v. 5, n. 9, 2025

International Journal of Health Science

Acceptance date: 04/02/2025

HEALTH EDUCATION AND PELVIC FLOOR MUSCLE TRAINING IMPROVE WOMEN'S PELVIC COMPLAINTS, LEVEL OF KNOWLEDGE AND QUALITY OF LIFE: A CROSS-SECTIONAL STUDY[1]

Rafaela Ferreira de Amorim
Physiotherapy course at the Federal University of Paraná (UFPR) - Curitiba (PR), Brazil
https://orcid.org/0000-0003-0505-1782

Gabriela Barbosa Carneiro e Silva
Physiotherapy course at the Federal University of Paraná (UFPR) - Curitiba (PR), Brazil
https://orcid.org/0000-0002-2186-6466

Raciele Ivandra Guarda Korelo
Department of Prevention and Rehabilitation in Physiotherapy (UFPR) - Curitiba (PR), Brazil
https://orcid.org/0000-0002-6754-098X

Rubneide Barreto da Silva Gallo
Department of Physiotherapy (UFSE) - Aracaju (SE), Brazil
https://orcid.org/0000-0001-9953-0260

1. Study carried out at the Physiotherapy Laboratory of the Federal University of Paraná (UFPR) - Curitiba (PR), Brazil.
Source of funding: nothing to declare.
Approved by the Research Ethics Committee of the Health Sciences Sector of the Federal University of Paraná - CAAE: 98183818.4.0000.0102.

Abstract: Pelvic Floor Dysfunctions (PFD) have a high prevalence and generate various health impacts. Around 81% of women have never even received information about this area and 79% do not know its functions. This study aimed to evaluate the effects of a health promotion program that included Health Education and Pelvic Floor Muscle Training (PFMT), considering the presence of complaints related to PF, the level of knowledge about the Pelvic Floor Muscle (PFM), and quality of life. This is a cross-sectional study, with pre-post intervention measurements, including 35 female civil servants from a public university, aged between 20 and 60. All the participants underwent a physiotherapeutic assessment of the PF, as well as answering a questionnaire on knowledge of the Pelvic Floor Muscle (PFM) and the WHOQOL-bref, before and after the physiotherapeutic intervention. The intervention consisted of 4 face-to-face meetings, lasting 60 minutes, held in groups of 5 to 8 participants, during which health education and PFMT took place. At the assessment, 80% of the participants had complaints related to PA, reducing to 51.4% at the reassessment. With the intervention, there was a significant improvement in knowledge about the PF muscles in all the aspects assessed, as well as an increase in quality of life. The research showed that a 4-week physiotherapy intervention program, including health education and TMAP, is capable of providing short-term benefits for health promotion and improving complaints related to the PA in adult women.

Keywords: Health Education, Pelvic Floor Disorders, Pelvic Floor Muscle Training, Quality of Life.

INTRODUCTION

Pelvic Floor Dysfunctions (PFD) have a high prevalence and generate various impacts on women's health. Economic, social, physical, psychological and emotional problems, as well as interference in sexual satisfaction, family life, productivity, self-esteem and confidence, are some of the repercussions[1(,)2].

PADs affect around 33.5% of adult women and include: Urinary Incontinence (UI), Pelvic Organ Prolapse (POP), Sexual Dysfunctions (FSD) and Anorectal Dysfunctions such as Fecal Incontinence (FI) and Constipation (CI)[3]. These pathologies generate high costs and cause restrictions for women, but are often not considered serious and are commonly neglected and trivialized[2,4]. Adult women are largely unaware of the existence of these dysfunctions, making it difficult to access treatment and resulting in delayed intervention and symptom improvement. Around 81% of women have never even been told what the pelvic floor is and 79% don't know its functions[4].

Pelvic Floor Muscle Training, as a conservative form of treatment, is the first line of treatment for Stress Urinary Incontinence, with a grade A recommendation[5]. They stand out due to their low risk, reduced surgical and drug costs and proven efficacy[4,6].

Health Education has increasingly been shown to be an effective intervention for supporting, motivating and developing behavioral skills in patients at the start of PFM rehabilitation programs, although there is still no consensus on the best way to approach and administer the content. However, simple programs aimed at the community are proving to be effective in preventing and treating pelvic floor dysfunction[7].

Knowing that this group of muscles exists increases the chance of satisfactory rehabilitation, changes in lifestyle habits and a reduction in symptoms[4]. Health education, therefo-

re, coupled with improved proprioception and body awareness, intensified in kinesiotherapy, tend to corroborate early intervention, with a greater chance of success in the functional rehabilitation of PA[4,7]. In addition, self-knowledge is interrelated with improved quality of life (QoL), self-esteem and confidence[8].

Based on the lack of women's approaches and instructions on the subject, we sought to combine health education and a kinesiotherapy protocol as a tool to promote health, increase quality of life, prevent dysfunctions and treat symptoms related to PF. In this way, the study was conducted with the aim of evaluating the effects of a health promotion program that included Health Education and Pelvic Floor Muscle Training (PFMT), considering the presence of complaints related to PF, the level of knowledge about the Pelvic Floor Muscle (PFM), and quality of life.

METHODOLOGY

This was a cross-sectional study with pre--post intervention measurements. The study was approved by the Research Ethics Committee CAAE: 98183818.4.0000.0102, and all the participants signed an informed consent form.

The inclusion criteria were women aged between 20 and 60 years old, employees of the university studied, who wished to take part in the study, and who were available to attend the weekly interventions on pre-established dates and times. The exclusion criteria were women who were already undergoing drug treatment, physiotherapy or any other treatment aimed at PFD, as well as women who were unable to perform the PF contraction during the initial assessment, even after proprioceptive training. The criteria for discontinuing the study were women who wished to leave the study; who did not agree to undergo a physical examination of the PA; who did not attend at least 2 weekly meetings and/or who did not attend the re-evaluation after the intervention.

The outcomes analyzed were: the presence of symptoms related to the pelvic floor, the level of knowledge about female PA and quality of life.

Recruitment took place through verbal invitations at different commemorative events related to Women's Health promoted by the research group on two of the university's campuses, and by publicizing the project through posters in the campuses' corridors. The invitation was extended to all female employees digitally via the university's official website. Those who were interested underwent an individual assessment protocol to analyze clinical outcomes, physiotherapeutic intervention and reassessment. 49 women were interested in the study, but after applying the exclusion/interruption criteria, the final sample consisted of 35 participants.

In order to assess the symptoms related to PF, an anamnesis was used, in which the following questions were asked: "What made you seek physiotherapy?" and "What bothers you about your intimate area?", and then the answer was noted down by the applicator. After this, the symptoms reported were separated into 11 categories: no symptoms; stress urinary symptoms; urgency urinary symptoms; mixed urinary symptoms; anorectal symptoms ; sexual dysfunctions; nocturnal enuresis; urinary + sexual symptoms; urinary + gynecological symptoms; urinary + anorectal symptoms; urinary + gynecological + anorectal + sexual symptoms.

The physiotherapeutic assessment of the PA was carried out individually, with the participants in the modified lithotomy position. Following the guidelines of the International Urogynecology Association (IUGA) and the International Continence Society (ICS), a visual inspection and then palpation of the PA were carried out[9]. Vaginal palpation was bidigital in order to measure the patient's ability to contract and relax the muscles, as well as repeat and sustain this contraction. The per-

ception of muscle contraction and function before and after the intervention was measured by the same assessor, using the Modified Oxford Scale, which grades the perception of PF contraction into 6 levels[10].

In order to assess the level of knowledge of female civil servants about PFM, a questionnaire was used, which is currently being validated by the Research Group of the Laboratory for Functional Assessment of the Female Pelvic Floor (LAFAP - FMRP-USP)[11]. The first question asks if the woman has ever heard of PFM and the questionnaire is only continued if the answer is positive. In the next 4 questions, the interviewee answers questions related to the muscle group. The questionnaire results were scored and analyzed according to the study by Freitas *et al.*[12], ranging from 0 to 4, with the closer to 4 the better the knowledge of PFM.

The WHOQOL-BREEF questionnaire was used to assess quality of life. It consists of 26 questions on a Likert scale (answers from 1 to 5, the higher the score, the better the QOL). The questionnaire can assess the physical domain, the psychological domain, social relationships and the environment[13].

In order to carry out the health promotion program, which included Health Education and TMAP, the researchers received prior training from the supervising professor. To this end, a pilot study was carried out with students from the university, where all the stages of the study were replicated. In this way, it was possible to standardize the anamnesis and physiotherapeutic assessment of the pelvic floor, the application of evaluation questionnaires and verbal commands during kinesiotherapy.

The intervention consisted of 4 meetings lasting 60 minutes, held in groups of 5 to 8 civil servants, including: 40 minutes of health education (conversation circles to explain, clarify doubts and exchange experiences on a subject) and 20 minutes of warm-up, TMAP and relaxation.

The content of the discussion circles was approached in a playful and clear way, including artificial models and illustrated representations of the female reproductive system, for greater exposure and explanation of the topic, facilitating visualization and understanding. A description of the main topics discussed at each meeting is shown in Table 1. In all the interventions, the frequency of participation of the female employees was monitored through a roll call, thus being able to verify adherence to the program proposed in this study.

Meeting	Main theme	Approach
First	Anatomy and physiology of the female genitourinary system	Pelvic bone structure, pelvic floor muscle structure, pelvic organs, pelvic floor functions
Second	Urinary Incontinence and Pelvic Organ Prolapse	Physiology of urination and pelvic floor synergy, physiotherapeutic and surgical treatment for UI and POP
Third	Anorectal dysfunctions (fecal incontinence and constipation)	Physiology of evacuation and pelvic floor synergy, correct positioning for evacuation; risk factors for fecal incontinence and physiotherapeutic treatment for both
Bedroom	Sexual dysfunctions	Sexuality and the feminine; dyspareunia; vaginismus; dysorgasmia; anorgasmia; absence of arousal and desire; vulvodynia; functions of vaginal lubrication and guidance on types of lubricants.

Chart 1 - Theme and approach to health education

Source: The Authors, 2021.

The group TMAP protocol was adapted from the study by Dumoulin *et al.*[14], in which the group exercises consisted of strengthening, resistance and coordination exercises for the PFM, together with functional and balance exercises in the form of a dance, with progression (Chart 2). The researchers were responsible for giving verbal commands and monitoring the participants while they performed the exercises. The participants were instructed to perform the exercises during the weekly meeting in their homes, five times a week during

the research period, and were given a script of the exercises they were to perform that week. However, the frequency of performance was not monitored by the researchers, and this suggestion is proposed for future research. According to the participants' reports, those who performed the exercises daily were more satisfied during the re-evaluation.

At the end of the four meetings, a re-evaluation was scheduled, in which all the processes carried out in the evaluation were repeated in order to verify the effects of the intervention.

Statistical analyses were carried out using the *Statistical Package for the Social Sciences* (SPSS) software, version 22.0 for Windows®, by a blind evaluator. Categorical data was presented as frequency and percentage. Parametric numerical data was described as mean ± standard deviation of the mean, while non-parametric data was expressed as median (minimum and maximum).

The statistical procedures for analyzing the outcome variables, pre- and post-intervention, followed the intention-to-treat principles. Categorical data was submitted to Pearson's Chi-square test to analyze the differences between before and after. The effect size was determined by Cramer's V, with values below 0.10 being considered a negligible effect, between 0.10 and 0.20 a weak effect, between 0.20 and 0.40 a moderate effect, between 0.40 and 0.60 a relatively strong effect, between 0.60 and 0.80 a strong effect and values between 0.80 and 1.0 a very strong effect[15].

Pre- and post-intervention comparisons of numerical data were carried out using paired t-tests or the equivalent non-parametric Wilcoxon test (in the event of any violation of the normality assumption tested using the Shapiro-Wilk statistic). The confidence interval was set at 95% for all analyses. The significance level was set at $p<0.05$. Subsequently, effect sizes were calculated, "Cohen's d" for the paired t-test and "*r*" for the Wilcoxon rank-sum test. Cohen's d was calculated by dividing the t score of the paired t test by the square root of the sample size, while the effect size 'r' was obtained by dividing the Z value of the Wilcoxon rank-sum test by the total number of observations. For the interpretation of Cohen's d, values below 0.19 were considered to be insignificant, between 0.20 and 0.49 as small, between 0.50 and 0.79 as moderate, between 0.80 and 1.29 as large and values above 1.30 as very large[16]. To interpret the 'r' effect, 0.10, 0.30 and above 0.50 represented a small, medium and large effect respectively[15].

RESULTS

Of the 35 participants who completed the intervention program, 28 (80%) had complaints related to PA during the evaluation. After the intervention, this number was reduced to 18 (51.4%) symptomatic participants, and the improvement in complaints was statistically significant ($Z=-2.06$; $p=0.03$, with a medium effect size ($r=0.34$)).

With regard to stress urinary incontinence, 3 (8.6%) of the 10 (28.6%) participants who complained did not report urine loss at the reassessment. This demonstrates how a 4-week intervention can have a positive impact in the short term, while respecting the individual characteristics of each participant.

At the assessment, 23% of the participants had some symptoms related to sexual dysfunction. After the health education intervention combined with kinesiotherapy, 20.3% no longer had these symptoms. With regard to the presence of some kind of anorectal symptom, 8.6% of the participants had complaints during the assessment, which was reduced to 5.8% at the reassessment. These data are shown in Chart 3.

Table 1 shows the analysis of the participants' knowledge about the pelvic floor, with a significant increase in the women's learning, significant values for all the questions assessed by the questionnaire, as well as in the total

	Heating (5 minutes)	TMAP PROGRAM (10 minutes)				Relaxation (5 minutes)
		Pre-contraction from AP[1]	Exercises for proprioception pelvic	Sustained contractions (tonic fibers)[2]	Contractions fast (phasic fibers)[3]	
1st meeting	Dance - movements zumba (1 song)	1 cough (3 repetitions)	In bipedestation, antero and retroversion movements of the pelvis (a) (4 repetitions) Guidance for implementation exercises and perception of MAP contraction during exhalation by palpation of the transverse muscle abdomen	6 repetitions 6s. isometric	2 repetitions 8 contractions	Quiet music, deep breathing, a "body and soul" moment.
2nd meeting	Dance - axé (1 song)	1 cough (3 repetitions)	In bipedestation, latero-lateral pelvic tilt (b) (4 repetitions)	8 repetitions 6s. isometric	2 repetitions 8 contractions	Quiet music + deep breathing + stretching[4] (2 rep, 30s).
3rd meeting	Dance - Brazilian pop (1 song)	2 coughs in a row (3 repetitions)	In bipedestation, alternating bilateral pelvic tilt movements with a rotation - "on the move 8" (c)(4 repetitions)	8 repetitions 8s. isometric	2 repetitions 10 contractions	Quiet music + deep breathing + stretching (2 rep, 30s).
4t[h] meeting	Dance - 2000s (1 song)	3 coughs in a row (3 repetitions)	In bipedestation, bilateral pelvic tilt movements alternating with a rotation - "in movement of 8 (c) (4 repetitions)	10 repetitions 10s. isometric	2 repetitions 10 contractions	Quiet music + deep breathing + *coffee breaks* for get-togethers

Chart 2 - Group exercise protocol

Source: The authors, adapted from Dumoulin *et al* (2017).

Caption: [1] Pre-contraction exercises involve contraction of the PFM before and during the requested coughing episode.[2] Requested PFM contraction and maintenance of this contraction for the given time, followed by PFM relaxation. [3] Maximum contraction is requested, without holding, followed by relaxation of the PFM. [4]MMSS: upper limbs; MMII: lower limbs.

COMPLAINTS	Pre-intervention ↓	Post-intervention →						
	Total	No symptoms	Stress urinary symptoms	Urinary urgency symptoms	Mixed urinary symptoms	Anorectal symptoms	Urinary + sexual symptoms	Nocturnal enuresis
No symptoms	7 (20)	7 (20)						
Stress urinary symptoms	10 (28.6)	3 (8.6)	5 (17.3)					2 (5.7)
Urinary urgency symptoms	4 (11.4)	1 (2.9)		3 (8.6)				
Mixed urinary symptoms	1 (2.9)				1 (2.9)			
Anorectal symptoms	2 (5.7)	1 (2.9)				1 (2.9)		
Sexual dysfunctions	3 (8.6)	3 (8.6)						
Urinary + sexual symptoms	4 (11.4)	1 (2.9)	2 (5.7)				1 (2.9)	
Urinary + gynecological symptoms	2 (5.7)				1 (2.9)		1 (2.9)	
Urinary + anorectal symptoms	1 (2.9)	1 (2.9)						
Urinary + gynecological + anorectal + sexual symptoms	1 (2.9)		1 (2.9)					
Total	35 (100)	17 (48.6)	8 (22.9)	3 (8.6)	2 (5.7)	1 (2.9)	2 (5.7)	2 (5.7)

Table 3 - Frequencies and percentages (n, %) of main complaints pre- and post-intervention (n=35)

Source: The Authors, 2021.

Legend: * p<0.05, Wilcoxon test.

Issues assessed	Knowledge of MAPs (n, %) Scored	Did not score	Total score (mean ± SD)	Average differences (95% CI)	p-value	Cohen's d
Where are the PRTs located?, 0-1[a]						
Pre-intervention	29 (82.9)	6 (17.1)	0.82 ± 0.38	-0.17 (-0.30;-0.04)	*0.012**	0.448
Post-intervention	35 (100.0)	0 (0.0)	1.00 ± 0.00			
What are the functions of PRTs? 0-1[a]						
Pre-intervention	29 (82.9)	6 (17.1)	0.21 ± 0.13	-0.37 (-0.46;-0.29)	*0.000**	1.531
Post-intervention	35 (100.0)	(0.0)	0.58 ± 0.23			
What are the MAP dysfunctions? 0-1[a]						
Pre-intervention	24 (68.6)	11 (31.4)	0.25 ± 0.21	-0.31 (-0.38;-0.24)	*0.000**	1.475
Post-intervention	35 (100.0)	0 (0.0)	0.56 ± 0.14			
What are the treatment options for PA dysfunctions? 0-1[a]						
Pre-intervention	30 (85.7)	5 (14.3)	0.47 ± 0.27	-0.18 (-0,28;-0.07)	*0.001**	0.612
Post-intervention	35 (100.0)	0 (0.)	0.65 ± 0.22			
Total Score, 0-4[b]						
Pre-intervention	33 (94.3)	2 (5.7)	1.76 ± 0.64	-1.04 (-1.25;-0.83)	*0.000**	1.707
Post-intervention	35 (100.0)	0 (0.0)	2.80 ± 0.44			

Table 1 - Analysis of the participants' knowledge, presented as a score for each question and the total score

Source: The Authors, 2021.

*Legend: p < 0.05; paired t-test. Cohen's d effect size: <0.19 insignificant, 0.20 - 0.49 small, 0.50-0.79 moderate, 0.80-1.29 large and > 1.30 very large. MAP=Pelvic Floor Musculature; PA=Pelvic Floor. [a,b] Higher values indicate a better level of knowledge about the pelvic floor.

Evaluated outcome	Mean ± Standard Deviation	Mean differences (95% CI)	p-value	Cohen's d
Quality of life (WHOQOL-BREEF)				
Physical domain, 1-5[a]				
Pre-intervention	3.71 ± 0.60	-0.17 (-0.30;-0.03)	0.019*	0.417
Post-intervention	3.88 ± 0.51			
Psychological Domain, 1-5[a]				
Pre-intervention	4.58 ± 5.50	0.81 (-0.20;2,74)	0.415	0.146
Post-intervention	3.76 ± 0.55			
Social Relations, 1-5[a]				
Pre-intervention	3.42 ± 1.00	-0.21 (-0.45;-0.02)	0.065	0.349
Post-intervention	3.64 ± 0.79			
Environment, 1-5[a]				
Pre-intervention	3.70 ± 0.55	-0.13 (-0.24;-0.02)	0.026*	0.396
Post-intervention	3.83 ± 0.64			
General Score, 0-100[a]				
Pre-intervention	73.7 ± 10.94	-3.05(-4.74;-1.49)	0.001*	1.093
Post-intervention	76.81 ± 10.24			

Table 2 - Comparison of quality of life pre and post intervention (n=35)

Source: The Authors, 2021.

Legend: *p<0.05, Paired t-test. Cohen's d effect size: <0.19 insignificant, 0.20 - 0.49 small, 0.50-0.79 moderate, 0.80-1.29 large and > 1.30 very large. WHOQOL-BREEF= World Health Organization Quality of Life - abbreviated version. [a] Higher values indicate better quality of life for the individual.

score (*p=0*.00; *d*= 1.70). The results showed that the intervention strategy adopted was suitable for improving women's knowledge of PFM, with a moderate magnitude of effect.

The impact of the intervention on QoL was positive in the physical, environmental and overall score domains (p=0.01; p=0.02; p=0.00 respectively), with a large effect size for the overall score, as shown in Table 2.

These results also confirmed, in the short term, that the women who underwent the intervention with adequate physiotherapy supervision and guidance showed a reduction in symptoms related to PF and an improvement in quality of life, with medium to large effect magnitudes. However, it would be possible to make a more precise assessment of characteristics related to pelvic floor muscle strength and awareness, in order to account for how a 4-week intervention can impact these aspects of the musculature. The participants in the study reported that with the assessments and training, they noticed greater self-awareness and motor coordination, which can be greatly exploited with this duration of training. The practice of this form of intervention could positively affect the health of adult women, preventing dysfunctions by increasing the self-awareness of the female population, as well as having a positive impact on the characteristics of the pelvic floor, positively impacting on quality of life.

DISCUSSION

This study sought to compare the effect of an intervention consisting of health education and TMAP on the presence of complaints related to PF, the level of knowledge about PFM, and the quality of life of the participants. It was observed that the frequency of symptoms related to PA is high (80%), and that the intervention was effective in reducing these complaints (51.4%). After the intervention, the level of knowledge about PF increased, as did the participants' quality of life.

There is little evidence in the literature that the intervention takes place over a period of less than 12 weeks of training, due to the theory of muscular physiology, which states that strength training programs show a positive effect after 8-12 weeks[14]. However, in the present study, complaints related to PA were present in 80% of the women who took part in the project before the intervention, falling to 51.4% after the exercise program. This demonstrates that 4 weeks of targeted training is already capable of producing positive effects and reducing complaints, although it is not capable, for the most part, of completely resolving them.

Studies reiterate the lack of knowledge of a significant portion of the female population about their PF. The lack of a basic understanding of the anatomical and functional aspects of PFM can hinder the identification, treatment and prevention of PAD[17]. Lack of access to health and educational forums, embarrassment when talking about the subject and recurring concerns about social stigma may be the reason for this scenario[12].

A study by Kasawara *et al.*[8] stated that knowledge of pelvic floor anatomy is important for promoting body awareness, positive body image, posture and even ensuring personal hygiene. In a survey aimed at determining internet users' knowledge of PFM, its functions, dysfunctions and the role of pelvic physiotherapy, 70.8% of the sample was made up of women, 45% of whom said they had never heard of PFM and 50% said they were unaware of the role of urogynecological physiotherapy[8].

After the intervention protocol, the study participants significantly improved their knowledge of pelvic floor muscles in all the areas assessed by the questionnaire, in line with the study carried out by Batista[11], in which the same questionnaire was used, with weekly lectures given to groups of no more than 10 people. In this sense, it was possible through health education to promote the dissemination of women's knowledge about how their

bodies are the protagonists of this biopsychosocial interaction to which we are inserted.

Also with regard to health education research, Kaestner *et al.*[18] sought to verify the effectiveness of a dynamic protocol for an open group in the public health network, based on lectures and recreational activities on the subject of urinary incontinence, with a consequent increase in the level of knowledge about this dysfunction among the study participants.

The impact of the intervention on QoL was positive in the physical and environmental domains, which demonstrates how PADs transcend women's physical characteristics, impacting on QoL in a biopsychosocial way. UI, for example, has an impact on the QoL of those who suffer from it, even when it is not the main complaint that leads the individual to seek care[19].

The choice of approaching health education and TMAP in a group format of conversation circles was designed to create a welcoming environment that provided a constant exchange of technical knowledge, life experiences, cultural differences and taboo-breaking between the participants and the study researchers. In these meetings, the participants were able to experience a moment of self-care, as well as learning about different topics related to female PA, often identifying with symptoms, paying more attention to their pelvic region, as well as empowering themselves about their own bodies and passing on the knowledge acquired to their family and friends.

One of the limitations of the study was the low demand from female civil servants to take part in the research, which resulted in a small sample, and this may have led to a distribution with great variability in the characteristics of the participants. A larger sample size would have made it possible to have a second group, where the effects of the intervention could be compared only with the physiotherapeutic assessment and TMAP at home, compared to the weekly face-to-face monitoring, or even a control group. There is also a lack of precise equipment to measure PFM function and coordination, such as electromyographic biofeedback. We leave these suggestions for future research.

CONCLUSION

This research shows that the 4-week physiotherapy intervention to promote health, including health education and TMAP, is capable of providing benefits to women's health. The results showed that the strategy used improved women's knowledge of PFM, reduced symptoms related to PFM and improved quality of life.

Therefore, it can be said that practicing this form of intervention could positively affect the health of adult women by preventing and treating muscle dysfunctions related to female PA, as well as having a positive impact on quality of life.

REFERENCES

1. Lopes MHBM, Costa JND, Bicalho MB, Casale TE, Camisão AR, Fernandes MLV. Perfil e qualidade de vida de mulheres em reabilitação do assoalho pélvico. Rev Bras Enferm. 2018;71(5):2496-2505. doi: 10.1590/0034-7167-2017-0602.

2. Piloto AM, Silva E, de Almeida Souza MA, Cirqueira RP. Análise das Características Clínicas em Mulheres com Disfunções do Assoalho Pélvico Atendidas em um Ambulatório no Interior da Bahia/Analysis of Clinical Characteristics in Women with Pelvic Floor Disorders Attended in an Ambulatory of the Interior of Bahia. ID on line Revista De Psicologia. 2019;13(48):109-119. doi: 10.14295/idonline.v13i48.2241.

3. BARACHO, E. Fisioterapia aplicada à saúde da mulher. Rio de Janeiro: Guanabara Koogan; 2018. p. 269-449.

4. Fante JF, Silva TD, Mateus-Vasconcelos ECL, Ferreira CHJ, Brito LGO. Do Women have Adequate Knowledge about Pelvic Floor Dysfunctions? A Systematic Review. Rev Bras Ginecol Obstet. 2019; 41:508-519. doi:10.1055/s-0039-1695002.

5. Cavenaghi S, Lombardi BS, Bataus SC, Machado BPB. Efeitos da fisioterapia na incontinência urinária feminina. Rev Pesq Fisio. 2020;10(4):658-665. doi:10.17267/2238-2704rpf.v10i4.3260

6. Stein SR, Pavan FV, Carneiro-Nunes EF, Latorre GFS. Entendimento da fisioterapia pélvica como opção de tratamento para as disfunções do assoalho pélvico por profissionais de saúde da rede pública. Rev Ciên Méd. 2019;27(2): 65-72. doi:10.24220/2318-0897v27n2a4242

7. Fernandes, ACNL, Palacios-Ceña D, Hay-Smith, J, Pena CC, Sidou, MF, de Alencar AL, Ferreira CHJ. Women report sustained benefits from attending group-based education about pelvic floor muscles: a longitudinal qualitative study. J Physiother. 2021;*67*(3):210–216. doi:10.1016/j.jphys.2021.06.010

8. Kasawara KT, Oliveira JM, Carneiro MCAS, Dias LB, Carvas Junior N. Assessing knowledge on pelvic floor muscles and role of physiotherapy in urogynecology among Internet users. HealthMED. 2015;9(10):419-24. Disponível em: http://pdf.healthmed.ba/healthmed_9_10_web.pdf#page=26

9. Bo K, Frawley HC, Haylen BT, Abramov Y, Almeida FG, Berghmans B, *et al*. An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for the conservative and nonpharmacological management of female pelvic floor dysfunction. Int Urogynecol J. 2017;28(2):191-213. doi: 10.1007/s00192-016-3123-4

10. Fernandes, A. C. N. L., Reis, B. M., Patrizzi, L. J., & Meirelles, M. C. C. C. (2018). Clinical functional evaluation of female's pelvic floor: integrative review. Fisioter Mov. 2018;31:1-9. doi:10.1590/1980-5918.031.AO24

11. BATISTA, RAL. Efeito de uma atividade educativa na função dos músculos do assoalho pélvico em mulheres: ensaio clínico randomizado e controlado. Ribeirão Preto. Tese [Doutorado em Ciências] - Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo; 2017.

12. FREITAS, LM. Conhecimento de mulheres sobre os músculos do assoalho pélvico e sua relação com a capacidade de contração e sintomas de incontinência urinária: estudo transversal. Ribeirão Preto. Dissertação [Mestrado em Fisioterapia] - Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo; 2018.

13. Kluthcovsky, ACG, Kluthcovsky FA. O WHOQOL-bref, um instrumento para avaliar qualidade de vida: uma revisão sistemática. Rev Psiquiat Rio Gd Sul. 2009;31(3). doi:10.1590/S0101-81082009000400007

14. Dumoulin C, Morin M, Mayrand MH, Tousignant M, Abrahamowicz M. Group physiotherapy compared to individual physiotherapy to treat urinary incontinence in aging women: study protocol for a randomized controlled trial. Trials. 2017;18(1):1-14. doi:10.1186/s13063-017-2261-4

15. LEE, DK. Alternatives to P value: confidence interval and effect size. Korean J Anesthesiol. 2016;69(6):555-562. doi:10.4097/kjae.2016.69.6.555

16. Espirito-Santo H, Daniel. F: Calcular e apresentar tamanhos do efeito em trabalhos científicos (1): As limitações do $p < 0,05$ na análise de diferenças de médias de dois grupos [Folha de cálculo suplementar]. RPICS. 2015;1(1):3-16. doi:10.7342/ismt.rpics.2015.1.1.14

17. Do Nascimento, ES. Avaliação do autoconhecimento dos músculos do assoalho pélvico e incidência de incontinência urinária em mulheres praticantes de Crossfit®: Estudo transversal. Revista Científica UMC. 2020; 5(3). Disponível em: http://seer.umc.br/index.php/revistaumc/issue/view/20/showToc

18. Kaestner K, Da Roza T, Virtuoso J, Tonon da Luz S. Eficácia da dinâmica de grupo em educação em saúde em mulheres com incontinência urinária. Arquivos de Ciências da Saúde. 2016;23(2):54-59. doi: 10.17696/2318-3691.23.2.2016.296.

Alappattu M, Neville C, Beneciuk J, Bishop M. Urinary incontinence symptoms and impact on quality of life in patients seeking outpatient physical therapy services. Physiother Theory Pract. 2016;32(2), 107-112. doi:10.3109/09593985.2015.1116648