

Awareness and Perception of Manual Therapy in Improving Women's Fertility among Physiotherapists in Malaysia: A Cross-Sectional Study

Shirley, C.L., Yughdtheswari, M., Sharmila G.K.P.,* Siti Hazirah, S.

Faculty of Health and Life Sciences, INTI International University 71800 Nilai, Negeri Sembilan, Malaysia.

***Email:** sharmila.gopala@newinti.edu.my

Abstract

Problem Statement: Infertility is a global health care concern and is clinically defined as failure to attain clinical pregnancy despite 12 months or more unprotected coitus. Manual therapy (MT), commonly used in physiotherapy, is used as part of infertility management. To date, no research concerning MT in infertility management in Malaysia.

Objective: To determine the awareness and perception of MT in improving women's fertility among Physiotherapists in Malaysia.

Methodology: This is a cross-sectional study with a total of 222 participants recruited via non-probability sampling design. Participants are physiotherapists in Malaysia with a minimum qualification of Diploma in Physiotherapy. The survey tool used is a pre-validated structured questionnaire distributed to the participants through an online platform.

Results and Discussion: Majority participants were female with age range of 23-32 years and from state of Selangor. Out of 222 responses, only 12 participants (5.4%) have experience in treating infertility cases using MT. Despite lack of awareness of majority participants (50.5%) on MT as management for infertility, participants exhibit interest on the use of MT in clinical practice in women's health cases concerning infertility.

Conclusion: Physiotherapists in Malaysia exhibit low awareness on the utilization of MT in improving women's fertility. Survey further reveals positive perception and interest amongst physiotherapists in the application of MT as a management in women's infertility cases.

Keywords

Infertility, manual therapy, physiotherapy, awareness, perception



Introduction

Infertility is defined by the failure to achieve a clinical pregnancy after one year of regular unprotected intercourse (Zegers-Hochschild et al., 2009). Infertility, a disease of the reproductive system is one of the global concerns which affects both genders in many aspects of life (Ali et al., 2011) and considered as a major health care problem in all society (Ali et al., 2011; Masoumi, et al., 2015). It may lead to serious problems and sexual dysfunctions (Smith et al., 2009). People often undermine infertility as it is not classified as life-threatening diseases like diabetes, heart attack, and cancer (Abdullah et al., 2012). Genetic, infections, environmental, or even dietary in origin might cause infertility affecting both genders. Infertility prevalence increases with advancing age, as the ability to become pregnant and deliver a live birth reduces with age in all populations (Mascarenhas et al., 2012).

Manual Therapy (MT) is one of the physiotherapy techniques used in patient management. MT is a standardized hands-on skill which is a non-surgical type of conservative treatment to manage numerous musculoskeletal and non-musculoskeletal cases, such as dysmenorrhea, premenstrual syndrome, infantile colic, and hypertension (Bronfort et al., 2010). MT functions in increasing range of motion of the joint complex, mobilize or manipulate soft tissues (Costello et al., 2016), induce relaxation, change muscle function, modulate pain, and reduce soft tissue swelling, inflammation or movement restriction, and break adhesion to improve tissue extensibility (Wurn et al., 2004). Study by Wurn and colleagues (2015) demonstrated clear passage approach (CPA) which is a combination of MT has demonstrated significant improvement with the success rate of pregnancy in occluded fallopian tubes (60.85 %), endometriosis (42.8%), premature ovarian failure (20%), polycystic ovary syndrome (53.6%), elevated follicle-stimulating hormone (49.2%) and has shown 1.5 times higher pregnancy rate in those patients who underwent In-vitro fertilization (IVF) after CPA, compared to IVF alone.

There is a high prevalence of women's health conditions such as urinary incontinence, pelvic floor muscle dysfunction, and prolapse that increases the demand for a physiotherapist in this field (Muhammad et al., 2019). A study by Araki and Uritani (2015) however reported a lack of professional training, insufficient knowledge, and excluding women's health from physiotherapy education resulting in low awareness of physiotherapy for women's health. Further, there is no research on awareness among physiotherapists in Malaysian on the application of MT in female infertility management. Hence, this research aims to determine the level of awareness and perception of MT in improving women's fertility among Malaysian physiotherapists.

Methodology

A cross-sectional study design using convenience sampling were adopted. This study includes practicing qualified physiotherapists in Malaysia with a minimum qualification of diploma while physiotherapist who are not treating musculoskeletal cases are excluded. A structured questionnaire was developed and validated by 2 experts from INTI International University. The questionnaire consists of 4 section. Section A captures on the demographic data, section B on the experience and knowledge in women's health and infertility, section C related to perception and

interest on women's fertility while section D consists of four items on implementation of MT as a treatment in the future. Participants were approached with notification through email and online survey. The ethical clearance was obtained from Research and Ethics Committee of INTI International University.

Results and Discussion

A total of 222 were recruited after screening for eligibility. Our study results demonstrated majority participants are between 23-32 years old (75.2 %), female (71.2 %), and from Selangor state (84.2%). Most participants possess a cumulative working experience of 2-4 years (50.5%) with a Bachelor's degree or above (83.4%). However, they do not practice on a specific area such as musculoskeletal, neurology, sports, women's health or pediatrics (67%). Figure 1 highlights 50.9% of participants have experience in women's health but only 19.4% have experience in the management of medical conditions related to infertility with further only 5.4% have experience treating infertility using MT. 5.4% participants who apply MT in the fertility management, included stretching as a treatment. Pelvic stability exercise also used (19.0%), followed by soft tissue mobilisation and strengthening exercise (13.8%). Among participants with experience in women health, all agreed that being overweight or underweight might put women in the risk of infertility, followed by sexual dysfunction, ovary disorder, endometriosis, vaginal prolapse, hormonal imbalance, fallopian disorder, overactive bladder, and incontinence. Table 1 shows majority of the participants (50.5%) are unaware that MT is used in improving women's fertility and there is lack of awareness amongst them on the availability of good evidence on the usage of MT in improving fertility.

Based on table 2, 50.5% of participants are interested in using MT in improving women's fertility. 36.9% participants claimed lacks familiarity with MT related to women's fertility, 30.2% participants claimed that women's awareness on MT to fertility is low, 22.1% participants are not confident on the women's fertility success rate and 10.8% stated that cases of women health conditions is not commonly seen at the workplace. The results of this study further demonstrated majority of participants agreed and strongly agreed on the use of MT in their practice while only 4.1% of subjects strongly disagree.

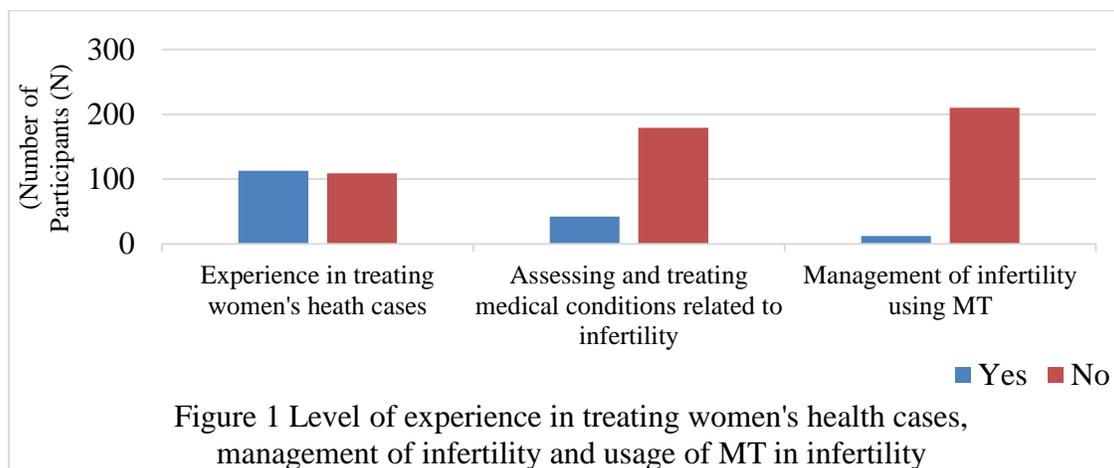


Table 1. Awareness and experience of MT on women's health and fertility

Variables	Value n (%)
Awareness that infertility can be treated using MT	
▪ Not aware at all	112 (50.5 %)
▪ Slightly aware	70 (31.5%)
▪ Moderately aware	25 (11.3%)
▪ Strongly aware	10 (4.5%)
▪ Extremely aware	5 (2.2 %)
Awareness on good evidence on the usage of MT in improving fertility	
▪ Not aware at all	124 (55.9 %)
▪ Slightly aware	67 (30.2 %)
▪ Moderately aware	28 (12.6%)
▪ Strongly aware	3 (1.35%)
▪ Extremely aware	0 (0%)

Table 2. Subject's perception, interest and motives on MT in improving women's fertility

Variable	Value n (%)
Interest in MT in improving women's fertility	
• Strongly interested	35 (15.8%)
• Interested	112 (50.5%)
• Neutral	53 (23.9%)
• Not interested	22 (9.9 %)
Reasons that drive interest in MT in improving women's fertility	
• Relevant articles and research	66 (29.7%)
• Knowing from other PTs regarding the relevant technique	76 (34.2 %)
• Eager to gain more knowledge and application of new technique	54 (24.3 %)
• Knowing the importance of women's related disease and fertility rate	26 (11.7%)
Reasons for reduced interest in using MT in improving women's fertility	
• Not familiar with the manual therapy related to women's fertility	82 (36.9%)
• Low awareness among women regarding MT in improving fertility	67 (30.2 %)
• Cases of women health conditions and fertility is not commonly assessed at the workplace	24 (10.8%)
• Not confidence on the women's fertility success rate	49 (22.1 %)

The purpose of this study is to identify the awareness of the use of MT in improving women's fertility among physiotherapists in Malaysia and their perception of applying MT in women's health cases specific to infertility. Minimal participants (19.4%) participants are familiar with infertility management and this could be due to lack of knowledge and confidence with the use of MT. Despite good evidence on the usage of MT towards the success rate of pregnancy, many participants were unaware of this as could be a result of a lack of access to evidence-based research and journal in Malaysia (Muhammad et al., 2019). Physiotherapists need sufficient knowledge on the causes and risks of infertility. All participants with experience in women's health agreed overweight/underweight as a risk factor for infertility and this result is in line with study by Giviziez and colleagues (2016). According to Gambineri and co-researchers (2019), endometrium and ovarian function are affected by high adipose tissue which results in a reduction

in endometrial epithelium receptivity and alteration in oocyte maturation. Majority participants agreed sexual dysfunction, ovary disorder, hormonal imbalance, and vaginal prolapse are the risk factors that contribute to infertility. Hence, this study demonstrated most of the participants had moderate to good knowledge of the risk factors of infertility.

Minimal participants included MT as their management in women's health and fertility as many are unaware of the technique and lack of evidence-based practice. Yahui & Swaminathan, (2016), proposed this could be due to limited information on the evidence and certain techniques are not being practiced much. In Malaysia, MT is commonly applied in musculoskeletal cases during practice. Recently, few studies (Wurn et al., 2004 & Wurn et al., 2015) suggested MT be a new adjunct towards current management for infertility as it improves soft tissue mobility, restoring osseous and visceral function. There was a high interest in MT to improve women's fertility in this study as most participants had a positive attitude to apply MT in their practice. Most participants were unfamiliar with MT related to women's fertility and this greatly reduced the interest or confidence of the use of MT and success rate. This finding is supported by one study which demonstrated effective learning experience significantly increase confidence in applying their clinical skills and professionals among physiotherapy students (Blackford et al., 2015).

Few participants (10.8%) had difficulty in assessing cases of women's health conditions and fertility as it is not commonly seen in the workplace. This may be due to low awareness among women towards the role of physiotherapy in this area. The findings were in line with a study by Sheth and colleagues (2019) which concluded perception and knowledge regarding the role of antenatal physiotherapy were low, but the attitude of the pregnant woman was favourable. According to Muhammad and colleagues (2019), most Malaysian women often had misconceptions and are unaware of the benefits of exercise and physiotherapy. The main limitation to this study is that it will not be able to be generalized due to a lack of involvement from nationwide physiotherapists. Future research with a larger sample size and equal geographical area plus gender representation is needed. Managements and treatments used by physiotherapists who specialized in women's health could be investigated in more detail in the future.

Conclusion

There is low awareness among physiotherapists in Malaysia on the use of MT in improving women's fertility. Regardless, the study shows a positive perception and interest in this field. Development of good clinical practice guideline and conference on women's health cases in specific to infertility is warranted as this study reveal majority physiotherapist are still unaware of the MT on infertility.

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