ABSTRACT: South Africa has seen a steady increase in the rate of caesarean section deliveries, and while physiotherapists are often requested to treat these patients, there are no guidelines on their physiotherapeutic management. Current treatment is therefore based on clinical presentations of the patient. This paper reports on the physiotherapy management strategies for women post-caesarean section delivery used at four public hospitals in KwaZulu-Natal during 2011-2012. The study used a quantitative, cross-sectional, descriptive design. The sample consisted of 31 physiotherapists who completed an anonymous self-administered questionnaire, of whom eight had not treated post-caesarean section delivery women at all in the one year period. The results showed mobilization (100%), breathing exercises (94%) and education (94%) were common choices, with 68% selecting pelvic floor exercises as part of their management strategy. The study concluded that the current physiotherapy management strategy for women post-caesarean section delivery is based mainly on the doctors’ referral. Due to their limited knowledge about physiotherapy treatment, doctors overlook other complication(s) and potential complication(s) that could benefit from treatment post-delivery. The study showed that there is a need to improve the role and influence of physiotherapists in the multidisciplinary team.

KEY WORDS: PHYSIOTHERAPY MANAGEMENT, PHYSIOTHERAPY TREATMENT, CAESAREAN SECTION DELIVERY, SOUTH AFRICA, KWAZULU-NATAL.

INTRODUCTION
Physiotherapy has been involved in women’s health since the early 19th century (Mantle et al, 2006). While they were initially mainly involved with obstetric work, this gradually changed, and in the 1970s, physiotherapists also began to treat patients with gynaecological problems. (Mantle et al, 2006). Today, physiotherapists play an essential role in the multidisciplinary treatment team, and treat a wide variety of obstetric and gynaecological issues. In this capacity, they are required to keep abreast with the latest medical techniques and associated complications.

Caesarean section delivery (CSD) has become one of the most common surgical procedures performed by obstetricians (Penna and Arulkumaran, 2003). In 1989, the World Health Organization (WHO) stated that caesarean section rates should account for between 10-15% of births. Betrán et al (2007) reported that the global CSD rate was 15%, with higher rates found in developed countries (21.1%) compared to developing countries (2%). In Africa, South Africa has the highest CSD rates (Betrán et al, 2007), with an average of 16.1 % in 2008/09 (Health Systems Trust, 2009). Provincially, KwaZulu-Natal has the highest CSD rates amongst district hospitals in the country at 22.1% (Health Systems Trust, 2009). An audit done by Naidoo and Moodley (2009) on a specialist private practice within KwaZulu-Natal found that maternal requests, breech delivery, HIV and previous CSD contributed to the high CSD rates in that particular practice. Literature has further cited that fear of vaginal delivery, the need for control in the birthing process (Lavender et al, 2012; Dhai et al, 2011), convenience, and the preservation of the pelvic floor (Dhai et al, 2011) are some of the reasons why women opt for a CSD. Although CSD are considered relatively safe (Dhai et al, 2011), there are still a number of complications associated with this procedure.

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The rate of complications following CSDs has been reported at 36%, regard-
less of the type of CSD (van Ham et al, 1997). Complications include: sepsis, thromboembolic problems, anesthetic complications (Koroukian, 2004), an increased rate of maternal morbidity (Kuklina et al, 2009) and pneumonia (Belfort et al, 2010). In terms of evidence is presented in the literature as to whether a CSD can prevent pelvic floor trauma when compared to a normal vagi-
nal delivery. Literature has suggested that the incidence of urinary inconti-
tenence following a CSD may be reduced if the procedure is performed prior to the onset of labor (Chin et al, 2005). However, it is still evident that a significant number of women experience urinary stress incontinence following a CSD (Chin et al, 2005). Pregnancy is more significant than vaginal delivery as a factor for permanent urinary inconti-
nence (Fandus et al, 2001) and is largely attributed to the increased mechanical compression placed on the pelvic floor area during pregnancy (Fandus et al, 2001; Mant et al, 2009). A problem that is often unreported and untreated in pregnant women is lower back pain (Wang et al, 2004; Morген and Pohjanen, 2005). While the patho-
physiology and etiology of lower back pain in pregnancy is poorly understood (Morgen and Pohjanen, 2005), contributing factors highlighted in the lite-
rature are an increase in weight (To and Wong, 2003), and an increase in joint mobility due to hormonal changes (Marnach et al, 2003). The survey questionnaire treated manage-
ment strategies used in South African hospitals, this study aimed to identify the manage-
ment strategies used by physiotherapists to treat women post-CSD in four public hospitals in KwaZulu-Natal during 2011-2012. The objectives of the study were: (1) to identify the demographic profile of physiotherapists (2) to identify the physiotherapy management strategies of women post-CSD; (3) to identify the complications currently being addressed by physiotherapists in women post-
CSD; (4) to determine referral to other members of the multidisciplinary team by the physiotherapists and the advice given to the women on discharge.

METHODS

The study utilized a quantitative, cross-
sectional, descriptive survey design to determine the current management strategies employed by physiotherapists in the treatment of women post-CSD. It was conducted in 2012 at four public hospitals in KwaZulu-Natal using pur-
posive sampling. The hospitals were selected on the basis that they were in KwaZulu-Natal. Permission to conduct the study was obtained from all the relevant facility managers, the Ethikwini District Office and the Provincial Department of Health. Once permission was obtained, final arrangements were made with the Physiotherapy Departments at the hos-
pitals to conduct the study. All partici-
pants signed an informed consent form prior to participating in the study, and the consent form was detachable from the questionnaire to retain anonymity.

The survey questionnaire was divided into four sections to address the study objectives; Section A: demo-

Table 1: Modality selection vs year of graduation and treatment of women post-
CSD

<table>
<thead>
<tr>
<th>Year of graduation</th>
<th>Modality Selection</th>
<th>Have you treated a patient post-CSD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percussion</td>
<td>p = 0.80</td>
</tr>
<tr>
<td></td>
<td>Vibration</td>
<td>p = 0.80</td>
</tr>
<tr>
<td></td>
<td>Deep Breathing Exercises</td>
<td>p = 0.29</td>
</tr>
<tr>
<td></td>
<td>Inspiratory Holding</td>
<td>p = 0.76</td>
</tr>
<tr>
<td></td>
<td>Active Cycle Breathing Technique</td>
<td>p = 0.43</td>
</tr>
<tr>
<td></td>
<td>Pelvic Floor Exercises</td>
<td>p = 0.10</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>p = 0.13</td>
</tr>
</tbody>
</table>

Two-tailed Fisher’s exact test

Table 1

- The rate of complications following CSDs has been reported at 36%, regardless of the type of CSD. Complications include: sepsis, thromboembolic problems, anesthetic complications, an increased rate of maternal morbidity, and pneumonia. Literature suggests that the incidence of urinary incontinence following a CSD may be reduced if the procedure is performed prior to the onset of labor.
- A problem that is often unreported and untreated in pregnant women is lower back pain. The pathophysiology and etiology of lower back pain in pregnancy is poorly understood, but contributing factors highlighted in the literature are an increase in weight and joint mobility due to hormonal changes.

Results

- A response rate of 84% (N=31) was achieved, and the mean age of the participants was 32 years (SD±6.6). There were slightly more females (n=28) than males (n=3) among the participants.
- Of the participants, 45% (n=14) had 3-7 years of experience, 26% (n=8) had 8-12 years of experience and 29% (n=9) had 13-19 years of experience in Physiotherapy. In terms of post-graduate education, 96.7% (n=30) do not have any post-graduate degrees in Physiotherapy.
- Forty five percent (n=14) of physio-
therapists mentioned that they treated other complications following caesarean section and are shown in Figure 3.
- Of the 31 participants who had and had not treated post-CSD patients in the past, 19.4% (n=6) referred them to when the participants graduated (Table 1).
- Percussion was the only modality selected most frequently (p=0.01) as a treatment choice by those who had treated post-CSD patients in the past compared to those who had not (Table 1).
- Other techniques reported by the participants included: “circulatory exercises and breathing exercises” and “coughing techniques” and “infra-
red lamp for post caesarean section hematomas”.

Figure 1: Reasons for not treating patients post-CSD

Figure 2: Choice of physiotherapy treatment techniques for patients post-CSD

2 SA JOURNAL OF PHYSIOTHERAPY 2013 Vol 69 No 1

3 SA JOURNAL OF PHYSIOTHERAPY 2013 Vol 69 No 1
and Lewis (2004) showed that although physiotherapists were in favour of evidence based research, they were reluctant to change their practice.

Anecdotal information from the hospitals used in this study indicates that some perform over 2000 caesarean sections per annum out of a total of 8400 births. When the study by van Ham et al. (1997) indicating that 36% of CSD women have complications and could require physiotherapy treatment, the low mean number of patients (mean=5) being treated by the participants demonstrates a low level of referral from obstetricians. There is evidence that physiotherapy can successfully treat postpartum problems such as pelvic floor dysfunction and lower back pain (Britnell et al., 2005), and that in-hospital prophylactic treatment should also be rendered. What is noteworthy is the main reason selected for not having treated a patient post-CSD was not having been on that particular clinical rotation, with only one participant selecting “lack of referral from a doctor” (Figure 1). This indicates that obstetricians and gynaecologists are only referring patients they deem necessary for physiotherapy. This is supported in the study by the mean number (mean=3.52; SD=±1.09) of treatment sessions rendered for a patient post-CSD. This is a high number of physiotherapy treatment sessions for uncomplicated post-CSD patients, as they are considered for discharge on day three post-operatively (South African Department of Health, 2007). Thus, the other reason for non-referral could be that uncomplicated post-CSD patients who would benefit from prophylactic treatment are not being referred for physiotherapy because doctors are unaware of the services physiotherapists render.

Participants in this study selected respiratory complications (29%) as well as nine (29%) specified back care exercises and nine (29%) specified back care and ergonomics as a home program. However, the literature indicates that in terms of potential problems following a CSD, urinary infections was prevalent (Chin et al., 2005), and lower back pain was frequently underreported (Wang et al., 2004). The study demonstrated the need for improvements in the role, effectiveness and influence of physiotherapists in their management strategy of post-CSD patients. Greater awareness by the midwifery and other health professionals that physiotherapists can treat post-CSD will not only strengthen their role within the multidisciplinary team, but assist women who would benefit from additional treatment.

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REFERENCES


