ORIGINAL ARTICLE

IJPHY

Knowledge and Awareness of Physiotherapists in Malaysia Regarding Post-Mastectomy Lymphedema Management and Associated Upper Limb Disability: A Cross-Sectional Survey

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ABSTRACT

Background: Breast cancer is a significant cause of cancer-related morbidity and mortality worldwide, including in Malaysia. Post-mastectomy complications, such as lymphedema and upper limb disability, significantly affect health-related quality of life. Physiotherapy-led rehabilitation plays a critical role, yet little research has explored physiotherapists' awareness of these issues in Malaysia.This study aimed to identify the knowledge and awareness regarding post-mastectomy lymphedema management and upper limb disability among Malaysian physiotherapists.

Methods: A cross-sectional study was conducted with 111 physiotherapists through an online survey. Participants completed a validated self-structured questionnaire encompassing eight sections: demographics, clinical practice, knowledge, management of lymphedema and disability, awareness of physiotherapists' roles, awareness levels, and learning needs. Data analysis assessed awareness and influencing factors.

Results: Physiotherapists displayed commendable awareness, with an overall average accuracy of 72.88%. Participants with Bachelor's degrees achieved higher accuracy compared to diploma holders, underlining the importance of educational background and clinical experience in shaping awareness ($p<0.05$).

Conclusion: The findings highlight the need for personalized education and ongoing professional development to enhance physiotherapists' competence in managing post-mastectomy complications. This underscores their pivotal role in improving patient recovery and quality of life.

Keywords: Post-mastectomy; lymphedema; upper limb disability; breast cancer; physiotherapists; awareness; Malaysia.

Received 04th December 2024, accepted 25th February 2025, published 09th March 2025

10.15621/ijphy/2025/v12i1/1680

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INTRODUCTION

Breast cancer development has contributed significantly to making it one of the most important public health issues globally, contributing more than 2.3 million newly diagnosed cases per year and probably accounting for a considerable proportion of cancer morbidity and mortality [1]. Moreover, in Malaysia, breast cancer ranks the most common type of cancer among women, with a shocking incidence of 1 in 19 women diagnosed in their lifetimes [2,3]. Malaysian women, rather than their Western counterparts, usually have breast cancer at a younger age because of different lifestyles and younger population profiles [4].

Surgery, and especially mastectomy, is an integral part of the medical management of breast cancer, but occasionally leads to complications such as post-mastectomy lymphedema (PML) and upper limb disability [5]. Post-mastectomy lymphedema or swelling and pain with restricted shoulder mobility can last for years following treatment, with as much as 62 % of the survivors experiencing functional limitations [6,7]. Common conditions, such as adhesive capsulitis, impingement syndrome, scapulo-thoracic bursitis, etc., will deteriorate well-being [8-10]. Physiotherapy plays a significant role in this scenario. Still, the clinical evidence has not been translated into practice through structured rehabilitation programs in Malaysia due to a lack of awareness and training among physiotherapists. [11,12]

The importance of resolving these matters is demonstrated in benefiting patient outcomes and cost-efficient healthcare management. Physiotherapy focuses on more significant aspects than physical recovery, including self-management education and long-term recovery for breast cancer survivors [13]. To date, however, there continues to be inconsistencies in access to the services and rehabilitation procedures spearheaded by physiotherapy, as recommended by such organizations as National Institute for Health and Care Excellence (NICE) -all these issues attest to the fact that careful research and professional development are still being needed to fill the gaps on focus and intensity concerning physiotherapy provision towards breast cancer patients [14-15].

Developing awareness and empowering physiotherapists in Malaysia would also ensure that survivors get appropriate, well-researched, and relevant care tailored to their needs. This research aims to assess the current practices and barriers experienced by physiotherapists in Malaysia in post-mastectomy complications management and recommend ways to step up their role in breast cancer rehabilitation.

METHODS

Study design

A cross-sectional study design was established, with data gathered via an online questionnaire (Validity and reliability were analyzed). The sampling frame for this study was developed by identifying individuals who met specific inclusion and exclusion criteria, which were assessed through a population screening questionnaire. The inclusion criteria required participants to be certified Malaysian physiotherapists of either gender with more than one year of work experience. Conversely, individuals who were other medical professionals or physiotherapists with no work experience were excluded from the study. This research adhered to the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines to ensure consistent and transparent reporting of observational study methods and results [16].

Study setting

Between February 2023 and September 2023, an online questionnaire was sent to physical therapists in different cities and regions in Malaysia. Multipleminderswere dispatched regularlyto encourageparticipation.

Participants

Participants were recruited through advertisements from local and national physical therapy departments and centers in Malaysia. A link to the questionnaire, accompanied by an invitation to participate in the study, was distributed to physiotherapists. The link directed potential participants to a webpage with a complete study description, where they could review the information and either provide informed consent or decline participation.

The sample size was calculated using the Raosoft sample size calculator (RaosoftInc., Seattle,WA, USA), considering the approximate population of 4,500 physiotherapists in Malaysia [17]. To ensure accuracy, the calculation used a 95% confidence level, 50% response rate, and a 5% margin of error, resulting in a required sample of 355 participants. A convenience sampling approach was applied to select participants.

Before commencing the study, ethical approval was obtained from the Faculty Research Review Committee (FRRC) of the Faculty of Health Sciences of MAHSA University (Approval No: MAHSA/FOHS-FRRC/23(63)). All participants provided informed consent.

Instruments and outcomes

The self-structured questionnaire was created to assess knowledge and awareness of post-mastectomy lymphedema and upper limb disability management. Its content, construct validity, and reliability were thoroughly analyzed and confirmed, ensuring the questionnaire was valid and reliable for this research. The development process involved reviewing relevant literature, analyzing anatomical aspects, understanding complications, and considering physical therapy interventions. Participants completed a validated, self-structured questionnaire divided into eight sections: demographics, clinical practice, knowledge, management of lymphedema and disability, awareness of physiotherapists' roles, awareness levels, and learning needs.

Data analysis

The data collected for this study was analyzed using SPSS

version 26 (Armonk, NY: IBM Corp.). Descriptive statistics were obtained, including means, standard deviations, and frequencies. Cronbach's alpha analysis confirmed the reliability of the questionnaire. The normality of the data was assessed using the Shapiro-Wilk test. Analysis of Variance (ANOVA) was used to examine if years of clinical experience and qualifications influenced the knowledge and awareness levels related to post-mastectomy lymphedema and upper limb disability.

RESULTS

One hundred eleven subjects completed the questionnaire and met the inclusion criteria. Table 1 summarizes the participants' demographic information.

***Table1*: Demographic breakdown of participants**

Demographics	Group
N (Males / Females)	111 (60/51)
Age – Mean (Standard deviation)	28 years (5.2)
Age-wise category	
21-30 -Frequency (Percentage)	46 (41%)
31-40- Frequency (Percentage)	50 (45%)
41-50- Frequency (Percentage)	15 (14%)
Academic Qualification	
Diploma in Physiotherapy - Frequency (Percentage)	49 (44%)
Bachelor of Physiotherapy- Frequency (Percentage)	46 (42%)
Master of Physiotherapy- Frequency (Percentage)	12 (11%)
PhD in Physiotherapy- Frequency (Percentage)	4 (3%)
Years of Clinical Experience	
2-4 years	36 (32%)
5-10 years	56 (51%)
10+ years	19 (17%)
Current Practice Setting	
Clinic / Center	44 (40%)
Elderly care center	12 (10%)
Multi Specialty Hospital	15 (14%)
Public Health Sector	1 (1%)
Private Hospitals	30 (27%)
Home care	9 (8%)

Most physiotherapists in the study are aged between 21-40, with the 31-40 group slightly more represented than the 21-30 age range, while fewer fall into the 41-50 category. Educationally, many hold either a Bachelor's or Diploma in Physiotherapy, with these two qualifications being almost evenly distributed. A notable number have advanced their education to a Master's degree, though only a few have pursued a Doctorate or Ph.D. in the field. In terms of experience, the majority have 5-10 years of practice, followed by those with 2-4 years, while practitioners with over 10 years of experience are relatively rare. Clinics or centers are the most common practice setting, accounting for 37.9% of respondents, followed by general hospitals at 25.9%. Specialized hospitals and elderly care centers are less common (12.1% and 11.2%, respectively), while home care accounts for just 7.8%. Public health centers are the least represented, with only one respondent, making up just 0.9% of the sample.

The knowledge score of physiotherapists in managing post-mastectomy complications reflects a strong understanding of key concepts, though some areas show room for improvement. A majority of respondents demonstrated familiarity with the purpose of mastectomy, as 82.9% identified it as the removal of cancerous tumors. However, only a third (34.2%) were fully aware of potential complications that could arise after the procedure. While many physiotherapists recognized post-mastectomy lymphedema, with 67.6% correctly identifying its cause, only a slightly higher percentage (91.9%) acknowledged the significance of manual lymphatic drainage as a treatment. Awareness of post-mastectomy upper limb disability (ULD) was nearly universal, as 99.1% recognized the condition. Still, there was more variation in the knowledge of treatment modalities such as ultrasound therapy and proprioceptive neuromuscular facilitation (PNF). Overall, the average knowledge score, ranging from 70.4% to 83.4%, indicates a solid base of understanding among the physiotherapists but also highlights areas where further education could be beneficial.

The awareness score indicates a strong recognition of the prevalence and management of post-mastectomy lymphedema and ULD among physiotherapists. Most respondents (83.8%) acknowledged the existence of these conditions among breast cancer survivors. Regarding familiarity with potential complications, 14.4% of respondents reported being very familiar, while the majority (70.3%) were somewhat familiar with the challenges that may arise. Regarding training and professional development, 72.1% of respondents expressed interest in pursuing future training opportunities to enhance their expertise in this area, suggesting a strong demand for continued education. Furthermore, 93.7% of participants affirmed the importance of ongoing learning and professional development for effective management of post-mastectomy complications, underscoring a consensus within the profession on the necessity of continuous skill-building. These results suggest that while physiotherapists are generally aware of these conditions, there is a substantial desire for further knowledge and specialized training to improve patient care.

***Table 2: ANOVA* (knowledge-based Clinical Experience)**

ANOVA					
Total Knowledge Scores					
	Sum of	*Degree of freedom*	*Mean Square*	*F*	*Significance*
Between groups	*124.03*	*2*	*62.02*	*5.67*	*.005*
Within groups	*1181.39*	*108*	*10.94*		
Total	*1305.42*	*110*			

Table 3: *ANOVA* (knowledge-based Qualifications)

ANOVA					
Total Knowledge Scores					
	Sum of	*Degree of freedom*	*Mean Square*	*F*	*Significance*
Between groups	487.83	4	121.96	15.81	.000
Within groups	817.59	106	7,71		
Total	1305.42	110			

A one-way analysis of variance (ANOVA) was carried out to observe if there were statistically significant differences. The findings showed no significant differences in physiotherapists' knowledge based on clinical experience ($p>.05$), but significant differences were observed based on their highest educational qualification ($p<.05$).

***Table 4: ANOVA* (Awareness-based Clinical Experience)**

ANOVA					
PTQ Average					
	Sum of	*Degree of freedom*	*Mean Square*	*F*	*Significance*
Between groups	15.64	2	7.82	9.05	.000
Within groups	99.34	108	0.864		
Total	108.98	110			

***Table 5: ANOVA* (Awareness-based Qualification)**

ANOVA					
PTQ Average					
	Sum of	*Degree of freedom*	*Mean Square*	*F*	*Significance*
Between groups	22.65	4	5.66	6.95	.000
Within groups	86.33	106	0.814		
Total	108.98	110			

Two one-way ANOVA tests were conducted to examine the impact of clinical experience and educational qualification on awareness of physiotherapists' roles. Significant differences were observed for both factors ($p < .05$).

DISCUSSION

The present study aimed to evaluate the knowledge and awareness of physiotherapists in Malaysia concerning the management of post-mastectomy lymphedema and upper limb disability. After excluding 23 responses that did not meet the inclusion criteria, a total of 111 valid responses were obtained. This resulted in a response rate considered substantial and comparable to those reported in similar research conducted within analogous timeframes and settings. Studies conducted in comparable regions and durations have reported response totals ranging from approximately 100 to just over 110 [18,19]. At the same time, research in other geographical contexts has documented lower response rates over extended periods [20], thereby providing a meaningful reference point for interpreting the response rate achieved in the current study.

Most respondents held either a Bachelor's or a Diploma in Physiotherapy, with the Bachelor's group demonstrating a higher accuracy rate. The results revealed strong knowledge, especially in the purpose, indications, complications, and physical therapy for mastectomy, with correct responses averaging 82.9%, 77.5%, and 82.9% across different sections. Despite this, certain areas, such as the management of Post-Mastectomy Pain Syndrome (PMPS), showed lower accuracy, with only 43.2% of respondents answering correctly. This lower accuracy was attributed to limited knowledge of current treatment approaches for post-mastectomy complications, as indicated by 61 respondents who acknowledged a lack of expertise in managing these conditions.

Participants generally demonstrated a strong lymphedema awareness, with 70.4% providing correct responses. However, misconceptions were noted, such as the belief that "Axillary lymph node dissection" does not increase the risk of lymphedema, as only four out of 107 respondents recognized this risk [21]. Regarding identifying upper limb disabilities, the respondents achieved a high accuracy rate of 99.1%, with an average correct response rate of 83.4% across all questions. Despite these strengths, 70% of participants reported being only "slightly confident" in their practice, potentially due to limited exposure to evidence-based guidelines or referrals from other healthcare professionals [22].

The study also underscored the critical need for continuous professional education in physiotherapy. Most respondents (93.7%) recognized the importance of ongoing learning to ensure effective management practices. This finding aligns with trends observed in prior research, which similarly emphasized the value of continuous education for enhancing clinical competency and patient care outcomes [23]. The one-way ANOVA tests revealed significant differences in awareness based on clinical experience and educational background, underscoring the need for improved professional development. Overall, this study provides valuable insights into the current state of knowledge and highlights areas for further enhancement in education and practice [24].

Strengths and Limitations

The study experienced challenges in gathering a sufficiently large sample size, which might limit how well the findings apply to a wider population. This was mainly due to the limited timeframe for data collection. Moreover, using self-reported surveys could have affected the reliability of the results, as personal biases or perceptions may have influenced participants' responses.

CONCLUSION

This study reveals a solid knowledge level of 72.88% among participants, with awareness influenced by their clinical experience and educational background. Most participants (93.7%) stressed the importance of ongoing education to improve patient care. With a strong response rate of 111, the findings emphasize the need for continuous learning to help physiotherapists provide adequate support for breast cancer survivors, ensuring their recovery and quality of life.

Source of Support:

No external funding or resources were provided for this study.

Disclaimer:

The views expressed in this article are solely those of the authors and do not represent the views of any affiliated institutions.

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Appendix1

OutcomeMeasures(Questionnaire)

Demographic Data

1. Age

[ ] 21-30
[ ] 31-40
[ ] 41-50
[ ] 51 years old and above

2. Are you Malaysian?

[ ] Yes
[ ] No

Clinicalpractice

1. What is your highest academic qualification?

[ ] Diploma of Physiotherapy
[ ] Bachelorof physiotherapy (BSc)
[ ] Masterof physiotherapy (MSc)
[ ] Doctorof physiotherapy (DPT)
[ ] Philosophy degree (PhD)

2. What is your current practice setting?

[ ]General hospital
[ ] Specialized hospital
[ ] Elderly care center
[ ] Public health center
[ ]Clinic/center
[ ] Home care
[ ] Other:

3. What is your current specialty area of physiotherapy practice?

[ ] Neurology
[ ] Cardiopulmonary
[ ] Sport
[ ] Intensive care unit(ICU)
[ ] Geriatric
[ ] Orthopaedic
[ ] Pediatric
[ ] Oncology
[ ] Medical
[ ] Amputation
[ ] Other:

4.How many years of clinical experience do you have?

[ ] Less than1year
[ ] 2-4 years
[ ] 5-10 years
[ ] +10 years

Knowledge about Mastectomy

Choose all that are applicable or answer with Yes/No or select the most appropriate answer

1. What is the primary reason for performing a mastectomy in breast cancer treatment?

[ ] To remove cancerous tumors from the breast
[ ] To alleviate pain and discomfort
[ ] Extended life expectancy of patients
[ ] All of the above
[ ]Not sure

2. In my opinion, most patients diagnosed with cancer undergo mastectomy.

[ ] Yes

[ ] No

3. In my opinion, the joint that is more commonly affected following a mastectomy procedure is:

[ ] Wrist joint
[ ] Elbow joint
[ ] shoulder joint
[ ] Thoracic joints
[ ] Cervical joints
[ ] All of the above
[ ] Not sure

4. Which of the following is a potential complication of mastectomy? (Select all that apply)

[ ] Infection at the surgical site
[ ] Numbness, tingling in the chest or armpit area
[ ] Shoulder stiffness or pain
[ ] Pain
[ ] Swelling
[ ] Limited Rom
[ ] Lymphedema
[ ] Axillary web syndrome
[ ] Paresthesia and Sensory Impairments
[ ] Motor impairment
[ ] Seroma formation
[ ] All of the above
[ ] Not sure

5. The indications for physiotherapy treatment for females after mastectomy are(select all that apply):

[ ] Shoulder dysfunction
[ ] Axillary web syndrome
[ ] Restricted range of motion
[ ] Lymphedema
[ ] Treatment of pain
[ ] Promote healing
[ ] All of the above
[ ] Notsure

Knowledge and Management of Post-Mastectomy Lymphedema

Choose all that are applicable or select the most appropriate answer

1. What is post-mastectomy lymphedema?

[ ] Inflammation of the breast tissue
[ ] Accumulation of fluid in the lymphatic system after mastectomy
[ ] Enlargement of the axillary lymph nodes
[ ] Excessive production of lymphocytes after mastectomy
[ ] Not sure

2. Which of the following is a risk factor for developing post-mastectomy lymphedema?

[ ] lack of performing regular exercise
[ ] Axillary lymph node dissection
[ ] body weight
[ ] Avoiding limb elevation
[ ] Not sure

3. What are the common signs and symptoms of post-mastectomy lymphedema?

[ ] Pain and redness in the affected limb
[ ] Tingling and numbness in the affected limb
[ ] Swelling and heaviness in the affected limb
[ ] Decreased range of motion in the affected limb
[ ] Not sure

4. Which of the following is a sign of infection in a patient with lymphedema?

[ ] Increased limb size

[ ] Redness and warmth in the limb
[ ] Decreased sensation in the limb
[ ] Tingling and numbness
[ ] Notsure

5. Which of the following techniques is commonly employed in physiotherapy to improve lymphatic drainage and reduce swelling in the upper limb post-mastectomy?

[ ] Manual lymphatic drainage
[ ] Cervical traction
[ ] Exercise and stretching
[ ] Breathing exercise
[ ] all of the above

6. What is the role of manual lymphatic drainage in the management of post-mastectomy lymphedema?

[ ] To break down scar tissue
[ ] To improve lymphatic flow and reduce swelling
[ ] To increase blood circulation in the affected limb
[ ] To strengthen the muscles in the affected limb
[ ] Not sure

7. Which of the following techniques can be employed in physiotherapy to manage lymphedema post-mastectomy?

[ ] Trigger point release
[ ] Strengthening exercises
[ ] Compression therapy
[ ] Cryotherapy
[ ] Notsure

Knowledge and management of post-mastectomy upper limb disability

Choose all that are applicable or select the most appropriate answer

1. What is upper limb disability?(Select all that apply)

[ ] Impairment of function in the upper limb
[ ] Chronic pain in the upper limb
[ ] Inflammation of the muscles in the upper limb
[ ] Reduced grip strength in the upper limb
[ ] Joint stiffness
[ ] Loss of dexterous movement, and reduced sensation
[ ] Not sure

2. Which of the following physiotherapy techniques is commonly used to manage Post-Mastectomy Pain Syndrome (PMPS)?(Select2)

[ ] Resistance exercises
[ ] Transcutaneous electrical nerve stimulation
[ ] Acupuncture
[ ] ultrasound
[ ] Breathing exercises

3. Frozen shoulder is a common upper limb disability seen in patients post-mastectomy. Select from the following the effective techniques to manage this condition. (Select all that apply)

[ ] McKenzie Method
[ ] Mulligan Mobilization
[ ] Isometric exercise
[ ] Maitland's Mobilizations
[ ] stretching exercises
[ ] Heat therapy

4. Which of the following physiotherapy modalities is specifically utilized for reducing pain and promoting healing in the shoulder and arm after a mastectomy

[ ] Neuromuscular Electrical Stimulation (NMES)
[ ] Ultrasound Therapy
[ ] Cold Therapy
[ ] all of the above

[ ] Not sure

5. Which of the following techniques is specifically used in physiotherapy to promote muscle strength and coordination in the affected arm after a mastectomy?

[ ] Active range of motion exercises
[ ] Transcutaneous electrical nerve stimulation (TENS)
[ ] Mirror therapy
[ ] Proprioceptive neuromuscular facilitation (PNF)
[ ] Not sure

6. Which of the following techniques involves the use of targeted pressure to release trigger points and improve muscle function in the upper limb post-mastectomy?

[ ] kinesiology taping
[ ] Pulsed electromagnetic field therapy(PEMF)
[ ] Mobilization
[ ] Postural correction
[ ] Myofascial release
[ ] Not sure

7. Select three common Muscles that are mostly affected and should be targeted in the management of shoulder complications post-mastectomy (select 3)

[ ] Scapular muscles
[ ] Rhomboids
[ ] Trapezius muscles
[ ] Deltoid
[ ] Biceps
[ ] Serratus anterior
[ ] Pectoral muscles

Awareness of importance of physiotherapists role

Please identify your level of agreement with the following statements regarding the role of Physiotherapists in the management of post-mastectomy complications. Specify your level of agreement on the following five points.

1. Do you believe that physiotherapists play a crucial role among multidisciplinary teams in the management of post-mastectomy lymphedema and upper limb disability?

[ ] Strongly agree
[ ] Agree
[ ] Neutral
[ ] Disagree
[ ] Strongly Disagree

2. Physiotherapy can help avoid upper limb joint issues after a mastectomy, such as sensory (pain and paraesthesia) and motor deficits (limited range of motion).

[ ] Strongly agree
[ ] Agree
[ ] Neutral
[ ] Disagree
[ ] Strongly Disagree

3. Physiotherapy can enhance the quality of lifef or patient after having a mastectomy.

[ ] Strongly agree
[ ] Agree
[ ] Neutral
[ ] disagree
[ ] strongly disagree

Awareness level

Please answer with Yes/No or select the most appropriate answer.

1. Are you aware of the prevalence of post-mastectomy lymphedema and upper limb disability among breast cancer survivors?

[ ] Yes
[ ] No

2. How familiar are you with the potential complications associated with post-mastectomy lymphedema and upper limb disability?

[ ] Very familiar
[ ] Somehow familiar
[ ] Not familiar

3. How knowledgeable do you feel about the current best practices and treatment approaches for managing post-mastectomy lymphedema and upper limb disability?

[ ] Very knowledgeable
[ ] Moderately knowledgeable
[ ] Slightly knowledgeable
[ ] Not knowledgeable

4. Have you received specific training or continuing education related to the management of post-mastectomy lymphedema and upper limb disability?

[ ] Yes, recently
[ ] Yes, in the past
[ ] No, but interested in pursuing training
[ ] No, not interested in pursuing training

5. Do you believe that continuous learning and professional development are essential for physiotherapists in managing post-mastectomy lymphedema and upper limb disability?

[ ] Yes
[ ] No
[ ] Maybe

6. Are you aware of any available evidence-based guidelines or protocols for the management of post-mastectomy lymphedema and upper limb disability?

[ ] Yes, I am familiar with and use them regularly
[ ] Yes, I am aware of them, but do not use them regularly
[ ] No, I am not aware of any guidelines or protocols
[ ] Not sure

7. How confident do you feel in your ability to implement the latest research findings and evidence-based practices in the management of post-mastectomy lymphedema and upper limb disability?

[ ] Very confident
[ ] Moderately confident
[ ] Slightly confident
[ ] Not confident

Learning needs

Please identify your level of agreement with the following statements regarding the physiotherapists' learning needs for the management of post-mastectomy complications. Specify your level of agreement on the following five points.

1. To treat post-mastectomy complications, physiotherapists must have the required training and attend specific courses.

[ ] Strongly agree
[ ] Agree
[ ] Neutral
[ ] Disagree
[ ] Strongly Disagree

2. There should be a guideline, protocol or information procedure for the treatment of post-mastectomy complications

[ ] Strongly agree
[ ] Agree
[ ] Neutral
[ ] Disagree

[ ] Strongly Disagree

3. Collaborative learning opportunities, such as case discussions or peer-to-peer knowledge sharing, can enhance physiotherapists' skills in managing post-mastectomy lymphedema and upper limb disability.

[ ] Strongly agree
[ ] Agree
[ ] Neutral
[ ] Disagree
[ ] Strongly Disagree

4. Without adequate knowledge of the complication and its pathophysiology, Physiotherapists will not be able to treat patients following mastectomy.

[ ] Strongly agree
[ ] Agree
[ ] Neutral
[ ] Disagree
[ ] Strongly Disagree