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Knowledge, attitude and practice towards physiotherapy management after caesarean section delivery among doctors at the University Teaching Hospitals in Lusaka, Zambia

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Abstract

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Background: Caesarean section delivery (CSD) is one of the common surgical procedures performed to save the life of an expectant mother and the baby whenever needed. Although relatively safe, it is associated with complications, which Physiotherapists are well equipped to address and prevent. This study aimed to determine the knowledge, attitude and practice of doctors towards physiotherapy management following CSD at the University Teaching Hospitals in Lusaka, Zambia.

Methods: The study design was cross-sectional and convenient sampling method was used to recruit participants. Data was collected using a semi-structured questionnaire modified from previous studies. Analysis for descriptive statistics was done using the statistical package of social sciences (SPSS) version 20.0 for windows. While association of factors was tested using the chi-square test at 0.05 level of significance.

Results: Forty-two medical doctors comprising 54.8% males participated in the study. Majority 64.3% had 1-5 years working experience and Obstetrics 73.8% was their major specialty of practice. Most of the participants 86% had adequate levels of knowledge on the practice of physiotherapy following CSD. However, 59.5% of the participants submitted not referring patients to physiotherapy following CSD. Further, work experience was significantly associated with level of knowledge (p=0.02701).

Conclusion: Participants in this study exhibited adequate levels of knowledge and positive attitudes, towards physiotherapy management but more than half of them had poor consultation practices as they referred post CSD patients for physiotherapy. This suggests a need for enhanced interaction and communication between medical officers and physiotherapists, which could be achieved through ward rounds, clinical meetings, seminars, and workshops.

Key words: *Cesarean section, Delivery, Obstetrics, Doctors, Physiotherapy, Knowledge, Attitude, Practice.*

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INTRODUCTION

Postnatal care is regarded as one of the most important maternal healthcare services for the prevention of impairments and disabilities that result from childbirth [1]. The postnatal period that is the first six weeks after birth is critical to the health and survival of a mother and her newborn [2]. Unfortunately, the health of mothers after caesarean section delivery (CSD) has been described as a particular area of neglect among all reproductive health programs. As a result, prolonged maternal recovery, restricted mobility and other minor health problems have been reported after CSD [3]. Caesarean section delivery often has saved the life of the mother and the baby whenever it is needed. Being the commonest surgical procedure, it allows the fetus, placenta and membranes to be removed through incisions on the abdominal wall and uterus [4]. Over the past three decades, there has been an unprecedented and steady rise in the rates of CSD, which has been a source of concern among healthcare professionals, governments and policy makers.

Worldwide, CSD rates increased from 6.7% in 1990 to 19.1% in 2014, which represents a 12.4% absolute increase [5]. In Zambia Betrán and colleagues [5] reported that CSD increased from 2.6% to 3%. There are multiple reasons for the growing CSD rates, which are not limited to clinical medical practice, but also include, non-medical, cultural, psychosocial and socio-economic factors [6, 7]. Other studies have cited medical protocols such as breech presentation, multiple pregnancies, past CSD, electronic fetal monitoring and growing health problems in women such as diabetes, hypertension and HIV-infection as reasons for CSD [6-11]. Allegedly, the incidence rates of postpartum morbidity after CSD are higher than with vaginal delivery [4]. It is because of these challenges that CSD has become one of the most debatable topics in most spheres of maternal health care physiotherapy inclusive.

Villar and others [12] indicate that abdominal and thoracic incisions to some extent lead to a high incidence of respiratory complications and physiotherapy is cardinal in managing CSD patients pre- and post-operatively. Scott and Porter [13] suggest that maternal complications in CSD can include fever, infection of the uterus, inflammation of the endometrium, infection of the incision, urinary tract infection, bladder or bowel injury, excessive hemorrhage, shock secondary to hemorrhage, pulmonary embolism and hypertension which may prolong hospital stay as the patient remains immobile or inactive for some time. In long-term complications according to Ecker and colleagues [14] may include scar tissue adhesions that can cause intestinal obstruction, post-operative dehiscence, and uterine rupture during subsequent labor. Physiotherapy has the ability to influence a vast number of domains in post CSD patients including maintenance, restoration of body structure and enhancement of physical and functional activity thus improving quality of life. In addition, physiotherapists attend to patients with postnatal complications that include among others, urinary incontinence, muscle weakness, backache and postnatal depression. Contact with these patients is often through doctor consultations. Therefore, the doctor's knowledge, attitude and practice towards physiotherapy management after CSD is very fundamental in ensuring effective opportunities to promote health behaviors that affect post-CSD women. Hence, this study aimed to determine the knowledge, attitude and practice of doctors towards physiotherapy management after CSD at the University Teaching Hospital (UTH) in Lusaka, Zambia.

MATERIALS AND METHODS

This was a descriptive cross-sectional study design and convenient sampling method was used to recruit participants who were practicing doctors in the department of Obstetrics and Gynecology at the University Teaching Hospitals in Lusaka, Zambia.

A semi structured questionnaire adapted from studies [15-17], was used. It was divided into; Section A: where demographic information of the participants was collected, Section B: assessed the knowledge on physiotherapy management after CSD, Section C doctor's attitude towards physiotherapy management after CSD and in Section D the current doctors' practices regarding physiotherapy management after CSD were assessed. Data analysis was conducted using the statistical package for social sciences (SPSS) version 20.0 for windows and summarized using descriptive statistics and inferential statistics. The Chi-square statistical test was used to determine association of variables and the significance level was set at 0.05.

RESULTS

Participant's demographic characteristics

We recruited 42 participants in our study of which 54.8 % were males. As can be

seen in table 1, most of the participants 90.5% had Bachelor's degree level of education, 64.3% reported having 1-5 years working experience and obstetrics was the major specialty of practice for most of them 73.8%.

Table 1: Participants' demographic characteristics

Variable	Male n=23		Female n=19	
	N (%)		N (%)	
Age categories				
30 and below	10	23.8	4	9.5
31- 40	9	21.4	14	33.3
41-50	0	0	1	2.4
Above 50	4	9.5	0	0
Specialty of Practice				
Obstetrics	18	42.9	13	30.9
Gynaecology	5	11.9	5	11.9
Other	0	0	1	2.4
Highest Qualification				
Bachelor's Degree	19	45.2	19	45.2
Master's Degree	4	9.5	0	0
Experience				
1-5 years	13	30.9	14	33.3
6-10 years	6	14.3	5	11.9
More than 10 years	4	9.5	0	0

Participants' knowledge on physiotherapy management after caesarean section delivery

Outcomes from the responses to the key knowledge questions regarding physiotherapy management after CSD indicated that majority of the participants 86% had adequate knowledge. In addition, all the participants believed that physiotherapy management after CSD was beneficial to postnatal mothers.

Participant's attitude towards physiotherapy management after Caesarean Section Delivery

Most of the participants 79% attached positive attitudes towards statements regarding physiotherapy management after CSD. Further, all respondents showed interest in participating in a workshop on post CSD physiotherapy management.

Practice regarding post caesarean section delivery referral to physiotherapy

Results on responses to practice concerning physiotherapy referral and inquiry of post CSD patients indicate that majority 69% of the participants seldom referred patients to physiotherapy suggesting poor practice (Table 2).

Table 2: Participants practice towards referral to physiotherapy after CSD

	Never	Seldom	Often	Always
Do you refer each post CSD patient for physiotherapy management?	11(26.3)	29 (69.0)	2 (4.7)	0 (0)
Do your post CSD patients ask you questions about physiotherapy after CSD?	9 (21.4)	30 (71.4)	3 (7.2)	0 (0)

Level of Knowledge and Demographic data

Outcomes in table 3 highlight that work experience was significantly associated with level of knowledge at p-value 0.027

Table 3: Participant's level of Knowledge in relation to Demographic data

	Level of knowledge		
	Adequate	**Inadequate**	**χ^2 (p-value)**
Age categories			
30 and below	10	4	
31- 40	20	2	
41-50	1	1	3.5725 (0.3114)
Above 50	3	1	
Highest Qualification			
Bachelor's Degree	32	6	0.737 (0.391)
Master's Degree	4	0	
Experience			
1-5 years	26	1	
6-10 years	7	4	7.2229 **(0.02701)***
More than 10 years	3	1	
Gender			
Male	19	4	0.4005 (0.5268)
Female	17	2	

Attitude and Demographic data

Results in table show a significant relationship between attitude and participant's age at p-value 0.008 including work experience at p-value 0.002

Table 4: Participant's attitude in relation to demographic data

	Attitude of doctors		
	Positive	**Negative**	**χ^2 (p-value)**
Age categories			
30 and below	14	0	
31- 40	20	3	11.725 **(0.008)***
41-50	0	1	
Above 50	4	0	
Highest Qualification			
Bachelor's Degree	34	4	0.465 (0.495)
Master's Degree	3	1	
Experience			
1-5 years	27	0	
6-10 years	7	4	12.459 **(0.002)***
More than 10 years	4	0	
Gender			
Male	21	2	0.040 (0.841)
Female	17	2	

Practice and Demographic data

Participants practice was significantly associated with highest qualification at p-value 0.005, work experience p-0.014 and gender p-0.012 (Table 5).

Table 5: participant's practice in relation to demographic data

	Practice of doctors		Poor	χ^2 (p-value)
	Excellent	Good		
Age categories				
30 and below	1	5	8	
31- 40	1	6	16	11.823 (0.066)
41-50	0	0	1	
Above 50	2	2	0	
Highest Qualification				
Bachelor's Degree	2	11	25	10.755 **(0.005)***
Master's Degree	2	2	0	
Experience				
1-5 years	2	9	16	
6-10 years	0	2	9	12.453 **(0.014)***
More than 10 years	2	2	0	
Gender				
Male	3	11	9	8.890 **(0.012)***
Female	1	2	16	

DISCUSSION

Caesarean section surgery affects muscles and takes time to recover compared to vaginal delivery [18-19]. In addition, deep abdominal muscles are vital in providing stability to the pelvis and lower back and without them spinal movement and the pelvic joints cannot be well controlled and supported [20]. Consequently, this may affect the health of the mother including the workplace, because of lengthened time off to allow full recovery. However, Good pelvic stability and control are essential components for the performance of normal activities of daily living (NADL) and all weight-bearing activities such as sitting, walking, running and climbing stairs. Therefore, recovery and return to NADL following CSD cannot be left to nature. Professional guidance and correct exercise activities to prevent post-operative complications, promote core muscle reactivation, restore tone in abdominal, and pelvic floor muscles is encouraged. Based on their therapeutic advice, medical doctors have an important role to play in achieving this including changing the postnatal health behaviors of women following CSD. However, in this study majority (69%) of our participants seldom referred post CSD patients for physiotherapy management. This finding is similar to that of Reddy and Frantz [21], who reported that not all post CSD women were referred for physiotherapy treatment in Kwa-Zulu Natal, South Africa. Consequently, this has led to the none identification and address of some mobility complications that arise as a result of the CSD procedures. In the current study, most of the participants were still practicing general medicine and only had between 1-5 years of work experience, which could have a bearing on the low referrals, as participants may not have been aware of the service that physiotherapists render.

Freeman and others [22] advise that in order for patients to be referred to other members of the multidisciplinary team, health care professionals need to understand each other's role and contribution towards patient care. The current results indicate that participants mostly referred patients with mobility complications for physiotherapy despite the influence in obstetric and gynecological conditions being established more than five decades ago [23] suggesting a

misconception on what physiotherapy achieve. Nonetheless, it has been documented that physiotherapy including prophylactic physiotherapy can successfully treat post-CSD complications such as pelvic floor dysfunction; mobility difficulties and lower back pain [24].

Doctors have profound influence on other health professions including physiotherapy, as they are on the top of the pyramid of the health care professionals. In a similar study in Nigeria, Odunaiya and others [16] reported underutilization of physiotherapy services, which was attributed to limited knowledge on the role of physiotherapy in postnatal care. A number of their participants strongly agreed that physiotherapists have not performed adequately in their inter-professional relationships, which is a similar outcome in the current study. This stresses the need for improved collaboration and interaction between the two departments that can be achieved through participation in ward rounds, seminars and workshops. Encouragingly, outcomes in this study highlight that majority of the study participants indicated willingness to attend workshops on the subject. This interest in continuous professional development (CPD) has been echoed in other studies, Bauer and colleagues [25] and Garett [26], and provides great potential for improving the occurrence and impact of doctors' advice on utilization of other professional services. In fact, Odunaiya [16] found that physicians training can double the amount of advice given.

Research has shown that healthcare providers can have a positive effect on their patient's attitudes towards exercise [27]. Undeniably, gaining knowledge on the benefits of postnatal physiotherapy exercise management may motivate postnatal women to engage in physiotherapy. In the current study majority of the participants indicated spending less than 5 minutes advising patients on physical activity similarly Bauer et al., [25] found that >61% of health providers spent 5–10 minutes or less advising patients on exercise. Likewise, Odunaiya et al [16] echoed that lack of time with patients, as well as misinformation given by some physicians, could have a negative effect on a woman's exercise behavior after the surgery. In another study, Clapp [27] suggested that the effect that provider recommendations have on exercise behavior generally showed that patient attitudes are responsive to exercise advice from healthcare providers. Thus, doctors have a pivotal role in influencing and recommending physiotherapy to the post CSD patients. Moreover, in the general population, brief counseling from a general practitioner or nurse has shown to be a cost effective and successful method of improving activity levels. Therefore, Medical doctor's advice on post CSD physical activity may have a profound effect on the postnatal population and should form an integral part of postnatal care.

Consultants had better levels of knowledge on the role of physiotherapy in CSD compared to the younger ones and cross tabulations of doctors' knowledge and demographic data in the current study showed that participant's knowledge on physiotherapy management after CSD was significantly associated to their work experience. Further participants qualification and work experience was also significantly associated to their practice towards physiotherapy management following CSD. This may suggest that exposure resulting from years of work experience contributes to better knowledge and understanding on the role of physiotherapy in post-natal care. This outcome is similar to Odunaiya and others [16], who indicated that consultants tend to be more aware and have better knowledge than senior registrars about the role of physiotherapy in obstetrics and gynecology due to exposure resulting from years of experience. Regardless of this, it is paramount for the physiotherapy profession to actively educate health personnel aligned to obstetrics and Gynecology about the role and effectiveness of physiotherapy techniques in patients' post-CSD. Scholes and Vaughan [28] stated that inter-professional education improves collaboration between members of the multidisciplinary team and results in more effective and efficient teamwork. Therefore, inter-professional education seminars on the role of physiotherapy in managing post-CSD are avenues that could be ventured into to increase referrals at the institutions.

CONCLUSION

Despite having poor consultation practices and seldom referring post CSD patients for physiotherapy, medical doctors who

participated in the study exhibited adequate level of knowledge and positive attitudes, towards physiotherapy management and strongly agreed that physiotherapy was beneficial to women after CSD. As such, the need for improvements in the role, effectiveness and influence of physiotherapists in their management strategy of post CSD patients must be emphasized. Embarking on awareness campaigns on the conditions that physiotherapists manage post-CSD among health personnel will not only strengthen their role within the multidisciplinary team but benefit women who require their services.

DECLARATION

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