**BMC Public Health**

# The prevalence and socio-demographic correlates of hypertension among women (15–49 years) in Lesotho: a descriptive analysis

Mapitso Lebuso* and Nicole De Wet- Billings

## Abstract

**Background:** Hypertensive disorders are among the leading conditions for severe maternal morbidity across all regions and have a major impact on health care costs. This study aimed to identify the prevalence and its associated socio-demographic correlates of hypertension among women of the reproductive ages in Lesotho.

**Methods:** The study used the Lesotho Demographic and Health Survey (2014 LDHS) data set. A total of 3353 women of childbearing age (15–49 years) whose blood pressure was measured were used for analysis. The blood pressure readings were categorized according to the JNC7 cut-offs. The dependent variable of this study is hypertension. Both bivariate and binary logistic regressions were performed to determine socio-demographic correlates of hypertension.

**Results:** Results from this study revealed that one out of every five respondents of the study had hypertension compared to 23% who were in the prehypertension stage. The situation adds to the overall future risk of hypertension. About 30% percent who were at the hypertension stage were either living with a partner or widowed. The odds of being hypertensive were significantly 9.78 times higher among women aged 45–49 years [CI: 6.38–15.00]. Other factors associated with hypertension among women of the reproductive ages were "living with a partner" [OR 3.55:95% CI: 1.76–7.16], widowed [OR 2.61:95% CI: 1.89–3.60], and residing in the Maseru district [OR 2.12: 95% CI: 1.49–3.03].

**Conclusion:** Chances of being diagnosed with high blood pressure increased with an increase with the age of the respondents. Age was found to be the most definite positive significant socio-demographic correlate of hypertension among women in Lesotho. To control hypertension, primary prevention strategies should target the identified high-risk -older age groups, the ever-married as well as prehypertensive women.

**Keywords:** Hypertension, High blood pressure, Socio-demographic factors

## Background

Africa is expected to have 216.8 million hypertensive people by 2030. Over 54.6 million cases of hypertension were estimated in 1990, 92.3 million cases in 2000 and 130.2 million cases in 2010 respectively. Hypertension is prevalent in Africa [1, 2]. Similarly, hypertension is widespread in Sub-Saharan Africa, its consequences include

among others cardiovascular diseases and increased risk in morbidity and mortality [3]. According to the latest WHO data published in 2018, the WHO STEPS of 2012 and other surveys done in 2001 and 2012 show that the prevalence of hypertension in the population was 31%. Hypertension related deaths in Lesotho reached 536 or 1.91% of the total deaths [Who.int/ncds/surveillance/steps/Lesotho_2012_STEPS_fact_sheet.pdf]. Hypertension is the 9th leading cause of death in the world, and Lesotho is ranked number 4 at 46.81per 100 000 according to the world rankings.

*Correspondence: mapitsol2000@gmail.com
Demography and Population Studies, School of Social Sciences, Faculty of Humanities, University of the Witwatersrand, Johannesburg 2000, South Africa

Hypertension is a major cause of morbidity among adult patients in Lesotho; it is among the five causes of female admission into hospitals. Hypertension is also the third most common cause of outpatient attendance and one of the leading causes of admission to public health [4–7]. The high prevalence of hypertension exerts a tremendous public health crisis [8, 9]. Mashea et al. [8], discovered that obstetric haemorrhage and hypertensive disorder escalates mortality by 31.4% and 28% respectively. The objective of this study is to identify prevalence and its associated socio-demographic correlates of hypertension among women aged 15–49 years in Lesotho. Prevalence of hypertension remains high (one in 3 persons are hypertensive) and it remains a challenge in the country despite concerted efforts made by the Lesotho government and development partners to curb it. Previous studies conducted in the country made investigations on hypertension treatment and control in primary care setting as well as knowledge of disease and medications among hypertension patients. The child-bearing women's demographic and social factors which could be predictors of hypertension have not been examined in Lesotho. The study is intended to fill that gap in the literature.

## Methods
This is a secondary data analysis of cross-sectional data of the 2014 Lesotho Demographic and Health Survey (LDHS). These are women of childbearing age (15–49 years) who had ever given birth in the five years preceding the 2014 LDHS. The total unweighted female population in the LDHS was 6,621. In determining the variable of interest, respondents were asked whether they were ever diagnosed with high blood pressure by a doctor or a nurse [10]. Blood pressure readings were taken from 3353 who were included in the final analysis. About fifteen percent (705) respondents were ever diagnosed with high blood pressure. The individual female dataset for the 2014 LDHS was used for this study and the data were extracted and processed using Stata version 14.

### The outcome variable
In this study, hypertension is the outcome variable, which was defined using the WHO classification and categorized using the JNC7 cut-offs. The categorization was done with the use of blood pressure records of women taken from the 2014 Lesotho Demographic and Health Survey [11].

This variable is derived from the survey question of "Ever been diagnosed with high blood pressure by a doctor or a nurse?". If the response is "yes", then the inclusion criteria which was used was for those whose hypertension levels were $140 + $ mmHg (systolic) or $90 + $ mmHg (diastolic) or above. The outcome variable was categorized as hypertension stage 1, that is, those with $SBP \geq 140$ (mmHg) or $DBP$ of $\geq 90$ (mmHg), then Hypertension stage 2, as those with $SBP \geq 160$ (mmHg) or $DBP$ $SBP \geq 100$ (mmHg) [12].

### Independent variable
The independent variables of the study were socio-demographic characteristics such as age, marital status, place of residence, region/district, religion, level of education and occupation.

### Statistical analyses
Cross-tabulations, bivariate and logistic regression analyses were done. At the bivariate level, the percentage distribution of the study sample was presented by the selected socio-demographic characteristics of the women. The correlation was tested using the Pearson correlation coefficient. Binary logistic regression was used to determine socio-demographic correlates of hypertension among women aged 15–49 years in Lesotho. A $p$-value of $< 0.05$ was considered statistically significant. All analyses were carried out using version 14 of the STATA software.

### Ethical consideration
The Lesotho DHS can be downloaded from the website and is free to use by researchers for further analysis. In order to access the data from DHS MEASURE, a written request was submitted to the DHS MACRO, and permission was granted to use the data for this survey.

## Results
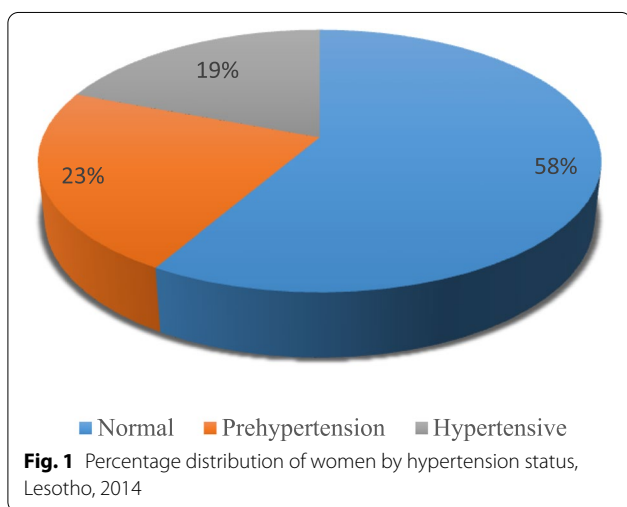### Socio-demographic characteristics of the respondents
Table 1 depicts the socio-demographic characteristics of respondents. Regarding the profile of women, 23.29% were aged 15–19 years while 7.40% were aged 45–49 years. More than three quarters (67%) were rural dwellers and 14% were residing in the Maseru district compared to 8% from Quthing and Qacha's Nek districts respectively. About one percent (0.80%) were living with their partners compared to 54% who were married. More than half (51%) of the women had completed the secondary level of education (Table 1). Thirty eight percent were members of the Roman Catholic Church compared to 0.02% of the Hindu religion. About 17% of the women's occupation was sales while only 1.3% reported being agricultural employees.

**Table 1** The socio-demographic characteristics of women in Lesotho, 2014

| Characteristics | N(6621) | N(705) Ever diagnosed with high blood pressure |
|---|---|---|
| Age groups | n(%) | n% |
| 15–19 | 1242 (23.29) | 29 (4.11) |
| 20–24 | 1300 (19.63) | 93 (13.19) |
| 25–29 | 1072 (16.19) | 94 (13.33) |
| 30–34 | 907 (13.70) | 116 (16.45) |
| 35–39 | 728 (11.00) | 118 (16.74) |
| 40–44 | 582 (8.79) | 114 (16.17) |
| 45–49 | 490 (7.40) | 141 (20.00) |
| Place of residence | | |
| Urban | 2202 (33.26) | 254 (36.03) |
| Rural | 4419 (66.74) | 451 (63.97) |
| Region/district | | |
| Botha-bothe | 593 (8.96) | 47 (6.67) |
| Leribe | 785 (11.86) | 93 (13.19) |
| Berea | 760 (11.48) | 77 (10.92) |
| Maseru | 930 (14.05) | 147 (20.85) |
| Mafeteng | 624 (9.42) | 96 (13.62) |
| Mohale's hoek | 621 (9.38) | 66 (9.36) |
| Quthing | 556 (8.40) | 42 (5.96) |
| Qacha's-nek | 558 (8.43) | 56 (7.94) |
| Mokhotlong | 605 (9.14) | 43 (6.10) |
| Thaba tseka | 589 (8.90) | 38 (5.39) |
| Marital Status | | |
| Single | 2201 (33.24) | 98 (13.90) |
| Married | 3556 (53.71) | 470 (66.67) |
| Living with partner | 53 (0.80) | 12 (1.70) |
| Widowed | 471 (7.11) | 83 (11.77) |
| Divorced | 96 (1.45) | 13 (1.84) |
| No longer living together/separated | 244 (3.69) | 29 (4.11) |
| Level of education | | |
| No education | 81 (1.22) | 10 (1.42) |
| Primary | 2665 (40.25) | 290 (41.13) |
| Secondary | 3354 (50.66) | 327 (46.38) |
| Higher | 521 (7.87) | 78 (11.06) |
| Religion | | |
| Roman catholic church | 2514 (37.97) | 281 (39.86) |
| Lesotho evangelical church | 1133 (17.11) | 135 (19.15) |
| Methodist | 111 (1.68) | 10 (1.42) |
| Anglican church | 453 (6.84) | 58 (8.23) |
| Seventh day Adventist | 40 (0.60) | 6 (0.85) |
| Pentecostal | 1682 (25.40) | 138 (19.25) |
| Other Christian | 540 (8.16) | 64 (9.08) |
| Islam | 11 (0.17) | 2 (0.28) |
| Hindu | 1 (0.02) | 0 (0.00) |
| No religion | 65 (0.98) | 4 (0.57) |
| Other | 71 (1.07) | 7 (0.99) |
| Professional/technical/managerial | 295 (10.84) | 49 (12.89) |
| Clerical | 132 (4.85) | 23 (6.05) |

**Table 1**  (continued)

| Characteristics | N(6621) | N(705) Ever diagnosed with high blood pressure |
| --- | --- | --- |
| Sales | 475 (17.46) | 69 (18.16) |
| Agricultural—self-employed | 270 (9.92) | 35 (9.21) |
| Agricultural—employee | 35 (1.29) | 3 (0.79) |
| Household and domestic | 420 (15.44) | 40 (10.53) |
| Services | 314 (11.54) | 54 (14.21) |
| Skilled manual | 266 (9.78) | 42 (11.05) |
| Unskilled manual | 353 (12.97) | 43 (11.32) |
| Don't know | 161 (5.92) | 22 (5.79) |
|  |  | $N = 380$ |



**Fig. 1** Percentage distribution of women by hypertension status, Lesotho, 2014

## Percentage of respondents diagnosed with high blood pressure

As expected, women (63.97%) who resided in the rural areas were more likely to be hypertensive than their urban counterparts (36.03%). Majority were 45–49 years old, and were from Maseru district (20.85%). They had secondary education, belonged to the Roman Catholic Church and their occupation was more likely to be in the sales sector.

Figure 1 displays information on the hypertension status of women. The hypertension status has been divided in *normal (those with "systolic BP (SBP) < = 120–129(mmHg) and/or diastolic < = 80- 84 (mmHg)),* pre-hypertension (systolic BP (SBP) 130 -139*(mmHg) and/or diastolic 85–89(mm Hg) and hypertensive (those with SBP ≥ 140 (mmHg) and/or DBP of ≥ 90 (mmHg))*

Based on Fig. 1, 19% of women have hypertension, compared to 23% and 58% who have prehypertension and normal blood pressure.

Table 2 presents chi-square results of hypertension status by socio-demographic characteristics of women in Lesotho.

A total of 58.32%, 22.51%, and 19.17% of the females had normal blood pressure, were prehypertensive, and had hypertension respectively The bivariate analysis show that age, region, marital status, level of education, religion and occupation have a significant association with hypertensive status of women. The findings revealed that 44% of females aged 45–49 were found to be more hypertensive compared to other age cohorts.

Females in the professional/technical/managerial occupation (32%) and with high level of education (24%) had higher levels of blood pressure readings of SBP ≥ 140 (mmHg) or DBP of ≥ 90 (mmHg). Furthermore, 25% and 24% of females from the Quthing and Botha-Bothe districts were hypertensive while 30% and 29% of women who were either living with a partner or widowed had a blood pressure reading of SBP ≥ 140 (mmHg) or DBP SBP ≥ 90 (mmHg). While on the other hand, 25% of women who belong to Methodist and Anglican Church were reported to be at prehypertensive stage.

Table 3 displays binary logistic regressions of the Odds Ratio (OR) of hypertension status and socio-demographic factors among women aged 15–49 years. Age has been found to have a positive influence on hypertension. Thus, compared with women aged 15–19 years, the odds of being hypertensive were significantly higher among females aged 25–29 [OR: 2.06; CI: 1.2 3,2.91], 30–34[OR: 3.23; CI: 2.11,4.93], 35–39[OR:

**Table 2** Hypertension status by socio-demographic factors among women aged 15–49 years in Lesotho, 2014

| Characteristics | Normal Blood pressure (systolic < = 120–129 and diastolic < = 80-84) | Prehypertension (systolic 130–139 and/or diastolic 85–89) | Hypertension (systolic ≥ 140–159 and/or diastolic ≥ 90–99) | Total | Pearson's Chi square |
|---|---|---|---|---|---|
| Age group | | | | | |
| 15–19 | 556 (70.83) | 161 (20.51) | 68 (8.66) | 785 | < 0.000 |
| 20–24 | 421 (68.01) | 125 (20.19) | 73 (11.79) | 619 | |
| 25–29 | 335 (62.92) | 122 (22.93) | 75 (14.10) | 532 | |
| 30–34 | 239 (52.07) | 128 (27.89) | 92 (20.04) | 459 | |
| 35–39 | 168 (46.80) | 86 (23.96) | 105 (29.29) | 359 | |
| 40–44 | 129 (44.64) | 52 (17.99) | 108 (37.31) | 289 | |
| 45–49 | 72 (28.92) | 67 (26.91) | 110 (44.18) | 249 | |
| Place of residence | | | | | |
| Urban | 647 (59.80) | 231 (21.35) | 204 (18.85) | 1082 | 0.439 |
| Rural | 1273 (57.60) | 510 (23.08) | 427 (19.32) | 2210 | |
| **Region/district** | | | | | |
| Botha-bothe | 144 (27.30) | 80 (27.30) | 69 (23.55) | 293 | < 0.001 |
| Leribe | 241 (61.95) | 91 (23.39) | 57 (14.65) | 389 | |
| Berea | 233 (61.97) | 74 (19.68) | 69 (18.35) | 376 | |
| Maseru | 265 (58.50) | 89 (19.65) | 99 (21.85) | 453 | |
| Mafeteng | 167 (55.12) | 67 (22.11) | 69 (22.77) | 303 | |
| Mohale's hoek | 194 (60.82) | 72 (22.57) | 53 (16.66) | 319 | |
| Quthing | 137 (50.00) | 68 (24.82) | 69 (25.18) | 274 | |
| Qacha's-nek | 165 (60.00) | 56 (20.36) | 54 (19.68) | 275 | |
| Mokhotlong | 191 (61.22) | 73 (23.40) | 43 (15.38) | 312 | |
| Thaba tseka | 183 (61.41) | 71 (23.83) | 44 (14.77) | 298 | |
| **Marital Status** | | | | | |
| Single | 724 (66.85) | 231 (21.33) | 128 (11.82) | 1083 | < 0.000 |
| Married | 953 (54.21) | 417 (23.72) | 388 (22.07) | 1758 | |
| Living with partner | 18 (54.55) | 5 (15.15) | 10 (30.30) | 33 | |
| Widowed | 133 (52.57) | 46 (18.18) | 74 (29.25) | 253 | |
| Divorced | 28 (57.14) | 11 (22.45) | 10 (20.41) | 49 | |
| No longer living together/ separated | 64 (55.17) | 31 (26.72) | 21 (18.10) | 116 | |
| **Level of education** | | | | | |
| No education | 23 (56.10) | 9 (21.95) | 9 (21.95) | 41 | 0.030 |
| Primary | 748 (55.86) | 313 (23.38) | 278 (20.86) | 1339 | |
| Secondary | 1012 (61.00) | 364 (21.94) | 283 (17.06) | 1659 | |
| Higher | 137 (54.15) | 55 (21.74) | 61 (24.11) | 253 | |
| **Religion** | | | | | |
| Roman catholic church | 717 (56.15) | 297 (23.26) | 263 (20.60) | 1277 | < 0.001 |
| Lesotho evangelical church | 331 (57.57) | 126 (21.91) | 118 (20.52) | 575 | |
| Methodist | 29 (49.15) | 15 (25.42) | 15 (25.42) | 59 | |
| Anglican church | 99 (49.01) | 53 (26.42) | 50 (24.75) | 202 | |
| Seventh day Adventist | 17 (80.95) | 2 (9.52) | 2 (9.52) | 21 | |
| Pentecostal | 528 (62.93) | 184 (21.93) | 127 (15.14) | 839 | |
| Other Christian | 157 (62.30) | 52 (20.63) | 43 (17.06) | 252 | |
| Islam | 0 (0.00) | 1 (33.33) | 2 (66.67) | 3 | |
| No religion | 16 (51.61) | 7 (22.58) | 8 (25.81) | 31 | |
| Other | 26 (78.79) | 4 (12.12) | 3 (9.09) | 33 | |

**Table 2** (continued)

| Characteristics | Normal Blood pressure (systolic < =120–129 and diastolic < =80-84) | Prehypertension (systolic 130–139 and/or diastolic 85–89) | Hypertension (systolic ≥ 140–159 and/or diastolic ≥ 90–99) | Total | Pearson's Chi square |
|---|---|---|---|---|---|
| **Occupation** | | | | | |
| Professional/technical/managerial | 73 (50.34) | 29 (20.00) | 43 (31.88) | 148 | 0.017 |
| Clerical | 34 (49.28) | 13 (18.84) | 22 (25.96) | 69 | |
| Sales | 111 (47.23) | 61 (25.96) | 63 (26.81) | 235 | |
| Agricultural—self-employed | 75 (51.02) | 38 (25.85) | 34 (23.13) | 147 | |
| Agricultural—employee | 13 (72.22) | 2 (11.11) | 3 (16.67) | 18 | |
| Household and domestic | 144 (62.61) | 51 (22.17) | 35 (15.22) | 230 | |
| Services | 85 (54.84) | 41 (26.45) | 29 (18.71) | 155 | |
| Skilled manual | 62 (45.93) | 42 (31.11) | 31 (22.96) | 135 | |
| Unskilled manual | 90 (52.63) | 46 (26.90) | 35 (20.47) | 171 | |
| Don't know | 47 (58.02) | 14 (17.28) | 20 (24.69) | 81 | |
| **Total** | **1920 (58.32)** | **741 (22.51)** | **323 (19.17)** | **3353 (100)** | |

*p* < 0.05 is considered statistically significant (Chi-Square test)

4.47; CI: 2.92,6.85], 40−44 [OR: 5.69; CI: 3.71,8.75] and 45−49 [OR: 9.78; CI: 6.38,14.99], respectively.

Married women were found to be 1.71 times more likely to be hypertensive than single women. Likewise, widows were 2.61 times more likely to be hypertensive than single women counterparts. This was true as well for couples living together [OR: 3.55; CI: 1.76,7.16] (Table 3).

Conversely, women who belonged to Pentecostal church were found to be 0.73 times less likely to be hypertensive compared to their Roman Catholic Church fellows [CI: 0.59,0.91].

## Discussion

The objective of the study was to determine prevalence of hypertension and also identify socio-demographic correlates of hypertension in women in Lesotho. Baseline analysis has illustrated that a high proportion of women were aged 15–19 years, most (67%) of them resided in rural areas. More than half (54%) were married while 51% of the women had completed the secondary level of education.

In agreement with similar studies conducted in other African countries like Ethiopia, the study demonstrated that older age groups are a strong factor associated with hypertension. The proportion of women who were diagnosed with high blood pressure increases with an increase in age, the odds of being hypertensive were significantly higher among women aged 45–49 years. This is in line with other studies where the risks of hypertension increase with age [1, 13]. Thinyane, 2015 also discovered

that age was among factors associated with poor blood pressure in Lesotho.

Moreover, there were higher odds for the ever-married (married, divorced, and widowed) to be diagnosed with hypertension. In Ghana, Tuoyire (2018) found significantly higher odds of hypertension for married, cohabiting, and previously married adults. It seems that married and widowed/divorced/separated, women were at higher risk of having hypertension and this could be due to the inevitable "vicissitudes of marriage." [14]. Likewise, Wickham, 2001 found out that marital stress significantly increases the likelihood of earlier hypertension among long term married women. Using secondary data made it impossible to evaluate other confounding factors, such as stress levels among women, especially those living with a partner or widowed.

Specifically, the study addresses hypertension, a topic of particular relevance to Lesotho given its high rate of maternal mortality. Literature suggests a link between hypertension and maternal morbidity and mortality. However, there is a limitation to the generalizability of the results because only female data was utilized.

## Conclusion

This study showed that age was associated with hypertension among a sample of the women adult population in Lesotho. The study further suggests that 741 (22.10%) of the respondents were in prehypertension stage, which adds to the overall future risk of hypertension. The socio-demographic correlates of hypertension among women include: advancement in age, living with partner, being married, being widowed, and living in Maseru

**Table 3** Odd Ratios for socio-demographic factors associated with prevalence of hypertension among women aged 15–49 years who had at least one live birth in the 5 years preceding the survey in Lesotho, 2014

| Socio-demographic characteristics | Odds, 95% C.I | P value |
|---|---|---|
| **Age** | | |
| 15–19 | RC | |
| 20–24 | 1.89 (1.22,2.91) | 0.004* |
| 25–29 | 2.06 (1.34, 3.17) | 0.001* |
| 30–34 | 3.23 (2.11,4.93) | < 0.000* |
| 35–39 | 4.47 (2.92, 6.85) | < 0.000* |
| 40–44 | 5.69 (3.71, 8.75) | < 0.000* |
| 45–49 | 9.78 (6.38, 15.00) | < 0.000* |
| **Level of education** | | |
| No education | RC | |
| Primary | 0.73 (0.39, 1.47) | 0.376 |
| Secondary | 0.68 (0.33, 1.37) | 0.276 |
| Higher | 0.81 (0.39, 1.70) | 0.582 |
| **Place of residence** | | |
| Urban | RC | |
| Rural | 0.92 (0.78, 1.09) | 0.316 |
| **Marital Status** | | |
| Single | RC | |
| Married | 1.71 (1.39, 2.16) | < 0.000* |
| Living with partner | 3.55 (1.76, 7.16) | < 0.000* |
| Widowed | 2.61 (1.90, 3.60) | < 0.000* |
| Divorced | 1.60 (0.86, 3.00) | 0.140 |
| Separated | 1.54 (0.99, 2.41) | 0.057 |
| **Region/district** | | |
| Botha-bothe | RC | |
| Leribe | 1.39 (0.95, 2.02) | 0.088 |
| Berea | 1.23 (0.84, 1.82) | 0.289 |
| Maseru | 2.12 (1.49, 3.03) | < 0.000* |
| Mafeteng | 2.05 (1.40, 2.99) | < 0.000* |
| Mohale's hoek | 1.26 (0.84, 1.88) | 0.262 |
| Quthing | 0.98 (0.63, 1.52) | 0.924 |
| Qacha's-nek | 1.33 (0.87, 2.01) | 0.185 |
| Mokhotlong | 0.91 (0.58, 1.41) | 0.663 |
| Thaba tseka | 0.79 (0.51, 1.25) | 0.320 |
| **Religion** | | |
| Roman catholic church | RC | |
| Lesotho evangelical church | 1.06 (0.85, 1.33) | 0.598 |
| Methodist | 1.02 (0.51, 2.02) | 0.966 |
| Anglican church | 1.16 (0.85, 1.58) | 0.353 |
| Seventh day Adventist | 1.19 (0.49, 2.91) | 0.697 |
| Pentecostal | 0.73 (0.57, 0.91) | 0.005* |
| Other Christian | 1.04 (0.77, 1.39) | 0.818 |
| Islam | 1.15 (0.25, 5.35) | 0.858 |
| Hindu | - | - |
| No religion | 0.42 (0.15, 1.18) | 0.100 |
| Other | 0.74 (0.33, 1.65) | 0.461 |

**Table 3** (continued)

| Socio-demographic characteristics | Odds, 95% C.I | P value |
|---|---|---|
| **Occupation** | | |
| Professional/technical/managerial | RC | |
| Clerical | 1.14 (0.66, 1.99) | 0.640 |
| Sales | 0.97 (0.64, 1.45) | 0.867 |
| Agricultural—self-employed | 0.88 (0.55, 1.42) | 0.612 |
| Agricultural—employee | 0.66 (0.19, 2.29) | 0.508 |
| Household and domestic | 0.68 (0.43, 1.07) | 0.093 |
| Services | 1.15 (0.75, 1.77) | 0.524 |
| Skilled manual | 1.05 (0.66, 1.66) | 0.840 |
| Unskilled manual | 0.77 (0.49, 1.21) | 0.253 |
| Don't know | 0.91 (0.52, 1.58) | 0.728 |

*Significant *p*-values: *p* < 0.005; 95% Confidence intervals (CI); *OR* odds ratio, *RC* Reference Category

and Mafeteng districts. While the primary prevention strategies should start with Basotho women in high-risk groups, the importance of focusing on prehypertensive individuals should not be overlooked because it indicates a future risk of hypertension.

## Declarations

### Ethics approval and consent to participate
Not applicable.

### Consent for publication
Not applicable.

## References

1.  Bell K, Twiggs J, Olin BR, Date IR. Hypertension: the silent killer: updated JNC-8 guideline recommendations. Alabama Pharmacy Association. 2015;334:4222.
2.  Okello S, Muhihi A, Mohamed SF, et al. Hypertension prevalence, awareness, treatment, and control and predicted 10-year CVD risk: a cross-sectional study of seven communities in East and West Africa (Seven CEWA). BMC Public Health. 2020;20:1706. https://doi.org/10.1186/s12889-020-09829-5.
3.  Ataklte F, Erqou S, Kaptoge S, Taye B, Echouffo-Tcheugui JB, Kengne AP. Burden of undiagnosed hypertension in sub-saharan Africa: a systematic review and meta-analysis. Hypertension. 2015;65(2):291–8.
4.  Thinyane KH, Mothebe T, Sooro M, Namole LD, Cooper V. An observational study of hypertension treatment and patient outcomes in a primary care setting. Pan Afr Med J. 2015;20.
5.  Government of Lesotho; Bureau of Statistics (2016). "Population Census Analytical Report" – Vol. IIIA Statistics, Maseru. Lesotho.
6.  Mugomeri E, Chatanga P, Chakane N. Medicinal herbs used by HIV-positive people in Lesotho. Afr J Tradit Complement Altern Med. 2016;13(4):123–31.
7.  Shaabe, M. (2019). Compliance to hypertension treatment by patients attending primary health care services in Mafeteng District, Lesotho (Doctoral dissertation, University of the Free State).
8.  Mashea A, Mefane M, Tsoloane-Bolepo M, Sehalahala N. National Action Plan for Reducing Maternal Mortality in Lesotho. Maseru: Ministry of Health, Family Health Division; 2018. Nulstice Retrieved 22/10/2018.
9.  Alexander MR, Madhur MS, Harrison DG, Dreisbach AW, Riaz K. What is the global prevalence of hypertension (high blood pressure). Urologi og Virginia [internet]. 2019;29.
10. Ministry of Health and Social Welfare (MOH) and ICF Macro 2014 Lesotho Demographic and Health Survey 2014 Calverton MOH and ICF Macro
11. World Health Organization. Guidelines set new definitions, update treatment for hypertension. Bull World Health Organ. 1999;77(3).
12. Anteneh ZA, Yalew WA, Abitew DB. Prevalence and correlation of hypertension among adult population in Bahir Dar city, northwest Ethiopia: a community based cross-sectional study. Int J Gen Med. 2015;8:175.
13. Ibrahim NK, Hijazi NA, Al-Bar AA. Prevalence and determinants of prehypertension and hypertension among preparatory and secondary school teachers in Jeddah. J Egypt public health assoc. 2008;83(14):183–203.
14. Nyarko SH. Prevalence and sociodemographic determinants of hypertension history among women in reproductive age in Ghana. Int J Hyper. 2016;2016:5. https://doi.org/10.1155/2016/3292938.

**Publisher's Note**

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.