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Patterns and determinants of postpartum physical activity among women attending postnatal care in Lusaka, Zambia: A cross-sectional study.

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Abstract

Background:

Postpartum physical activity is vital for maternal recovery and long-term health, but participation rates are low, particularly in low- and middle-income countries like Zambia. This study focused on assessing the knowledge, attitudes, practices, and factors influencing postpartum physical activity among women receiving postnatal care in Lusaka, highlighting the need for more quantitative evidence in this area.

Methods:

A facility-based cross-sectional study involving 420 postpartum women at four public health facilities in Lusaka District, assessed their sociodemographic characteristics, obstetric history, knowledge, attitudes, physical activity practices, barriers, and healthcare provider counselling. Data was collected through a structured questionnaire, and multivariable logistic regression was utilized to identify factors associated with adherence to World Health Organization physical activity recommendations.

Results:

The mean age of participants was 28.4±5.6 years. Only 24.3% (n=102) of women met recommended levels of postpartum physical activity. Although 38.6% (n=162) demonstrated good knowledge and 45.7% (n=192) reported positive attitudes towards physical activity, a substantial knowledge-practice gap existed. Multivariable analysis revealed that vaginal delivery (AOR=2.34, 95%CI: 1.45-3.78, p<0.001), tertiary education (AOR=2.87, 95%CI: 1.52-5.41, p=0.001), good knowledge (AOR=2.15, 95%CI: 1.18-3.92, p=0.012), positive attitudes (AOR=1.98, 95%CI: 1.05-3.74, p=0.035), primiparity (AOR=1.76, 95%CI: 1.09-2.84, p=0.020), and receipt of healthcare provider counselling (AOR=3.21, 95%CI: 2.01-5.13, p<0.001) were independently associated with higher physical activity participation. Major barriers included lack of time (68.3%), fatigue (62.1%), cultural beliefs about postpartum rest (54.8%), and absence of healthcare provider guidance (55.7%).

Conclusion:

Postpartum physical activity among women in Lusaka is low, indicating a knowledge-practice gap. The strongest modifiable predictor is healthcare provider counselling. Enhancing counselling in routine postnatal care, particularly for women recovering from caesarean sections, could effectively improve maternal physical activity engagement. Future nationwide longitudinal studies should assess pregnancy-to-postpartum physical activity trends.

Keywords: *Postpartum physical activity; Knowledge; Attitudes; Practices; maternal health; Zambia; Sub-Saharan Africa*
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Introduction

The postpartum period represents a critical but often underutilized opportunity for maternal health promotion. Engagement in regular physical activity during this period is associated with improved cardiovascular fitness, weight management, psychological well-being, and reduced risk of postpartum depression. International guidelines recommend that postpartum women gradually resume physical activity

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and accumulate at least 150 minutes of moderate-intensity activity per week, taking into account individual recovery and mode of delivery [1-4].

Despite these recommendations, evidence from low- and middle-income countries consistently demonstrates low postpartum physical activity participation [5, 6]. Existing research suggests that limited procedural knowledge, sociocultural expectations, competing childcare demands, and gaps within postnatal healthcare services contribute to low engagement [7-11]. In Zambia, several studies have examined exercise knowledge and practices during pregnancy [12-14], yet empirical data focusing specifically on the postpartum period remain scarce.

Understanding postpartum physical activity patterns through a knowledge, attitudes, and practices (KAP) lens provides an important quantitative foundation for identifying modifiable determinants and informing intervention development. This study, therefore, aimed to assess postpartum physical activity knowledge, attitudes, practices, and associated factors among women attending postnatal care in Lusaka, Zambia.

Methods

Study design and setting

A facility-based cross-sectional study was conducted between March and June 2024 in Lusaka District, Zambia. Four public Level 1 health facilities in Lusaka that provide routine postnatal services were purposively selected to capture women from diverse urban and peri-urban communities: Chilenje, Chawama, Matero, and Kanyama. These facilities were selected based on their high patient volumes and provision of comprehensive postnatal care services.

Participants and sampling

The study included 420 postpartum women aged 18-45 years. The sample size was calculated using the formula for estimating a single proportion: $n = Z^2p(1-p)/d^2$, where Z = 1.96 (95% confidence level), p = estimated prevalence of postpartum exercise practice (assumed at 25% based on similar studies in sub-Saharan Africa), and d = margin of error (5%). This yielded a minimum sample of 289. Adjusting for a 10% non-response rate and design effect of 1.5 for multi-site sampling, the final sample size was 420 participants.

The study used a consecutive sampling during postnatal clinic visits, with participants proportionately allocated across the four facilities based on their monthly postnatal clinic attendance statistics.

Inclusion and exclusion

The study included women who were between six weeks and six months postpartum and consented to participate in the study. Women with medical contraindications to physical activity, severe postpartum complications, or conditions limiting participation were excluded.

Data collection

Data was collected using a structured interviewer-administered questionnaire adapted from validated instruments used in previous studies on postpartum physical activity and our team's prior research on pregnancy exercise in Zambia. The instrument was premised on the Health Belief Model and the Theory of Planned Behaviour.

The questionnaire was reviewed by a panel of seven experts, including physiotherapists (n=3), obstetricians (n=2), a public health specialist, and a research methodologist. The overall scale-level content validity index was 0.89, indicating excellent content validity. The questionnaire was pre-tested among 30 postpartum women at a non-study facility, and modifications were made based on feedback.

The final questionnaire assessed the independent variables: sociodemographic characteristics (age, educational level, and marital status), obstetric history (mode of delivery, parity, and current postpartum period), and dependent variables: knowledge of postpartum physical activity, attitudes towards physical activity, and physical activity practices. Knowledge of postpartum physical activity was measured using 15 multiple-choice questions (good ≥75%, moderate 50-74%, poor <50%), attitudes towards physical activity using 10 statements rated on a 5-point Likert scale (positive >35, neutral 25-35, negative <25). The attitude scale demonstrated good internal consistency (Cronbach's alpha = 0.76), physical activity practices (type, frequency, duration, intensity, timing), and perceived barriers and healthcare provider counselling. Eight trained research assistants with healthcare backgrounds and fluency in English and local languages (Nyanja, Bemba) conducted face-to-face interviews in private spaces within the health facilities. Each interview lasted approximately 25-30 minutes.

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Data analysis

Data were analysed using SPSS version 26. Descriptive statistics included frequencies and percentages for categorical variables and means with standard deviations for continuous variables. Physical activity practice was defined according to World Health Organization recommendations (≥150 minutes/week of moderate-intensity activity). Chi-square tests (or Fisher's exact test when expected cell counts were <5) examined associations between independent variables and postpartum physical activity practice. Variables with $p<0.25$ were considered for multivariable analysis.

Binary logistic regression using the backward elimination method identified independent predictors of postpartum physical activity practice. Adjusted odds ratios (AOR) with 95% confidence intervals (CI) were reported for variables remaining in the final model, with statistical significance set at $p<0.05$. Model fit was assessed using the Hosmer-Lemeshow goodness-of-fit test and Nagelkerke R^2. Multicollinearity was assessed using variance inflation factors (VIF<3).

Ethical considerations

Ethical approval for this study, dated 24th January, 2024, was obtained from the University of Zambia Health Sciences Research Ethics Committee (Protocol ID 2023270503), consistent with approval granted for the related mixed-methods investigation conducted in the same setting. Additional permissions were obtained from the Lusaka District Health Management Team and participating health facilities. All participants received detailed information about the study objectives, procedures, potential risks, and benefits. Written informed consent was obtained before participation. Confidentiality was ensured through the use of unique identification codes, de-identification of data, and secure data storage accessible only to the research team. Participation was voluntary, and women were informed of their right to decline or withdraw at any stage without affecting their access to healthcare services. The study was conducted in accordance with the Declaration of Helsinki and established ethical principles for research involving human participants.

Results

A total of 423 postpartum women were approached, of whom 420 consented and completed the questionnaire (response rate 99.3%). Three women declined participation due to time constraints.

Sociodemographic and obstetric characteristics

Table 1 presents the sociodemographic and obstetric characteristics of the 420 participants. The mean age was 28.4±5.6 years (range 18-45), with the majority (52.4%, n=220) in the 25-34 years age group. Most participants were married (78.1%, n=328), had attained secondary education (58.3%, n=245), and were unemployed (62.4%, n=262). Regarding obstetric characteristics, 45.5% (n=191) had delivered via caesarean section, while 54.5% (n=229) had vaginal deliveries. Multiparous women comprised 64.3% (n=270) of the sample, and most participants (68.6%, n=288) were in the 6 weeks to 3 months postpartum period.

Table 1. Sociodemographic and obstetric characteristics (N=420)

Characteristic	n	Percentage (%)
Age (years)		
18-24	98	23.3
25-34	220	52.4
35-45	102	24.3
Mean ± SD	28.4 ± 5.6	
Marital Status		
Married	328	78.1
Single	67	16.0
Divorced/Separated/Widowed	25	5.9
Educational Level		

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Primary	89	21.2
Secondary	245	58.3
Tertiary	86	20.5
Employment Status		
Employed (formal)	91	21.7
Self-employed	67	16.0
Unemployed	262	62.4
Mode of Delivery		
Vaginal delivery	229	54.5
Caesarean section	191	45.5
Parity		
Primiparous	150	35.7
Multiparous (2-3 children)	198	47.1
Grand multiparous (≥4 children)	72	17.1
Postpartum Period		
6 weeks - 3 months	288	68.6
>3 - 6 months	132	31.4

Knowledge of postpartum physical activity

Only 38.6% (n=162) of participants demonstrated good knowledge (≥75% correct responses), while 44.0% (n=185) had moderate knowledge (50-74%) and 17.4% (n=73) had poor knowledge (<50%). The mean knowledge score was 9.8±3.2 out of 15. Table 2 details responses to specific knowledge questions. While 82.4% correctly identified walking as a suitable postpartum exercise, only 45.2% knew the recommended timing for resuming exercise after caesarean section. Common knowledge gaps included understanding intensity levels (38.6% correct), knowing contraindications (42.1%), and recognizing warning signs (39.5%).

Table 2. Knowledge of postpartum physical activity (N=420)

Knowledge Item	Correct Response n (%)
Walking is a suitable form of exercise postpartum	346 (82.4)
Exercise helps with postpartum recovery	332 (79.0)
Exercise can improve mood and reduce depression	298 (71.0)
Pelvic floor exercises should be started early	267 (63.6)
Exercise helps with weight management postpartum	318 (75.7)
Light exercise can resume 1-2 weeks after vaginal delivery	256 (61.0)
Exercise is delayed 6-8 weeks after caesarean section	190 (45.2)
Moderate exercise does not reduce breast milk	221 (52.6)

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Understanding moderate vs vigorous intensity	162 (38.6)
Warning signs to stop exercising	166 (39.5)
Importance of gradual progression	243 (57.9)
Core strengthening exercises important	234 (55.7)
Contraindications to postpartum exercise	177 (42.1)
Recommended weekly duration (150 minutes)	198 (47.1)
Exercise adapted based on delivery mode	212 (50.5)
Overall Knowledge Level	
Good (≥75%)	162 (38.6)
Moderate (50-74%)	185 (44.0)
Poor (<50%)	73 (17.4)

Attitudes toward postpartum physical activity

Overall, 45.7% (n=192) of participants had positive attitudes (score >35), 38.6% (n=162) had neutral attitudes, and 15.7% (n=66) had negative attitudes toward postpartum exercise. The mean total attitude score was 33.2±7.8.

Table 3 presents attitudes toward postpartum physical activity. Most women agreed that exercise is important for postpartum recovery (mean score 4.1±0.9) and can help with weight management (4.0±1.0). However, concerns were evident regarding impact on breastfeeding (mean score 3.2±1.2), with 48.3% expressing worry that exercise might reduce milk supply. Cultural beliefs presented mixed attitudes, with 54.3% agreeing that "women should rest rather than exercise after childbirth" (mean score 3.6±1.1).

Table 3. Attitudes toward postpartum physical activity (N=420)

Attitude Statement	Mean Score ± SD*	Agree/Strongly Agree n (%)
Exercise is important for postpartum recovery	4.1 ± 0.9	348 (82.9)
Exercise can help me manage my weight	4.0 ± 1.0	332 (79.0)
I am confident I can find time to exercise	2.8 ± 1.2	156 (37.1)
Exercise will help improve my mood	3.9 ± 0.9	310 (73.8)
I am worried that exercise might reduce breast milk	3.2 ± 1.2	203 (48.3)
My family supports me in exercising	3.4 ± 1.1	234 (55.7)
Women should rest rather than exercise postpartum	3.6 ± 1.1	228 (54.3)
I am confident I know what exercises are safe	2.9 ± 1.1	167 (39.8)
Exercise is a priority for me	3.1 ± 1.2	189 (45.0)
I can safely exercise while caring for my baby	3.2 ± 1.1	198 (47.1)
Overall Attitude Score		
Positive (>35)		192 (45.7)
Neutral (25-35)		162 (38.6)
Negative (<25)		66 (15.7)

**5-point Likert scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree*

Physical activity practices

Only 24.3% (n=102) of participants reported engaging in regular physical activity during the postpartum period (defined as at least 150 minutes per week of moderate-intensity activity as per WHO guidelines). Among those who exercised, walking was the most common form (87.3%, n=89), followed by household chores (56.9%, n=58) and

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light aerobics/dancing (18.6%, n=19). The majority (73.5%, n=75) exercised 3-4 days per week, with sessions lasting 20-30 minutes (64.7%, n=66). Most exercise was light intensity (65.7%) and conducted at home (76.5%).

Table 4. Physical activity practices among active participants (n=102)

Practice Characteristic	n (%)
Type of Physical Activity (multiple responses)*	
Walking	89 (87.3)
Household chores	58 (56.9)
Light aerobics/dancing	19 (18.6)
Pelvic floor exercises	34 (33.3)
Frequency per Week	
1-2 days	14 (13.7)
3-4 days	75 (73.5)
5-7 days	13 (12.7)
Duration per Session	
<20 minutes	18 (17.6)
20-30 minutes	66 (64.7)
31-45 minutes	15 (14.7)
Intensity Level	
Light (can talk and sing)	67 (65.7)
Moderate (can talk, not sing)	32 (31.4)
Vigorous (difficult to talk)	3 (2.9)
Location of Exercise	
Home	78 (76.5)
Outdoors	31 (30.4)

**Multiple responses allowed; percentages do not sum to 100%*

Healthcare provider counselling and the knowledge-practice gap

Only 32.1% (n=135) of participants reported receiving counselling on postpartum exercise from healthcare providers. Of those who received counselling, 71.1% (n=96) found it helpful. A substantial knowledge-practice gap was evident. Among women with good knowledge, only 41.4% actually practiced regular exercise, while 58.6% with good knowledge were not exercising. This gap was even wider among those with moderate knowledge (18.9% practicing) and poor knowledge (8.2% practicing).

Barriers to postpartum physical activity

Table 5 presents barriers to postpartum exercise. The most frequently cited barriers were lack of time due to childcare responsibilities (68.3%, n=287), fatigue and lack of energy (62.1%, n=261), and cultural beliefs about needing to rest postpartum (54.8%, n=230). Other significant barriers included lack of healthcare provider guidance (55.7%, n=234), no available postnatal exercise programs (50.5%, n=212), and belief that exercise reduces breast milk (48.3%, n=203).

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Original Article

Table 5. Barriers to Postpartum Physical Activity (N=420)

Barrier	n (%)
Time-Related Barriers	
Lack of time due to childcare	287 (68.3)
Competing household responsibilities	245 (58.3)
Lack of childcare support	204 (48.6)
Physical Barriers	
Fatigue and lack of energy	261 (62.1)
Pain from delivery/caesarean section	198 (47.1)
Physical discomfort during exercise	156 (37.1)
Knowledge and Confidence Barriers	
Inadequate knowledge about safe exercises	180 (42.9)
Fear of complications or injury	190 (45.2)
Uncertainty about when safe to start	167 (39.8)
Social and Cultural Barriers	
Cultural beliefs about needing rest	230 (54.8)
Lack of family/partner support	178 (42.4)
Healthcare System Barriers	
Lack of guidance from providers	234 (55.7)
No postnatal exercise programs available	212 (50.5)
Attitudinal Barriers	
The belief that exercise reduces breast milk	203 (48.3)
Low motivation/not a priority	167 (39.8)
Environmental Barriers	
No safe place to exercise	145 (34.5)
Financial constraints	198 (47.1)

**Multiple responses allowed; percentages do not sum to 100%*

Factors associated with postpartum physical activity practice

Table 6 shows results from a multivariable logistic regression analysis. After controlling for confounders, six factors emerged as significant independent predictors of postpartum exercise engagement: mode of delivery (vaginal delivery: AOR=2.34, 95%CI: 1.45-3.78, p<0.001), healthcare provider counselling (AOR=3.21, 95%CI: 2.01-5.13, p<0.001), educational level (tertiary: AOR=2.87, 95%CI: 1.52-5.41, p=0.001), good knowledge (AOR=2.15, 95%CI: 1.18-3.92, p=0.012), positive attitudes (AOR=1.98, 95%CI: 1.05-3.74, p=0.035), and primiparity (AOR=1.76, 95%CI: 1.09-2.84, p=0.020). The model demonstrated good fit (Hosmer-Lemeshow test: $\chi^2 = 8.34$, $p = 0.401$; Nagelkerke $R^2 = 0.423$).

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Original Article

Table 6. Factors associated with postpartum physical activity practice (N=420)

Variable	Unadjusted OR (95% CI)	p-value	Adjusted OR (95% CI)	p-value
Mode of Delivery				
Caesarean section	1.00 (ref)		1.00 (ref)	
Vaginal delivery	2.67 (1.68-4.24)	<0.001	2.34 (1.45-3.78)	<0.001
Educational Level				
Primary	1.00 (ref)		1.00 (ref)	
Secondary	1.98 (1.05-3.73)	0.034	1.76 (0.91-3.41)	0.094
Tertiary	3.45 (1.72-6.92)	<0.001	2.87 (1.52-5.41)	0.001
Parity				
Multiparous	1.00 (ref)		1.00 (ref)	
Primiparous	1.89 (1.21-2.96)	0.005	1.76 (1.09-2.84)	0.020
Knowledge Level				
Poor	1.00 (ref)		1.00 (ref)	
Moderate	1.87 (0.89-3.93)	0.098	1.65 (0.76-3.58)	0.206
Good	3.12 (1.52-6.41)	0.002	2.15 (1.18-3.92)	0.012
Attitude Score				
Negative	1.00 (ref)		1.00 (ref)	
Neutral	1.76 (0.84-3.69)	0.135	1.54 (0.71-3.34)	0.276
Positive	2.98 (1.46-6.08)	0.003	1.98 (1.05-3.74)	0.035
Healthcare Provider Counselling				
No	1.00 (ref)		1.00 (ref)	
Yes	3.89 (2.47-6.12)	<0.001	3.21 (2.01-5.13)	<0.001

OR = Odds Ratio; CI = Confidence Interval; ref = reference category
Hosmer-Lemeshow goodness-of-fit test: $\chi^2 = 8.34$, $p = 0.401$; Nagelkerke $R^2 = 0.423$

Discussion

This study provides quantitative evidence that postpartum physical activity participation among women attending postnatal care in Lusaka is low, despite moderate levels of knowledge and generally positive attitudes. Fewer than one in four women met recommended physical activity levels, highlighting a substantial gap between awareness and behaviour. The observed knowledge-practice gap aligns with international literature demonstrating that knowledge alone is insufficient to drive behaviour change [15,16]. Although women understood the general benefits of physical activity, practical constraints such as fatigue, childcare demands, and fear of complications limited engagement. Similar findings have been reported in studies from Nigeria, South Africa, and other low- and middle-income settings, where structural and social factors outweigh individual motivation [17-19]. Healthcare provider counselling emerged as the strongest predictor of postpartum physical activity participation. Women who received counselling were more than three times as likely to engage in regular activity, underscoring the pivotal role of postnatal health services. This finding is consistent with broader evidence that supportive, provider-led guidance enhances health behaviour uptake [20,21]. However, the relatively low proportion of women reporting receipt of counselling (32.1%) reflects persistent gaps in postnatal care, which often prioritises infant health over maternal recovery [22].

Mode of delivery also significantly influenced activity patterns, with women who delivered vaginally being more active than those who underwent caesarean section. This aligns with previous research linking operative delivery to delayed physical activity resumption due to pain, fear, and uncertainty regarding safe recovery timelines [23,24]. In resource-limited settings where access to postpartum rehabilitation services is minimal, these barriers may be particularly pronounced. The high rate of caesarean section in the sample (45.5%) underscores the importance of developing targeted interventions for this population.

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Education level was independently associated with physical activity participation, suggesting that health literacy and confidence play an important role in enabling behaviour. This finding reinforces the need for tailored, accessible counselling approaches that address women with varying educational backgrounds.

The cultural belief that women should rest rather than exercise postpartum (endorsed by 54.3%) reflects the intersection of traditional postpartum practices with modern health recommendations. In many African cultures, the postpartum period is traditionally a time for rest, family support, and focus on infant care [25,26]. While rest is indeed important for recovery, particularly in the immediate postpartum weeks, these cultural expectations may extend beyond the physiological recovery period and inadvertently discourage beneficial physical activity.

The concern about exercise affecting breastfeeding (expressed by 48.3% of participants) is noteworthy, as research consistently shows that moderate physical activity does not negatively impact lactation [27,28]. This misconception represents a clear target for educational interventions, requiring evidence-based counselling from healthcare providers. The barriers identified, lack of time (68.3%), fatigue (62.1%), and absence of structured guidance (55.7%) are consistent with global patterns but require context-specific solutions. In Zambian settings where extended family support is traditionally strong, interventions might leverage family engagement to facilitate childcare support during exercise time. Community-based exercise programs allowing mothers to bring infants, or brief home-based exercise routines requiring minimal time, may be more feasible than attending an exercise facility.

Implications for practice and policy

These findings have several important implications. First, postpartum exercise counselling should be standardized in postnatal care protocols, with healthcare providers receiving training on evidence-based recommendations, counselling techniques, and how to tailor advice based on mode of delivery and individual recovery. Second, given the significant impact of delivery mode, women who have caesarean sections require targeted attention with clear, progressive guidelines on exercise resumption, addressing pain management, and building confidence in safe movement. Third, programs must respect and work within cultural postpartum practices, finding synergies between traditional rest periods and gradual activity resumption, and addressing breastfeeding concerns with evidence-based information. Finally, given time and childcare barriers, community-based group exercise sessions, mother-baby exercise classes, or digital health interventions may be more accessible than facility-based programs.

Study limitations

Several limitations should be acknowledged. The cross-sectional design precludes causal inference; associations identified could reflect bi-directional relationships or unmeasured confounding. Self-reported physical activity is potentially subject to recall bias or social desirability bias, potentially overestimating actual practice levels. To mitigate for this, the data collection was conducted by researchers who are not part of the patient's clinical care team, and to separate medical care from research, a standard neutrality script was employed. The study was conducted in urban Lusaka facilities, limiting generalizability to rural areas where access to healthcare, cultural practices, and physical activity opportunities possibly differ substantially. Consecutive sampling may introduce selection bias if women who attend postnatal care differ systematically from those who do not. The study did not assess pregnancy physical activity levels, precluding examination of continuity from pregnancy to postpartum or postpartum-specific changes.

Generalisability

Based on the sample size, the findings of this study are highly generalizable to other major urban areas within the country that share similar infrastructure and patient volumes. The results may not be directly extrapolable to rural or 'hard-to-reach' districts because of contextual disparities such as acute resource constraints and variations in Sociodemographic and Obstetric Characteristics.

Recommendations

It is recommended to conduct a nationwide longitudinal study that samples urban, peri-urban, and rural areas, ensuring representativeness across contexts. This approach would enhance generalizability, reduce social desirability and recall bias, and enable causal inferences. This longitudinal study can also assess continuity or variations of pregnancy physical activity levels from pregnancy to postpartum or postpartum-specific changes.

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Conclusion

Postpartum physical activity participation among women in Lusaka remains low, reflecting a persistent gap between knowledge and practice. Healthcare provider counselling, mode of delivery, educational level, knowledge, attitudes, and parity are key determinants of engagement. Integrating structured, practical physical activity counselling into routine postnatal services, with specific attention to women recovering from caesarean section, may represent a feasible strategy to enhance maternal health outcomes in Zambia. To address these findings, we recommend: (1) Integration of standardized postpartum exercise counselling into routine postnatal care with specific attention to women recovering from caesarean delivery; (2) Healthcare provider training on postpartum exercise recommendations and behaviour change counselling; (3) Development of culturally sensitive, practically feasible exercise interventions addressing identified barriers; (4) Community engagement strategies leveraging family support systems; and (5) Further research on implementation strategies to bridge the knowledge-practice gap in Zambian and similar low- and middle-income country contexts.

Author contributions

JCS: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing – original draft. GM: Supervision, Validation, Writing – review & editing. LAN: Conceptualization, Methodology, Supervision, Validation, Writing – review & editing.

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Data availability statement

The datasets generated and analysed during the current study are available from the corresponding author on reasonable request.

Conflict of interests

The authors declare no conflict of interest.

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List of abbreviations

KAP: Knowledge, attitudes, and practice

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SPSS: Statistical Package for Social Sciences
PhD: Doctor of Philosophy

References

1. World Health Organization. WHO recommendations on postnatal care of the mother and newborn. Geneva: WHO; 2013. https://iris.who.int/server/api/core/bitstreams/de085c59-2f77-44ff-831c-f50da6fa52c5/content
2. Evenson KR, Mottola MF, Owe KM, Rousham EK, Brown WJ. Summary of international guidelines for physical activity after pregnancy. Obstet Gynecol Surv. 2014;69(7):407-414. https://doi.org/10.1097/OGX.0000000000000077 PMid:25112589 PMCid:PMC4134098
3. Davenport MH, McCurdy AP, Mottola MF, et al. Impact of prenatal exercise on both prenatal and postnatal anxiety and depressive symptoms: a systematic review and meta-analysis. Br J Sports Med. 2018;52(21):1376-1385. https://doi.org/10.1136/bjsports-2018-099697
4. World Health Organization. WHO guidelines on physical activity and sedentary behaviour. Geneva: WHO; 2020. https://iris.who.int/server/api/core/bitstreams/faa83413-d89e-4be9-bb01-b24671aef7ca/content
5. Saligheh M, McNamara B, Rooney R. Perceived barriers and enablers of physical activity in postpartum women: a qualitative approach. BMC Pregnancy Childbirth. 2016;16(1):131. https://doi.org/10.1186/s12884-016-0908-x PMid:27256279 PMCid:PMC4890285
6. Albright CL, Maddock JE, Nigg CR. Physical activity before pregnancy and following childbirth in a multiethnic sample of healthy women in Hawaii. Women's Health. 2006;42(3):95-110.https://doi.org/10.1300/J013v42n03_06 PMid:16901890
7. Haakstad LAH, Voldner N, Henriksen T, Bø K. Physical activity level and weight retention in the postpartum period: a prospective study. Acta Obstet Gynecol Scand. 2007;86(12):1427-1434.https://doi.org/10.1080/00016340601185301 PMid:17464584
8. Gaston A, Cramp A. Exercise during pregnancy: a review of patterns and determinants. J Sci Med Sport. 2011;14(4):299-305.https://doi.org/10.1016/j.jsams.2011.02.006 PMid:21420359
9. Evenson KR, Aytur SA, Borodulin K. Physical activity beliefs, barriers, and enablers among postpartum women. J Womens Health. 2009;18(12):1925-1934.https://doi.org/10.1089/jwh.2008.1309 PMid:20044854 PMCid:PMC2828187
10. Albright C, Maddock JE, Nigg CR. Increasing physical activity in postpartum multiethnic women in Hawaii: results from a pilot study. BMC Women's Health. 2009;9:4. https://doi.org/10.1186/1472-6874-9-4 PMid:19254387 PMCid:PMC2662815
11. Cramp AG, Bray SR. Understanding exercise self-efficacy and barriers to leisure-time physical activity among postnatal women. Matern Child Health J. 2011;15(5):642-651.https://doi.org/10.1007/s10995-010-0617-4 PMid:20495858
12. Nkhata LA, Munalula-Nkandu E, Shula H. Exercise practice among women attending antenatal care at the University Teaching Hospital in Lusaka, Zambia. Science Journal Public Health. 2015;3(3):361-365.https://doi.org/10.11648/j.sjph.20150303.19
13. Nkhata L, Nkandu E, Shula H. The knowledge, attitudes, and practices towards exercise among women attending antenatal care at the University Teaching Hospital in Lusaka, Zambia. Journal of Scientific Research and Reports. 2014;3(15):1986-1992. https://doi.org/10.9734/JSRR/2014/10693
14. Phiri M, Likwa RN, Mweshi MM, Nkhata LA. Knowledge and practice of exercise during pregnancy among pregnant women receiving antenatal care in selected public health facilities in Lusaka, Zambia. American Journal of Nursing and Health Sciences. 2024;5(1):17-22. https://doi.org/10.11648/j.ajnhs.20240501.13
15. Jukic AMZ, Evenson KR, Daniels JL, Herring AH, Wilcox AJ, Hartmann KE. A prospective study of the association between vigorous physical activity during pregnancy and length of gestation and birthweight. Matern Child Health J. 2012;16(5):1031-1044. https://doi.org/10.1007/s10995-011-0831-8 PMid:21674218 PMCid:PMC3386423
16. Prochaska JO, DiClemente CC. Stages and processes of self-change of smoking: toward an integrative model of change. J Consult Clin Psychol. 1983;51(3):390-395. https://cpb-eu-w2.wpmucdn.com/mypad.northampton.ac.uk/dist/5/6345/files/2016/05/Stages-of-Change-Prochaska-1983-typs6q.pdf https://doi.org/10.1037/0022-006X.51.3.390 PMid:6863699
17. Adeniyi AF, Ogwumike OO, Osinike CI. Physical activity and energy expenditure: findings from the Ibadan Pregnant Women's Survey. Afr J Reprod Health. 2014;18(2):117-126.
18. Mottola MF, Davenport MH, Ruchat SM, et al. 2019 Canadian guideline for physical activity throughout

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pregnancy. Br J Sports Med. 2018;52(21):1339-1346. https://doi.org/10.1136/bjsports-2018-100056 PMid:30337460

19. Connelly M, Brown H, van der Pligt P, Teychenne M. Modifiable barriers to leisure-time physical activity during pregnancy: a qualitative study investigating first-time mothers' views and experiences. BMC Pregnancy Childbirth. 2015;15:100. https://doi.org/10.1186/s12884-015-0529-9 PMid:25896111 PMCid:PMC4409747

20. Hartman MA, Hosper K, Stronks K. Targeting physical activity promotion in general practice: characteristics of inactive patients and willingness to change. BMC Public Health. 2008;8:70.https://doi.org/10.1186/1471-2458-8-172 PMid:18498623 PMCid:PMC2412873

21. Wilcox S, Dowda M, Leviton LC, et al. Active for Life: final results from the translation of two physical activity programs. Am J Prev Med. 2008;35(4):340-351. https://doi.org/10.1016/j.amepre.2008.07.001 PMid:18779028

22. Kerber KJ, de Graft-Johnson JE, Bhutta ZA, Okong P, Starrs A, Lawn JE. Continuum of care for maternal, newborn, and child health: from slogan to service delivery. Lancet. 2007;370(9595):1358-1369.https://doi.org/10.1016/S0140-6736(07)61578-5 PMid:17933651

23. Declercq E, Cunningham DK, Johnson C, Sakala C. Mothers' reports of postpartum pain associated with vaginal and cesarean deliveries: results of a national survey. Birth. 2008;35(1):16-24. https://doi.org/10.1111/j.1523-536X.2007.00207.x PMid:18307483

24. Gimovsky AC, Guarente J, Berghella V. Prolonged second stage in nulliparous with epidurals: a systematic review. J Matern Fetal Neonatal Med. 2017;30(4):461-465.https://doi.org/10.1080/14767058.2016.1174999 PMid:27050812

25. Dennis CL, Fung K, Grigoriadis S, et al. Traditional postpartum practices and rituals: a qualitative systematic review. Women's Health. 2007;3(4):487-502.https://doi.org/10.2217/17455057.3.4.487 PMid:19804024

26. Kaewsarn P, Moyle W, Creedy D. Traditional postpartum practices among Thai women. J Adv Nurs. 2003;41(4):358-366.https://doi.org/10.1046/j.1365-2648.2003.02534.x PMid:12581101

27. Lovelady CA, Lonnerdal B, Dewey KG. Lactation performance of exercising women. Am J Clin Nutr. 1990;52(1):103-109.https://doi.org/10.1093/ajcn/52.1.103 PMid:2360539

28. Dewey KG, Lovelady CA, Nommsen-Rivers LA, McCrory MA, Lonnerdal B. A randomized study of the effects of aerobic exercise by lactating women on breast-milk volume and composition. N Engl J Med. 1994;330(7):449-453. https://doi.org/10.1056/NEJM199402173300701 PMid:8289849

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