

MODIFIED QIGONG EXERCISE PROGRAM AS A HOME INSTRUCTIONAL MATERIAL FOR BALANCE IMPROVEMENT AMONG REGISTERED PHYSICAL THERAPISTS FOR OLDER ADULTS

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ABSTRACT

The study aimed to assess the acceptability of a modified Qigong exercise program, presented as a home instructional manual, for improving balance among registered physical therapists where the distribution of an educational booklet was a means of providing information that was valued by both patients and doctors. Employing a descriptive research design, the study utilized a questionnaire consisting of a combination of Likert scale and checklist items to gather information from a sample population of 40 registered physical therapists recruited from hospitals and rehabilitation clinics in Santa Rosa, Biñan, and San Pedro, Laguna. Purposive sampling was employed, with respondents selected based on specific inclusion criteria, namely level of acceptability in terms of movement, difficulty, execution, content, balance purpose, and as a home instructional material. The findings provide valuable insights into the perceived effectiveness and feasibility of incorporating modified Qigong exercises into physical therapy practice for enhancing balance. The overall result indicates moderately acceptable acceptability of the Modified Qigong Exercise as a Home Instructional Material for Balance Improvement among Registered Physical Therapists.

INTRODUCTION

Compliance with physiotherapy exercises is only achievable if patients recall them correctly. The goal of this study was to test how well elderly patients remembered simple physiotherapy activities. (Smith, J., Lewis, J., & Prichard, D., 2005). Physiotherapists should play a key role in the prevention and treatment of all diseases related to low levels of physical exercise. The advantages of regular physical activity for health, longevity, and well-being much outweigh

the efficacy of any medicine or other medical treatment. Physical activity provides numerous health benefits, aids in the prevention of many chronic diseases, and serves as an effective supplement to pharmacological treatment in many cases. (Wittink, H., Engelbert, R., and Takken, T., 2011). The word “qigong” (pronounced chee-kung or chee-kong) is a modern invention. It is an umbrella term for the full spectrum of ancient Chinese energy art. Qi (chi) means “life energy” and gong means “cultivation”. A more poetic expression of qigong can be translated as “the art of cultivating life energy” (Korahais, 2017). Some of the older participants could have performed poorly due to problems with recall, particularly when they had to remember a number of exercises. Face-to-face verbal instructions and supervision during the instruction procedure together with an illustrated brochure written at a junior school educational level have been argued to enhance comprehension, correctness of exercise performance and home exercise adherence in older people. (Morris, M.E., 2005)

Although the goals are roughly similar to those of a standard physiotherapy exercise plan, this program is based on a normal model of human behavior rather than a sick model. Participants are advised to compare themselves to athletes who have been out of shape for a long period and need to return to their prior level of fitness in a gradual and responsible manner. (Moffett, J. K., et al. 2000). The objective of the researchers is to determine the acceptability of the Qigong manual to the Physical Therapists. The distribution of an educational booklet was a means of providing information that was valued by both patients and doctors.

METHODOLOGY

Research Design

The study utilized a descriptive type of research design to determine and emphasize the level of Acceptability Of Qigong Exercise Program As A Home Instructional Manual For Balance Improvement Among Registered Physical Therapists for Older Adults. The researchers conducted a study in which purposely modified and evaluated a Home Instructional Material for Balance Improvement Among Registered Physical Therapists for Older Adults.

Participants, Inclusion and Exclusion Criteria

Total of forty (40) Physical Therapist Registered, Philippines (PTRP) who met the inclusion/exclusion criteria provided during the screening procedure were purposely selected. The researchers selected the respondents for the study based on the following inclusion criteria:

1. Male or Female
2. Registered Physical Therapists
3. Has updated PRC license
4. Currently working in a hospital, or a rehab clinic
5. Has more than 1 year of clinical experience.

Research Instrument

The study made use of the home exercise manual (see fig. 1). It is an instructional material that serves as a comprehensive guide for enhancing balance among older adults. The researchers made a questionnaire (see fig 2.), that helped in analyzing the response of the respondents. The researcher-made questionnaire and instructional manual was validated with the help of professionals and experts. The questionnaire focused on answering the statement of the problem and determining the level of acceptability of the Modified Qigong Exercise Program As A Home Instructional Manual For Balance Improvement Among Registered

Physical Therapists. There are six (6) main questions namely, movement, difficulty, execution, content, balance purpose, and the overall acceptability of the device with three (3) sub-question on each five (5) main questions.

Research Procedure

Prior to implementation, the researchers secured consent from their adviser and the dean of the college of physical therapy. Subsequently, the researchers dispatched implementation request letters to hospitals in Santa Rosa, Biñan, and San Pedro, Laguna, aiming to enlist the participation of registered physical therapists. During the implementation phase, the researchers embarked on visits to seven physical therapy facilities, including St. James Hospital, New Sinai MDI, and The Medical City—South Luzon in Santa Rosa; Unihealth Southwoods; Perpetual Biñan PT Rehabilitation Facility, and Biñan Doctors' Hospital in Biñan; and Divine Mercy Hospital in San Pedro, Laguna. At these facilities, the researchers introduced the modified Qigong exercise program to therapists, providing a comprehensive overview of its background and contents.

Moreover, the researchers facilitated discussions with therapists, ensuring clarity on the study's objectives and procedures. Therapists were required to complete consent forms and questionnaires, offering insights into the acceptability of the modified Qigong exercise program as a home instructional material for balance improvement among older adults. They also had the opportunity to provide feedback, suggestions, and comments to enhance the instructional material. Furthermore, the researchers conducted live demonstrations of the exercises outlined in the instructional material, addressing any queries or concerns raised by the participating therapists. Throughout the implementation process, the researchers meticulously documented the proceedings through audio-visual means, ensuring a comprehensive record of the activities undertaken.

In the post-implementation phase, the researchers collated and meticulously analyzed the data gathered from the questionnaires, employing statistical methods such as the weighted mean to derive meaningful insights. They meticulously compared, evaluated, and synthesized the findings to draw conclusions and formulate recommendations based on the responses and feedback obtained from the participating therapists. This comprehensive analysis formed the basis for presenting the study's outcomes and implications, contributing valuable insights to the field of physical therapy practice and research.

Statistical Treatment of Data

For the analysis of data gathered. The weighted mean was utilized to determine the level of acceptability of an instructional manual in terms of movement, difficulty, execution, content, and balance purpose. It is a sort of arithmetic mean determined by multiplying each value in a data set by a weight and then summing the results.

RESULTS

1. Level of acceptability of modified qigong exercise in terms of movement, difficulty, execution, content, and balance purpose.

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1. Level of Acceptability of Modified Qigong Exercise in Terms of Movement N=40

| Presentation of the Home Instructional Material in terms of A. Movement | HA 5 | MA 4 | A 3 | FA 2 | PA 1 | Wm | Int | Rank |
|---|---------|---------|--------|---------|---------|-------------|-----------|------|
| 1. The modified Qigong exercise program can be performed at home by individuals with difficulties in balance. | 10 | 14 | 10 | 6 | 0 | 3.70 | MA | 3 |
| 2. Standing, weight shifting, one leg stand, tandem stance, side stepping, heel-to-toe are movements which are essential for balance improvement. | 21 | 10 | 7 | 2 | 0 | 4.25 | MA | 1 |
| 3. The proper sequencing of modified Qigong exercise program enhances balance of oneself. | 14 | 15 | 8 | 3 | 0 | 4.00 | MA | 2 |
| Overall weighted mean | | | | | | 3.98 | MA | |

Legend:

4.51-5.00 - Highly Acceptable (HA) 3.51-4.50 - Moderately Acceptable

(MA) 2.51-3.50 - Acceptable (A)

1.51-2.50 - Fairly Acceptable (FA)

1.00-1.50 - Poorly Acceptable (PA)

The acceptability of the Modified Qigong Exercise was assessed based on movement aspects in Table 1. Question two, focusing on key movements essential for balance improvement, scored highest at 4.25. Question three, evaluating the effectiveness of proper sequencing in

enhancing balance, scored 4.00. Question one, assessing the feasibility of performing the exercise at home for those with balance difficulties, scored 3.70. Overall, all questions were moderately acceptable, with an average score of 3.98.

1.1 Level of Acceptability of Modified Qigong Exercise in Terms of Difficulty N=40

| Presentation of the Home Instructional Material in terms of B. Difficulty | HA 5 | MA 4 | A 3 | FA 2 | PA 1 | Wm | Int | Rank |
|--|---------|---------|--------|---------|---------|-------------|-----------|------|
| 1. The steps and repetitions included in the Qigong exercise manual are uncomplicated to perform. | 9 | 15 | 15 | 1 | 0 | 3.80 | MA | 2 |
| 2. The sets and repetitions of the modified Qigong exercise program is adequate for balance improvement of older adults. | 9 | 19 | 10 | 2 | 0 | 3.88 | MA | 1 |
| 3. The intensity of the movements of the modified Qigong exercise is appropriate for older adults. | 9 | 16 | 10 | 4 | 1 | 3.70 | MA | 3 |
| Overall weighted mean | | | | | | 3.79 | MA | |

Table 1.1 assessed the acceptability of the Modified Qigong Exercise in terms of difficulty. Question two, regarding sets and repetitions for balance improvement in older adults, scored highest at 3.88. Question one, on the simplicity of steps and repetitions in the Qigong manual, scored 3.80. Question three, assessing movement intensity for older adults, scored 3.70. Overall, all questions were moderately acceptable, with an average score of 3.79.

1.2 Level of Acceptability of Modified Qigong Exercise in Terms of Execution N=40

| Presentation of the Home Instructional Material in terms of C. Execution | HA | MA | A | FA | PA | Wm | Int | Rank |
|---|----|----|----|----|----|-------------|-----------|------|
| | 5 | 4 | 3 | 2 | 1 | | | |
| 1. The modified qigong exercise is safe to perform. | 8 | 7 | 13 | 2 | 0 | 2.78 | A | 3 |
| 2. The modified qigong exercise provides pleasant movement without any limitations to mobility. | 13 | 14 | 9 | 4 | 0 | 3.90 | MA | 2 |
| 3. The modified Qigong exercise can be done by oneself in the comfort of one's own home. | 20 | 8 | 7 | 5 | 0 | 4.08 | MA | 1 |
| Overall weighted mean | | | | | | 3.58 | MA | |

Table 1.2 evaluated the acceptability of the Modified Qigong Exercise in execution. Question three, about performing the exercise at home independently, scored highest at 4.08. Question two, on the exercise's pleasantness and mobility benefits, scored 3.90. Question one, regarding exercise safety, scored 2.78, deemed acceptable. The overall mean was 3.58, indicating moderate acceptability.

1.3 Level of Acceptability of Modified Qigong Exercise in Terms of Content N=40

| Presentation of the Home Instructional Material in terms of D. Content | HA | MA | A | FA | PA | Wm | Int | Rank |
|--|----|----|---|----|----|----|-----|------|
| | 5 | 4 | 3 | 2 | 1 | | | |

| | | | | | | | | |
|---|----|----|----|---|---|-------------|-----------|---|
| 1. The design and layout of the home instructional material is visually pleasing. | 18 | 14 | 7 | 1 | 0 | 4.23 | MA | 1 |
| 2. The design and layout of the home instructional material is suitable for the older adults. | 14 | 12 | 11 | 2 | 1 | 3.90 | MA | 3 |
| 3. The home instructional material is demonstrated systematically. | 15 | 18 | 6 | 1 | 0 | 4.18 | MA | 2 |
| Overall weighted mean | | | | | | 4.10 | MA | |

Table 4 assessed content acceptability for the Modified Qigong Exercise. Question one on visual appeal scored highest at 4.23, followed by question three on systematic demonstration at 4.18, and question two on design suitability for older adults at 3.90. Overall, all questions were moderately acceptable, with a mean of 4.10.

1.4 Level of Acceptability of Modified Qigong Exercise in Terms of Balance Purpose N=40

| Presentation of the Home Instructional Material in terms of E. Balance Purpose | HA 5 | MA 4 | A 3 | FA 2 | PA 1 | Wm | Int | Rank |
|---|----------------|----------------|---------------|----------------|----------------|-----------|------------|-------------|
| 1. The Modified Qigong Exercise provides movements that enhance balance. | 12 | 23 | 3 | 2 | 0 | 4.13 | MA | 1 |

| | | | | | | | | |
|--|----|----|---|---|---|-------------|-----------|---|
| 2. The modified Qigong exercise can be used as progressive exercise for maintaining proper body control for balance. | 13 | 18 | 5 | 3 | 1 | 3.98 | MA | 2 |
| 3. The modified Qigong exercise aids in the treatment of older individuals' balance issues. | 10 | 17 | 9 | 3 | 1 | 3.80 | MA | 3 |
| Overall weighted mean | | | | | | 3.97 | MA | |

In Table 1.4, the Modified Qigong Exercise's acceptability for balance improvement was assessed. Question one, on balance-enhancing movements, scored highest at 4.13. Question two, regarding its use as a progressive exercise for body control, scored 3.98. Question three, on its effectiveness in treating balance issues in older individuals, scored 3.80. Overall, all questions were moderately acceptable, with a mean of 3.97.

2. Overall Acceptability of the Modified Qigong Exercise Program as a Home Instructional Material for Balance Improvement among Registered Physical Therapists N=40

| Overall Acceptability of the Home Instructional Material | HA 5 | MA 4 | A 3 | FA 2 | PA 1 | Wm | Int |
|--|---------|---------|--------|---------|---------|------|-----|
| Overall acceptability of the Modified Qigong Exercise Program as a Home Instructional Material for Balance Improvement among Registered Physical Therapists for Older Adults | 12 | 18 | 9 | 1 | 0 | 4.03 | MA |

Based on Table 2, overall acceptability of the Modified Qigong Exercise as a Home Instructional Material for Balance Improvement among Registered Physical Therapists, the overall mean is 4.03 interpreted as moderately acceptable.

DISCUSSION

This research aimed to create and assess the acceptability of a modified qigong exercise as a home instructional material for balance improvement among physical therapists for older adults. The hypothesis posited that this material would be deemed acceptable by registered physical therapists. The hypothesis was explored through addressing six research questions. 1. What is the level of acceptability of modified qigong exercise in terms of movement? 2. What is the level of acceptability of modified qigong exercise in terms of difficulty? 3. What is the level of acceptability of modified qigong exercise in terms of execution?

4. What is the level of acceptability of modified qigong exercise in terms of content? 5. What is the level of acceptability of modified qigong exercise in terms of balance purpose? 6. What is the overall acceptability of the Modified Qigong Exercise Program as a Home Instructional Material for Balance Improvement among Registered Physical Therapists for Older Adults?

The study found that essential movements for balance improvement ranked highest, followed by the importance of proper exercise sequencing. The ability to perform the program at home for individuals with balance difficulties ranked slightly lower. Overall, the program was considered moderately acceptable.

The acceptability of the Modified Qigong Exercise in terms of difficulty was assessed. Question two, focusing on the adequacy of sets and repetitions for balance improvement in older adults, ranked highest. Question one, concerning the simplicity of steps and repetitions in the exercise manual, followed closely. Question three, addressing movement intensity for older adults, ranked slightly lower. Overall, the program was moderately acceptable.

The acceptability of executing the Modified Qigong Exercise was evaluated. Question three, about performing it independently at home, ranked highest. Question two, regarding pleasant movement without mobility limitations, followed closely. Question one, concerning safety, was acceptable, while the others were moderately acceptable. Overall, the program's acceptability was deemed moderately acceptable.

The level of acceptability of the Modified Qigong Exercise content was assessed. Question one, regarding the visual appeal, ranked highest. Question three, about systematic demonstration, followed closely. Question two, concerning suitability for older adults, ranked slightly lower. Overall, the program was moderately acceptable.

The acceptability of the Modified Qigong Exercise for improving balance was assessed. Question one, about its effectiveness in enhancing balance, ranked highest. Question two, addressing its use as a progressive exercise for body control, followed closely. Question three, regarding its role in treating balance issues in older individuals, ranked slightly lower. Overall, it was moderately acceptable.

Table 6 presents the acceptability of the Modified Qigong Exercise as a home instructional material for balance improvement among registered physical therapists for older adults. The overall interpretation of the data indicates a moderately acceptable level.

CONCLUSION

Based on the findings of the study, the researchers concluded that the modified Qigong exercise program focuses on essential movements like standing, weight shifting, one leg stand, tandem stance, side stepping, and heel-to-toe, all crucial for improving balance, especially in older adults. This exercise program can be performed independently at home, with sets and repetitions tailored for balance enhancement. Additionally, the instructional material for the program is visually appealing, making it user-friendly. Registered physical therapists for older adults find the modified Qigong exercise program moderately acceptable as a home instructional material for balance improvement.

ACKNOWLEDGEMENT

We would like to express our heartfelt gratitude to the individuals mentioned for making our undergraduate thesis possible. Firstly, we offer our deepest thanks to the Almighty God for granting us the strength and courage to pursue this path. To the University of Perpetual Help - Dr. Jose G. Tamayo Medical University, we extend our sincere appreciation for being our second home throughout our academic journey.

A special acknowledgment is reserved for our adviser and dean of the College of Physical Therapy, John P. Lumagui PTRP, MAEd, MSCPD. His endless support, guidance, concerns, comments, suggestions, and unconditional understanding have been instrumental in helping us execute, finish, and achieve the goals of our group and research.

We also wish to extend our gratitude to our research professors, Gerardo M. Buhay, PTRP, MAEd, and Rufo S. Calixtro, Jr., PhD, for imparting the knowledge and fundamentals of research writing. We are also grateful to Juan Carlo P. Mariano, PTRP, and Stephanie L. Piol for their expert opinions on our researcher-made questionnaire and providing us with the necessary information to complete our research.

To our respondents, we express our gratitude for their cooperation and participation in providing us with all the information needed to finish our study.

To our beloved parents, batchmates, professors, and friends, we owe a debt of gratitude for their unwavering support, camaraderie, and motivation, which have propelled us to reach higher levels. We are grateful for the financial, emotional, and moral support they have provided us throughout this journey.

Each one of you has played a significant role in our success, and for that, we are eternally deeply grateful.

REFERENCES

- Klaber Moffett, J., Frost, H., & Collaboration with the UKBEAM Trial Team*. (2000). Back to Fitness Programme: The manual for physiotherapists to set up the classes. *Physiotherapy*, 86(6), 295-305.
- Korahais, A. (2017, February 14). History of Qigong: The 5 Categories of Qi Cultivation. *Title of Website or Journal*.

- Schoo, A. M. M. (2005). The effects of mode of exercise instruction on compliance with a home exercise program in older adults with osteoarthritis. *Physiotherapy*, 91(2), 79-86
- Smith, J., Lewis, J., & Prichard, D. (2005). Physiotherapy exercise programmes: Are instructional exercise sheets effective? *Physiother Theory Pract.* 2005 Apr-Jun;21(2):93-10