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A SURVEY ON PHYSIOTHERAPIST KNOWLEDGE IN UNDERSATNDING THE ASSOCIATION OF LOWER BACK PAIN AND URINARY INCONTINENCE.

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ABSTRACT

*U*rinary incontinence (UI) is a common but often under-reported medical condition that laid a significant impact in one's quality of life (QoL). Studies have highlighted that there is strong association between UI and lower back pain (LBP). However, there is limited evidence on clinician incorporating UI assessment and treatment as a part of LBP management. Therefore, the aim of this study is to evaluate physiotherapy knowledge in understanding the association of lower back pain and urinary incontinence. A cross sectional study design was adopted to a randomly selected sample. A self-administered questionnaire was used to obtained detailed information on the awareness of risk factor of LBP, understanding the associated problem of LBP, common LBP management and evaluating knowledge level of LBP and UI. A total of 60 participants has participated in this survey. The results demonstrate almost more than 50% of physiotherapist is not fully aware of the association between lower back pain and urinary incontinence. About 57% of physiotherapist did not incorporate bladder management as part of LBP care. However, when compared between genders, female populations had better knowledge and understanding of the association of LBP and UI. The results show there is still a lack of knowledge on the association of lower back pain and urinary incontinence among Physiotherapists. In the future, more of education talk about the association between lower back pain and urinary incontinence would help in increasing the knowledge level of Physiotherapist thus incorporating UI assessment and treatment as a part of lower back care.

Keywords: Urinary incontinence; lower back; management

INTRODUCTION

Low back pain (LBP) is a very frequently occurring phenomenon which is associated with multiple risk factors, including gender, age, lifestyle, and psychosocial profile, physical demands of the workplace, social support, and pain perception (Wong et al. 2010). It is the leading cause of activity limitation and works absence throughout much of the world, and it causes an enormous economic burden on individuals, families, communities, industries, and governments (Hoy et et al. 2010). The incidence of LBP peaks in the third decade of life and the prevalence increases until the age of 60 to 65 years and then gradually declines (Hoy et et al. 2010). In the Global Burden of Disease 2010, LBP was listed among the top ten high burden diseases and injuries. This highlights the importance in managing LBP.

Despite advances in diagnosis and treatment, physiotherapy is one of the largest direct cost components for the treatment of LBP (Dagenais et al. 2008). One factor that the physiotherapist may consider when determining the origin of back pain is dysfunction in relevant trunk musculature. Trunk control is reliant on the function and coordination of muscles in the abdominopelvic cavity and dysfunction of this musculature may lead to pain and disability. Accordingly, pelvic floor muscles (PFM) is generally accepted as a part of the trunk stability mechanism (Ghaderi et al. 2016). The contribution of PFM to intraabdominal pressure and trunk stability has been explained by feed-forward activation of these muscles in response to trunk perturbation similar to the other components of the deep stabilizing muscle system of the trunk including deep abdominal muscles and lumbar multifidus (Ghaderi et al. 2016). Hence this underline the association between LBP and Urinary incontinence (UI).

UI is referred as "the complaint of any involuntary leakage of urine (Hunskaar et al. 2003). Although UI is one of the most common problem but it is often under-reported medical condition which laid a significant impact on one's quality of life (QoL). UI and other symptoms of lower urinary tract such as frequency, urgency and incomplete emptying of the bladder are common among women of all ages, objectively demonstrable, which give rise to social and hygienic problems (Hunskaar et al. 2003). These distressing and embarrassing conditions are among the most common health problems in women, and frequently occur in men also (Thomas et al. 1980). These symptoms are widespread, causing discomfort, shame, and loss of self-confidence and may negatively affect the quality of life (Trantafylidis 2009).

Prior research suggests that much of the unrecognized incontinence is dismissed by patients as well as by physicians as a minor problem (Resnick and Yalla 1997). Furthermore, seeking treatment was strongly associated with the frequency and volume of urine loss (Burgio et al. 1994). According to a study done by Grodstein et al. (2003) found that more women sought medical treatment when the leakage wet their outer clothes than when urinary incontinence is in the form of only dribbles or when dribbles wet their pants (Grodstein et al. 2003).

While UI has been well documented in the developed countries, the worldwide prevalence data is difficult to summarize and

impossible to generalize to the general population in a given area because of the large variations in the reported levels of its prevalence. (Miner 2004). Although several studies have shown the association between lower back pain and urinary incontinence, no study has been done to check the knowledge level of physiotherapy in understanding this association. The study was done by Bush et al. (2013) had concluded their concern that PFM assessment and treatment may not be a common practice among Physiotherapist in managing LBP. Therefore, the primary aim of this study to determine physiotherapy knowledge in understanding the association of lower back pain and urinary incontinence.

METHOD

Participants

A cross sectional study design was adopted. A total of 61 participants (46 females and 14 male) were recruited in this study. Study was focused on participants working in hospitals and clinics around Klang Valley. The inclusion criteria are participants between age 20 to 55, being a full time physiotherapist, with minimum of one year of practice, had experience in treating musculoskeletal cases. Whereas, the exclusion criteria of this study are therapist who no longer practices physiotherapy profession or retired physiotherapist. Prior to data collection, all participants were given explanation about the study purpose and procedures, and written informed consent was obtained. This study was approved by Research and Ethics Committee of INTI International University.

Questionnaire

This study chooses survey with a questionnaire. The questionnaire helps in describing and exploring variable and constructing interest in among participants. The principal requirement of questionnaire format is that questions are sequenced in a logical order, allowing a smooth transition from one topic to the next. This will ensure that participants understand the purpose of the research and they will carefully answer questions to the end of the survey. This criterion is accomplished by grouping related questions under a short heading describing the section's theme in the questionnaire. A survey questionnaire is prepared with Likert scale 5 points and dichotomous and closed-ended question. Closed questions are easy to administer, easily coded and analyzed, allow comparisons and quantification, and they are more likely to produce fully completed questionnaires while avoiding irrelevant responses. This structured questionnaire was validated by three experts and was design to find out on the knowledge of Physiotherapist in understanding the association of lower back pain and urinary incontinence. All the questions formed based on research evidence. Followings are the explanations of each section: -

i. The first session captures the participant's personal details, socio-demographic and years of clinical experiences and clinical field specialization.
ii. The second section is to determine if Physiotherapist are aware of the possible risk factors of lower back pain.
iii. Third section captures the information if Physiotherapist has the knowledge on

the associated problem with lower back pain

iv. Fourth section is capture how Physiotherapist manages the lower back pain by agreeing to most effective treatment plan and to check if bladder management was included in lower back pain patients.

v. Fifth section is to check Physiotherapist magnitude/level of understanding in understanding the association of lower back pain and urinary incontinence.

Procedure

A structured questionnaire on the risk factors, problem associated with lower back, plan of treatment and physiotherapy knowledge in understanding the association of lower back pain and urinary incontinence was distributed to the participants. The questionnaire was sent to the three experts for validation. After validation the questionnaire is designated into a Google forms for convenient of the participants and the researchers and also to create environmental friendly research. Only participant who are willing to give consent is chosen. Participants were given brief explanation about the study and informed consent were obtained prior to answering the questionnaire.

Data analysis

Data was analyzed by using statistical software package SPSS (Version 22.0). Descriptive statistics using frequency and percentages were used to analyze the knowledge level in understanding the association of lower back with urinary incontinence among physiotherapist. Normality was tested using Shapiro-Wilk test, boxplots and skewness ranging between -1 to 1.

RESULTS

Characteristics of participant

Details of study participant's demographics and professional characteristics are summarized in Table 1. Almost three quarter of the participants were female 76.7% with clinical experience ranging between 1 to 3 years. A total of 68% of them are working in private sector. The majority of the respondent did not have an area of specialization. About 77% of participants treat an average of two lower back cases in a day.

Table 1: Demographic of participants

Variables	Total (n)	Percentage (%)
Age (Mean+SD)		
Age Range		
<30	44	73.3
30- 49	16	26.7
>50	-	
Position		
Clinicians	55	91.7
Clinical instructor	5	8.3
Lecturer	-	-
Gender		

Female	46	76.7
Male	14	23.3
Years of experience		
1-3 years	29	48.3
3-6 years	19	31.7
6-9 years	6	10.0
9-12 years	1	1.7
>12 years	5	8.3
Field specialization		
Yes	20	33.3
No	40	66.7
Specialization		
Not specific	41	68.3
Musculoskeletal/Sports	12	20.0
Peadiatrics	2	3.3
Neurology	4	6.7
Cardiorespiratory	1	1.7
Area of practice		
Government hospital	11	18.3
Health clinics/ klinik kesihatan	3	5.0
Private hospital	12	20.0
Private clinics	19	31.7
Home care	5	8.3
University	5	8.3
Sports centre	2	3.3
Others	3	5.0
Average working hours		
<20 hours	7	11.7
20-30 hours	2	3.3
30-40 hours	24	40.0
>40 hours	27	45.0
Average LBP patient treated per day		
<2 patients	13	21.7
2-4 patients	25	41.7
5-7 patients	15	25.0
8-10 patients	4	6.7
>10 patients	3	5.0

Awareness on the lower back pain risk factors

The results demonstrate that the majority of the participant aware of the risk of lower back pain. The highest variable agreed by the participant to be one of the risks of lower back pain is lifestyle (58.3%) and followed with gender (46.7%).

Table 2: Awareness of the risk factors for LBP.

Variables of risk factor	**Total (n)**	**Percentage (%)**
Gender		
Strongly disagree	1	1.7
Disagree	4	6.7
Neither agree nor disagree	15	25.0
Agree	28	46.7
Strongly agree	12	20.0
Parity		
Strongly disagree	-	-
Disagree	1	1.7
Neither agree nor disagree	6	10.0
Agree	42	70.0
Strongly agree	11	18.3
Obesity		
Strongly disagree	-	-
Disagree	2	3.3
Neither agree nor disagree	9	15.0
Agree	26	43.3
Strongly agree	23	38.3
Age		
Strongly disagree	-	-
Disagree	9	15.0
Neither agree nor disagree	17	28.3
Agree	25	41.7
Strongly agree	9	15.0
Psychological		
Strongly disagree	-	-
Disagree	13	21.7
Neither agree nor disagree	29	48.3
Agree	16	26.7
Strongly agree	2	3.3

Occupation		
Strongly disagree	1	1.7
Disagree	1	1.7
Neither agree nor disagree	-	-
Agree	15	25.0
Strongly agree	43	71.7
Lifestyle		
Strongly disagree	1	1.7
Disagree	6	10.0
Neither agree nor disagree	8	13.3
Agree	35	58.3
Strongly agree	10	16.7

Level of understanding of Physiotherapist of associated lower back pain problems.

The results demonstrated that majority of the participants were aware of the problems associated with lower back pain. However, there is lacking in knowledge among participants on understanding bladder dysfunction as one of the causative factor of back pain.

Table 3: Understanding the problem associated with lower back pain

Variables	N	n (%)
Neurological deficits		
Strongly disagree	-	-
Disagree	-	-
Neither agree nor disagree	6	10.0
Agree	40	66.7
Strongly agree	14	23.3
Muscle weakness – Trunk		
Strongly disagree	-	-
Disagree	3	5.0
Neither agree nor disagree	7	11.7
Agree	30	50.0
Strongly agree	20	33.3
Muscle weakness- Lower extremity		

Strongly disagree	-	-
Disagree	-	-
Neither agree nor disagree	6	10.0
Agree	35	68.3
Strongly agree	19	31.7
Muscle weakness-PFM		
Strongly disagree	-	-
Disagree	2	3.3
Neither agree nor disagree	12	20.0
Agree	36	60.0
Strongly agree	10	16.7
Muscle Atrophy-Paraspinal		
Strongly disagree	1	1.7
Disagree	10	16.7
Neither agree nor disagree	11	18.3
Agree	31	51.7
Strongly agree	7	11.7
Posture impairment		
Strongly disagree	-	-
Disagree	1	1.7
Neither agree nor disagree	1	1.7
Agree	34	56.7
Strongly agree	24	40.0
Bladder dysfunction		
Strongly disagree	1	1.7
Disagree	2	3.3
Neither agree nor disagree	22	36.7
Agree	31	51.7
Strongly agree	4	6.7

Knowledge level of physiotherapy regarding the association of LBP and UI

Almost half of the participants which have agreed to include subjective history related to urinary incontinence in patients with lower back

pain, while 45.0 % did not take into account of performing an objective assessment of urinary incontinence in lower back pain patients. On the other hand, participants had shown higher response to refer to physician's patients with lower back pain and urinary incontinence for further management of urinary incontinence. Majority of participants agreed to barriers in our current physiotherapy practice to assess urinary incontinence in lower back patients. This shows a clear correlation between physiotherapist not performing urinary incontinence assessment and referring patients to physicians for bladder management was due to barriers in our current practice. However, a vast number of participants were lacking in the knowledge of the association of lower back pain with urinary incontinence. As 55.5% had neither agree nor disagree with the statement of "lower back pain has an association with urinary incontinence.

DISCUSSION

This study was conducted with sixty participants. The study sought to determine the level of physiotherapy knowledge in understanding association of urinary incontinence and lower back pain patients. Studies relating to physiotherapy knowledge level with regards of the association of lower back pain and urinary incontinence are limited in literatures. This had been difficult for comparisons with other studies. Although this study has limited participants, the questions on knowledge were tested with closed ended and allows participant to choose only one answer. Out of sixty participants, 46 were female and 14 of them are male. Most of the responded participants were aged less than 30 with 73.3% and majority falls on the years of experience between 1-3 years with 48.3%.

The results of the study found there is still lack of knowledge on the association of lower back pain and urinary incontinence among Physiotherapist. In line with this study, there was another study done to evaluate knowledge level of Nigerian Physiotherapist on topical pharmacotherapy. Out of 134 participants, 80.7% showed lack in knowledge of pharmacotherapy by choosing an incorrect answer. The results of the study showed a significant association between years of clinical experience and scores obtained for knowledge with p value < 0.05. The study by Onigbinde (2012) has highlighted there is significant association between years of clinical experience and knowledge. The more years of experience in general have accumulated knowledge and the physiotherapists are able to deliver high care quality. This shows there is direct relationship between the years of experience and level of knowledge and this may be contributory factor to lack of knowledge of Physiotherapist in this study. As many of participants in my study falls within the range of experience 1-3 years

Apart from that, our study results demonstrated almost 40% of the participants do not include PFM as a part of strengthening the program in treating back patients. This reflects the majority of participants are unaware of the associated problem of incontinence might arise in patients with lower back pain. A review by Rosenbaum (2007) has concluded pelvic floor muscle rehabilitation has been demonstrated to be effective in treating stress urinary incontinence and, if maintained, is effective over a 5-year period. Another study was done by

Britnell et al (2005) on the posture alignment and associated dysfunction has identified urinary incontinence as one of the problems and concluded Physiotherapists play an important role in assessing and treating postural alignment and associated dysfunctions. Majority participant 83.3 % were aware of the postural education in patients with lower back pain but was lacking in knowledge associated problem of urinary incontinence that may develop in LBP with faulty posture. Majority of participants which account for 31.7% has agreed to include bladder management as "sometimes" only in lower back pain patients. While a study by Hay-Smith et al (2001) has concluded physiotherapy treatment that includes education about bowel and bladder management and behavioral modification decreases the symptoms of urge and stress incontinence. Following this statement, a study was done by Bush et al (2013) has proven a strong association between chronic back pain and urinary incontinence and the concern of the author was if physiotherapist includes assessment and treatment of PFM in back pain patients. This study has reported that the majority of physiotherapy does not include the assessment and treatment of PFM in patients with LBP.

According to a study done by Hendrick et al (2013) on therapist knowledge and adherence and use of low back pain guidelines to inform clinical decision – A national survey of manipulative and sports Physiotherapist in New Zealand concluded that higher percentage of participants adhere to the guidelines of LBP and delivers patient care. This is the first study to report therapist characteristics are associated with practice pattern. Following that, the majority of participants of 91.7% are clinicians and the reason behind their lacking of knowledge can attributable to the practice pattern and adherence to set guidelines. This explains the results of the study as majority Physiotherapist did not include PFM as assessment and treatment in LBP.

CONCLUSION

The association of UI and LBP has been proven by many studies. This study aims to check the knowledge level of physiotherapy in understanding the association of UI and LBP. Most of the participants are clinicians with experience of 1-3 years. The results demonstrate that there are still lacking of knowledge among physiotherapist on this association of lower back pain and UI. Majority of participants has not included PFM as a part of assessment and treatment while treating and LBP. This showed the Physiotherapists are not fully equipped with the knowledge of this association. On the other hand, majority participants had showed a positive response on asking LBP patients on the subjective of UI. Furthermore, most of the of participants around 45% did not agree neither disagree to perform an objective assessment of PFM but have agreed to refer to physicians for further UI investigations and management. However vast number of participants did not neither agree nor disagree to the knowledge checking question of the association of UI and LBP. Hence, understanding the association between UI and lower back pain is necessary in delivering the best patient care.

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