

Using a wrap skirt to improve the pelvic examination experience

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Conflicts of interest

The authors have stated explicitly that there are no conflicts of interest in connection with this article.

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Introduction

Pelvic examination causes many women embarrassment, discomfort, and anxiety. Nakedness, vaginal odor concerns, and genital exposure on the examination chair or table combine to instill a sense of shame and vulnerability (1–4) extending either side of the physical examination itself to comprise the few steps between changing room and chair and the postprocedure verbal exchange before the woman gets dressed. Other factors impairing the experience include fear, whether of pain, cold instruments, or the discovery of disease (4,5), failure to fully explain the procedure, third-party entry into the examination suite, and telephone interruptions. In addition,

Abstract

Introduction. The study aims were to analyze the experience of women and their physicians of nakedness when moving between changing room and examination chair and during pelvic examination itself, and to assess the protective benefit of a wrap skirt in alleviating the associated discomfort and vulnerability. **Material and methods.** We offered 1000 women a wrap skirt for pelvic examination and asked them to complete a post-procedure questionnaire. Physicians were invited to complete a similar but separate questionnaire. Data were analyzed using chi-squared contingency tables. **Results.** A total of 425 women (43%, age 15–78 years) completed the questionnaire; 51% felt uncomfortable and embarrassed during the examination, Muslim women significantly more so ($p < 0.001$). Most women ($n = 255$; 58%) rated the wrap skirt a significant improvement; 69% requested it for future examinations, significantly more so if the physician was male rather than female (66% vs. 54%, $p = 0.003$). Even the one-third of women experiencing no discomfort reported improvement. Most examiners ($n = 45$; 56%) found the wrap skirt beneficial; 31 (38%) were unconvinced. **Conclusions.** Pelvic examination as practiced in many countries, on women naked from the waist down throughout, causes unnecessary embarrassment. A simple protective measure, such as a wrap skirt, significantly alleviates the discomfort and sense of vulnerability associated with nakedness.

reported levels of shame and pain depend on both examiner gender and women's ethnocultural and religious background (4,6–9).

Many physicians and midwives take account of these feelings by trying to minimize discomfort during pelvic examination. They build up confidence by talking to the women and explaining the procedure in detail. They

Key Message

Pelvic examination causes many women embarrassment, discomfort, and anxiety. Such feelings and the sense of unclothed vulnerability are alleviated using a simple protective measure such as a wrap skirt.

provide a separate changing room, a disposable gown \pm blanket or other drape, instruments at body temperature, and a chaperone as appropriate (1,2,9–13).

However, such measures have yet to enter standard practice where women are not routinely offered such provisions. Many women, no matter what their sociocultural background, find this undignified and feel more comfortable wearing a long shirt to cover their pelvis, in particular when moving between undressing area and chair, especially if this takes place in the physician's presence.

We therefore developed a disposable mid-thigh wrap skirt with an adhesive fastener to cover the pelvic area after women undress and before they leave the changing room. Our aim, using an anonymous questionnaire, was to analyze women's experience of moving between changing room and chair and undergoing pelvic examination, and to assess the effect of a wrap skirt in alleviating the associated discomfort and sense of vulnerability. Since physician perception of women's well-being or discomfort during pelvic examination is not always consistent with women's reported feelings, physicians completed a separate questionnaire of their own.

Material and methods

The study was approved by the Research Ethics Committee of the University of Zurich (StV 26/2006). All Department of Obstetrics and Gynecology outpatients were offered a single-size disposable waist to mid-thigh wrap skirt (manufactured and provided by IVF Hartmann, Neuhausen, Switzerland; Figure 1); they wore their normal clothes over their upper body. Women were asked to complete a post-procedure questionnaire produced in six languages (Albanian, English, French, German, Italian, and Portuguese) on their feelings and discomfort during the examination and on the impact of the wrap skirt on

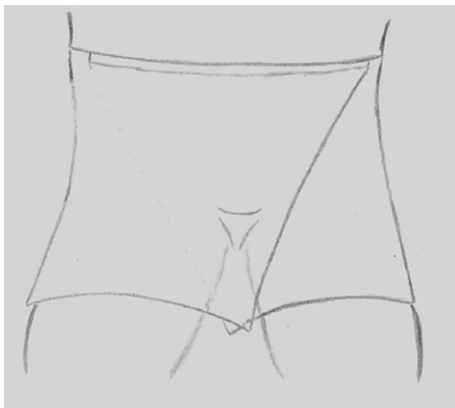


Figure 1. Wrap-skirt like sheet.

their well-being (Table 1). Completed questionnaires were dropped in a waiting room box to ensure anonymity. Physicians completed a separate questionnaire. Both questionnaires were developed jointly with the Institute of Psychosocial Medicine at the University of Zurich.

Between February and August 2007, 1000 women were invited into the study. Wrap skirts were provided with poster instructions in the changing room next to the examination suite. Women left the changing room in the wrap skirt with normal clothes over their upper body. Physicians could easily open the wrap skirt during examination if necessary. Women then returned to the changing room in the wrap skirt.

Physicians performing pelvic examinations and attending a teaching course at our institution ($n = 104$) were also interviewed by anonymous questionnaire on their views of women's feelings during examination and the impact of the wrap skirts (Table 2).

Statistical analysis

We analyzed the frequency ratings of three grades of well-being/discomfort (very embarrassed/unpleasant – embarrassed/unpleasant – not embarrassed/not unpleasant) with respect to various parameters using chi-squared contingency tables (14). Initially we analyzed statistical significance in the overall population; where we found significant differences, we undertook subset analyses to calculate the significance of intergroup ratings. We performed the calculations using the programs available at www.physics.csbsju.edu/stats/ (15), assuming a significance level of <0.05 .

Results

Of the 1000 women offered a wrap skirt 425 (43%) completed the questionnaire. Mean age was 34 years (range 15–78 years); 47% were Swiss, 48% non-Swiss, and 5% gave no information. Over half were Christian (56%), 14% Muslim, 4% Hindu, Buddhist, Jewish or Jehovah's Witness, and 26% gave no information. The purpose of pelvic examination was routine care in 47%, pregnancy check-up in 19%, emergency consultation in 10%, and private physician referral for second opinion in 18%; 6% gave no information.

Half the women (51%) experienced embarrassment during both examination situations, be it moving “uncovered” between changing room and chair (Figure 2a) and/or sitting “uncovered” on the chair (Figure 2b). Religion significantly affected both experiences: Muslim and other non-Christian women reported the most embarrassing/unpleasant feelings (Figure 3a,b; $p < 0.001$).

Table 1. Questionnaire for patients.

1. Age
2. Country of origin
3. Religion
4. Cultural background
5. Education level
6. Reason for consultation
 - a. emergency
 - b. referral by private physician
 - c. gynecological routine examination
 - d. pregnancy routine examination
7. Frequency of gynecological examination?
 - a. <1 × per year
 - b. 1–2 × per year
 - c. 2 × per year
8. What are your feelings, when walking “uncovered” from the changing room to the examination chair?
 - a. not embarrassing/unpleasant
 - b. embarrassing/unpleasant
 - c. very embarrassing/unpleasant
9. What are your feelings, when sitting “uncovered” on the examination chair?
 - a. not embarrassing/unpleasant
 - b. embarrassing/unpleasant
 - c. very embarrassing/unpleasant
- 10.1. Would you like to wear the wrap skirt-like sheet when the examiner is a male?
 - a. yes
 - b. no
- 10.2. Would you like to wear the wrap skirt-like sheet when the examiner is a female?
 - a. yes
 - b. no
11. How do you assess your well-being during the examination with the wrap skirt-like sheet compared without the sheet?
 - a. worse
 - b. unchanged
 - c. improved
 - d. much improved
12. Would you like to wear the wrap skirt-like sheet during the following examination?
 - a. yes
 - b. no
13. Additional comments

Pregnant women tended to feel less embarrassed during both situations compared with those attending a routine, emergency, or referral consultation, but the difference was not significant (61% vs. 48% not embarrassed; $p = 0.09$). Age also had no significant effect ($p > 0.20$), any more than education ($p > 0.09$) or frequency of gynecological examinations per year ($p > 0.14$).

The question “Would you like to wear the wrap skirt regardless of the examiner’s gender?” elicited a positive response in 69%. Significantly more women requested the skirt with a male than with a female physician (66% vs.

Table 2. Questionnaire for physicians.

1. Age
2. Gender
3. Speciality
 - a. gynecologist
 - b. gynecologist in training
 - c. general practitioner
 - d. others
4. How often do you notice feelings of embarrassment and discomfort during the pelvic examination?
 - a. daily
 - b. several times per week
 - c. several times per month
 - d. rarely
5. Which measures do you take to protect the intimate area of the patients during the examination?
 - a. presence of a chaperone
 - b. changing room to undress
 - c. use of a “cover”
 - d. others
6. Tell us three issues, which are mostly disturbing to women during the examination?
7. Do you think that the need of undressing is one of the key issues of patients during the examination?
 - a. yes
 - b. maybe
 - c. no
8. Do you think that the examination is especially embarrassing/unpleasant for defined groups of patients, i.e., age, education level, country of origin, religion, cultural and ethical background?
 - a. yes
 - b. maybe
 - c. no
9. Do you think that the gender of the examiner influences the well-being/discomfort of the patients during the examination?
 - a. yes
 - b. maybe
 - c. no
10. Do you think that a “cover” to protect the intimate area during examination is helpful and sensible?
 - a. yes
 - b. no
11. Would you offer a “cover” to your patients in your private practice?
 - a. yes
 - b. no

54%, $p = 0.003$). Of the 217 women feeling embarrassed moving “uncovered” between changing room and chair and/or being examined “uncovered” on the chair, almost all (93%) requested a wrap skirt. Of the 208 women not feeling embarrassed, significantly fewer, but a still substantial proportion (44%; $p < 0.001$), expressed a wish for the wrap skirt.

Most women reported improved well-being with the wrap skirt in both exposure situations ($n = 255$; 58%;

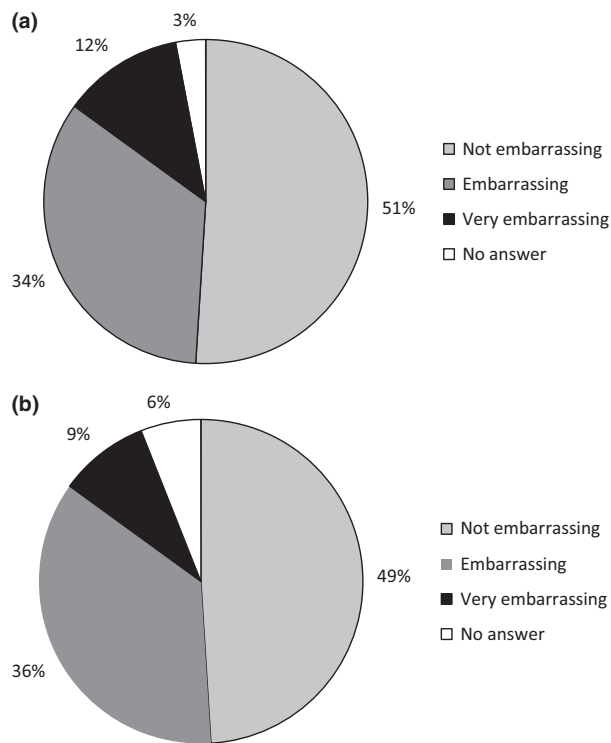


Figure 2. (a) All 425 patients: Walking "uncovered" from changing room to examination chair. (b) All 425 Patients: Examination "uncovered" on the chair.

132 (31%) felt no different, 4% felt worse, and 7% did not answer this question.

Of the 217 women embarrassed by moving "uncovered" between changing room and chair, and/or by being examined "uncovered" on the chair, 86% reported improvement. Of the 208 women not feeling embarrassed, significantly fewer ($p < 0.001$), but still almost one-third (29%), reported improvement.

Two-thirds of all women (68%) wished for a wrap skirt in future examinations. This proportion increased to 95% among the 217 women embarrassed by moving "uncovered" to/from the chair and/or of being examined "uncovered" on the chair. Of the 208 women not feeling embarrassed, only 82% answered this question (vs. 100% of embarrassed women); significantly fewer such women, but still 50% ($p < 0.001$), nevertheless preferred a wrap skirt. Religious background had a significant effect: significantly more Muslim than Christian women wished for a wrap skirt (80% regardless of examiner gender vs. 64% for male and 53% for female physicians; $p \leq 0.02$).

The questionnaire was completed by 81 physicians (78%; females, $n = 64$). Most highlighted nakedness as a key issue for women, and took intimacy-protective measures. Female physicians tended to notice embarrassment/discomfort more often than male physicians (34% vs.

13% daily, 30% vs. 40% several times per week; $p = 0.16$). However, significantly more female physicians reported an influence of examiner gender on patient well-being (90% vs. 40%; $p < 0.001$). Over half of all physicians (56%) thought a wrap skirt helpful and sensible; 38% were unconvinced, yet 63% stated their intention to use a "cover" in their private practice.

Discussion

Our study shows that a simple wrap skirt significantly alleviates the discomfort, shame and sense of vulnerability experienced in association with nakedness and genital exposure by many women during pelvic examination (2–4,6,12). Many physicians alleviate this situation by offering a changing room and by examining breasts and genitalia in sequence, so that half the body remains covered at any one time, so avoiding complete nakedness. In some Asian countries, such as Taiwan, a female chaperone draws a curtain that screens women from the physician and restricts the latter's field of vision to the genitalia (13). In some English-speaking countries women are offered a "hospital gown", whereas in some European countries, including Switzerland, offering a cover is not standard.

Our study confirms the embarrassment and discomfort associated with the entire pelvic examination sequence. Half the women were disturbed not only by being examined on the chair, but also by moving the few steps between changing room and chair. There is therefore a pressing need for a clothing item that protects the naked pelvis from the moment the woman exits the changing room until the moment she returns.

Religious as well as cultural background significantly impacts pelvic examination experience. Muslim women were significantly more distressed during the examination and some explicitly stated that they would reject a male examiner. The great majority of Muslim women residents were not raised in Switzerland and live in a closed immigrant community. Their religious background cannot be separated from their ethnocultural environment (16). Women from neither Christian nor Muslim backgrounds were even more disturbed by gynecological examination. Many were raised far from Europe and were unfamiliar with preventive medical procedures such as pelvic examination. Our findings were consistent with previous studies showing the significant overlay of religion and cultural tradition on the desire for pelvic privacy: one-third of immigrant women refused examination by a male physician, with none claiming that their husband was the reason for their refusal (17).

Neither woman's age, educational background, frequency of previous gynecological examination, nor reason for consultation significantly influenced well-being or

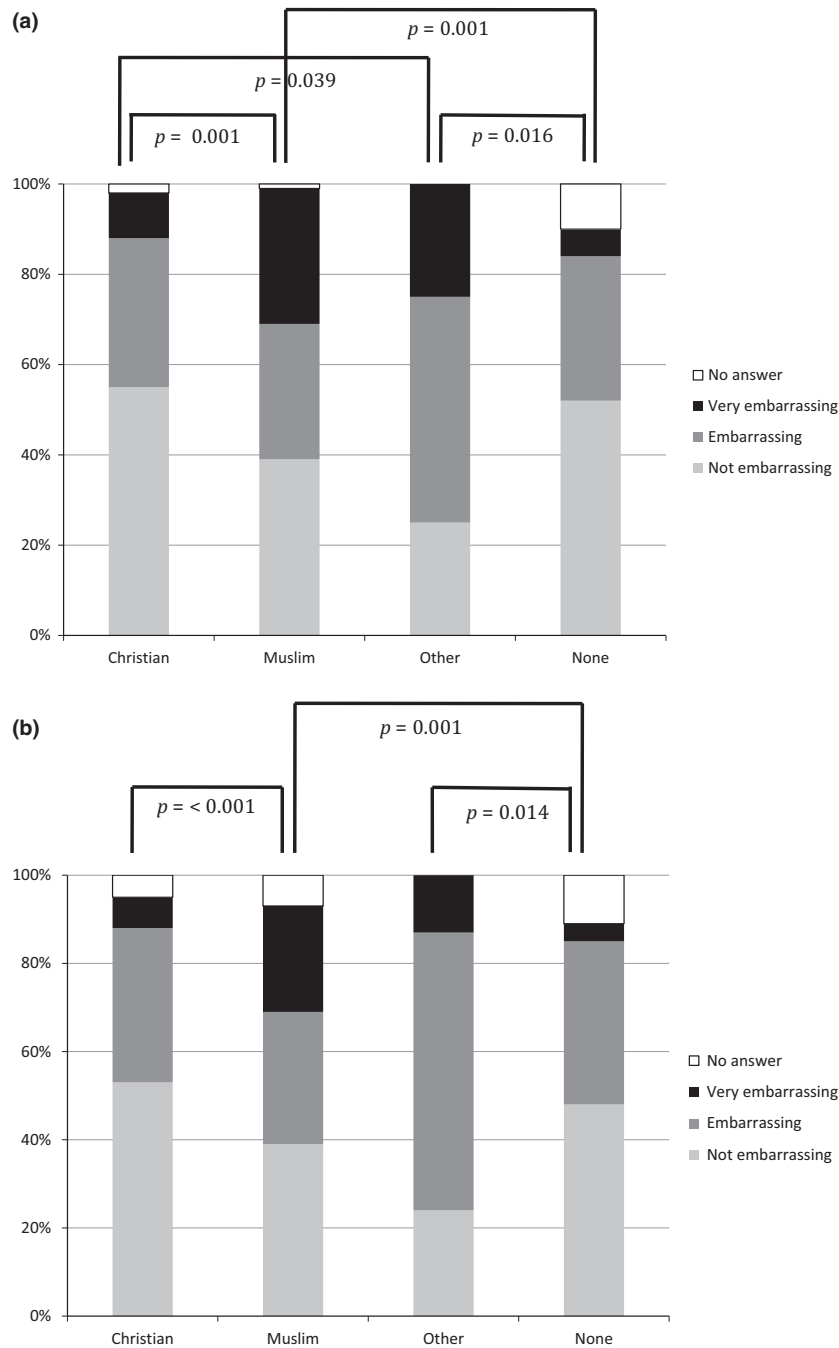


Figure 3. (a) Walking "uncovered": Effect of religion. χ^2 -contingency table analysis: Significant difference among all patient groups ($p < 0.001$); significant differences between subset groups are shown in the figure. (b) Examination "uncovered" on the chair: Effect of religion. χ^2 -contingency table analysis: Significant difference among all patient groups ($p < 0.001$); significant differences between subset groups are shown in the figure.

discomfort, indicating that the results can be extrapolated to any pelvic examination setting. Only pregnant women tended to feel less embarrassed at any point, presumably because their primary concern, outweighing embarrass-

ment on their personal account, was for the unborn child, while fetal ultrasound is beneficial in its own right, alleviating maternal anxiety and strengthening maternal-fetal attachment (18).

Most physicians noted embarrassment and discomfort in their patients, and confirmed that associated nakedness was primarily responsible (2,3). Most therefore rated the wrap skirt effect as beneficial and stated their intention to use some form of “cover” in future examination settings. The influence of examiner gender on women’s well-being was judged significantly less important by male physicians than by female physicians and the women themselves. This may be the effect of calculated optimism on the part of male examiners.

Most women (58%) stated that the protective effect of the wrap skirt improved their experience of the examination and/or of moving to and from the chair. Most (68%) would also opt for a wrap skirt for future gynecological examinations. In particular, of women feeling embarrassment and discomfort, over 80% and 90%, respectively, reported significant improvement during the examination and a strong wish for protective covering in future examinations. Perhaps more tellingly, even a substantial proportion (29%) of those not feeling embarrassed reported improvement, with 50% stating that they would opt for cover during future examinations. These findings are powerful evidence that physicians need to take account of, and do their utmost to alleviate, the embarrassment and discomfort implicit in pelvic examination. This applies particularly to the busy outpatient settings where women are seen by unknown and often changing medical staff.

The strength of our study is that it was conducted in a variety of gynecological consultation settings in a large university outpatient clinic. Furthermore, we were able to recruit a representative sample of our population by translating the questionnaire into six languages. Answers were further anonymized by being collected from a waiting area box rather than being handed to staff. On the other hand, the absence of supervision in this procedure may have accounted for the low response rate (42%).

In summary, a wrap skirt significantly improves the embarrassment, discomfort and sense of vulnerability experienced by many women in association with the nakedness implicit in pelvic examination.

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