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The Knowledge, Attitudes and Practices towards Exercise among Women Attending Antenatal Care at the University Teaching Hospital in Lusaka, Zambia

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Authors' contributions

This work was carried out in collaboration between all authors. Author LAN designed the study, wrote the protocol and wrote the first draft of the manuscript. Author EMN managed the literature searches. Author HS managed the analysis of the study. All authors read and approved the final manuscript.

Original Research Article

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ABSTRACT

Introduction: There is persuasive evidence on the benefits of exercise during pregnancy such as; reduced time spent in labour, prevention of caesarean sections, quick recovery after childbirth and getting back to the pre-pregnancy figure. The aim of the study was to obtain information on the knowledge, attitudes and practices towards exercise among women attending antenatal care at the University Teaching Hospital in Lusaka, Zambia.
Methods: This was a cross-sectional exploratory study. Data was collected using a semi structured questionnaire and summarized using descriptive statistics. The chi-square test was used to test associations and the significance level was set at 5%.
Results: Three hundred pregnant women participated in the study and the majority (n=222) 74% showed inadequate knowledge on the type of exercises done in pregnancy. Knowledge and attitude was positively associated with the educational level ($p<0.03$) though exercise practice in relation to the educational level was insignificant. The number of pregnancies were also positively associated with the pregnant women's knowledge ($p=0.001$), attitude ($p<0.01$) and practice ($p=0.01$) towards exercise in pregnancy.
Conclusions: The flow of information on the types of exercises done in pregnancy

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among pregnant women attending antenatal care is inadequate. This underlines the need for physiotherapy personnel involvement in antenatal care to provide information and advice on exercises to pregnant women.

Keywords: Antenatal; attitude; exercise; knowledge; practice; pregnancy and physiotherapy.

1. INTRODUCTION

Appropriate exercises during pregnancy have proved to be beneficial to many expectant mothers, though how much and what kind of exercises varies from person to person [1]. Reports indicate that exercise during pregnancy can improve women's psychological wellbeing, reduce gestational weight gain, back pain, length of labour, decrease caesarean section rates and reduce recovery times [1,10]. Furthermore, babies born seem to be calmer, are leaner, more intelligent with improved neurological and mental development. Also, children of women who continued to exercise through pregnancy had significantly higher scores on oral language and general intelligence tests [2,6]. Exercise in pregnancy is safe for both mother and foetus in most cases however, majority of women are less active during pregnancy and little is known about how to support exercises during this period. Attitudes towards exercise vary and reduction in exercise levels during pregnancy is common with concerns being strongest amongst those who had miscarriages or problems conceiving [3]. Further, rates of physical activity differ by race and ethnicity in a number of ways and personal or cultural values influence the pregnant women's physical activity behaviours.

Like in anyother Sub-Saharan country, safe motherhood programs in Zambia are carried out during antenatal clinics. Pregnant women are taught about good nutritional habits, ground immunisations and prevention of mother to child HIV transmission (PMTC) among others. They are also encouraged to do exercise activities to ensure a healthy birth. However, there is inadequate information on exercise practice among women attending antenatal care in Zambia therefore, we conducted this survey to explore and determine the knowledge, attitudes and practices (KAP) towards exercise among women attending antenatal care at the University Teaching Hospital (UTH) in Lusaka and establish whether, educational level, number of pregnancies and cultural background had an influence on the KAP of exercise in pregnancy.

2. METHODS

A total of number 300 pregnant women were randomly selected and recruited into the study. Ethical approval was obtained from the Biomedical Research Ethics Committee of the University of Zambia (UNZABREC). Data was collected using a semi structured questionnaire which was divided into three parts. Demographic data was collected in section A. Information on antenatal care attendance and previous pregnancies was collected in section B and in section C data on knowledge, attitudes and practices towards exercise in pregnancy was collected. This section aimed to determine the health seeking behaviour of pregnant women towards exercise during pregnancy and establish whether there were any cultural beliefs attached to exercise during pregnancy. Other items required information on the practice of exercise during current and previous pregnancies, types of exercise and their frequency. Analysis of data was done using the statistical package for social sciences (SPSS) version 10.0 for windows and summarized using descriptive statistics. The chi-

square test was used to test association between variables and the significance level was set at 5%.

3. RESULTS

The demographic characteristics of 300 participants are displayed in Table 1. Most participants 48% (n=144) had attained college level of education and 44% (n=132) were in formal employment.

Table 1. Respondents' demographic characteristics

Respondents demographic characteristics		(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%

3.1 Antenatal Care Attendance

Majority of the pregnant women 93% (n=279) attended antenatal care regulary, 74% (n=222) attached great importance to antenatal attendance and 41% (n= 123) reported having had at least 3 pregnancies (Table 2).

3.2 Respondents Levels of Knowledge on Exercise, Type and Sources of Information

Only 19% (n=57) of respondents had adequate levels of knowledge on exercise and types of exercise ideal in pregnancy. Majority 74% (n=222) exhibited inadequate levels of knowledge. Television and books were the common source of information for 25% (n=75) of respondents and only 5%(n=15) reported having obtained information from a physiotherapist (Fig. 1).

3.3 Respondent's Attitudes towards Exercise and Seeking Medical Advice during Pregnancy

Most participants 93% (n=279) attached positive attitudes towards exercise and seeking medical advice on exercise during pregnancy. Reasons for seeking medical advice included knowing the right exercise to do 56% (n=168) and proper exercise positions 19% (n=57).

Table 2. Antenatal and exercise information

Respondents antenatal information	(n=300)	
Number of times pregnant	**Frequency**	**Percentage**
2	111	37%
3	123	41%
4	22	22%
Number of children		
0	33	11%
1	78	26%
2	45	15%
3	66	22%
4	78	26%
Antenatal attendance		
Always	279	93%
Sometimes	21	7%
Never		
Exercise during pregnancy		
Always	207	69%
Sometimes	93	31%
Never		
Types of exercise activity done		
Walking	87	29%
Walking and sit ups	33	11%
Walking and sweeping	39	13%
Breathing exercises and sit ups	42	14%
Sit ups and Leg raising	33	11%
Leg raising	18	6%
Washing and sweeping	33	11%
Sweeping	15	5%

3.4 Respondents Exercise Practice during Pregnancy

Only 67% (n=201) reported practicing some form of exercise during their current pregnancy and 63% (n=189) in previous pregnancies. Walking was the most prevalent type of exercise 30% (n=90) commonly identified by respondents (Table 2). Reasons for not exercising reported by respondents included not knowing the type of exercises 60% (n=180).

3.5 Cross Tabulations for Knowledge, Attitude and Practice in Relation to the Educational Level, Cultural Background and Previous Pregnancies

Though, exercise practice in relation to the educational levels was insignificant, knowledge and attitude was positively associated with the pregnant women's level of education ($p<0.03$). Their cultural background had a significant association with their knowledge ($p=0.01$) and practice ($p<0.03$). Also, the number of pregnancies was positively associated with the pregnant women's knowledge ($p=0.001$), attitude ($P<0.01$) and Practice ($p=0.01$) towards exercise in pregnancy.

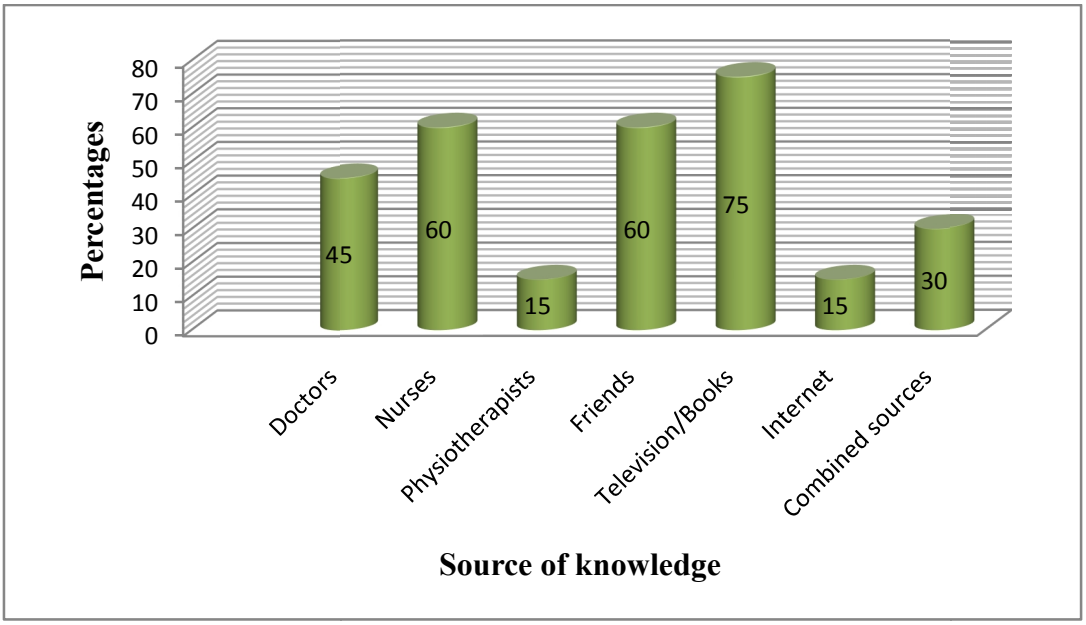

Fig. 1. Respondents source of knowledge about exercise in pregnancy

4. DISCUSSION

Education covers a range of experiences from formal learning to day-to-day experiences that build up understanding and knowledge [4,11]. All pregnant women that participated in the study had attained formal education. Despite the levels of education attained, practice was in significantly associated with the level of education amongst the respondents. The pregnant women had basic and inadequate information on exercise during pregnancy which may be because information obtained on exercise during pregnancy lacked details and was inconsistent with little specificity though, knowledge and attitude was positively associated with the level of education ($p<0.03$). Therefore, it may be important to establish how exercise education or awareness can be incorporated in antenatal care so that women are well informed on exercise activities and their benefit during pregnancy. At least 30 minutes of moderate non weight-bearing exercise a day at most, if not all days of the week is recommended for a pregnant woman [5,6]. To encourage proper exercise in pregnancy, Priravej and Sakisirinukul, recommend that all members of the related health care team should be involved in planning [5]. Professionals like physiotherapists should be integrated into the reproductive health care programmes during antenatal care to provide information and training on exercise activities ideal for pregnancy. These exercise activities reduce time spent in labour, prevent caesarean sections, improve muscle tone and aid recovery after childbirth. Babies of women that continue to exercise come out healthier, adapt faster to the outside and exhibit improved neurological and mental development.

Culture has been referred to as “the way of life for an entire society” [7,11]. In large societies however, O’Neil says there are subcultures, or groups of people with distinct sets of behaviour and beliefs that differentiate them from a larger culture of which they are part [7]. These may be distinctive because of the age of its members, their race, ethnicity or gender. Cultural background had a significant association with the knowledge of the pregnant women

(p=0.01) and practice (p<0.03) but was insignificantly associated with attitude. Participants who took part in the study belonged to six subcultures. However, there was nothing peculiar about these subcultures that was identified or attributed to the participants' knowledge and exercise practice in pregnancy. The reason could be that, participants have dwelt in the city which is characterised by a combination of subcultures most of their lives. Therefore, culture may have been influenced by others factors which could have a bearing on the participants KAP towards exercise in pregnancy. Carrying out a similar study in rural setups would help bring out issues if any.

Pregnancy according to Weallens et al. is a period during which the women's perception of risk is likely to be heightened, exercise patterns change and physical activity lessens [8]. Often it is assumed that multiparous women are able to handle subsequent pregnancies better, because of experience and knowledge gained from earlier pregnancies. It is also assumed that behaviours and attitudes towards subsequent pregnancies depend mostly on the women's experiences in earlier pregnancies; they determine the development of negative or positive attitudes towards various activities during pregnancy .In this study, the history of the respondent's previous pregnancies was noted and enquiry made into whether any exercises were done. Outcomes revealed that the number of pregnancies was positively associated with the respondents knowledge (p=0.001), attitude (p<0.01) and Practice (p=0.01) towards exercise in pregnancy. Despite this most women's knowledge on exercises done in pregnancy was limited highlighting the fact that little advise on specific exercises during pregnancy is received from health care professionals during antenatal. Consistent advise and education should therefore, be provided to the mothers by health professionals that have knowledge in this area as there seems to be reliance of obtaining information from a wide range of sources which includes magazines, media, friends, doctors, nurses, and rarely physiotherapists. Similar results on attitudes towards exercise in pregnancy were noted by Clapp suggesting that attitudes towards exercise in pregnancy had markedly changed in recent decades because the underlying concerns revolved around fears that exercise could adversely affect the course and outcome of pregnancy [9]. Nonetheless, substantial amount of research has also been completed to support the idea that it is beneficial to exercise during pregnancy [10,11]. Exercises should therefore, be encouraged and prescribed in pregnancy as participants who took part in this study also showed willingness to engage in physical activity during pregnancy regardless of previous experiences and outcomes.

Health talks which range from HIV/AIDS awareness and prevention, malaria prevention, nutrition and general fitness of the mother are given during antenatal clinics every week day at the UTH. This implies that during health talks exercise activities are mentioned to the mothers to encourage fitness but attention and detail may be lacking compared to what is given for topics such as HIV/AIDS, Malaria and Nutrition. The reproductive health programme in the country in line with the millennium development goals (MDGs) is concerned with providing quality health care that supports safe motherhood. Services therefore, need a holistic approach if these goals have to be achieved. Exercise education during antenatal should therefore, be emphasised because they not only help maintain fitness levels but also, contribute to the reduction of discomforts and prevention of diseases such as gestational diabetes, hypertension, osteoporosis and backaches.

The limitations to this study include information obtained which was based on the respondents' responses. For this reason it was not generalized to the entire population. The questionnaire, because it was not a standard tool may have lacked items that could bring out more information on the variables under study.

5. CONCLUSION

Knowledge on exercise activity during pregnancy among pregnant women attending antenatal care at UTH is limited. Outcomes highlighted that women had basic and inadequate information on specific exercises done during pregnancy. Information on exercise lacked detail, was inconsistent and with little specificity. Health professionals inclined to physical activity should be involved in provision of antenatal services to give correct and adequate advice on exercises to the women.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Clark AM. Promoting exercise during pregnancy: A qualitative study of pregnant women, birth partners and health professionals in Scotland. University of Glasgow; 2005.
2. Rice PL, Fort IL. The relationship of maternal exercise on labour, delivery and health of the new born child. Journal of Paediatrics. 1991;1(2):2-4.
3. Paisley TS, Joy EA, Price RJ. Exercise during Pregnancy a Practical Approach. 2003;27(8):347-60.
4. The United Nations Educational. Scientific and Cultural Organisation. UNESCO, Education; 2004. Available: http://www.unesco.org/educationre
5. Piravej K, Sakisirinukul R. Survey of exercise patterns, attitudes and the general effects of exercise during pregnancy in 203 Thai Women at King Chulalongkorn Memorial Hospital. Thailand; 2001.
6. Reich C, Exercise in pregnancy. A review for Nurse practitioners. Health Care Women International. 1987;8(2):6-7.
7. O'Neil D. Cultural anthropology tutorial. Behavioural sciences department, Palomar College. San Marco- California. 2006;18(12):40-51.
8. Weallens E, Clark AM, Mutrie N, Gaudoin M. Attitudes and beliefs of Primegravidae women to exercise during pregnancy. Health Educational Journal, Glasgow, Scotland. 2003;1:06-09.
9. Clapp JF. Beginning regular exercise in early pregnancy: Effects on fetoplacental growth. American Journal of Obstetrics and Gynaecology. 2000;183:6-10.
10. Wang TW, Apgar BS. Exercise during pregnancy. American Academy of Family Physicians. 1998;57(8):27.
11. The United Nations Educational. Scientific and Cultural Organisation. UNESCO, Culture; 2004. Available: http://www.unesco.org/culture

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