This cautious interpretation strengthens the methodological transparency of the article. Ethical considerations were observed in the conduct of the study. Participation was voluntary, and respondents were informed about the purpose of the research. Confidentiality and anonymity were maintained, and the data were used strictly for academic purposes. The findings are presented in aggregate form without identifying individual respondents or departments.

Results and discussion

The results are presented in line with the objectives and hypotheses of the study. The section begins with the demographic profile of respondents, then examines the five major categories of determinants: socio-demographic characteristics, economic factors, recreational facilities, workload and time constraints, and social/psychological factors. Tables and figures are cited directly in the discussion so that the statistical evidence is connected to interpretation and institutional relevance. Figure 2 and Table 1 present the demographic distribution of respondents. Male respondents accounted for 220 participants (57.3%), while female respondents accounted for 164 participants (42.7%). The age distribution shows that the largest group was 35-44 years, with

146 respondents (38.0%), followed by 25-34 years with 98 respondents (25.5%), 45-54 years with 94 respondents (24.5%) and 55 years and above with 46 respondents (12.0%). This profile indicates that the study captured staff within active career stages. The dominance of respondents between 35 and 54 years is important because these categories are likely to combine teaching, research, supervision and administrative responsibilities, making them highly relevant for analysing workload and recreation.

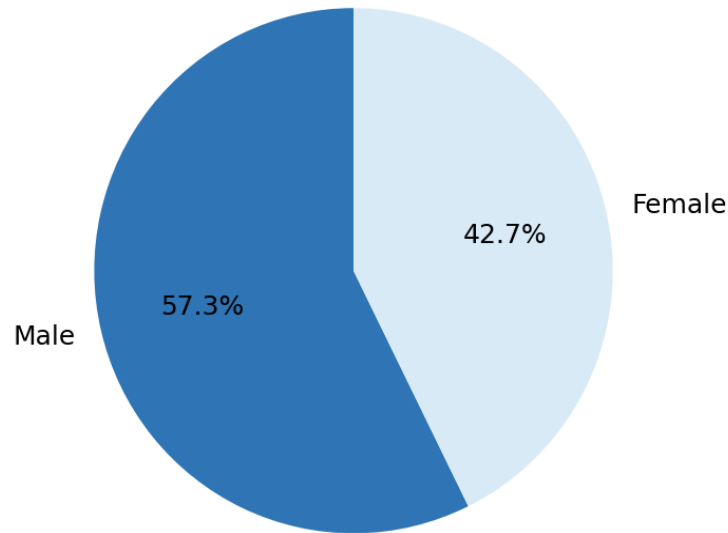


Figure 2. Gender distribution of respondents.

Source: Field survey data, 2025.

Table 1. Demographic profile of respondents.

Variable	Category	Frequency	Percentage (%)
Gender	Male	220	57.3
Gender	Female	164	42.7
Gender	Total	384	100
Age	25-34 years	98	25.5
Age	35-44 years	146	38.0
Age	45-54 years	94	24.5
Age	55 years and above	46	12.0
Age	Total	384	100

Source: Field survey data, 2025.

The findings on socio-demographic factors are presented in Table 2. Respondents agreed that age influences participation ($M = 3.16$), gender affects participation ($M = 3.13$) and marital status affects participation ($M = 3.06$). All mean scores exceeded the criterion mean of 2.50, indicating agreement that socio-demographic characteristics shape recreation behaviour among academic staff. The combined response distribution also shows stronger agreement than disagreement, with 500 strongly agree responses and 390 agree responses across the three items. This pattern suggests that demographic realities should be considered when designing university recreation programmes. The result has practical meaning. Age may influence activity preference and intensity; younger staff may prefer competitive or vigorous activities, while older staff may prefer walking, low-impact exercise or social recreation. Gender may influence both activity choice and participation barriers, especially where safety, domestic expectations or cultural norms are relevant. Marital status may affect available leisure time because family responsibilities can compete with recreation. These interpretations support previous literature that identifies socio-demographic variables as important predictors of leisure behaviour (Agbabiaka et al., 2023; Soria et al., 2022).

Table 2. Socio-demographic factors and recreational participation.

Variables	SA	A	D	SD	Mean
Age influences participation	180	120	50	34	3.16
Gender affects participation	170	130	48	36	3.13
Marital status affects participation	150	140	60	34	3.06

Decision rule: Mean scores of 2.50 and above indicate agreement.

Source: Field survey data, 2025.

The chi-square goodness-of-fit result for the combined socio-demographic responses is presented in Table 3. The calculated chi-square value was 368.43, compared with the critical value of 7.815 at 3 degrees of freedom and 0.05 level of significance. Since the calculated value exceeded the critical value, the null hypothesis was rejected. This means that responses were significantly distributed toward the view that socio-demographic factors influence recreational activity participation among academic staff. However, because the data are summary frequencies, the result should be interpreted as evidence of significant perceived influence rather than a causal relationship.

Table 3. Chi-square computation for socio-demographic factors.

Response	Observed (O)	Expected (E)	(O-E) ² /E
Strongly agree	500	288	156.06
Agree	390	288	36.13
Disagree	158	288	58.68
Strongly disagree	104	288	117.56
Total chi-square			368.43

df = 3; critical chi-square at 0.05 = 7.815.

Source: Field survey data, 2025.

Economic factors were also found to affect participation. Table 4 shows that low-income limits participation ($M = 3.32$), while the high cost of recreational facilities also discourages participation ($M = 3.24$). These means indicate strong agreement that financial conditions shape recreation behaviour. Many recreational activities require transport, equipment, facility access, clothing, registration fees or refreshments. In a context where academic staff may already face household and professional financial commitments, recreation can be perceived as optional or unaffordable. The finding aligns with evidence that leisure and recreation are influenced by socioeconomic position and available resources (Kim et al., 2023; Yoshida et al., 2022). It also suggests that university management should not assume that awareness alone will increase participation. If recreation is expensive, staff with limited disposable income may remain excluded. Subsidised wellness programmes, free staff access to university facilities, equipment-sharing schemes and staff sports clubs can reduce this barrier. Economic support is therefore not simply a welfare gesture; it is a participation strategy.

Table 4. Economic factors affecting recreational activity participation.

Variables	SA	A	D	SD	Mean
Low income limits participation	210	110	40	24	3.32
Recreational facilities are expensive	190	120	50	24	3.24

Decision rule: Mean scores of 2.50 and above indicate agreement.

Source: Field survey data, 2025.

The chi-square values for the two economic indicators were also significant. For the item on low income, the calculated value was 224.09, and for the item on expensive recreational facilities, the calculated value was 174.08. Both values exceeded the critical value of 7.815 at the 0.05 level. The null hypothesis stating that economic factors do not significantly influence participation was therefore rejected. The pattern confirms that respondents perceived financial conditions as a major barrier to recreational participation.

Table 5. Chi-square summary for economic factors.

Economic indicator	Chi-square value	df	Critical value	Decision
Low income affects participation	224.09	3	7.815	Reject H0
Recreational facilities are expensive	174.08	3	7.815	Reject H0

Source: Field survey data, 2025.

Table 6 presents the influence of recreational facility availability and accessibility. Respondents agreed that the availability of facilities encourages participation ($M = 3.35$) and that accessibility affects participation ($M = 3.27$). The grand mean of 3.31 is well above the criterion mean of 2.50. This indicates that recreational facilities are a major institutional determinant of participation among academic staff. The result is unsurprising because even motivated staff may not participate where facilities are absent, poorly maintained, overcrowded, unsafe or distant from their offices and residences. The evidence supports the view that universities must treat recreation infrastructure as part of staff wellbeing. Facilities should be functional, safe, inclusive and accessible at times that fit staff schedules. A football field alone may not meet the needs of all categories of staff. A balanced recreation system should include walking spaces, indoor games, fitness rooms, low-impact exercise options, relaxation areas and social wellness events. This broader facility approach is consistent with contemporary campus recreation literature, which emphasises both availability and the ability of participants to negotiate barriers to engagement (Newsome & Garcia, 2025; Snelgrove et al., 2022; Eneyo, 2025b; Eneyo & Archibong, 2024).

Table 6. Recreational facilities and participation.

Variables	SA	A	D	SD	Mean
Availability of facilities encourages participation	220	100	40	24	3.35
Accessibility affects participation	200	110	50	24	3.27

Decision rule: Mean scores of 2.50 and above indicate agreement.

Source: Field survey data, 2025.

For the facility-related items, the aggregated response pattern also supported rejection of the null hypothesis. Combining the two facility indicators produced 420 strongly agree responses, 210 agree responses, 90 disagree responses and 48 strongly disagree responses. The calculated chi-square value for this aggregated distribution was 434.63, which exceeded the critical value of 7.815. This indicates that respondents' opinions were significantly tilted toward the view that recreational facilities affect participation. The implication is that facility provision and access should be central to any university recreation policy.

Table 7. Aggregated chi-square computation for recreational facilities.

Response category	Observed (O)	Expected (E)	(O-E) ² /E
Strongly agree	420	192	270.75
Agree	210	192	1.69
Disagree	90	192	54.19
Strongly disagree	48	192	108.00
Total chi-square			434.63

df = 3; critical chi-square at 0.05 = 7.815.

Source: Field survey data, 2025.

Workload and time constraints emerged as the strongest determinant in the study. Table 8 shows that 210 respondents strongly agreed and 130 agreed that workload and lack of time affect recreational activity participation. Only 24 disagreed and 20 strongly disagreed. The computed mean score was 3.38, the highest among the determinant groups. This result demonstrates that the demands of academic work are a major barrier to recreation among university staff in Cross River State. The finding is important because it shifts attention from individual motivation to institutional work conditions. Academic staff may value recreation but still fail to participate when workload is excessive or schedules are inflexible. Teaching loads, marking, student supervision, research expectations, accreditation duties, departmental meetings and administrative roles reduce the time available for leisure. Where staff must work evenings and weekends to meet deadlines, recreation becomes

displaced. This aligns with research showing that workload, sedentary academic work and time constraints reduce physical activity among academics (García-Hermoso et al., 2025; Ntovoli et al., 2025). The chi-square result in Table 8 further confirms the strength of this finding. The calculated value of 261.59 exceeded the critical value of 7.815 at the 0.05 level. Therefore, the null hypothesis stating that workload/lack of time does not significantly affect participation was rejected. The implication is that recreation policies will have limited success unless they are connected to work-life balance. Universities should introduce staff-friendly recreation schedules, encourage departmental wellness breaks, avoid excessive meeting overload and create institutional cues that legitimise recreation as part of staff wellbeing rather than a distraction from work.

Table 8. Workload/lack of time and recreational activity participation.

Response category	Observed frequency (O)	Expected (E)	(O-E) ² /E
Strongly agree	210	96	135.38
Agree	130	96	12.04
Disagree	24	96	54.00
Strongly disagree	20	96	60.17
Total chi-square	384		261.59

df = 3; critical chi-square at 0.05 = 7.815; mean = 3.38.

Source: Field survey data, 2025.

Social and psychological determinants are presented in Table 9. Respondents agreed that peer influence affects participation, self-interest affects participation and attitude influences participation. The combined response distribution produced 500 strongly agree responses, 390 agree responses, 158 disagree responses and 104 strongly disagree responses. The chi-square value was 368.43, which exceeded the critical value of 7.815. The null hypothesis was therefore rejected. This indicates that social and psychological factors significantly influence recreational activity participation among academic staff. The result supports the view that recreation is not only determined by facilities and money. Attitude, motivation and social encouragement matter. Staff may participate more regularly when colleagues invite them, when departments organise group activities, when wellness campaigns communicate benefits and when individuals view recreation as enjoyable and meaningful. Conversely, negative attitudes, low motivation and absence of peer support may reduce participation even where facilities exist. This finding aligns with studies on leisure attitude, social support and motivation in recreational participation (Elmose-Osterlund et al., 2023; Ntovoli et al., 2025; Song & Ahn, 2023).

Table 9. Social and psychological determinants of participation.

Item	SA	A	D	SD	Total
Peer influence affects participation	180	120	50	34	384
Self-interest affects participation	170	130	48	36	384
Attitude influences participation	150	140	60	34	384
Total	500	390	158	104	1,152

Source: Field survey data, 2025.

Table 10. Chi-square computation for social and psychological determinants.

Response category	Observed (O)	Expected (E)	(O-E) ² /E
Strongly agree	500	288	156.06
Agree	390	288	36.13
Disagree	158	288	58.68
Strongly disagree	104	288	117.56
Total chi-square			368.43

df = 3; critical chi-square at 0.05 = 7.815.

Source: Field survey data, 2025.

Figure 3 compares the mean ratings of the major determinant groups. Workload and time constraints recorded the highest mean score, followed by recreational facilities, economic factors, socio-demographic factors and social-psychological determinants. The figure demonstrates that all five determinant groups were important, but workload and institutional conditions were especially prominent. This supports an integrated interpretation: participation is not simply a matter of personal choice; it depends on whether university systems make recreation practical, affordable and socially supported.

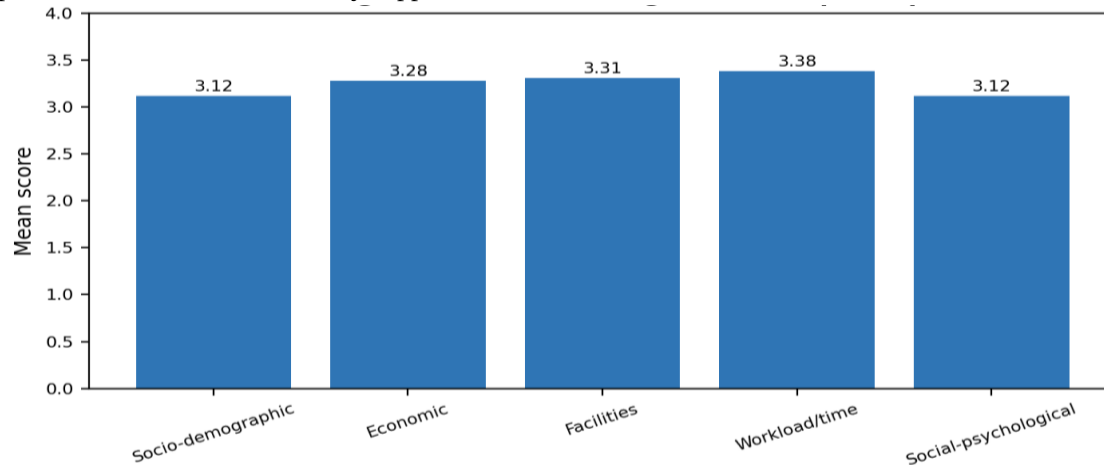


Figure 3. Mean ratings of major determinant groups affecting recreational activity participation.

Source: Field survey data, 2025.

Table 11. Hypothesis decisions.

Hypothesis	Statistical evidence	Decision	Interpretation
H01: Socio-demographic factors have no significant relationship with participation	$\chi^2 = 368.43$; critical = 7.815	Reject H0	Socio-demographic factors significantly influence participation perceptions.
H02: Economic factors do not significantly influence participation	$\chi^2 = 224.09$ and 174.08 ; critical = 7.815	Reject H0	Low income and facility cost significantly affect participation perceptions.
H03: Recreational facilities do not significantly affect participation	$\chi^2 = 434.63$; critical = 7.815	Reject H0	Facility availability and accessibility significantly affect participation perceptions.
H04: Workload/lack of time does not significantly affect participation	$\chi^2 = 261.59$; critical = 7.815	Reject H0	Workload and time constraints significantly affect participation perceptions.
H05: Social and psychological determinants do not significantly influence participation	$\chi^2 = 368.43$; critical = 7.815	Reject H0	Peer influence, self-interest and attitude significantly influence participation perceptions.

All decisions interpreted at 0.05 level of significance.

Source: Field survey data, 2025.

Taken together, the findings show that recreational activity participation among academic staff is shaped by multiple and interrelated determinants. Socio-demographic characteristics influence preferences and opportunities; economic factors affect affordability; facilities determine practical access; workload and time constraints limit availability; and social/psychological determinants influence motivation. The convergence of these factors explains why recreation participation may remain low even when staff understand its benefits. A staff member may recognise that recreation is healthy but still fail to participate because there is no time, no convenient facility, no peer group or no affordable programme. The results also reveal the importance of institutional responsibility. If recreation participation is framed only as a personal decision, then the burden falls entirely on academic staff. However, the evidence indicates that universities influence participation through workload expectations, facility provision, cost structure, programme scheduling and wellness culture. This means that universities can increase participation by modifying the environment in which decisions are made. In Health Belief Model terms, universities can reduce perceived barriers, increase cues to action and strengthen

self-efficacy. Staff wellness campaigns, recreation days, departmental walking clubs, subsidised gym access and management encouragement can all function as cues that legitimise participation.

The dominance of workload and time constraints also has implications for productivity. Academic productivity should not be measured only by the number of lectures delivered or papers published. Sustainable productivity depends on staff health, mental clarity and resilience. Recreation supports these outcomes by providing recovery from cognitive and emotional strain. When universities ignore recreation, staff may remain physically present but psychologically fatigued. In contrast, institutions that encourage balanced work and wellness may benefit from improved morale, stronger collegial relationships and better long-term performance. Another important implication concerns equity. Recreational programmes should be designed for different categories of staff. Younger staff, older staff, male staff, female staff, married staff and staff with different academic ranks may not have the same needs. A one-size-fits-all programme may privilege already active participants while excluding those with greater constraints. Inclusive recreation should provide varied options: competitive sports for interested staff, low-impact activities for older staff, indoor recreation during rainy seasons, family-friendly events, flexible scheduling and gender-sensitive facility access. Such diversity would improve participation across demographic groups. Findings show that future research should move beyond summary perception data. The present study provides useful evidence based on frequencies, mean scores and chi-square tests. However, individual-level data would allow stronger analysis using regression, correlation or structural models. Future studies should measure actual frequency of participation, type of recreation, health outcomes, workload hours, facility distance and institutional support. Such data would deepen understanding of causal pathways and enable more precise policy interventions.

Implications/conclusion

The study has important implications for university administration and staff wellbeing in Cross River State. First, universities should recognise recreation as part of occupational health and productivity. Recreational participation should not be treated as an optional activity outside institutional concern. Academic staff are the core of teaching, research and mentoring; therefore, their wellbeing has direct implications for institutional quality. University management should develop staff recreation policies that define responsibilities for facility provision, programme scheduling, staff sensitisation and monitoring of participation. Second, universities should improve recreational facilities and make them accessible to staff. The study found that facility availability and accessibility significantly influenced participation. Institutions should therefore provide functional sports fields, indoor games, walking tracks, fitness spaces, relaxation areas and wellness centres. Existing facilities should be maintained, made safe and scheduled for staff use. Where resources are limited, universities can begin with low-cost programmes such as walking clubs, table games, aerobics, staff sports days and departmental wellness events. The important point is that recreation should be visible and organised.

Third, universities should address workload and time constraints. The strongest determinant in the study was workload/lack of time. Management should promote realistic workload distribution, reduce unnecessary meetings, encourage departmental time-management practices and create staff wellness periods. Recreation will not improve if staff are encouraged to participate but given no time to do so. Work-life balance should therefore be integrated into academic planning and staff development policies. Fourth, recreation should be made affordable. Economic factors significantly influenced participation, which means that cost can exclude staff from wellness opportunities. Universities and staff unions should collaborate to subsidise recreation, negotiate access to external facilities, provide basic equipment and organise low-cost events. Subsidisation is especially important in periods of economic pressure, where household needs may reduce staff willingness to spend on recreation. Fifth, social and psychological determinants should be strengthened through awareness, motivation and peer support. Staff should be educated on the health, psychological and productivity benefits of recreation. Departments can encourage group participation, and institutional leaders can model participation by supporting

staff recreation events. Peer influence can be converted into a positive force when recreation becomes part of workplace culture.

The study concludes that recreational activity participation among academic staff of universities in Cross River State is significantly influenced by socio-demographic characteristics, economic factors, recreational facilities, workload/time constraints and social/psychological determinants. All five null hypotheses were rejected, indicating that the determinants examined in the study meaningfully shape staff perceptions of recreation participation. The most prominent barrier was workload and lack of time, followed by facility availability/accessibility and economic factors. The conclusion is that staff recreation is not only a personal health behaviour but also an institutional wellbeing issue. The study recommends that universities in Cross River State should provide adequate recreational facilities, organise regular staff recreation programmes, reduce excessive workload, subsidise staff access to facilities, conduct awareness campaigns and develop formal staff wellness policies. Future research should use individual-level data, longitudinal designs and objective health indicators to examine how recreation participation affects stress, productivity, job satisfaction and overall wellbeing among academic staff.

Declarations

Ethics approval and consent to participate: The study was conducted in line with accepted ethical principles for social research. Respondents participated voluntarily and were informed of the purpose of the study. Consent was obtained before questionnaire administration.

Consent for publication: The authors approved the manuscript for journal submission and publication.

Availability of data and materials: The datasets used for the analysis are available from the corresponding author on reasonable request.

Competing interests: The authors declare no competing interests.

Funding: No external funding was declared for this study.

Authors' contributions: The authors contributed to the conception of the study, literature development, fieldwork, data analysis, manuscript drafting and final approval of the article.

Acknowledgements: The authors acknowledge the support of the participating universities, academic staff respondents and colleagues who assisted during data collection and manuscript preparation.

References

- Abbah, O. I. (2022). Socio-demographic factors associated with participation in recreational activities among undergraduate students of University of Nigeria, Nsukka. *International Journal of Human Kinetics, Health and Education*, 7(1), 1-12.
- Agbabiaka, H. I., Doguwa, M. A., & Ukpong, E. (2023). Female student participation in recreational activities: A study of facilities availability and its influencing factors in Nigerian Northern University. *Recreational Sports Journal*, 47(1), 57-66. <https://doi.org/10.1177/15588661231154489>
- Angbashim, B. B., & Ijeomah, H. M. (2025). Socio-demographic determinants of visit motivation and participation in recreational activities in Obudu Mountain Resort and Yankari Safari and Resort, Nigeria.
- Balogun, A. G. (2023). Moderating effects of personal resources on work engagement and work-family conflict. *SA Journal of Industrial Psychology*, 49, Article a2052. <https://doi.org/10.4102/sajip.v49i0.2052>
- Creswell, J. W., & Plano Clark, V. L. (2017). *Designing and conducting mixed methods research* (3rd ed.). SAGE.
- Elmose-Osterlund, K., Dalgas, B. W., Bredahl, T. V. G., & Lenze, L. (2023). Motives for leisure-time physical activity participation: An analysis of their prevalence, consistency and associations with activity type and social background. *BMC Public Health*, 23, 2399. <https://doi.org/10.1186/s12889-023-17304-0>
- Eneyo, V. B. (2025a). Analysis of plastic waste types and volumes generated by fast food centres in Calabar Metropolis, Nigeria. *Journal of Environmental and Tourism Education*, 8(1), 548–568.
- Eneyo, V. B. (2025b). *Environment: An introduction to environmental science—A monograph*. IDbeyond Printing Press.
- Eneyo, V. B., & Archibong, A. A. (2023). Cultural and economic impacts of the Lagos Black Heritage Festival. *Nigerian Journal of Social & Development Issues*, 11(1), 79–98.
- Eneyo, V. B., & Archibong, A. A. (2024). Examining socio-economic implications of tourism development in Nigeria. *World Tourism Journal*, 2(2), 61–82.
- Eze, T. N., & Dike, D. O. (2023). Factors influencing recreational activity participation among academic and administrative staff of Federal College of Education, Eha-Amufu, Enugu State, Nigeria. *International Journal of Human Kinetics, Health and Education*, 4(1), 1-12.
- Garcia-Hermoso, A., et al. (2025). Associated factors, barriers, and interventions to promote physical activity and reduce sedentary time in academics: A systematic review. *BMC Public Health*, 25, Article 24092. <https://doi.org/10.1186/s12889-025-24092-2>

- Kim, J., Kim, M., & Lee, C. (2023). Leisure participation and quality of life among community residents after COVID-19. *Leisure Studies*, 42(5), 703-718. <https://doi.org/10.1080/02614367.2022.2150279>
- Lamont, M., Kennelly, M., & Moyle, B. (2024). Recreation participation, social connectedness, and community well-being. *Leisure Sciences*, 46(2), 215-232. <https://doi.org/10.1080/01490400.2023.2198701>
- Lee, J., & Iso-Ahola, S. E. (2026). A cross-national study of the relationships among leisure participation, basic psychological needs satisfaction in leisure, and global life satisfaction. *Leisure Studies*. <https://doi.org/10.1080/02614367.2026.2628581>
- Newsome, A. M., & Garcia, J. (2025). Examining college students' constraints and negotiation strategies to campus recreation engagement: Concurrent validity of CRCNQ. *Recreational Sports Journal*, 49(2), 1-15. <https://doi.org/10.1177/15588661251358164>
- Ntovoli, A., Stavropoulou, G., Karagiorgos, T., Lianopoulos, Y., Anagnostou, G., Papacosta, E., & Alexandris, K. (2025). The role of social support in overcoming leisure constraints in recreational sport participation. *Frontiers in Sports and Active Living*, 7, Article 1646511. <https://doi.org/10.3389/fspor.2025.1646511>
- Ogunsile, S., Alebiosu, E., & Bolarinwa, O. (2023). Knowledge and attitude as correlates of participation in recreation activities among members of staff of a tertiary institution in Ekiti State, Nigeria. *Journal of Indonesian Physical Education and Sport*, 9(2), 18-29. <https://doi.org/10.21009/JIPES.092.03>
- Reig, S., Cruz, E. P., Powers, M. M., He, J., Chong, T., Tham, Y. J., Kratz, S., Robinson, A., Smith, B. A., Vaish, R., & Monroy-Hernandez, A. (2023). Supporting piggybacked co-located leisure activities via augmented reality. *Proceedings of the ACM on Human-Computer Interaction*. <https://doi.org/10.1145/3594734>
- Rosenstock, I. M. (1974). Historical origins of the Health Belief Model. *Health Education Monographs*, 2(4), 328-335.
- Snelgrove, R., Selvaratnam, V., Wood, L., & Potwarka, L. R. (2022). Distinguishing participants and non-participants in campus recreation: The roles of knowledge and motivations. *Recreational Sports Journal*, 46(2), 122-137. <https://doi.org/10.1177/15588661221125206>
- Song, W.-I., & Ahn, B.-W. (2023). Effect of outdoor leisure activity participation on leisure attitude, serious leisure, recreational specialization, and leisure satisfaction. *Societies*, 13(7), 155. <https://doi.org/10.3390/soc13070155>
- Soria, K. M., Boettcher, B., & Hallahan, K. (2022). The effects of participation in recreational activities on students' resilience and sense of belonging. *Recreational Sports Journal*, 46(2), 138-154. <https://doi.org/10.1177/15588661221125201>
- Wicker, P., Feiler, S., & Breuer, C. (2022). Sport participation and subjective well-being: Evidence from recreational sport activities. *European Sport Management Quarterly*, 22(3), 423-440. <https://doi.org/10.1080/16184742.2020.1763549>
- World Health Organization. (2020). WHO guidelines on physical activity and sedentary behaviour. World Health Organization.
- Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper & Row.
- Yoshida, M., Gordon, B. S., Heere, B., & James, J. D. (2022). Social capital and recreational sport participation: Community engagement and well-being. *Sport Management Review*, 25(4), 648-661. <https://doi.org/10.1080/14413523.2021.1908796>