


Knowledge of pelvic floor disorders in young women: a cross-sectional study


Conhecimento dos distúrbios do assoalho pélvico em mulheres jovens: um estudo transversal

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Abstract

Introduction: Young women's knowledge about pelvic floor function and dysfunction are poor. **Objective:** To identify the level of knowledge of young women about pelvic floor muscles (PFM) anatomy and function, pelvic floor muscle dysfunction (PFMD), pelvic organ prolapse (POP), and sexual dysfunction (SD). **Methods:** This is a cross-sectional study. Two hundred forty-two (242) young women from first to the third year of high school from ten public schools, in geographically disparate areas of a Brazilian county serving economic minority student populations, participated in the study. Data analysis was performed using SPSS 20.0 (SPSS Inc., Chicago, IL). The categorical data were expressed as absolute and relative frequency. **Results:** Only 28% of the young women knew PFM, and 26% answered to be able to contract these muscles. The prevalence of urinary incontinence was 16%, while 5% reported fecal incontinence. The previous knowledge about POP was similar between bladder and uterus prolapse, 34% and 40%, respectively. SD was known by 48% of the young women. Seventy-seven young women (31.8%) declared to have had sexual intercourse. Ten percent declared difficulties to allow vaginal penetration, and 48% of those who were able to have penetration declared that they experienced pain and discomfort. **Conclusion:** Young women have little knowledge about the PFM anatomy and function, PFMD, POP, and SD. In addition, they have complaints related to sexual practice, such as difficulty during vaginal penetration and pain.

Keywords: Adolescent. Health education. Pelvic floor disorders. Primary prevention. Women's health.

Resumo

Introdução: O conhecimento de mulheres jovens sobre a função e disfunção do assoalho pélvico é insuficiente. **Objetivo:** Identificar o nível de conhecimento de mulheres jovens sobre a anatomia e função dos músculos do assoalho pélvico (MAP), disfunção dos músculos do assoalho pélvico (DMAP), prolapso de órgãos pélvicos (POP) e disfunção sexual (DS). **Métodos:** Trata-se de um estudo transversal. Participaram do estudo 242 mulheres jovens do primeiro ao terceiro ano do ensino médio de dez escolas públicas, em áreas geograficamente díspares de um município brasileiro que atende a populações de estudantes de minorias econômicas. A análise dos dados foi realizada usando SPSS 20.0 (SPSS Inc., Chicago, IL). Os dados categóricos foram expressos em frequência absoluta e relativa. **Resultados:** Apenas 28% das mulheres jovens conheciam os MAP e 26% responderam ser capazes de contrair esses músculos. A prevalência de incontinência urinária foi de 16%, enquanto 5% relataram incontinência fecal. O conhecimento prévio sobre POP foi semelhante entre o prolapso de bexiga e útero, 34% e 40%, respectivamente. De todas as mulheres jovens avaliadas, 48% tinham conhecimento sobre DS. Setenta e sete (31,8%) declararam ter vivenciado relação sexual, sendo que 10% destas declararam dificuldade para permitir a penetração vaginal e 48% das que conseguiram ter penetração declararam sentir dor e desconforto. **Conclusão:** Mulheres jovens apresentam pouco conhecimento sobre a anatomia e função dos MAP, sobre as DMAP, POP e sobre as DS. Além disso, apresentam queixas relacionadas à prática sexual, como dificuldade durante a penetração vaginal e dor.

Palavras-chave: Adolescente. Educação em saúde. Distúrbios do assoalho pélvico. Prevenção primária. Saúde da mulher.

Introduction

Decades after a health model based on secondary and tertiary health care, a movement towards a preventive approach has been on the rise in recent years.^{1,2} The implementation of preventive measures is challenging when it comes to pelvic floor muscle dysfunction (PFMD), pelvic organ prolapse (POP), and sexual dysfunction (SD), since the literature shows that women do not have sufficient knowledge about the subject, do not know available treatment options, and are not able to identify factors that may predispose the

onset of these disorders.^{2,3} The lack of information about general PFMD by the population results in delayed demand for the health sector, and this occurs long after the onset of the first symptoms, when these dysfunction has evolved and, therefore, has other components that make it improvement difficult.²⁻⁶

This context implies social, physical, psychological, and economic disorders for women.^{2,6,7} Politically, the study of preventive education strategies is justified not only by the importance of devising new strategies to restore the well-being of the individual, but also by the fact of the economic impact.^{2,6,8} With the increase in life expectancy and the chronicity of general PFMD, the tendency is that the treatment is done later and in greater complexity, resulting in higher expenses.^{2,6,7} Sung et al.⁷ estimated that the costs have increased in recent decades; direct spending on PFMD annually is \$412 million.

The university has a very important mission, which goes beyond its physical limits, which is to understand the reality of the community that is inserted and, in this way, to prevent the appearance of dysfunctions that can cause damage to society. Thus, the aim of this study was to identify the level of knowledge of young women about pelvic floor muscles (PFM) anatomy and function, PFMD, POP, and SD.

Methods

Ethical aspects

This is a cross-sectional study, approved by the research ethics committee (n. 1918/2009) of the School of Philosophy and Science of UNESP (Universidade Estadual Paulista/Campus Marília), Brazil.

Participants: inclusion criteria

All young women from the first to the third year of high school from ten public schools, in geographically disparate areas of a Brazilian county serving economic minority student populations, were invited to participate in the study. All participants over the age of 18 signed the consent form. Participants under the age of 18 years old presented the consent form signed by their respective legal guardians.

Procedures

The study was conducted from April/2016 to June/2018. Two hundred and forty-two young women were recruited. Two meetings were held at each participating school; the first one was intended to inform about the objectives of the study and to invite the young women to participate. The young women who agreed to participate received the consent form printed and were informed to bring it signed at the next meeting. In the second meeting, the young women answered the self-reported questionnaire pre-designed by the research team to assess the knowledge about PFM anatomy and function, PFMD, POP, and SD.

Statistical analysis

Data analysis was performed using SPSS 20.0 (SPSS Inc., Chicago, IL). The categorical data were expressed as absolute and relative frequency.

Results

Out of 643 young women that were invited, 220 refused to participate, 114 did not return consent forms and 67 did not attend the assessment day (Figure 1). Two hundred and forty-two young women, with an average

age of 15.5 ± 0.9 years old, participate in the study. Table 1 shows that only 28% of the young women knew PFM. The proportion of young women who did not want to answer the PFM function question was very high (72%). The same occurred on their perception of the ability to contract the PFM, only 26% answered to be able to do it. When questioned if they knew women with urinary incontinence, nearly half of them (51%) answered positively, and the prevalence of urinary incontinence in young women was 16%.

When asked if they knew women in their family with fecal incontinence, 9% answered yes, 21% knew women with fecal incontinence, and the prevalence of young women that reported fecal incontinence was 5%.

The previous knowledge about POP was similar between bladder and uterus prolapse, 34% and 40%, respectively. Around 60% considered unable to answer the question about if they knew someone with bladder and uterus prolapse. SD was known by 48% of the young women. When asked whether they knew people with vaginismus/dyspareunia, 10% chose yes and more than half did not answer the question. Seventy-seven young women (31.8%) declared to have had sexual intercourse. Ten percent declared difficulties to allow vaginal penetration, and 48% of those who were able to have penetration declared that they experienced pain and discomfort during sex.

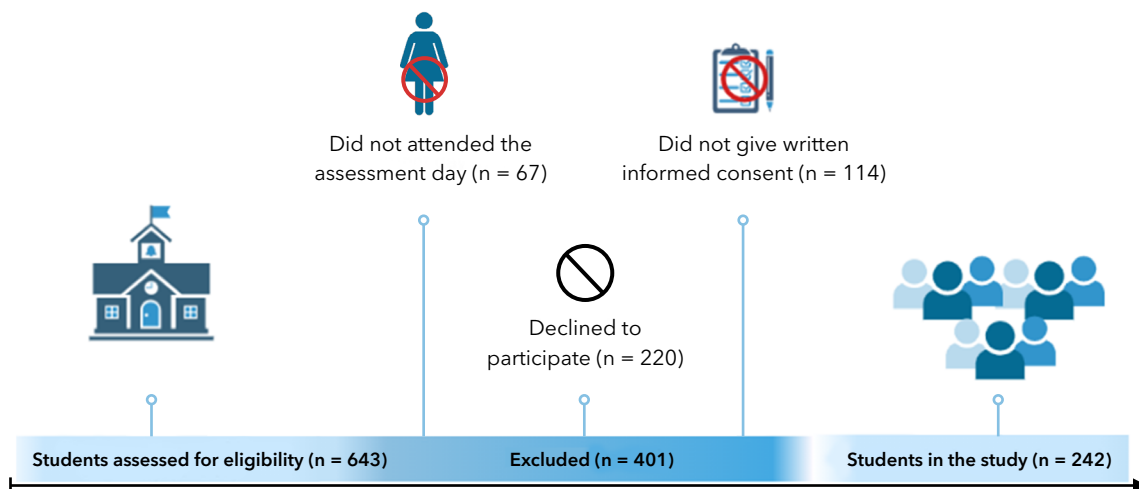


Figure 1 - Study flowchart.

Table 1 - Young women's conceptual knowledge of pelvic floor muscle anatomy and function, pelvic floor muscle dysfunction, pelvic organ prolapse, and sexual dysfunction (n = 242)

Questions	Yes (%)	No (%)	n/a (%)
Do you know about pelvic floor muscles?	28	72	-
Do you know the pelvic floor muscles function?	26	2	72
Are you able to perform pelvic floor muscles contractions?	26	1	73
Do you know about women that leak urine when cough, jump, laugh or after a sudden and strong need to urinate?	51	49	-
Do you know if any women in your family leak urine unintentionally?	22	29	49
Do you leak urine unintentionally?	16	73	11
Do you know about women that leak stool when cough, jump, laugh or after a sudden and strong need to evacuate?	21	79	-
Do you know if any women in your family leak stool unintentionally?	9	12	79
Do you leak stool unintentionally?	5	61	34
Do you know about women who present a dropped bladder?	34	66	-
Do you know if your relatives present a dropped bladder?	15	19	66
Do you know about women who present dropped uterus?	40	56	4
Do you know if your relatives present dropped uterus?	15	25	60
Do you know about women who experience pain or are not able to have sexual intercourse?	48	52	-
Do you know if your relatives had ever reported those sexual difficulties?	10	38	52
Are you able to allow penetration?*	90	10	-
Have you ever experienced pain or discomfort during sexual intercourse?***	48	52	-

Note: n/a = not answered. *This domain was performed in young women who had sexual intercourse (n = 77). ** This domain was performed in young women who had sexual intercourse and were able to have penetration (n = 69).

Discussion

From our findings emerged information about the knowledge of PFM anatomy and function, PFMD, POP, and SD of the young women. Furthermore, our findings showed an overview of the prevalence of PFMD and SD among them. Choosing schools to speak on health-related issues is an interesting strategy to detect early health issues.^{2,9} The implementation and discussion in this environment could encourage young women to share new information with their colleges and could be a way to spread information to the community.^{2,9}

Additionally, in the beginning, it was possible to observe that urinary incontinence (51%) and SD (48%) were the domains that young women were more acquainted compared to uterus prolapse (40%), bladder prolapse (34%) or fecal incontinence (21%). Similar questions were asked to adolescents by Arbuckle et al.,¹⁰ however they did not divide PFMD into urinary

incontinence and fecal incontinence; therefore, their study showed a higher percentage (62.9%) of adolescents who declared previous knowledge about both PFMD. On the other hand, comprehension of POP was more limited in their study (19.5%).¹⁰ The self-reported prevalence of urinary and fecal incontinence¹⁰ showed similarity to our study, including the proportion of relatives' complaints. Nevertheless, in the domains POP and "family member with fecal incontinence", the prevalence was higher in our study.

A recent systematic review warned that only a few women know sufficient information about PF health.⁴ Our study shows little understanding of PFMD and POP symptoms. Besides, less than 30% of the young women have a background in PFM anatomy or function, which makes it hard to prevent or identify problems and search for assistance earlier.

A study by Mandimika et al.¹¹ showed similarities with our findings in older women. Earlier identifying this gap could avoid situations in which adult women address urinary incontinence as a natural process of aging that takes part in life and just naturalizes the process.¹¹

Another important finding in this study was that 77 young women (31.8%) declared to have had sexual intercourse; this prevalence is higher than an Irish study that showed that 21.2% of young women of similar age were sexually initiated.¹² Early sexual initiation has been associated with physical and psychological risks.¹³ In our study, we also asked young women who had initiated sexual intercourse about sexual issues, and alarming data showed that 10% experienced difficulty during penetration and 43% experienced pain/discomfort during sexual intercourse.

Superstition on the subject of sexuality, misinformation, and difficulty in accessing quality information only increase fear and feed beliefs that will culminate in future problems.^{2,6,14} Further studies are needed to explore how to better educate and improve women's awareness of these prevalent PF disorders. The main strength of this research was that it was conducted in schools, and showed that young women have little knowledge about the subject addressed, although many are already sexually active, demonstrating that there is a need to teach these young women to avoid future problems.

Learning about PF health in an open and safe place provides discussion with high-quality information, which can be shared with others in the community. A limitation of this research was that it did not present information about the demographic characteristics of the young women, which could be important to assess the social context. Future research could implement physical evaluation in young women, giving support to better understand the results, and could perhaps involve workshops to guide young women about the PF disorders.

Conclusion

Young women have little knowledge about the PFM anatomy and function, PFMD, POP, and SD. In addition, they have complaints related to sexual practice, such as difficulty during vaginal penetration and pain or discomfort.

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Authors' contributions

All authors were equally responsible for the conception design, analysis, interpretation of data, writing of the manuscript, revision and approval of the final version.

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