



Research Article

Magnitude of Central Obesity and Its Associated Factors among Civil Servants in West Gojjam Zone District Government Offices, Northwest Ethiopia

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Abstract

Central obesity is defined as its excessive accumulation of visceral fat around the abdomen. It has become a significant public health concern and a major risk factor for non-communicable diseases (NCDs) in developing countries like Ethiopia. The study fills the knowledge gap and detects central obesity in civil servants in the West Gojjame zone office workers. *Objective:* To assess the magnitude of central obesity and its associated factors among civil servants in West Gojjam Zonal government office, North West Ethiopia, 2024. *Methods:* An institutional-based cross-sectional study was conducted among 567 civil servants in the West Gojjam Zone government office from August 7 to September 1, 2024. Study participants were selected using a simple random sampling technique, and data were collected through face-to-face interviews using a pretested structured questionnaire. The collected data were entered into Epi-Data version 3.1 and then exported to Stata version 17 for analysis. Binary logistic regression analysis was performed to identify factors associated with central obesity. Variables with a p-value of ≤ 0.25 in the bivariable binary logistic regression analysis were included in the multivariable binary logistic regression analysis. The odds ratio with a 95% Confidence Interval (CI) was calculated to assess the strength of the association. *Results:* The prevalence of central obesity among civil servants was 27.8% (95% CI: 24.1, 31.8). Factors positively associated with central obesity included older age (AOR=4.5, 95% CI: 2.3, 8.8), being female (AOR=2.5, 95% CI: 1.5, 4.2), and having an income above the poverty line (AOR=18.4, 95% CI: 7.9, 42.9). In contrast, a borderline food consumption score (AOR=2.2, 95% CI: 1.1, 4.2) and physical inactivity (AOR=2.5, 95% CI: 1.4, 4.5) were negatively associated with central obesity. *Conclusion and Recommendations:* Central obesity is prevalent in the West Gojjam Zone government office, affecting one in two women and one in five men, with factors like Being a female, older age, richest monthly income, inadequate food consumption score and physical inactivity significantly associated with central obesity among civil servants. Workplace health programs and campaigns targeting women and older adults are crucial, along with government policies promoting physical activity. Office workers should aim for at least 150 minutes of moderate or 75 minutes of vigorous weekly aerobic exercise.

Keywords

Magnitude, Central Obesity, Associated Factors, Civil Servants, West, Gojjam Zone

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1. Introduction

Central obesity, defined by excessive accumulation of abdominal fat, is particularly harmful because it is strongly associated with metabolic disorders such as type 2 diabetes mellitus, hypertension, cardiovascular diseases, and certain cancers [1].

The global prevalence of obesity has increased substantially over recent decades, largely driven by rapid urbanization, economic development, dietary transitions, and declining levels of physical activity [1]. As a result, obesity is now recognized as a leading risk factor for non-communicable diseases (NCDs) and premature mortality worldwide [2].

Central obesity, defined as excessive fat accumulation in the abdominal region, is considered more detrimental to health than general obesity because of its strong association with visceral fat deposition [3]. Visceral adiposity contributes to metabolic abnormalities such as insulin resistance, dyslipidemia, systemic inflammation, and hypertension, which significantly increase the risk of cardiovascular disease and type 2 diabetes mellitus [4]. Consequently, anthropometric measures such as waist circumference and waist-to-height ratio are widely recommended for assessing cardio metabolic risk in both clinical and population-based settings [5].

The rising burden of central obesity is closely linked to behavioral and lifestyle changes, including increased consumption of energy-dense foods, reduced physical activity, prolonged sedentary behavior, and exposure to psychosocial stress [6]. Occupational settings play a critical role in shaping these behaviors, particularly for office-based workers who spend prolonged periods sitting with limited opportunities for movement during working hours [7]. As a result, civil servants and other office employees are increasingly recognized as high-risk groups for central obesity and its related health consequences [8].

Civil servants constitute a substantial proportion of the formal workforce and are primarily engaged in administrative and managerial duties that require minimal physical exertion International Labor Organization [9]. Prolonged sitting, work-related stress, irregular eating patterns, and limited engagement in physical activity have been widely documented among civil servants and are known contributors to abdominal fat accumulation [10]. These factors collectively increase the likelihood of developing central obesity and related NCDs, which may negatively affect productivity and work performance [11].

Low- and middle-income countries, particularly those in sub-Saharan Africa, are currently experiencing a rapid nutrition and epidemiological transition characterized by shifts toward sedentary lifestyles and increased consumption of processed foods [12]. This transition has resulted in a growing burden of overweight and obesity alongside persistent under nutrition, creating a double burden of malnutrition [5]. Urban and semi-urban populations are disproportionately affected

due to changes in transport systems, work environments, and food availability [13].

Ethiopia, which has historically focused on combating under nutrition and infectious diseases, is now facing a steady rise in overweight and obesity, particularly among adults residing in urban areas [14]. Recent studies conducted in different parts of the country indicate that central obesity is increasingly prevalent, especially among women, older adults, and individuals engaged in sedentary occupations [15]. This emerging trend poses a significant public health concern, as the health system must address both communicable diseases and nutrition-related NCDs simultaneously (Federal Ministry of Health [16].

Despite the increasing burden of obesity, central obesity remains under-recognized and inadequately addressed in Ethiopia, as routine screening often relies on body mass index alone [4]. Limited awareness, insufficient workplace health promotion programs, and inadequate preventive strategies further contribute to the growing burden of abdominal obesity [16]. Consequently, central obesity continues to contribute silently to the rising prevalence of hypertension, diabetes, and cardiovascular disease among working-age adults [15].

West Gojjam Zone, located in Northwest Ethiopia, has experienced notable urban expansion and growth of district-level government offices in recent years [17]. These developments have been accompanied by lifestyle changes, including reduced physical activity, increased sedentary work, and shifts in dietary habits [18]. Civil servants working in district government offices in West Gojjam Zone are therefore likely to be exposed to multiple risk factors for central obesity.

However, there is limited evidence regarding the magnitude of central obesity and its associated factors among civil servants in this area. Most available studies in Ethiopia have focused on the general population or urban communities, with limited emphasis on occupational groups, particularly at the district level [19]. Therefore, generating context to assess the magnitude of central obesity and identify its associated factors among civil servants in West Gojjam Zone district government offices, Northwest Ethiopia.

Central obesity is a major contributor to the global burden of non-communicable diseases and is associated with increased morbidity, mortality, and health-care expenditure [5]. Individuals with excess abdominal fat are at a significantly higher risk of developing cardiovascular disease, type 2 diabetes mellitus, metabolic syndrome, and other chronic conditions compared to individuals without central obesity [20]. Despite these serious health consequences, central obesity often remains underdiagnosed, particularly in low-income settings [12].

In Ethiopia, public health priorities have traditionally focused on maternal and child under nutrition, communicable diseases, and emergency health challenges, while obesity and

other NCDs have received relatively limited attention [16].

Civil servants play a critical role in public administration and service delivery, and their health status directly influences institutional efficiency and national development [9]. Sedentary work environments, prolonged sitting, occupational stress, and unhealthy dietary behaviors are common among civil servants and are strongly associated with abdominal fat accumulation [7]. Without effective preventive measures, central obesity among civil servants may lead to increased absenteeism, reduced work performance, and early onset of chronic diseases [21].

Although several studies in Ethiopia have examined overweight and obesity, many rely solely on body mass index and fail to adequately capture central obesity, which is a stronger predictor of cardio metabolic risk [4]. Moreover, limited research has explored the occupational, behavioral, and socio demographic factors associated with central obesity among civil servants, particularly in district-level government offices [19]. This lack of evidence constrains the development of effective workplace-based interventions and policies. In West Gojjam Zone, district government offices employ a large number of civil servants who may be at increased risk of central obesity due to changing lifestyles and work patterns associated with urbanization [22]. However, there is a clear lack of localized data on the magnitude of central obesity and its associated factors in this population. This evidence gap limits the ability of policymakers and health planners to design targeted prevention and control strategies. Therefore, assessing the magnitude of central obesity and identifying its associated factors among civil servants in West Gojjam Zone district government offices is essential. The findings of this study will provide valuable evidence to inform workplace health promotion programs, guide policy formulation, and support efforts to prevent and control non-communicable diseases in North-west Ethiopia.

2. Materials and Methods

2.1. Study Area and Period

A facility-based cross-sectional study was conducted in the July 07/08/2024 to September 1/2024 at the west Gojjam Zone Civil service offices, which is located in Finote Selam City

administration, capital of west Gojjam zone, Amhara Region, Ethiopia. The town is located about 387 km from Addis Ababa, the capital city of Ethiopia, and 173 km far from Bahir Dar, the Capital city of Amhara National Regional State.

West Gojjam Administration Zone had 32 Zonal and 12 woredas offices and both of 7667 workers.

2.2. Source and Study Population

All West Gojjam zonal government office civil Servants were the source population of the study, and all office workers from the selected seven Zonal departments in the West Gojjam zone is study populations.

2.3. Sample Size Determination and Sampling Procedure

To determine the magnitude of central obesity and the sample size as determined using a single population proportion formula with an assumption of the overall prevalence of outcome variable, central obesity 33.6% [23]. 95%, confidence interval 5% margin of error, and 10% non-response rate.

$$n = (Z\alpha/2)^2 \times p(1-p)/d^2$$

Here: n=the desired sample size

p=proportion of central obesity among civil servants

CI=Confidence interval with 95%

Z a/2 = Critical value at 95% confidence level of certainty is (1.96)

$$n = \frac{(Z\alpha/2)^2 p(1-p)}{d^2} = \frac{(1.96)^2 (0.336)(0.664)}{(0.05)^2} = 343 \times 1.5 + 10\%$$

By considering a 10% of non-response rate, n= 567

The sampling procedure used in this study is multi-stage random sampling. Initially, seven offices were selected from a total of 32 zonal offices through a simple random sampling method and a total of 12 woredas covering 25% of the total woredas in the west Gojjam Zone selected. Bure, Jabi Thinan, and Sekela were chosen as the sampling units using the lottery method. After that, samples were proportionally allocated to each selected woreda based on the total number of civil servants in those areas (Figure 1).

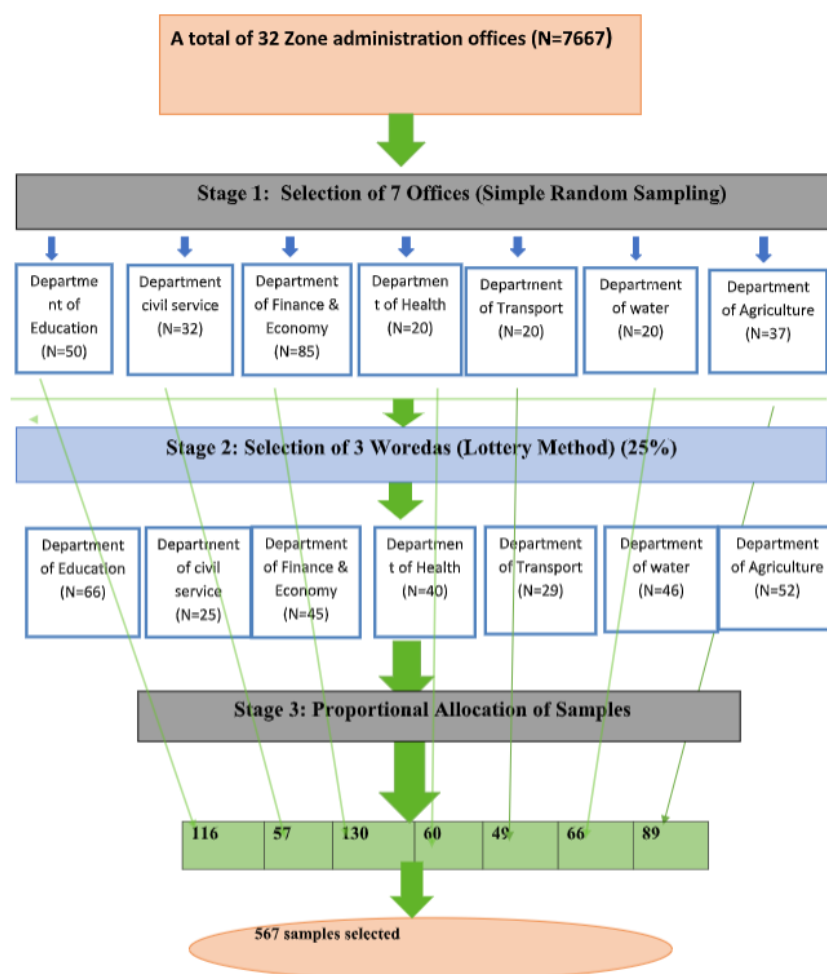


Figure 1. Schematic Presentation of Sampling Procedure in west Gojjam zone.

2.4. Variable of the Study

2.4.1. Dependent Variable

Central obesity (yes/no)

2.4.2. Independent Variable

Socio-demographic factors

Age, Sex, Marital status, Family size, Religion, Educational level

Behavioral factors

Alcohol use, Dietary diversity, Physical activity

Economic factors: Monthly income level

2.5. Operational Definition

Central obesity: waist circumference >94 cm in men and >80 cm in women [24].

Adult: a person whose age group is between 18 and 65 years [25].

Physically inactive: If the total physical activity MET minute/week is < 600 MET minutes [26].

Non-drinker: Amen and a woman who has a score of 0 on AUDIT score labeled as a non-drinker [27].

Alcohol use disorder: Defined as men and women who have a score of 8 or more on AUDIT score considered as AUD [28].

Monthly income: Based on the World Bank report, those who have an income of < 2.15\$ per day (<6450 ETB per month) are below the poverty line, and those who have an income of >2.15\$ per day (≥6451 ETB) are above poverty line [29].

Food Consumption Score (FCS): Food items are grouped into 8 standard food groups with a maximum value of 7 days/week. Items using the threshold 0 – 21, 21.5 – 35, and > 35 poor, borderline, and Acceptable consumption score, respectively [30].

2.6. Data Collection Tool

Data were collected using a structured and pretested interviewer-administered questionnaire combined with standard anthropometric measurements. The questionnaire was adapted from the World Health Organization (WHO) STEP-wise approach to Surveillance (STEPS) and related literature on central obesity and non-communicable disease risk factors,

with contextual modifications to suit the local setting and study population [31, 32]. The questionnaire was structured into four main sections. The first section addressed socio-demographic characteristics, including age, sex, marital status, educational level, job category, monthly income, and years of service. The second section focused on behavioral and lifestyle factors, such as dietary habits, physical activity, alcohol consumption, smoking status, and sedentary behaviors. The third section covered health-related factors, including a history of hypertension and diabetes mellitus, family history of obesity-related conditions, and current medication use. The fourth section consisted of anthropometric measurements, specifically waist circumference, which was used to assess central obesity.

Waist circumference was measured using a non-stretchable measuring tape, following WHO standard procedures. Measurements were taken at the midpoint between the lower margin of the last palpable rib and the top of the iliac crest, at the end of a normal expiration. Central obesity was defined as a waist circumference of ≥ 94 cm for men and ≥ 80 cm for women, in accordance with WHO recommendations for adult populations [33]. The questionnaire was first prepared in English, translated into Amharic, and then back-translated into English to ensure consistency and accuracy. A pretest was conducted on 5% of the sample size in a similar population outside the selected offices, and necessary modifications were made to improve clarity and reliability.

2.7. Data Collection Procedure

Data were collected from civil servants working in selected district government offices of West Gojjam Zone using a structured interviewer-administered questionnaire and anthropometric measurements. Trained health professionals conducted face-to-face interviews to obtain socio-demographic, behavioral, and health-related information. Prior to data collection, written informed consent was obtained from all participants after explaining the purpose of the study and assuring confidentiality. Waist circumference was measured using a non-stretchable measuring tape following World Health Organization (WHO) standard procedures. Supervisors closely monitored the data collection process and performed daily checks for completeness and consistency to ensure data quality.

2.8. Data Quality Assurance

One day of training was provided to data collectors and supervisors on the objectives of the research, how to collect the data, how to store the collected data, ethical principles, and

how to supervise the data collection process. Afterward, a pretest was conducted with 5% of the total sample size, involving civil servants, to assess the clarity of the data collection tools and make any necessary modifications.

2.9. Data Analysis Technique

The completed questionnaire was manually checked for completeness, coded and the data were entered into the Kobo toolbox and exported to STATA 17 for further analysis. Descriptive statistics were used to explain the population concerning the relevant variables. Data were presented using tables, graphs, and descriptive texts. A binary logistic regression technique was employed, and variables with p-values less than 0.25 in the bivariable analysis were included in the multivariable analysis. The odds ratio with a 95% confidence interval (CI) was calculated, and statistical significance was determined at p-values less than 0.05 in the multivariable analysis. Model fitness and multicollinearity were assessed using the Hosmer-Lemeshow goodness-of-fit test.

2.10. Ethical Consideration

Ethical approval was secured from the Institutional Review Board of the College of Medicine and Health Sciences at Debre Markos University. In addition, authorization was granted by public health institutions in West Gojjam Zone. Study participants were clearly informed about the purpose of the research and assured that participation was entirely voluntary. They were told that they could decline to participate or withdraw from the study at any time without any consequences. Data were collected only after obtaining informed consent from the selected individuals. All interviews were conducted in a manner that ensured the confidentiality of the information provided.

3. Results

3.1. Socio-demographic and Economic Characteristics of the Study Participants

Out of 567 study participants, complete information was collected from civil servants, resulting in a 100% response rate. Among the respondents, the mean age was 33.7 years. The majority of the participants (60.3%) were male, and over one-third (37.4%) had more than five family members. More than half (51.7%) had attained a bachelor's degree. In terms of monthly income, the majority (66.5%) of the respondents were above the poverty line (Table 2).

Table 1. Socio-demographic and economic characteristics of west Gojjam zone civil servants North west Ethiopia 2024 (n=567).

Variable	Category	Frequency	percent
Age	Yung Age (18-35)	191	33.7
	Middle age adults (36-55)	200	35.3
	old age adults (≥ 60)	176	31.0
Sex	Male	342	60.3
	Female	225	39.7
Marital status	Single	124	21.9
	Married	234	41.3
	Divorced	118	20.8
	widowed	91	16.0
Education	Primary (9-12)	19	3.4
	Diploma	150	26.5
	Degree	293	51.7
	Masters	105	18.5
Family size	<5	355	62.6
	≥ 5	212	37.4
Monthly income	below poverty line	190	33.5
	Above poverty line	377	66.5

3.2. Behavioral and Dietary Practices of the Respondents

Among the respondents, (44.6%) had borderline food consumption scores, while half (48.2%), were physically inactive. Most participants (65.6%) primarily consumed home-prepared meals. Tow-third of the civil servants (65.3%) had more than 3 years of work experience (Table 3).

Table 2. Behavioral characteristics of west Gojjame Zone civil servants North West Ethiopia 2024 (n=567).

Variables	Category	Frequency	percent
Alcohol consumption	Non-drinker	391	69.0
	Drinker	176	31.0
dietary consumption score	Acceptable	167	29.5
	Borderline	253	44.6
	Poor	147	25.9
Physical Activity	Active	294	51.9
	Inactive	273	48.2
Majorly eat	From- home prepared	372	65.6
	From- hotel/cafeteria	195	34.4
Work experience	<3	197	34.7
	≥ 3	370	65.3
Additional work	Yes	260	45.9

Variables	Category	Frequency	percent
	No	307	54.1

Source: Own survey, 2024

3.3. Prevalence of Central Obesity

The overall magnitude of central obesity among civil servants was 27.8% (95% CI, (24.2, 31.8) (Figure 2).

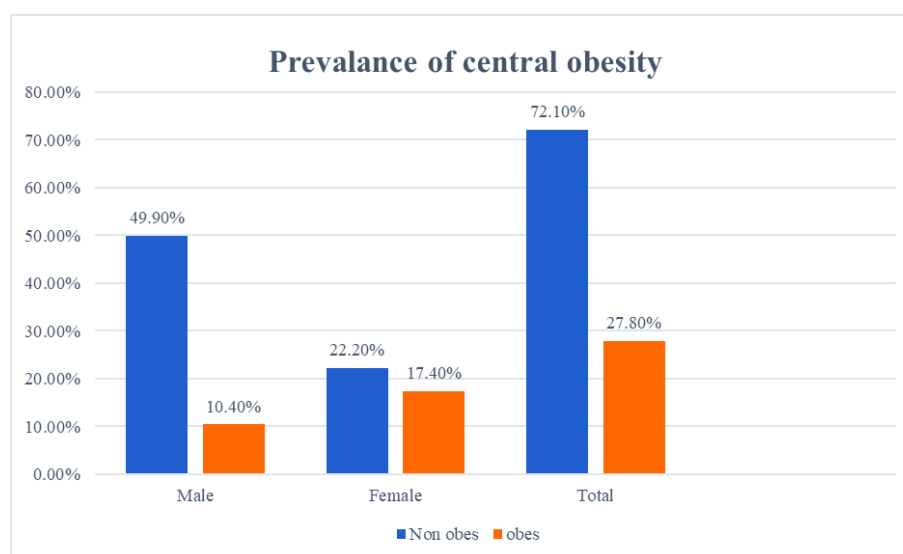


Figure 2. Prevalence of central obesity by sex using (WC) among West Gojjame zone civil servants in North West Ethiopia 2024 (n=567).

Factors associated with central obesity

In the bi-variable binary logistic regression analysis, age, sex, family size, monthly income, additional work, food consumption score, majorly eating, and physical activity were identified as significant factors associated with central obesity at a p-value of ≤ 0.25 . Subsequently, in a multivariable binary logistic regression analysis, age, sex, family size, monthly income, food consumption score, majorly eating, and physical activity had statistically significant associations with central obesity at a p-value of < 0.05 , the odds of central obesity being females were almost 2.5 times higher than in males (AOR=2.5,

(95% CI,1.5,4.2), Civil servants with the age of ≥ 60 were approximately 4.5 times more likely to develop central obesity than those below 18-44 age (AOR=4.5,95% CI: 2.3,8.8), Individuals with monthly income above the poverty line were 18.4 times more likely to develop central obesity compared to below the poverty line (AOR= 18.4,95% CI: 7.9,42.9). Individuals having borderline food consumption scores were 2.2 times more likely to develop central obesity compared to those with acceptable food consumption scores (AOR=2.2, 95% CI: 1.1,4.2), physically inactive participants had 2.5 times more likely to develop central obesity compared to those with physically active (AOR)= 2.5,95% CI: 1.4,4.5). (Table 4).

Table 4. Multivariable logistic regression of factors associated with central obesity by waist Circumference (WC) among west Gojjame zone civil servants in Northwest Ethiopia 2024 (n=567).

Variables	Category	Central obesity		COR 95%CI	AOR, 95%CI
		Yes	No		
Age	Yang age (18-35)	36	155	1	1
	Middle age (36-55)	39	161	1.0 (0.6,1.7)	0.9 (0.5,1.8)
	old age (≥ 65)	83	93	3.8 (2.4,6.1) *	4.5 (2.3,8.8) **

Variables	Category	Central obesity		COR 95%CI	AOR, 95%CI
Sex	Male	59	283	1	1
	Female	99	126	3.8 (2.6,5.5) *	2.5 (1.5,4.2) **
Family size	<5	51	304	1	1
	≥5	107	105	6.1 (4.1,9.1) *	12.2 (6.7,22.2) **
Monthly Income	Poverty line	10	180	1	1
	above Poverty line	148	229	11.6 (6.0,22.7) *	18.4 (7.9,42.9) **
Additional work	Yes	26	234	1	1
	No	132	175	2.1 (1.5,3.1) *	1.7 (1.0,2.9)
Dietary diversity	Acceptable	43	129	1	1
	Borderline	87	121	2.2 (1.4,3.4) *	2.2 (1.1,4.2) **
	Poor	28	159	0.5 (0.3,0.9)	0.5 (0.3,1.1)
Majorly eat	From home	75	306	1	1
	From hotel/cafeteria	83	103	3.3 (2.2,4.8) *	4.3. (2.4,7.8) **
Physical activity	Active	39	176	1	1
	Inactive	119	233	2.3 (1.5,3.5) *	2.5 (1.4,4.5) **

Key: *Significant at p-value < 0.25 in unadjusted logistic regression analysis

**Significant at p < 0.05 in adjusted logistic regression analysis

4. Discussion

This study examined the magnitude of central obesity and its associated factors among civil servants in West Gojjam Zone district government offices, Northwest Ethiopia. The findings demonstrated that age, sex, family size, monthly income, dietary practices, source of food, and physical activity were significant determinants of central obesity. These results reinforce existing evidence that central obesity is influenced by a complex interaction of socio-demographic, economic, and lifestyle factors.

The study suggested the age was significantly associated with central obesity. Civil servants aged 65 years and above were more than four times more likely to develop central obesity compared with young adults aged 18–35 years (AOR = 4.5; 95% CI: 2.3–8.8). This finding is consistent with studies conducted in Ethiopia, including Addis Ababa and Jimma, which reported increased central obesity with advancing age. Similar associations have also been documented in studies from other low- and middle-income countries. The increased risk among older adults may be attributed to age-related metabolic slowdown, hormonal changes, reduced lean body mass, and declining physical activity levels, all of which favor abdominal fat accumulation [34, 35].

We found that female participants were significantly more likely to have central obesity compared with males (AOR = 2.5; 95% CI: 1.5–4.2). This finding aligns with numerous

Ethiopian studies, including those conducted among urban residents and office workers, which consistently report higher central obesity prevalence among women. Biological factors such as pregnancy-related weight retention, hormonal variations, and menopause may partly explain this difference. Additionally, sociocultural norms that limit women's participation in physical activity and increase sedentary behavior may further contribute to higher abdominal obesity among females [36, 37].

The study suggested family size showed a strong and independent association with central obesity. Participants from households with five or more members were twelve times more likely to be centrally obese compared with those from smaller families (AOR = 12.2; 95% CI: 6.7–22.2). This finding is consistent with previous studies in Ethiopia, which reported that larger family size influences dietary patterns, portion size, and food quality. In urban and semi-urban settings, large families may depend on affordable, energy-dense foods with low nutritional quality, increasing the risk of central obesity [38].

We found that monthly income was one of the strongest predictors of central obesity in this study. Civil servants earning above the poverty line had significantly higher odds of central obesity than those earning below the poverty line (AOR = 18.4; 95% CI: 7.9–42.9). This finding is in agreement with studies conducted in urban Ethiopia and other developing countries, where higher income is associated with increased consumption of processed foods, reduced physical labor, and

sedentary lifestyles. This pattern reflects the ongoing nutrition transition in Ethiopia, where economic improvement is accompanied by unhealthy dietary shifts [12, 34].

The study suggested Participants without additional work were more likely to develop central obesity compared with those who had additional work (AOR = 1.7; 95% CI: 1.0–2.9). This may be explained by reduced physical activity and increased sedentary time among individuals who rely solely on office-based employment. Similar findings have been reported in studies among office workers, indicating that engagement in additional income-generating activities may increase energy expenditure and reduce obesity risk [39].

Dietary diversity was significantly associated with central obesity. Participants with borderline dietary diversity were twice as likely to be centrally obese compared with those with acceptable dietary diversity (AOR = 2.2; 95% CI: 1.1–4.2). This finding is consistent with evidence showing that inadequate dietary diversity reflects poor diet quality, often characterized by high intake of refined carbohydrates and fats. Interestingly, poor dietary diversity showed lower odds of central obesity, although the association was not statistically significant after adjustment. This inverse relationship may be related to lower overall caloric intake among individuals with very limited food access, a finding also reported in similar Ethiopian studies [40, 41].

We found that Civil servants who mainly consumed meals from hotels or cafeterias were more than four times more likely to have central obesity compared with those who ate predominantly home-prepared foods (AOR = 4.3; 95% CI: 2.4–7.8). This finding is consistent with previous studies showing that foods consumed outside the home tend to be energy-dense, high in fat and salt, and served in large portions. Increased reliance on commercially prepared foods has been identified as a major contributor to obesity in rapidly urbanizing settings like Ethiopia [42].

The study suggested that Physical inactivity was independently associated with central obesity. Inactive participants were 2.5 times more likely to be centrally obese compared with physically active individuals (AOR = 2.5; 95% CI: 1.4–4.5). This finding is in line with extensive global and national evidence demonstrating that insufficient physical activity is a major risk factor for abdominal obesity. Sedentary office-based work, combined with limited recreational exercise, likely explains the increased risk observed among civil servants [43, 44].

5. Strengths and Limitations

This study addressed an under-researched public health issue by focusing on central obesity among civil servants in Ethiopia. The use of waist circumference provided a valid and reliable measure of central obesity. Multivariable logistic regression enabled identification of independent predictors while controlling for confounders. Inclusion of diverse socio-

demographic, economic, dietary, and lifestyle variables enhanced the comprehensiveness and policy relevance of the findings.

The cross-sectional design limits causal inference between central obesity and associated factors. Some variables were self-reported, which may have introduced recall or social desirability bias. The study population was limited to district civil servants, restricting generalizability to other groups. Additionally, unmeasured factors such as genetics, stress, and detailed dietary intake may have influenced the results.

6. Conclusion And Recommendations

6.1. Conclusion

This study identified central obesity as a significant and emerging public health problem among civil servants in West Gojjam Zone district government offices. Central obesity was independently associated with age, sex, family size, monthly income, dietary diversity, source of food, physical activity, and additional work status. The higher prevalence among older adults, females, and higher-income earners reflects the combined influence of biological factors, urbanization, and lifestyle changes. Unhealthy dietary practices and physical inactivity further indicate that central obesity may increase the future burden of non-communicable diseases and reduce productivity if preventive measures are not implemented.

6.2. Recommendation

Recommendations for addressing central obesity among civil servants include integrating workplace-focused prevention strategies into national non-communicable disease frameworks and strengthening occupational health services with routine screening and counseling. Government institutions and employers should promote regular physical activity, provide healthy and affordable meals, and implement health education programs on balanced diets and active lifestyles. Civil servants are encouraged to increase physical activity, reduce sedentary behavior, choose healthier foods, and understand the risks of central obesity. Policymakers should foster multi sectoral collaboration to create supportive environments for healthy eating and activity in workplaces. Researchers should conduct longitudinal, intervention-based, and qualitative studies to identify causes and evaluate the effectiveness of workplace obesity prevention strategies.

Abbreviations

AMA	American Medical Association
BMI	Body Mass Index
COR	Crude Odd Ratio
CVD	Cardiovascular Disease
DM	Diabetes Mellitus

EDHS	Ethiopian Demographic Health Survey
HCWS	Health Care Workers
HDL	High-Density Lipoprotein
IDF	International Diabetes Federation
Kg/m ²	Kilo Gram Per Meter Square
KG	Kilo Gram
KM	Kilo Meter
NCD	Non-Communicable Disease
NGO	Non-Governmental Organization
OR	Odds Ratio
SSR	Simple Random Sampling
STEPS	Stepwise Approach to Surveillance
WC	Waist Circumference
WHO	World Health Organization

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Author Contributions

Haimanot Degu: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Validation, Visualization & Writing – original draft

Abraham Degu: Conceptualization, Data curation, Formal Analysis, Methodology, Project administration, Supervision, Validation, Visualization & Writing – review & editing

Agumas Degu: Conceptualization, Data curation, Formal Analysis, Methodology, Project administration, Supervision, Validation, Visualization & Writing – review & editing

Data Availability Statement

The data used for this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no competing interests.

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