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Original Article

Attitude to Exercise in Pregnant Women Attending Antenatal Care at the University Teaching Hospital in Lusaka, Zambia

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Abstract:
Introduction: It is undeniable that exercise is a fundamental aspect of people's lives and an important component of antenatal care. However, there is evidence, which suggests that, pregnant women are afraid to participate in physical exercise because they fear that exercise would negatively influence their health and pregnancy. Pregnant women are encouraged to continue exercising during pregnancy because more often than not it is beneficial for both mother and fetus. We explored the attitude of pregnant women attending antenatal care at the University Teaching Hospital in Lusaka Zambia to exercise and considered whether their level of knowledge, number of pregnancies, educational level and cultural background had an influence on their exercising or not during pregnancy.
Materials and Methods: The study was a cross-sectional and exploratory in design. Descriptive statistics were employed for data summaries. Association of factors was tested using the chi-square test while the level of significance was set at 5%.
Results: Three hundred pregnant women participated in the survey; the mean age was 29.4 years (SD 4.29). Majority of the participants 93% (n=279) attached a favourable attitude to exercising during pregnancy while 7% had an unfavourable attitude. The pregnant women's level of knowledge on exercise had a significant relationship (p-value <.0001) to their attitude towards exercise. Significant relationships were observed between attitude to exercise in the pregnant women and the number of pregnancies (p-value 0.001), educational level (p-value <.0001) and cultural background (p-value <.0001).
Conclusions: Majority of pregnant women in Zambia have a favourable attitude to exercise during pregnancy. However, they do not know the specific antenatal exercises they should do. Instead, they practise general physical activities of daily living (ADLs) such as walking and performing household chores during pregnancy. This highlights the need for integration of Physiotherapy personnel in antenatal care programmes so as to give appropriate information, education and communication on the ideal exercise activities to pregnant women attending antenatal clinics.

Keywords: Attitude, Antenatal, Prescribed-Exercise, Practice, Pregnancy, Physiotherapy

1. Introduction

Pregnancy marks an important period in a woman's life. Mottola and McLaughlin [1] note that lack of exercise, which is a fundamental component of antenatal care, may pose a great risk due to decreased physical activity in pregnant women. Literature revealed that it is good practice for women to continue exercising during pregnancy as in most cases [1-3] it is safe for both mother and foetus. In addition, benefits of exercise in pregnancy include improved physical fitness, cardiovascular endurance, and prevention of excessive gestational weight gain and glucose intolerance. It is a known fact that, exercise is an important catalyst to good health during antenatal and postnatal care. Misconceptions of reduced physical activity during pregnancy and postpartum to preserve mother and infant's lives are fast being replaced by fresh evidence that the benefits of doing safe and specifically prescribed

exercises outweigh the presumed risks by far. Doran and Davies [4] indicate that many women are still hesitant to engage in any sort of physical activity during pregnancy because exercise is believed to increase risks associated with pregnancy. However, a number of factors have been identified as contributing to pregnant women's inability to exercise. These include but are not limited to; safety concerns, previous involvement in regular exercise, level of knowledge, level of education, personal attitudes, beliefs and phobia [5-7].

Nkhata and colleagues [8] reported that majority of women in Zambia submitted not knowing how to perform ideal antenatal exercises, tiredness and discomfort as reasons for not doing exercises. Similar results were reported in Nigeria [5] and Brazil [6]. Further, Mbada and others [5] highlight that in Africa, engagement in exercise and delivery care among pregnant women is inhibited by cultural myths, traditional beliefs and misperceptions. Jones and colleagues [9] also report that attitudes towards exercise are derived from a set of health beliefs, which vary greatly among individuals with different lifestyles. Similarly, Downs [10] echoes that a pregnant woman's attitude towards exercise influences her participation in exercise activities and her intention to exercise is the strongest determinant of her actual exercise behaviour. As exercise prescribers in health care delivery, it is important for physiotherapists to explore and understand the attitude of pregnant women towards exercise in order to minimise the barriers to exercise. This study explored the attitude to exercise in pregnant women attending antenatal care at the University Teaching Hospital in Lusaka, Zambia. Attitude was the degree to which a pregnant woman had a favourable or unfavourable evaluation of exercise. We also considered whether level of knowledge, number of pregnancies, educational level and cultural background had an impact on the intention to exercise among the pregnant women.

2. Material and Methods

Following ethical approval from the Biomedical Research Ethics Committee of the University of Zambia (UNZABREC), 300 pregnant women were recruited in a cross-sectional survey. A self-administered questionnaire based on the theory of planned behaviour model (TPBM) was used to collect data. According to Ajzen [11] the model predicts an individual's intention to engage in behaviour at a specific time and place. The questionnaire was divided into two parts. Demographic data and antenatal care was collected in section A while data on knowledge and attitude to exercise was collected under section B. The second section also, set out to collect data on exercise practice in current and previous pregnancies, type of exercises done and frequency. Analysis of data was done using the statistical package for social sciences (SPSS) version 17.0 for windows and summarized using descriptive statistics. Association of factors was tested using the chi-square test with the significance level set at 5%. The sample size was adequate to mitigate the possibility of variability in the response variables.

3. Results

3.1 Respondents' demographic characteristics and antenatal attendance

Three hundred pregnant women participated in the survey; the mean age was 29.4 years (SD 4.29). Most participants 48% (n=144) had attained college level of education with 44% (n=32) being in formal employment. Majority of the pregnant women 41% (n=125) belonged to the Bemba tribe. While the average number of pregnancies reported was three, most of the pregnant women 96% (n=288) reported having attended antenatal care regularly and about 74% (n=222) attached great importance to antenatal attendance (Table 1).

Table 1: Respondents' demographic characteristics and antenatal attendance (n=300)

Demographics	Frequency	Percentage
Age		
20-25	33	11%
26-30	134	45%
31-35	100	33%
36-40	33	11%
Educational background		
Primary	24	8%
Secondary	132	44%
College	144	48%
Occupational background		
Student	12	4%
Unemployed	66	22%
Formal employment	132	44%
Self employed	90	30%
Tribe/Cultural background		
Lozi	35	12%
Soli	23	8%
Tonga	26	9%
Nsenga	77	26%
Kaonde	14	4%
Bemba	125	41%
Number of pregnancies		
2	111	37%
3	123	41%
4	22	22%
Antenatal attendance		
Always	279	93%
Sometimes	21	7%

3.2 Respondents' attitude to exercise and exercise practice during pregnancy

More than three-quarters of the study participants 93% (n=279) attached a favourable attitude to exercise during pregnancy (Figure 1). During the current pregnancy, more than half of the study respondents 67% (n=201)

reported engaging in some form of exercise activities and 63% (n=189) indicated having practised exercises in previous pregnancies. Walking was the commonest type of exercise identified by 30% (n=90) of the respondents. Figure 2 illustrates reasons for not practicing exercises which included not knowing the type of exercises 59% (n=177), feeling tired 25% (n=75) and being afraid to exercise 16% (n=48).

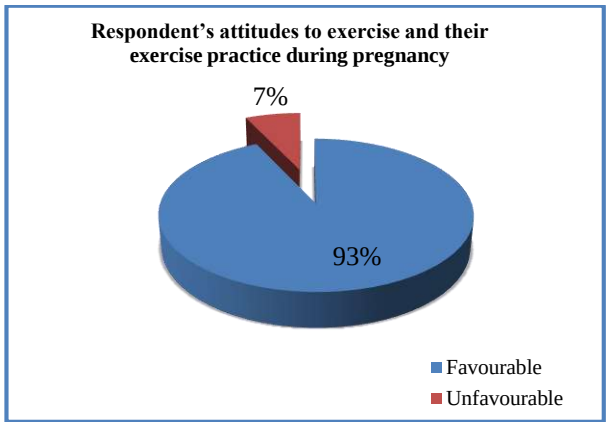

Figure 1: Respondent's attitudes to exercise and their exercise practice during pregnancy

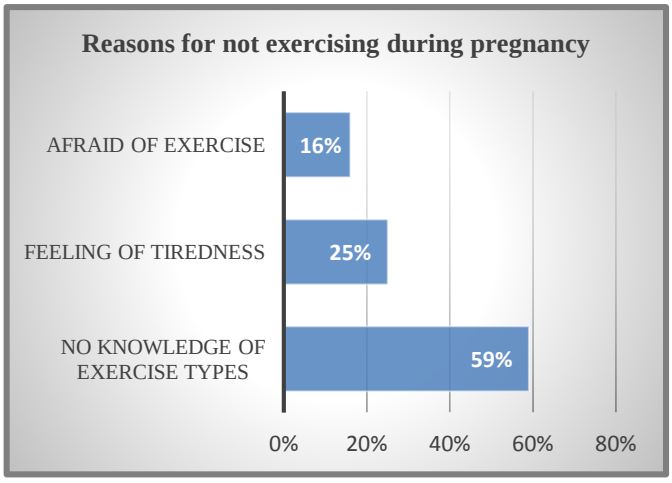

Figure 2: Respondent's reasons for not exercising during pregnancy

3.3 Respondents' levels of knowledge on exercise, type and sources of information

While majority of the respondents 74% (n=222) exhibited inadequate levels of knowledge on exercise and the type of ideal exercises only, 19% (n=57) had adequate knowledge on exercise and ideal exercises in pregnancy. A quarter of the study respondents 25% (n=75) revealed that television and books were the common sources of information on exercise during pregnancy and only 5% (n=15) indicated physiotherapists as their source (Figure 3).

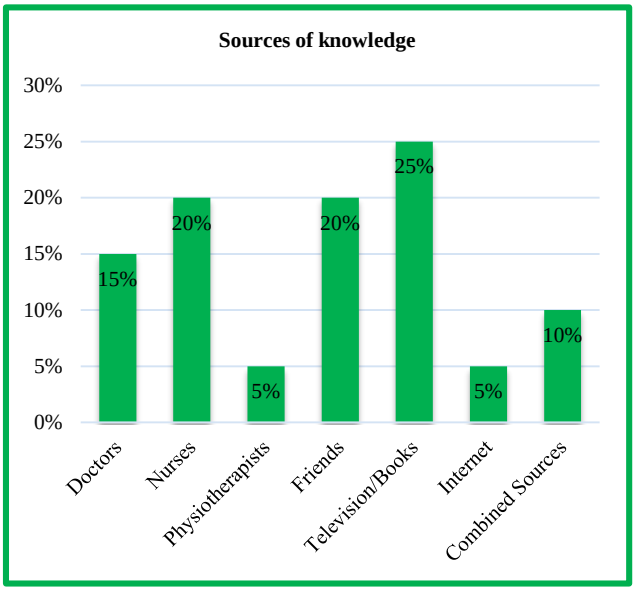

Figure 3: Respondent's source of knowledge on exercise in pregnancy

3.4 Cross tabulations for participants' level of knowledge, number of pregnancies, educational level and cultural background on attitude to exercise

The pregnant women's level of knowledge on exercise had a significant relationship (p-value <.0001) with their attitude to exercise. The researcher also noted statistically significant relationships to attitude between the pregnant women's attitude to exercise and the number of pregnancies (p-value 0.001), educational level (p-value <.0001) and cultural background (p-value <.0001) (table 2).

Table 2: Cross tabulations for level of knowledge, number of pregnancies, educational level and cultural background on attitude to exercise.

Category	X^2 statistic	Significance level	p-value
Level of knowledge	32.01	0.05	<.0001
Number of pregnancies	14.98	0.05	0.001
Educational level	198.38	0.05	<.0001
Cultural background	48.09	0.05	<.0001

4. Discussion

It is undeniable that exercise is a fundamental aspect of women's lives and an important component of antenatal care. Pregnant women are encouraged to continue exercising during pregnancy because more often than not, it is safe for both mother and fetus [1-3, 12, 13]. However, there is evidence, which suggests that, pregnant women are afraid to participate in physical exercise because they fear that exercise would have negative effects on their health and pregnancy [5, 8]. We explored the attitude to exercise in pregnant women attending antenatal care at the University Teaching

Hospital in Lusaka Zambia. The research findings revealed that most of the participants had a positive attitude to exercise in pregnancy. This study finding is in line with the research findings from Malaysia 96.4% [14], 93.8% in Brazil [6] and 84.1% in Nigeria [5]. In addition, these studies echoed a positive paradigm shift in the attitude towards exercise during pregnancy with increasing numbers of pregnant women participating in exercise and physical activities. This implies that exercises should be encouraged and prescribed during pregnancy because pregnant women are willing to participate in exercise activities during pregnancy.

The average number of pregnancies reported in this study was three, with most respondents attaching great importance to attending antenatal care in current and previous pregnancies. The number of pregnancies related significantly to their attitudes towards exercise. Although, respondents had a positive attitude towards exercising, a good number admitted to not engaging in any exercise activities in the current and previous pregnancies. Nevertheless, they commonly reported practicing general physical ADLs such as walking and carrying out household chores during pregnancy. The reasons for not exercising included; feeling tired, being afraid and not knowing the ideal antenatal exercises. In previous research, these factors were identified as contributing to the pregnant women's inability to meet exercise recommendations [5, 6, 8]. Furthermore, safety concerns, previous involvement in regular exercise, levels of knowledge and education, personal attitude, and beliefs were other factors identified as inhibitors to exercise activities among pregnant women. To overcome these factors and enhance correct exercise programmes during pregnancy, physiotherapists should take keen interest and advocate for their integration into antenatal care programmes. These programmes are conduits through which dissemination of information and training on ideal exercise activities for pregnancy could be achieved.

Despite educational level having a significant relationship with attitude to exercise and most participants having attained college level of education, the majority of respondents exhibited inadequate levels of knowledge on exercise recommendations during pregnancy in the current study. This research contradicts the study findings by authors in Nigeria [5], Brazil [6] and India [15] in which pregnant women had adequate levels of knowledge on the ideal exercise activities. At least 30 minutes of moderate non-weight bearing exercises such as Kegel exercises, swimming, brisk walking, indoor stationary bicycling and low-impact aerobics is recommended per day during pregnancy [1, 2, 16, 17]. In addition, these exercise activities help pregnant women develop the ability to control muscles during labor and minimizes decreased bladder control and hemorrhoids that may arise during pregnancy. Activities such as jogging, tennis and badminton are generally safe but must be done in moderation and with caution because rapid movements affect balance during pregnancy [12]. In this study majority of the pregnant women reported performing household chores for exercise. This may be attributed to the fact that the activities are easy to carry out, have no costs and do not require equipment.

Culture plays a major role in the way a woman perceives and prepares for her birthing experience. This is because each culture has its own values, beliefs and practices related to pregnancy and birth [18]. Mbada and others [5] highlight that cultural activities such as mandatory confinement during antenatal and postnatal period especially in Africa plays a prohibiting role in physical exercises. There are seven official vernacular languages in Zambia, which represent the major languages of each province. Participants who took part in this study belonged to six of these. Cultural background in our study had a significant relationship to attitude to exercise. However, this study finding may have been influenced by factors such as social and economic status and demographic characteristics. In addition, most of the participants dwell in the city, which has a combination of cultural factors, which may have interacted and contributed to the women's positive attitude to exercise during pregnancy.

Although, participants in this study showed willingness to engage in physical activity during pregnancy regardless of their previous experiences and outcomes, the study findings revealed that there is little advice obtained on specific antenatal exercises during pregnancy from health care professionals during antenatal. Therefore, pregnant women obtain information from a wide range of sources, which includes television, books, friends, doctors, nurses, and rarely, physiotherapists. Substantial amount of research has been completed to support the idea that it is beneficial to exercise during pregnancy. However, based on the pregnant women's medical history it is important that health professionals in this area, especially physiotherapists, consistently advise, educate and offer personalized exercise guidelines to pregnant women during antenatal clinics.

5. Conclusion

From the study it may be concluded say that majority of pregnant women do not know the specific antenatal exercises despite them practising general physical activities of daily living such as walking and carrying out household chores during pregnancy. Consequently, they are not able to practise the ideal exercise during pregnancy. Therefore, there is need to promote interdisciplinary collaboration between the

Physiotherapy and the Gynaecological and Obstetrical units at the hospital. This collaboration will ensure that physiotherapists get actively involved in antenatal clinics where they can inform, educate and communicate with pregnant women on the importance of carrying out timely exercise activities during pregnancy.

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