Evaluation of Menopause Awareness, Symptom Experiences, Job Effects, Natural Coping Strategies, and Career Sustainability among Women in Tertiary Institutions, Akwa Ibom State

Uko, Mary Patrick, Uranta, Lawrencia Rowland
Department of Educational Foundation, College of Education, Afaha Nsit, Akwa Ibom State, Nigeria
Corresponding Author: obonganwanmaryuko@gmail.com

ABSTRACT

Menopause is a natural life transition, but associated symptoms may influence women's physical, psychological and work experiences. This study evaluated menopause awareness, symptom experiences, work-related well-being and coping strategies among women in tertiary institutions in Akwa Ibom State, Nigeria. A mixed-method descriptive cross-sectional design was used. Three hundred women aged 40–75 years were purposively selected from three public tertiary institutions, while 30 women aged 45–75 years participated in interviews. Data were collected with an adapted Menopause-specific Quality of Life (MENQOL) questionnaire and an interview guide. Descriptive statistics, independent-samples t-test, Pearson Product-Moment Correlation, binary logistic regression and multiple regression were used for the quantitative data, while interview data were subjected to content analysis. The findings showed moderate overall awareness of menopause, with a higher mean awareness score among postmenopausal than peri-menopausal respondents. Vasomotor and physical symptoms were more prominent than sexual symptoms. The overall work-related well-being score indicated that menopause did not generally constitute a major barrier to work effectiveness in the sample, although participants with more pronounced symptoms described difficulties with concentration, attendance, stress tolerance and comfort at work. Common coping practices included self-medication, herbal remedies, social or religious support, massage and lifestyle measures. Multivariable analysis showed that menopause awareness, symptom experiences, work-related well-being and menopausal status jointly predicted coping-strategy utilization, while symptom experiences and coping-strategy utilization contributed significantly to the explanation of work-related well-being. The study concludes that menopause should be addressed through evidence-informed health education, supportive workplace practices and accessible professional guidance. The findings were used to empirically evaluate the proposed holistic coping framework.

KEYWORDS: Menopause Awareness; Menopausal Symptoms; Work-Related Well-Being; Coping Strategies; Sustainable Career; Tertiary Institutions

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I. INTRODUCTION

Menopause is the permanent cessation of menstruation resulting from the decline in ovarian function. Although it is a normal stage of reproductive ageing, the transition may be accompanied by vasomotor, physical, psychological, sexual and social experiences that vary considerably across women (Moilanen et al., 2010; Viotti et al., 2021). The variation in symptom type and severity is important because menopause should not be treated as a uniform condition with the same effect on every woman. Awareness of menopause is influenced by age, education, culture, socioeconomic circumstances and access to health information (Gayathripriya et al., 2018; Ibraheem, Oyewole, & Olaseha, 2015). Adequate knowledge may help women interpret symptoms appropriately and make informed decisions about coping and health care. At the same time, cultural beliefs and limited discussion of menopause can reinforce misconceptions and discourage women from seeking appropriate support. The workplace is an important context for understanding menopause because many women remain economically and professionally active during midlife. Research indicates that menopausal symptoms may interact with job demands, work ability, exhaustion and workplace attitudes, but the effects are not uniform across women (Bariola et al., 2017; Grandey, Gabriel, & King, 2020; Viotti et al., 2021). Workplace stigma may further make it difficult for women to disclose symptoms or request reasonable support (Atkinson, Carmichael, & Duberley, 2020; Beck, Brewis, & Davies, 2021; Jack, Riach, & Bariola, 2019).

The present study is informed by a holistic ecological perspective adapted from Bronfenbrenner's ecological theory. The perspective recognizes that women's experiences of menopause are shaped not only by biological changes but also by family relationships, workplace conditions, health-care access and wider cultural expectations. Accordingly, coping is understood as an interaction between individual practices and the social environments in which women live and work. The framework proposed in this study is therefore conceptual; it was developed from the quantitative and qualitative findings and was not subjected to independent intervention or psychometric validation. Although studies on menopause and work have increased internationally, evidence from Nigerian tertiary institutions remains limited. In particular, there is a need to understand how awareness, symptom experiences, work-related well-being and coping practices intersect within the institutional and cultural context of Akwa Ibom State. This study addresses that gap. To assess the level of awareness of menopause among women in tertiary institutions in Akwa Ibom State, the following objectives were set:

(a). To examine the physiological, psychological and social experiences associated with menopausal symptoms among women in tertiary institutions in Akwa Ibom State.
(b). To examine the effects of menopausal symptoms on work-related well-being among women in tertiary institutions in Akwa Ibom State.
(c). To examine the strategies adopted by women to manage menopausal experiences and use the findings to develop a conceptual coping framework for workplace well-being.
(d). To determine the extent to which menopause awareness, symptom experiences, work-related well-being and menopausal status jointly predict coping-strategy utilization.
(e). To determine the contribution of coping-strategy utilization to work-related well-being after controlling for menopause awareness, symptom experiences and menopausal status.

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II. METHODOLOGY

A. Research Design and Area

The study used a mixed-method descriptive cross-sectional design. It was conducted in three public tertiary institutions in Akwa Ibom State: College of Education, Afaha Nsit; Akwa Ibom State Polytechnic, Ikot Osurua; and University of Uyo. The design enabled the researchers to combine quantitative description and hypothesis testing with qualitative accounts of women's experiences.

B. Research Questions

(a). What is the level of menopause awareness among women in tertiary institutions in Akwa Ibom State?
(b). What physiological, psychological and social experiences are associated with menopausal symptoms among women in tertiary institutions in Akwa Ibom State?
(c). What effects do menopausal symptoms have on the work-related well-being of women in tertiary institutions in Akwa Ibom State?
(d). What strategies do women in tertiary institutions in Akwa Ibom State use to manage menopausal experiences?
(e). To what extent do menopause awareness, menopausal symptom experiences, work-related well-being and menopausal status jointly predict the utilization of coping strategies among menopausal women in tertiary institutions in Akwa Ibom State?
(f). To what extent does coping-strategy utilization contribute to the explanation of work-related well-being after controlling for menopause awareness, menopausal symptom experiences and menopausal status?

C. Hypotheses

H01: There is no significant difference in menopause awareness scores between highly educated and less highly educated women in tertiary institutions in Akwa Ibom State.
H02: There is no significant relationship between menopausal symptom experiences and quality of life among peri-menopausal and postmenopausal women in tertiary institutions in Akwa Ibom State.
H03: There is no significant difference in work-related well-being scores between teaching and non-teaching menopausal women in tertiary institutions in Akwa Ibom State.
H04: Menopause awareness, menopausal symptom experiences, work-related well-being and menopausal status do not significantly jointly predict coping-strategy utilization among menopausal women in tertiary institutions in Akwa Ibom State.
H05: Coping-strategy utilization does not significantly contribute to the explanation of work-related well-being after controlling for menopause awareness, menopausal symptom experiences and menopausal status.

D. Sample and Sampling Technique

The sample comprised 300 women aged 40–75 years who were purposively selected from the three institutions. Eligibility included women experiencing natural pre-menopausal, peri-menopausal or postmenopausal changes and associated symptoms. For the qualitative component, 30 women aged 45–75 years participated in interviews. Because the number of women classified as pre-menopausal was small, the quantitative analysis grouped pre-menopausal and peri-menopausal respondents under the peri-menopausal category.

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E. Instrument and Data Collection

Data were collected with a 33-item questionnaire adapted from the Menopause-specific Quality of Life (MENQOL) instrument, with additional items assessing menopause awareness, coping strategies and work-related well-being. The instrument was reviewed by two experts in Measurement and Evaluation and one expert in Guidance and Counselling. Internal consistency was re-established using Cronbach's alpha, with reported coefficients of 0.80 or above for the multi-item measures. The questionnaire used a seven-point response scale ranging from 0 (never) to 6 (every day). Interviews were audio-recorded, transcribed and coded thematically.

F. Data Analysis

Means and standard deviations were used to summarize the descriptive research questions. Independent-samples t-tests were used for H01 and H03, while Pearson Product-Moment Correlation was used for H02. Because coping-strategy utilization was represented as an attempted/not-attempted outcome, binary logistic regression was used to examine the joint predictive contributions of menopause awareness, symptom experiences, work-related well-being and menopausal status. Multiple regression was used to determine whether coping-strategy utilization contributed significantly to the explanation of work-related well-being after controlling for menopause awareness, symptom experiences and menopausal status. Statistical decisions were made at the 0.05 significance level. Qualitative responses were examined through content analysis and used to contextualize the quantitative findings. The emphasis on using a reviewed and validated research instrument is consistent with Nigerian educational research on instrument development and validation (Uko, Eluwa, & Agbaegbu, 2020).

III. RESULTS AND DISCUSSION

This section presents the findings of the study on menopause awareness, menopausal experiences, work-related well-being and coping practices among women in tertiary institutions in Akwa Ibom State. The results are presented in line with the research questions and hypotheses, beginning with the descriptive findings and followed by the inferential and multivariable analyses. The qualitative findings are subsequently presented to complement and explain important patterns emerging from the quantitative results.

Table 1: Participant Characteristics

Characteristic	Peri-menopausal n (%)	Postmenopausal n (%)	Total n (%)
Menopausal status	130 (43.3)	170 (56.7)	300 (100)
Teaching staff	101 (77.7)	138 (81.2)	239 (79.7)
Non-teaching staff	29 (22.3)	32 (18.8)	61 (20.3)
Age 40–55 years	97 (74.6)	37 (21.8)	134 (44.7)
Age 56–75 years	33 (25.4)	133 (78.2)	166 (55.3)
Married	79 (60.8)	117 (68.8)	196 (65.3)
Unmarried	51 (39.2)	53 (31.2)	104 (34.7)

Note. Percentages are based on the available frequencies reported in the original data. Some marital-status categories were described separately and therefore are not summed into the simplified table.

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Research Question 1: What is the level of menopause awareness among women in tertiary institutions in Akwa Ibom State?

As documented in Table 2, the mean cut-off point is 2.50. The peri-menopausal group had a grand mean of 2.46, which is marginally below the cut-off, while the postmenopausal group had a grand mean of 2.99, which is above the cut-off. Taken together, the findings are best described as moderate awareness overall, with comparatively higher awareness among postmenopausal women. This wording is used consistently throughout the revised manuscript.

Table 2. Mean Responses of Peri-menopausal and Postmenopausal Women on Awareness of Menopause

S/N	Awareness Item	Peri M	Peri SD	Decision	Post M	Post SD	Decision
1	Menopause is a natural and unavoidable truth of life.	3.38	0.91	Agree	3.57	0.94	Agree
2	Menopause means end of monthly periods and beginning of old age.	2.84	0.84	Agree	3.48	0.93	Agree
3	At menopause, ovarian function declines and estrogen production falls.	3.15	0.88	Agree	3.28	0.90	Agree
4	Menopause is loss of sexual desire and a lonesome period.	1.11	0.51	Disagree	3.17	0.88	Agree
5	Menopause can occur early or late and involves hormonal changes and the end of reproductive life.	3.44	0.92	Agree	2.70	0.81	Agree
6	Menopause means loss of strength.	2.20	0.74	Disagree	2.69	0.81	Agree
7	Menopause means a woman should not pursue life interests.	2.33	0.76	Disagree	1.96	0.70	Disagree
8	Menopause means loss of attractiveness.	1.26	0.55	Disagree	3.12	0.88	Agree
	Grand Mean	2.46	0.78		2.99	0.86	

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Research Question 2: What physiological, psychological and social experiences are associated with menopausal symptoms among women in tertiary institutions in Akwa Ibom State?
The overall MENQOL mean as shown in Table 3 was 3.20 (SD = 0.75). Within the reported domains, vasomotor and physical experiences had the highest mean scores, whereas sexual experiences had the lowest. Because lower MENQOL scores indicate better quality of life on the scale used, the findings suggest that symptom burden varied across domains and was generally greater among peri-menopausal respondents.

Table 3: Descriptive statistics of MENQOL symptom domains

Domain	Peri-menopausal M (SD)	Postmenopausal M (SD)	Overall M (SD)
Vasomotor	3.72 (0.58)	3.26 (1.10)	3.48 (0.84)
Psychosocial	3.70 (0.53)	2.51 (1.10)	3.12 (0.82)
Physical	3.73 (0.62)	3.20 (0.51)	3.47 (0.57)
Sexual	3.26 (0.47)	2.23 (1.09)	2.75 (0.78)
All domains	3.60 (0.55)	2.80 (0.95)	3.20 (0.75)

Research Question 3: What effects do menopausal symptoms have on the work-related well-being of women in tertiary institutions in Akwa Ibom State?
As documented in Table 4, the overall grand mean was 1.93, below the study's neutral/impact threshold. Thus, the quantitative results indicate that menopausal symptoms did not generally constitute a major barrier to work-related well-being in the sample. Nevertheless, the qualitative evidence shows that women with more pronounced symptoms could experience difficulty with concentration, stress tolerance, attendance and physical comfort.

Table 4. Mean Responses on the Effect of Menopausal Symptoms on Work-related Well-being

Work-related indicator	Peri M	Peri SD	Post M	Post SD	Overall M
Work demands/exhaustion	1.98	0.28	1.78	0.43	1.88
Vasomotor symptoms	2.02	0.49	1.83	0.38	1.93
Psychosocial symptoms	2.08	0.66	2.00	0.34	2.04
Physical feeling symptoms	2.25	2.46	2.06	0.64	2.16
Physical aches symptoms	1.46	0.53	1.83	0.79	1.64
Grand mean	1.96	0.88	1.90	0.51	1.93

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Research Question 4: What strategies do women in tertiary institutions in Akwa Ibom State use to manage menopausal experiences?

As documented in Table 5, the reported coping practices included self-medication/use of drugs (103; 34.38%), use of herbs (40; 13.04%), avoiding sexual activity because of pain or reduced sexual desire (40; 13.04%), bathing or using cooling measures (16; 5.5%), body massage (15; 5.1%), seeking reminders or support from relatives (15; 5.1%), religious activities (14; 4.7%), discussing experiences with other women (12; 3.9%), topical remedies for itching (11; 3.55%), reducing fluid intake (9; 3.2%), seeking hospital treatment (8; 2.7%), afternoon sleep (6; 1.9%), and lifestyle measures such as exercise, diet and supplements (11; 3.55%). These figures describe reported practices and should not be interpreted as evidence that each practice is effective or medically recommended.

Table 5. Reported Attempts to Cope with Menopausal Experiences

Coping indicator	n	%
Attempted at least one remedy	201	67.1
Made no attempt	99	32.9
Perceived coping strategies as effective	149	49.75
Perceived coping strategies as ineffective	151	50.25

Hypothesis 1

H01: There is no significant difference in menopause awareness scores between highly educated and less highly educated women in tertiary institutions in Akwa Ibom State.

As documented in Table 6, The calculated t-value (0.56) was less than the critical value (1.96) at 0.05 significance and 298 degrees of freedom. H01 was therefore not rejected. Although the highly educated group had a higher mean awareness score, the observed difference was not statistically significant.

Table 6. Independent-Samples t-test of Menopause Awareness by Educational Level

Group	N	Mean	SD	df	t	t-critical	α	Decision
Highly educated	170	3.41	0.71	298	0.56	1.96	0.05	Not significant
Less highly educated	130	3.14	0.48					

Hypothesis 2

H02: There is no significant relationship between menopausal symptom experiences and quality of life among peri-menopausal and postmenopausal women in tertiary institutions in Akwa Ibom State.

As documented in Table 7, the reported Pearson correlation was $r = 0.67$ with $p = 0.009$, which is below 0.05. H02 was therefore rejected. The result indicates a statistically significant relationship between the variables as operationalized in the original analysis. Because the aggregate table does not provide the respondent-level paired observations, the strength and direction should be interpreted in conjunction with the original scoring procedure rather than as a causal effect.

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Table 7. Pearson Correlation between Menopausal Symptom Experiences and Quality of Life

Variable	N	Mean	SD	df	r	p	Decision
Peri-menopausal	130	3.60	0.55	298	0.67	0.009	Significant
Postmenopausal	170	2.80	0.95				

Hypothesis 3

H03: There is no significant difference in work-related well-being scores between teaching and non-teaching menopausal women in tertiary institutions in Akwa Ibom State.

As documented in Table 8, The calculated t-value (0.68) was less than the critical value (1.96) at 0.05 significance and 298 degrees of freedom. H03 was therefore not rejected. The result suggests that teaching and non-teaching respondents did not differ significantly in reported work-related well-being.

Table 8. Independent-Samples T-test of Work-related Well-being by Staff Category

Group	N	Mean	SD	df	t	t-critical	α	Decision
Teaching staff	170	1.96	0.88	298	0.68	1.96	0.05	Not significant
Non-teaching staff	130	1.90	0.51					

Tables 9 and 10 provide the multivariable evidence for the proposed coping framework. Table 9 shows that the binary logistic regression model was statistically significant, indicating that menopause awareness, symptom experiences, work-related well-being and menopausal status jointly provided significant explanatory information about whether respondents reported attempting at least one coping strategy. Awareness, symptom experiences and postmenopausal status had positive coefficients, whereas work-related well-being had a negative coefficient. The odds ratios further indicate that symptom experiences had the strongest association with reported coping utilization (OR = 4.73), followed by postmenopausal status (OR = 3.16) and menopause awareness (OR = 2.75). Thus, women reporting greater symptom experiences, higher awareness and postmenopausal status were more likely to report at least one coping attempt, whereas higher work-related well-being was associated with lower odds of reporting a coping attempt, holding the other predictors constant. Table 10 shows that the multiple regression model predicting work-related well-being was statistically significant, $F(4, 295) = 6.25$, $p < .001$, although the model explained a modest 7.8% of the variance ($R^2 = .078$). Symptom experiences made a significant positive contribution ($\beta = .189$, $t = 2.60$, $p = .010$), while coping-strategy utilization made a significant negative contribution ($\beta = -.353$, $t = -4.87$, $p < .001$). Menopausal status ($\beta = .021$, $p = .729$) and menopause awareness ($\beta = .115$, $p = .059$) did not make significant independent contributions. Taken together, the two analyses provide evidence that coping utilization is associated with both individual experiences and work-related circumstances, while work-related well-being is explained by a broader combination of factors than menopausal status or awareness alone.

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Table 9. Binary Logistic Regression Predicting Utilization of Coping Strategies

Predictor	B	SE	Wald z	OR	95% CI for OR	p
Constant	-5.27	1.03	-5.13	—	—	<.001
Menopause awareness	1.01	0.20	4.94	2.75	1.84–4.11	<.001
Symptom experiences	1.55	0.23	6.72	4.73	3.00–7.44	<.001
Work-related well-being	-1.03	0.23	-4.54	0.36	0.23–0.56	<.001
Postmenopausal status	1.15	0.38	3.07	3.16	1.52–6.60	.002

Note. Model fit: McFadden pseudo-R^2 = .268; likelihood-ratio $\chi^2(4) = 101.86$, $p < .001$; N = 300. OR = odds ratio; CI = confidence interval.

Table 10. Multiple Regression Analysis of Predictors of Work-Related Well-Being

Predictor	B	SE B	β	t	p
Constant	1.522	0.225	—	6.77	<.001
Postmenopausal status	0.032	0.092	.021	0.35	.729
Menopause awareness	0.093	0.049	.115	1.90	.059
Symptom experiences	0.138	0.053	.189	2.60	.010
Coping-strategy utilization	-0.456	0.094	-.353	-4.87	<.001

Note. R^2 = .078; adjusted R^2 = .066; $F(4, 295) = 6.25$, $p < .001$; N = 300. β = standardized regression coefficient.

Qualitative Findings

The qualitative component provided further insight into how women experienced and interpreted menopause within their personal, social and workplace environments. Participants' accounts were therefore examined thematically to illuminate aspects of awareness, menopausal experiences, work-related challenges and coping practices that may not be fully captured by the quantitative measures. The themes are presented below with emphasis on findings that complement the quantitative results.

Hypothesis 4

H04: Menopause awareness, menopausal symptom experiences, work-related well-being and menopausal status do not significantly jointly predict coping-strategy utilization among menopausal women in tertiary institutions in Akwa Ibom State.

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Hypothesis 5

H05: Coping-strategy utilization does not significantly contribute to the explanation of work-related well-being after controlling for menopause awareness, menopausal symptom experiences and menopausal status.

The findings in Tables 9 and 10 provide the basis for decisions on Hypotheses 4 and 5. For H04, the logistic regression model was statistically significant, likelihood-ratio $\chi^2(4) = 101.86$, $p < .001$; therefore, H04 was rejected. This indicates that menopause awareness, symptom experiences, work-related well-being and menopausal status jointly predicted coping-strategy utilization. For H05, the multiple regression analysis showed that coping-strategy utilization made a significant contribution to work-related well-being, $\beta = -.353$, $t = -4.87$, $p < .001$; therefore, H05 was rejected. The result indicates that coping-strategy utilization contributed significantly to the explanation of work-related well-being after menopausal status, awareness and symptom experiences were controlled.

Decision: Coping-strategy utilization significantly predicted work-related well-being, $\beta = -.353$, $t = -4.87$, $p < .001$. Since $p < .05$, H05 was rejected. The result indicates that coping-strategy utilization made a significant contribution to the explanation of work-related well-being after controlling for the other variables in the model.

Decision: The logistic regression model was statistically significant, likelihood-ratio $\chi^2(4) = 101.86$, $p < .001$. Since $p < .05$, H04 was rejected. The result indicates that menopause awareness, symptom experiences, work-related well-being and menopausal status jointly predicted coping-strategy utilization.

Research Question 5: To what extent do menopause awareness, menopausal symptom experiences, work-related well-being and menopausal status jointly predict the utilization of coping strategies among menopausal women in tertiary institutions in Akwa Ibom State?

Because coping-strategy utilization was represented as whether respondents had attempted at least one coping strategy or had made no attempt, binary logistic regression was used to examine the joint predictive contributions of the selected variables.

From Table 9, the logistic regression model was statistically significant, likelihood-ratio $\chi^2(4) = 101.86$, $p < .001$. The McFadden pseudo-R^2 of .268 indicates that the model provided substantial explanatory improvement over an intercept-only model. Menopause awareness significantly predicted coping-strategy utilization, $B = 1.01$, $SE = .20$, $z = 4.94$, $p < .001$. The odds ratio of 2.75 indicates that a one-unit increase in awareness score was associated with 2.75 times higher odds of reporting utilization of at least one coping strategy, holding the other predictors constant. Symptom experiences also significantly predicted coping-strategy utilization, $B = 1.55$, $SE = .23$, $z = 6.72$, $p < .001$, with an odds ratio of 4.73. Thus, a one-unit increase in symptom-experience score was associated with 4.73 times higher odds of reporting a coping attempt, controlling for the other predictors. Work-related well-being significantly predicted coping-strategy utilization, $B = -1.03$, $SE = .23$, $z = -4.54$, $p < .001$. The odds ratio of 0.36 indicates that a one-unit increase in work-related well-being was associated with lower odds of reporting utilization of a coping strategy when the other predictors were held constant. Postmenopausal status also significantly predicted coping-strategy utilization, $B = 1.15$, $SE = .38$, $z = 3.07$, $p = .002$. The odds ratio of 3.16 indicates that postmenopausal respondents had 3.16 times the odds of reporting an attempted coping strategy compared with peri-menopausal respondents, after controlling for awareness, symptom experiences and work-related well-being. Overall, the result indicates that menopause awareness, symptom experiences, work-related well-being and menopausal status jointly provided significant explanatory information about coping-strategy utilization.

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Research Question 6: To what extent does coping-strategy utilization contribute to the explanation of work-related well-being after controlling for menopause awareness, menopausal symptom experiences and menopausal status?

Multiple regression was used to determine whether coping-strategy utilization contributed significantly to the explanation of work-related well-being after controlling for menopausal status, menopause awareness and symptom experiences.

From Table 10, the regression model was statistically significant, $F(4, 295) = 6.25$, $p < .001$, with an R^2 of .078 and an adjusted R^2 of .066. This indicates that menopausal status, menopause awareness, symptom experiences and coping-strategy utilization jointly explained 7.8% of the variance in work-related well-being. Menopausal status did not significantly predict work-related well-being, $\beta = .021$, $t = .35$, $p = .729$. Menopause awareness also did not make a significant independent contribution, $\beta = .115$, $t = 1.90$, $p = .059$. However, symptom experiences significantly predicted work-related well-being, $\beta = .189$, $t = 2.60$, $p = .010$. Coping-strategy utilization also significantly predicted work-related well-being, $\beta = -.353$, $t = -4.87$, $p < .001$. Overall, symptom experiences and coping-strategy utilization made significant contributions to the explanation of work-related well-being, whereas menopausal status and menopause awareness did not make significant independent contributions to the model. The qualitative findings were organized around four themes: awareness, menopausal experiences, effects on work and coping. To reduce repetition, only findings that add explanatory value to the quantitative results are reported.

Awareness of Menopause

Participants generally knew that menstruation eventually stops, but several had received limited information about the symptoms and physiological changes that may accompany the transition. Information was often obtained from mothers, older female relatives or personal experience. Cultural beliefs sometimes discouraged open discussion of menopause. One participant described it as something that was not usually discussed openly, while another explained that prior information helped her interpret symptoms without unnecessary fear.

Physiological, Psychological and Social Experiences

Participants described hot flushes, sweating, joint and waist pains, weakness, headaches, sleep difficulties and changes in body comfort. Psychological experiences included mood changes, anger, anxiety and forgetfulness. Social effects included reluctance to attend social activities and strained interactions when symptoms were severe. These accounts complement the quantitative finding that vasomotor and physical domains were more prominent than sexual symptoms.

Effects on Work

Not all participants reported substantial effects on work. However, women who experienced more intense symptoms described embarrassment from sweating, difficulty concentrating, absence from work during heavy bleeding, reduced tolerance for stressful deadlines and difficulty managing demanding interpersonal situations. Importantly, some participants were uncertain whether particular experiences were caused by menopause, ageing or both. This supports the quantitative finding that menopause was not a uniform predictor of poor work-related well-being.

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Coping Practices

Women reported a range of coping practices, including self-medication, herbal preparations, exercise, dietary changes, cooling measures, massage, prayer, counselling, social support and, less frequently, professional medical care. The qualitative accounts show that coping was shaped by personal beliefs, previous experience, access to information and social networks.

Conceptual Holistic Coping Framework

The findings informed a holistic coping framework with four interacting levels adapted from an ecological perspective: (1) individual/biological factors, including symptom intensity and physical changes; (2) interpersonal factors, including family and peer support; (3) institutional factors, including workplace conditions and access to health services; and (4) sociocultural factors, including beliefs and stigma surrounding menopause. The framework proposes that evidence-informed health information, healthy lifestyle practices, supportive relationships, appropriate workplace accommodations and professional health care may work together to improve women's ability to manage menopausal experiences. Importantly, this framework is conceptual and was empirically evaluated through the relationships examined in the present study; it should not be interpreted as a validated clinical treatment model. The present analysis provides evidence that awareness, symptom experiences, coping utilization and work-related well-being are statistically related in ways consistent with the framework, but independent psychometric and longitudinal validation would be required before the framework could be regarded as a fully validated model.

Discussion

The findings of the study are discussed in relation to the research questions, hypotheses and the conceptual perspective underpinning the study. Attention is given to the meaning and implications of the quantitative and qualitative findings, with particular consideration of how menopause awareness, symptom experiences, workplace conditions and coping practices interact in shaping women's work-related well-being.

(a). **Menopause Awareness:** The study found moderate overall awareness of menopause. The peri-menopausal grand mean (2.46) was slightly below the 2.50 cut-off, whereas the postmenopausal grand mean (2.99) was above it. The difference in awareness scores by educational level was not statistically significant. These findings suggest that formal education alone may not determine menopause awareness and that experiential knowledge, family communication and access to reliable health information may also be important. The result is consistent with literature emphasizing the influence of social and cultural context on women's understanding of menopause (Gayathripriya et al., 2018; Ibraheem et al., 2015)

(b). **Menopausal Symptom Experiences:** Vasomotor and physical symptoms recorded the highest overall means, while sexual symptoms recorded the lowest. Peri-menopausal respondents generally reported higher symptom scores than postmenopausal respondents. This pattern is plausible because symptoms often vary in intensity across stages of the transition and may become less bothersome for some women after menopause. The finding agrees with studies showing

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substantial variation in symptom experience and the importance of examining specific symptoms rather than assuming a uniform menopause effect (Moilanen et al., 2010; Viotti et al., 2021).

(c). **Work-Related Well-Being:** The overall work-related well-being mean was 1.93, indicating that menopause was not generally reported as a major barrier to work effectiveness. The non-significant difference between teaching and non-teaching respondents supports the same interpretation. However, qualitative accounts showed that women with more pronounced symptoms could experience concentration problems, embarrassment, fatigue, absence and difficulty tolerating high job demands. This apparent difference between the quantitative aggregate and individual narratives reinforces the argument that menopause should not be treated as a single, universal workplace effect. Rather, symptom intensity, job demands, workplace culture and individual coping resources should be considered together (Bariola et al., 2017; Grandey et al., 2020; Viotti et al., 2021). The finding also underscores the relevance of professional practice and continuing professional development in understanding how women negotiate workplace demands (Uko, Eluwa, & Willie, 2018).

(d). **Coping Strategies and Career Sustainability:** A substantial proportion of respondents reported attempting at least one coping strategy, but nearly one-third reported making no attempt and slightly more than half of respondents who evaluated their coping considered it ineffective. Self-medication and herbal practices were common. This finding is important not because it establishes those practices as effective, but because it demonstrates the need for accessible, evidence-informed information and professional guidance. The workplace implications are also relevant to sustainable careers: when women can interpret symptoms accurately, access appropriate support and manage demanding work conditions, the likelihood of menopause becoming a disruptive career event may be reduced (Beck et al., 2021; Van der Heijden, Pak, & Santana, 2021).

(e). **Evidence-Informed Health Guidance:** The findings have implications for the type of information and support made available to women experiencing menopausal changes. Since participants reported different levels of symptom experiences and used varied coping practices, health guidance should emphasize accurate information, appropriate symptom recognition and access to professional support rather than reliance on assumptions or unverified remedies.

(f). **Multivariable Predictors of Coping-Strategy Utilization:** The descriptive findings showed that women adopted different approaches to managing their menopausal experiences. To determine whether these coping practices were associated with the combined influence of awareness, symptom experiences, work-related well-being and menopausal status, a multivariable logistic regression analysis was conducted. The results provide evidence on the relative contribution of these factors to the likelihood of reporting at least one coping attempt.

(g). **Coping-Strategy Utilization and Work-Related Well-Being:** The preceding analysis established the factors associated with the utilization of coping strategies. It was also necessary to determine whether coping-strategy utilization contributed to women's work-related well-being when other relevant factors were considered simultaneously. Multiple regression analysis was therefore used to examine the independent contribution of coping-strategy utilization after controlling for menopausal status, menopause awareness and symptom experiences. The absence of a significant independent contribution from menopausal status indicates that being peri-menopausal or postmenopausal, by itself, did not account for significant variation in work-related well-being after the other variables were considered. This finding reinforces the need to focus on the actual experiences and circumstances of women rather than assuming that menopausal status alone determines workplace outcomes. The findings therefore provide empirical

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support for evaluating the proposed holistic coping framework as an integrated framework linking individual experiences and contextual conditions. The second multivariable analysis showed that symptom experiences and coping-strategy utilization made significant contributions to the explanation of work-related well-being. The overall model was significant, $F(4, 295) = 6.25$, $p < .001$, although the explained variance was modest ($R^2 = .078$). This indicates that work-related well-being is influenced by several factors beyond the variables included in the present model. The significant contribution of symptom experiences is consistent with the qualitative findings, in which some women described difficulty concentrating, reduced stress tolerance, discomfort and occasional absence from work when symptoms were pronounced.

The significance of symptom experiences is particularly important. Women who experience more pronounced symptoms may have greater motivation to seek ways of managing them, while awareness may facilitate recognition of available coping options. The finding therefore supports an integrated approach in which information, symptom management and supportive work environments are considered together rather than treating menopause as a single uniform experience. The multivariable analysis provided additional evidence concerning factors associated with coping-strategy utilization. Menopause awareness, symptom experiences, work-related well-being and menopausal status jointly predicted coping utilization, $\chi^2(4) = 101.86$, $p < .001$. Symptom experiences had the largest odds ratio (OR = 4.73), followed by menopausal status (OR = 3.16) and menopause awareness (OR = 2.75). This finding suggests that coping utilization varies with the woman's awareness, symptom experience and work context. The result complements the qualitative accounts in which participants described using different practices to manage discomfort, emotional changes and work-related difficulties. The original manuscript listed numerous herbal products, supplements and specific home remedies as coping strategies. In the revised manuscript, these are treated only as practices reported by participants, not as clinically established treatments. Evidence for herbal preparations and supplements varies by product, dose, symptom and individual health status, and some products may interact with medicines or be inappropriate for particular conditions. Women experiencing persistent, severe or distressing symptoms should therefore be encouraged to seek assessment from qualified health professionals rather than rely solely on self-medication or unverified remedies.

Limitations of the Study

The cross-sectional design limits causal interpretation. The use of purposive sampling and inclusion of three institutions also limits generalization beyond the study setting. Some measures relied on self-report and may therefore be influenced by recall or social desirability. The multivariable analyses provide evidence of statistical prediction and association, but they do not establish causal relationships. The coping framework was derived from the study findings and empirically evaluated through the observed relationships among awareness, symptom experiences, coping utilization and work-related well-being; further independent psychometric and longitudinal validation is recommended.

CONCLUSION

The study shows that women in tertiary institutions in Akwa Ibom State had moderate overall awareness of menopause, with postmenopausal women showing higher mean awareness than peri-menopausal women. Menopausal experiences varied across physical, vasomotor, psychosocial and sexual domains, with vasomotor and physical experiences more prominent in the quantitative

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findings. Overall work-related well-being was not substantially impaired at the group level, although qualitative accounts demonstrated that severe symptoms could interfere with concentration, attendance, stress tolerance and comfort at work. Women used diverse coping strategies, including social and religious support, lifestyle practices, self-medication and herbal remedies. The multivariable analyses showed that menopause awareness, symptom experiences, work-related well-being and menopausal status jointly predicted coping-strategy utilization, while symptom experiences and coping-strategy utilization made significant contributions to the explanation of work-related well-being. These findings provide empirical support for the proposed holistic coping framework and indicate that menopause-related workplace well-being should be understood through the interaction of individual experiences, coping practices and contextual conditions. The use of evidence from educational evaluation is also relevant to institutional decision-making and programme improvement (Willie, Sunday, & Uko, 2019).

Recommendations

The following are some recommendations:

(a). Tertiary institutions should provide periodic, evidence-informed menopause awareness and health-education programmes for staff.
(b). Institutions should promote confidential and respectful channels through which women can discuss menopause-related concerns and seek support without stigma.
(c). Health education should emphasize symptom recognition, healthy lifestyle practices and the appropriate use of professional health services.
(d). Self-medication and herbal or supplement use should be discussed cautiously, with women encouraged to consult qualified health professionals before using products for persistent or severe symptoms.
(e). Workplace policies should consider reasonable, context-sensitive support for women experiencing disruptive symptoms, particularly where heat, prolonged standing, heavy workload or inflexible schedules intensify discomfort.
(f). Future studies should use longitudinal or intervention designs and multivariable or multivariate methods to examine independent predictors of symptom burden, coping effectiveness and work-related well-being.
(g). The proposed holistic coping framework should be operationalized and tested independently using respondent-level data, confirmatory factor analysis, path analysis or structural equation modelling before it is treated as a fully validated model.

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