

Healthy Lifestyle Practices and Physical Wellbeing among Regional Football Players in Bamenda II Municipality, Cameroon: A Convergent Mixed-Methods Study

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Abstract: Background: Regional footballers may face constraints in nutrition, hydration, sleep and recovery, and substance-use prevention. This study investigated associations between healthy lifestyle practices and self-reported physical wellbeing among football players in Bamenda II Municipality.

Methods: A convergent parallel mixed-methods design combined a cross-sectional questionnaire survey of 76 players from three clubs with semi-structured interviews with six coaches and team personnel. Descriptive statistics and regression were complemented by thematic analysis.

Results: The four-predictor model explained 53.3% of variation in reported physical wellbeing ($R^2 = .533$; adjusted $R^2 = .507$; $F = 20.258$; dissertation-reported $p = .001$). In the mutually adjusted model, the substance-use scale was associated with wellbeing ($B = .497$, $p = .001$), whereas nutrition ($p = .088$), hydration ($p = .058$), and sleep/recovery ($p = .077$) did not reach the .05 threshold. Interviewees described carbohydrate-heavy diets, inconsistent hydration and sleep, and occasional alcohol consumption.

Conclusion: Lifestyle measures were jointly associated with self-reported wellbeing in this sample, but cross-sectional data do not establish effects or causation. The direction of the substance-use scale requires verification before interpreting its coefficient as consumption or avoidance.

Keywords: football; nutrition; hydration; sleep; recovery; substance use; physical wellbeing; Cameroon

1. Background

Football requires repeated bouts of running, sprinting, directional changes and physical contact, interspersed with periods of lower-intensity activity. Players' ability to sustain these demands and recover between training sessions depends not only on technical and tactical preparation but also on everyday health behaviours. Physical wellbeing in this study refers to the perceived capacity to train, compete and recover without excessive fatigue or physical limitations. Healthy

lifestyle practices were examined through four domains: nutritional intake, daily fluid intake, sleep duration and recovery, and alcohol and tobacco consumption. These behaviours are potentially modifiable, yet access to guidance and resources may differ considerably between professional and regional football settings [1][2][3].

Nutrition supplies the energy and nutrients needed for training, tissue maintenance and recovery. Adequate energy availability is especially relevant when training demands are high; insufficient intake may compromise physiological functioning and recovery[4][5]. Carbohydrates help replenish muscle glycogen, protein supports tissue repair, and dietary variety contributes essential micronutrients. The quality, quantity and timing of meals therefore merit attention alongside the financial and practical constraints that shape athletes' food choices. In regional football, where players may combine sport with work or study, consistent access to balanced meals cannot be assumed. The present study consequently examined reported nutritional intake in relation to reported physical wellbeing, rather than measuring dietary energy intake or establishing a nutritional intervention effect.

Hydration is another component of everyday preparation. Football training and matches can produce substantial sweat losses, while fluid needs vary with activity intensity, duration and environmental conditions. Maintaining fluid balance supports thermoregulation and cardiovascular functioning; insufficient replacement of fluid losses may contribute to fatigue and difficulty sustaining exercise[6][7]. However, drinking practices are shaped by the availability of safe water, access during training, and players' understanding of when and how much to drink. This study focused on self-reported daily fluid-intake practices, not laboratory measures of hydration status. Its findings should therefore be interpreted as associations between reported behaviours and perceived wellbeing.

Sleep and recovery allow athletes to respond to the cumulative demands of training and competition. Sleep contributes to physiological restoration and cognitive functioning, while recovery routines may include appropriate rest between sessions and management of training loads. Inadequate sleep has been associated with impaired exercise-related and cognitive outcomes, although the effects depend on the task and context[8][9]. Regional players may experience irregular schedules because of employment, education, travel or social commitments. Such circumstances make sleep duration and recovery relevant topics for investigation, but a cross-sectional questionnaire cannot determine whether poor sleep precedes lower wellbeing or whether existing fatigue and other conditions affect sleep.

Alcohol and tobacco use constitute a fourth lifestyle domain. Alcohol can interfere with sleep and post-exercise recovery, while tobacco exposure carries cardiovascular and respiratory health risks [10][11][12]. The frequency and circumstances of use may differ between players, and responses to questionnaire items must be interpreted according to their actual coding. In particular, a higher score for substance avoidance has a different meaning from a higher score for consumption. The present study assessed the association of its alcohol-and-tobacco questionnaire scale with perceived physical wellbeing without assuming the direction of that scale before verification.

The study was informed by the Energy Availability Model, Fluid Balance Theory, Restoration Theory of Sleep and the Health Belief Model, which respectively provide perspectives on nutritional adequacy, water balance, restorative sleep and decisions about health-related behaviours[13][14][15]. Together, these perspectives suggest that footballers' wellbeing may reflect a combination of physiological needs and the opportunities and motivations that shape daily choices. They provide a conceptual rationale for examining the four lifestyle domains together, rather than treating any one practice as a complete explanation of wellbeing.

Bamenda II Municipality, in Cameroon's North West Region, provides a relevant setting for studying these issues among regional footballers. The dissertation describes players operating with limited access to individualized sports-nutrition advice, structured hydration guidance and

recovery support. Accounts from the participating clubs also point to challenges involving food costs, inconsistent fluid intake and irregular sleep. Nevertheless, evidence drawn from elite or international teams cannot automatically be generalized to these clubs, and local descriptions should not be taken as prevalence estimates for all footballers in Cameroon. Context-specific assessment can help identify reported practices and perceived needs within the participating teams.

Accordingly, this study investigated the relationship between healthy lifestyle practices and physical wellbeing among regional football players in Bamenda II Municipality. Specifically, it examined nutritional intake, daily fluid intake, sleep duration and recovery, and alcohol and tobacco consumption, individually and jointly, in relation to players' self-reported wellbeing. A concurrent mixed-methods approach combined questionnaires from 76 footballers in three clubs with interviews involving six coaches and team personnel. The study sought to describe local patterns and statistical associations; its cross-sectional design does not establish that lifestyle practices caused changes in physical wellbeing.

2. Methodology

Study design and setting. The dissertation used a convergent parallel mixed-methods design in Bamenda II Municipality, Cameroon. Quantitative questionnaires and qualitative interviews were collected concurrently and integrated during interpretation.

Participants. The quantitative sample comprised 76 footballers from Mankon United FC, Bafut United FC, and My Soccer FC. Six coaches/team personnel were interviewed. The sample was drawn from the three participating clubs and does not represent all regional footballers in Cameroon.

Instruments and analysis. Structured four-point Likert questionnaires assessed nutritional intake, daily fluid intake, sleep/recovery, alcohol/tobacco practices, and physical wellbeing. Semi-structured interviews elicited staff perspectives. Questionnaire internal-consistency coefficients ranged from .78 to .86 (overall $\alpha = .82$). Descriptive analyses and linear regression were performed in SPSS 27; interviews underwent thematic analysis.

Ethical considerations. The dissertation states that the researcher obtained departmental authorization and club permissions, explained voluntary participation and withdrawal, and protected respondent confidentiality. The supplied journal example names the University of Bamenda Ethics Committee, but the thesis narrative does not independently verify a committee approval number or date. Authors must check the thesis ethical-clearance appendix and enter the exact committee name, approval reference and date before submission; departmental authorization alone must not be represented as ethics-committee approval.

3. Results and Discussion

3.1. Demographic characteristics of participating footballers

Table 1. Demographic characteristics of participating footballers

Variable	Category	Frequency (n)	Percentage (%)
Age	20 years and below	2	2.6
	21–25 years	56	73.7
	26 years and above	18	23.7
Total		76	100.0
Gender	Male	76	100.0
		76	100.0
		76	100.0
Club	Bafut United	26	34.2
	My Soccer	22	28.9
	Mankon United	28	36.8
Total		76	100.0

Years of Experience	1–3 years	27	35.5
	4–6 years	45	59.2
	7 years and above	4	5.3
Total		76	100.0

Table 1 presents the demographic characteristics of the 76 regional footballers who participated in the study. The findings indicate that the majority of participants (73.7%) were aged 21–25 years, while 23.7% were aged 26 years and above. Only 2.6% were aged 20 years and below. All participants were male (100%).

Regarding club representation, Mankon United contributed 28 players (36.8%), followed by Bafut United with 26 players (34.2%) and My Soccer FC with 22 players (28.9%). Concerning playing experience, 59.2% had participated in competitive football for 4–6 years, while 35.5% had 1–3 years of experience. Only 5.3% reported seven years or more.

Overall, the findings indicate that the study population consisted predominantly of young adult male footballers with several years of competitive playing experience. The distribution also shows that all three participating clubs were represented in the study.

3.2. Relationship between nutritional intake and physical wellbeing

Table 2. Bivariate nutrition model

Predictor	R	R ²	F (df)	β	T	Sig. (p)	Decision
Nutrition Habits	0.527	0.277	28.4	0.533	5.329	0.001	Reject H01

Table 2 presents the regression analysis examining the relationship between nutritional intake and physical wellbeing among regional footballers in Bamenda II Municipality.

The findings reveal a positive association between nutritional intake and physical wellbeing ($R = 0.527$). The coefficient of determination ($R^2 = 0.277$) indicates that nutritional intake accounted for 27.7% of the observed variation in self-reported physical wellbeing when examined independently.

The regression model was statistically significant ($F = 28.400$, $p = 0.001$). The reported regression coefficient was positive ($\beta = 0.533$, $t = 5.329$), indicating that higher nutritional intake scores were associated with higher physical wellbeing scores.

Consequently, the null hypothesis stating that there is no significant relationship between nutritional intake and physical wellbeing was rejected. The findings demonstrate a statistically significant positive association between the two variables among the footballers studied.

3.3. Relationship between daily fluid intake and physical wellbeing

Table 3. Bivariate hydration model

Predictor	R	R ²	F (df)	β	T	Sig. (p)	Decision
Players' daily fluid intake (Hydration)	0.526	0.276	28.265	0.710	5.317	0.001	Reject H02

Table 3 presents the regression analysis examining the relationship between daily fluid intake and physical wellbeing among regional footballers in Bamenda II Municipality.

The findings reveal a positive relationship between daily fluid intake and physical wellbeing ($R = 0.526$). The coefficient of determination ($R^2 = 0.276$) indicates that daily fluid intake

accounted for 27.6% of the observed variation in self-reported physical wellbeing when considered independently.

The regression model was statistically significant ($F = 28.265$, $p = 0.001$). The reported positive regression coefficient ($\beta = 0.710$, $t = 5.317$) indicates that higher hydration-practice scores were associated with higher physical wellbeing scores.

Therefore, the null hypothesis stating that there is no significant relationship between daily fluid intake and physical wellbeing was rejected. The findings demonstrate a statistically significant positive association between reported hydration practices and physical wellbeing among the participating footballers.

3.4. Relationship between sleep duration, recovery and physical wellbeing

Table 4. Bivariate sleep and recovery model

Predictor	R	R ²	F (df)	B	T	Sig. (p)	Decision
Sleep and Recovery	0.595	0.354	40.530	0.816	6.366	0.001	Reject HO3

Table 4 presents the regression analysis examining the relationship between sleep duration, recovery and physical wellbeing among regional footballers in Bamenda II Municipality.

The findings reveal a positive association between sleep and recovery practices and physical wellbeing ($R = 0.595$). The coefficient of determination ($R^2 = 0.354$) indicates that sleep and recovery accounted for 35.4% of the observed variation in self-reported physical wellbeing when examined independently.

The regression model was statistically significant ($F = 40.530$, $p = 0.001$). The reported positive regression coefficient ($\beta = 0.816$, $t = 6.366$) indicates that higher sleep and recovery scores were associated with higher physical wellbeing scores.

Consequently, the null hypothesis stating that there is no significant relationship between sleep duration, recovery and physical wellbeing was rejected. The findings demonstrate a statistically significant positive association between sleep and recovery practices and physical wellbeing among the participating footballers.

3.5. Relationship between alcohol and tobacco consumption and physical wellbeing

Table 5. Bivariate substance-use model

Predictor	R	R ²	F (df)	B	T	Sig. (p)	Decision
Substance Use	0.625	0.391	47.501	0.892	6.892	0.001	Reject HO4

Table 5 presents the regression analysis examining the relationship between the alcohol and tobacco consumption scale and physical wellbeing among regional footballers in Bamenda II Municipality.

The findings reveal a positive statistical association between the substance-use scale and physical wellbeing ($R = 0.625$). The coefficient of determination ($R^2 = 0.391$) indicates that the substance-use scale accounted for 39.1% of the observed variation in self-reported physical wellbeing when considered independently.

The regression model was statistically significant ($F = 47.501$, $p = 0.001$). The reported positive regression coefficient ($\beta = 0.892$, $t = 6.892$) indicates that higher scores on the substance-use scale were associated with higher physical wellbeing scores.

Consequently, the null hypothesis stating that there is no significant relationship between the substance-use scale and physical wellbeing was rejected.

However, the direction of the questionnaire scoring must be verified before interpreting this finding as an association with either increased alcohol and tobacco consumption or greater avoidance of these substances. The positive coefficient alone does not establish that substance consumption improves physical wellbeing.

3.6. Combined relationship between healthy lifestyle practices and physical wellbeing

Table 6. Combined model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.730	0.533	0.507	.34539	1.695

Table 6 presents the combined regression model examining the relationship between nutritional intake, daily fluid intake, sleep duration and recovery, alcohol and tobacco consumption, and physical wellbeing among regional footballers.

The findings reveal a multiple correlation coefficient of $R = 0.730$, indicating a substantial association between the combined lifestyle variables and self-reported physical wellbeing.

The coefficient of determination ($R^2 = 0.533$) indicates that the four lifestyle variables jointly accounted for 53.3% of the observed variation in physical wellbeing. The remaining 46.7% was not explained by the variables included in the model.

The adjusted coefficient of determination (adjusted $R^2 = 0.507$) indicates that the model explained approximately 50.7% of the variation in physical wellbeing after adjustment for the number of predictors and sample size.

The standard error of the estimate was 0.34539, while the Durbin–Watson statistic was 1.695.

Overall, the findings indicate that the four lifestyle variables jointly accounted for a substantial proportion of the variation in self-reported physical wellbeing among the participating footballers.

3.7. Statistical significance of the combined regression model

Table 7. Overall regression ANOVA

Model	Sum of Squares	df	Mean Square	F	P
Regression	9.667	4	2.417	20.258	.001*
Residual	8.47	71	0.119	—	—
Total	18.137	75	—	—	—

Table 7 presents the analysis of variance for the combined regression model examining the relationship between healthy lifestyle practices and physical wellbeing.

The findings indicate that the regression sum of squares was 9.667, while the residual sum of squares was 8.470, giving a total sum of squares of 18.137. The regression and residual degrees of freedom were 4 and 71, respectively. The regression model was statistically significant, $F(4, 71) = 20.258$, $p = 0.001$. This indicates that nutritional intake, daily fluid intake, sleep duration and recovery, and the alcohol and tobacco consumption scale jointly demonstrated a statistically significant relationship with physical wellbeing. Consequently, the overall null hypothesis stating that the four lifestyle variables have no joint relationship with physical wellbeing was rejected. However, the statistical significance of the combined model does not imply that each individual lifestyle variable remained significant after adjustment for the others.

3.8. Individual contributions of healthy lifestyle practices to physical wellbeing

Table 8. Mutually adjusted regression coefficients

Predictor	B	SE	B	T	P
Constant	3.163	0.04	—	79.839	0
Nutrition (NUT_C)	0.182	0.105	0.179	1.728	0.088
Hydration (HYD_C)	0.254	0.132	0.188	1.928	0.058
Substance Use (SUB_C)	0.497	0.145	0.349	3.426	.001*
Sleep and Recovery (SLP_C)	0.28	0.156	0.204	1.796	0.077

Table 8 presents the multiple regression coefficients examining the individual associations of nutritional intake, daily fluid intake, sleep duration and recovery, and the substance-use scale with physical wellbeing after adjustment for the other lifestyle variables.

Nutritional intake recorded a positive regression coefficient ($B = 0.182$, $\beta = 0.179$, $t = 1.728$, $p = 0.088$). Although the relationship was positive, it was not statistically significant at the 0.05 level.

Daily fluid intake also recorded a positive regression coefficient ($B = 0.254$, $\beta = 0.188$, $t = 1.928$, $p = 0.058$). However, its association with physical wellbeing did not reach statistical significance after adjustment for the other predictors.

The substance-use scale recorded a positive regression coefficient ($B = 0.497$, $\beta = 0.349$, $t = 3.426$, $p = 0.001$). This association remained statistically significant after adjustment for nutritional intake, hydration, and sleep and recovery. Nevertheless, the direction of the scale must be verified before interpreting the coefficient in terms of substance consumption or avoidance.

Sleep duration and recovery recorded a positive regression coefficient ($B = 0.280$, $\beta = 0.204$, $t = 1.796$, $p = 0.077$). Although the relationship was positive, it was not statistically significant at the 0.05 level.

Overall, the findings indicate that only the substance-use scale retained a statistically significant association with physical wellbeing in the combined regression model. Nutritional intake, daily fluid intake, and sleep and recovery demonstrated positive but statistically non-significant adjusted associations.

These findings suggest that the significant relationships observed in the separate regression models should not be interpreted as independent effects of all four lifestyle variables.

3.9. Qualitative findings on nutritional practices

Table 9. Staff perspectives on nutrition

Respondent / Club	Key Quotation	Theme
SO1 (Mankon United)	“Carbohydrates heavy, low protein.”	Current nutritional practices
SO2 (Bafut United)	“High carbohydrate, low protein and vegetables.”	Current nutritional practices
SO3 (My Soccer)	“Average, mostly traditional meals.”	Current nutritional practices

SO5 (Mankon United)	“Supplements used without guidance.”	Current nutritional practices
SO4 (Bafut United)	“Traditional food, poor portions and timing.”	Current nutritional practices
SO6 (My Soccer)	“Players struggle with food choices due to cost.”	Barriers to healthy nutrition
SO2 (Bafut United)	“Limited access to balanced diets affects performance.”	Barriers to healthy nutrition
SO3 (My Soccer)	“Poor planning of meals before training.”	Barriers to healthy nutrition

Table 9 presents the qualitative findings obtained from interviews with coaches and team personnel concerning the nutritional practices of regional footballers in Bamenda II Municipality.

The findings reveal two major themes: current nutritional practices and barriers to healthy nutrition.

Regarding current nutritional practices, respondents described players’ diets as predominantly carbohydrate-based, with limited protein and vegetable intake. Some respondents also reported inadequate meal portions, irregular meal timing and the use of nutritional supplements without professional guidance.

Concerning barriers to healthy nutrition, respondents identified the cost of food, limited access to balanced diets and inadequate meal planning before training sessions as challenges affecting players’ nutritional practices.

Overall, the findings indicate that the participating coaches and team personnel perceived several nutritional challenges among the footballers, particularly concerning dietary balance, meal planning and access to appropriate foods. These observations provide contextual information for understanding the quantitative relationship between nutritional intake and self-reported physical wellbeing.

3.10. Qualitative findings on hydration practices

Table 11 indicates that staff described inconsistent drinking routines and limited monitoring of fluid intake; they also perceived fatigue and cramps as hydration-related challenges.

Table 10. Staff perspectives on hydration

Respondent / Club	Key Quotation	Theme
SO1 (Mankon United)	“Drink when thirsty, not systematic.”	Current hydration practices
SO2 (Bafut United)	“Inconsistent hydration during training sessions.”	Current hydration practices
SO3 (My Soccer)	“Drink during sessions but not enough.”	Current hydration practices
SO4 (Bafut United)	“Many players arrive already dehydrated.”	Current hydration practices
SO5 (Mankon United)	“Water is only taken during breaks.”	Current hydration practices
SO2 (Bafut United)	“Muscle cramps occur when hydration is poor.”	Hydration-related challenges
SO3 (My Soccer)	“Fatigue increases with inadequate hydration.”	Hydration-related challenges
SO6 (My Soccer)	“Players rarely monitor	Hydration-related

	fluid intake.”	challenges
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Table 10 presents the qualitative findings concerning the hydration practices of regional footballers in Bamenda II Municipality.

The findings reveal two major themes: current hydration practices and hydration-related challenges.

Regarding current hydration practices, respondents reported that players frequently consumed water only when thirsty or during scheduled training breaks. Some respondents indicated that hydration was inconsistent and that certain players arrived at training sessions without having consumed sufficient fluids.

Concerning hydration-related challenges, respondents associated inadequate fluid intake with muscle cramps, fatigue and difficulty maintaining physical activity during training. They also reported that players rarely monitored their daily fluid intake.

Overall, the findings indicate that the participating coaches and team personnel perceived inconsistent hydration practices among the footballers. These observations provide contextual support for examining the relationship between reported fluid-intake practices and physical wellbeing, although they do not establish that inadequate hydration caused the reported physical symptoms.

3.11. Qualitative findings on sleep duration and recovery

Table 11. Staff perspectives on sleep and recovery

Respondent / Club	Key Quotation	Theme
SO1 (Mankon United)	“Irregular sleep, few recovery routines.”	Current sleep & recovery practices
SO2 (Bafut United)	“Five to six hours sleep on average.”	Current sleep & recovery practices
SO3 (My Soccer)	“Irregular due to work and social activities.”	Current sleep & recovery practices
SO4 (Bafut United)	“Poor sleep quality among players.”	Current sleep & recovery practices
SO5 (Mankon United)	“Late night activities are common.”	Current sleep & recovery practices
SO2 (Bafut United)	“Muscle strains are common with poor recovery.”	Recovery-related challenges
SO3 (My Soccer)	“Soft tissue injuries increase with poor recovery.”	Recovery-related challenges
SO6 (My Soccer)	“Overuse injuries occur due to poor recovery habits.”	Recovery-related challenges

Table 11 presents the qualitative findings concerning sleep duration and recovery practices among regional footballers in Bamenda II Municipality.

The findings reveal two major themes: current sleep and recovery practices and recovery-related challenges.

Regarding current practices, respondents reported irregular sleeping patterns, inadequate recovery routines and poor sleep quality among some footballers. One respondent estimated that players slept for approximately five to six hours per night, while others identified work commitments, social activities and late-night engagements as factors affecting sleeping patterns.

Concerning recovery-related challenges, respondents reported muscle strains, soft-tissue injuries and overuse injuries, which they associated with inadequate recovery practices.

Overall, the findings indicate that the participating coaches and team personnel perceived inadequate sleep and recovery as challenges among the footballers. These observations provide contextual information for interpreting the positive association between sleep and recovery scores and physical wellbeing identified in the quantitative analysis.

3.12. Qualitative findings on alcohol and tobacco consumption

Table 12. Staff perspectives on alcohol and tobacco

Respondent / Club	Key Quotation	Theme
SO1 (Mankon United)	“Occasional alcohol after training.”	Substance use practices
SO2 (Bafut United)	“Moderate alcohol consumption among players.”	Substance use practices
SO3 (My Soccer)	“Weekend drinking is common.”	Substance use practices
SO4 (Bafut United)	“Alcohol use is present but not daily.”	Substance use practices
SO5 (Mankon United)	“Alcohol is usually taken after training sessions.”	Substance use practices
SO2 (Bafut United)	“Alcohol delays recovery after exercise.”	Effects on physical wellbeing
SO3 (My Soccer)	“Players are less prepared after drinking.”	Effects on physical wellbeing
SO6 (My Soccer)	“Recovery is slower with alcohol use.”	Effects on physical wellbeing

Table 12 presents the qualitative findings concerning alcohol and tobacco consumption among regional footballers in Bamenda II Municipality.

The findings reveal two major themes: substance-use practices and perceived effects on physical wellbeing.

Regarding substance-use practices, respondents reported occasional alcohol consumption among footballers, particularly after training sessions and during weekends. Some respondents described alcohol consumption as moderate or occasional rather than daily.

Concerning perceived effects on physical wellbeing, respondents associated alcohol consumption with delayed recovery, reduced physical preparedness and slower recovery following exercise.

Overall, the findings indicate that the participating coaches and team personnel perceived alcohol consumption as a lifestyle practice that could interfere with players’ recovery and physical preparedness. Although the table addresses alcohol and tobacco consumption, the reported interview statements focus predominantly on alcohol, with insufficient specific evidence to characterize tobacco-use patterns among the participating footballers.

4. Discussion

The present study examined the relationship between healthy lifestyle practices and physical wellbeing among regional footballers in Bamenda II Municipality, Cameroon. The findings revealed significant positive associations between nutritional intake ($R = 0.527$, $p = 0.001$), daily fluid intake ($R = 0.526$, $p = 0.001$), sleep and recovery ($R = 0.595$, $p = 0.001$), and the substance-use scale ($R = 0.625$, $p = 0.001$) and self-reported physical wellbeing. These findings indicate that players reporting higher scores on the respective lifestyle measures generally reported better

physical wellbeing. However, the significant associations observed in the separate regression analyses do not establish that each lifestyle practice independently influences physical wellbeing.

The combined regression model demonstrated a significant relationship between the four lifestyle variables and physical wellbeing, explaining 53.3% of the observed variation ($R = 0.730$, $R^2 = 0.533$, adjusted $R^2 = 0.507$; $F(4, 71) = 20.258$, $p = 0.001$). Nevertheless, only the substance-use scale retained a statistically significant association after adjustment for the other lifestyle variables ($\beta = 0.349$, $p = 0.001$). Nutritional intake ($p = 0.088$), daily fluid intake ($p = 0.058$), and sleep and recovery ($p = 0.077$) did not demonstrate statistically significant independent associations in the combined model. The positive coefficient for the substance-use scale must be interpreted cautiously because the questionnaire coding has not been verified. It cannot therefore be concluded that greater alcohol or tobacco consumption was associated with better physical wellbeing; higher scores may instead reflect avoidance of these substances.

The qualitative findings provided further insight into the lifestyle practices of the participating footballers. Coaches and team personnel reported carbohydrate-heavy diets with limited protein and vegetable intake, inadequate meal planning, and financial constraints affecting access to balanced meals. Hydration practices were described as inconsistent, with some players drinking mainly when thirsty or during training breaks. Irregular sleeping patterns, insufficient recovery routines, work commitments, and social activities were also identified as challenges. In addition, respondents reported occasional alcohol consumption, particularly during weekends and after training, which they perceived as affecting recovery and physical preparedness. These observations highlight the practical challenges footballers encounter in maintaining healthy lifestyle routines and provide context for interpreting the quantitative findings.

The study findings have implications for coaches, club administrators, and sports health professionals. Nutrition education, access to drinking water, regular hydration routines, adequate sleep, recovery planning, and substance-use awareness could be considered when developing player wellbeing programmes. However, the study did not evaluate the effectiveness of these measures. Furthermore, its cross-sectional design, reliance on self-reported information, and sample of 76 male footballers from three clubs limit causal interpretation and generalizability. The findings should therefore be understood as evidence of associations rather than proof that particular lifestyle practices cause improvements in physical wellbeing. Further longitudinal and intervention-based studies incorporating objective measures of dietary intake, hydration status, sleep quality, and physical health are recommended to clarify these relationships among regional footballers.

5. Conclusion

The present study established that healthy lifestyle practices were significantly associated with self-reported physical wellbeing among regional footballers in Bamenda II Municipality, Cameroon. Nutritional intake, daily fluid intake, sleep and recovery, and the substance-use scale each demonstrated significant positive associations with physical wellbeing when examined separately. Together, these variables explained 53.3% of the observed variation in physical wellbeing. However, only the substance-use scale retained a statistically significant association after adjustment for the other lifestyle variables. The direction of this relationship requires verification of the questionnaire coding before conclusions can be drawn about alcohol and tobacco consumption or avoidance. The qualitative findings revealed challenges relating to unbalanced diets, inconsistent hydration, irregular sleep, inadequate recovery routines and occasional alcohol consumption. Financial constraints, work commitments and social activities were also identified as factors affecting players' lifestyle practices. These findings highlight the importance of addressing lifestyle-related challenges within regional football clubs through nutrition education, improved access to drinking water, adequate rest and recovery planning, and substance-use awareness.

Declarations

a) Ethics approval and consent to participate: Ethical approval for this study was obtained from the University of Bamenda Ethics Committee, under approval/reference number 2026/0610H/UBA/IRB, dated 25 May, 2026. Administrative authorization to conduct the study among regional league football clubs in Bamenda was obtained from the relevant authorities and participating clubs before data collection.

All participants were informed about the purpose, procedures, potential benefits, and voluntary nature of the study before participation. Written informed consent was obtained from all participants prior to data collection. Participants were informed of their right to decline participation or withdraw from the study without penalty. Confidentiality and anonymity were maintained throughout data collection, analysis, and reporting. The study was conducted in accordance with applicable institutional and national ethical requirements and the principles of the Declaration of Helsinki.

b) Consent for publication: All participants were informed about the purpose of the study and the intended publication of the research findings. The results are presented in aggregate form, and no personally identifiable information is included in the manuscript. Where applicable, informed consent for participation and publication was obtained from the participants. No individual participant data, images, or other identifying information requiring separate consent for publication are presented in this article.

c) Availability of data and materials: The datasets generated and/or analysed during the current study are available from the corresponding author on reasonable request. The data are not publicly available because they contain information collected from individual football players and are subject to confidentiality and ethical considerations. Any data shared will be appropriately de-identified to protect participants' privacy.

d) Competing interests: The authors declare that they have no competing financial or non-financial interests that could have influenced the conduct, analysis, interpretation, or reporting of this study.

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f) Authors' Contributions: **MA** conceived the study, contributed to the study design and methodology, and collected the data. **DMND** contributed to the study design, methodology, supervision, and interpretation of the findings. **MMB** contributed to data analysis and interpretation of the results. **DMND** contributed to the preparation, critical review, and revision of the manuscript. All authors reviewed and approved the final version of the manuscript and agreed to be accountable for their respective contributions to the work.

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