Abstract

Background/Objectives: Patient dignity is a core component of the Canadian health care system; however, there may be challenges to maintaining patient dignity in clinical settings requiring total body skin examination (TBSE) for adequate assessment and diagnosis. As standardized TBSE draping practices have not been investigated in a dermatology setting, we sought out to investigate subjective patient experiences of draping practices.

Methods: A cross-sectional study was performed using a paper survey in dermatology hospital clinics over a 6-month period to 150 patients.

Results: Draping was considered important by over 50% of patients surveyed (54.7%). Respondents who indicated that draping impacted their comfort level “a lot” or “very much” had a mean age of 52 and were more likely to be females ($P < .05$). Females were also more likely to answer that their body weight/shape ($P < .05$), physician of same ($P < .01$) or opposite sex ($P < .001$), and the degree of privacy offered by drapes ($P < .001$) impacted their comfort when undressing for a TBSE. Respondents who reported that any assessed factor impacted their comfort during a TBSE were also younger ($P < .05$), suggesting that younger and female patients were more likely to have comfort concerns than males.

Conclusions: Our study confirmed that most patients surveyed considered draping to be important. Our findings highlight the importance of adequate draping practices to maintain patient privacy and dignity for all patients, with special attention to younger female patients to ensure they feel as comfortable as possible. Future research should focus on how these identified patient comfort factors can be implemented into medical education.

Keywords
total body skin examination, draping, dermatology

Introduction

Patient dignity is a core component of the Canadian health care system and is universally selected by patients as one of the most important of the 8 domains outlined by the World Health Organization for patient experience.1-3 One key measure to enhance patient dignity in healthcare settings is through offering appropriate draping. Draping practices are defined as utilizing a sheet, paper cloth, or gown to cover part or all of a patient’s body during examination in order to preserve privacy.4 The type of drape can vary depending on physician context including preference, clinical setting, and available resources.

The College of Physicians and Surgeons of Ontario published an article and a video as an attempt to standardize draping of patients in generic medical settings.5 Among several proposed strategies, this video suggests to “only expose the area of the body being directly examined.” In a dermatology setting, however, this is not realistic due to the unique nature of the total body skin exam (TBSE), which requires patients to undress completely in order to visualize large surface areas of the skin at once. This is done for a complete and comprehensive assessment to make an accurate diagnosis. Modified draping techniques in dermatology are therefore integral for dermatologists to maintain patient dignity without compromising patient medical care during the TBSE.

Despite the central role of draping as a tool to maintain patient dignity, there is no standardized draping practice that exists for a general patient population, and there is an overall
paucity of research pertaining to draping in medicine. Of the existing literature, there are a number of studies that suggest females, when compared with males, prefer leaning their undergarments in place during TBSEs and report feeling embarrassed prior to their TBSEs, which may be due to their increased levels of body dissatisfaction and lower self-esteem.6–9 However, there are no studies to date specifically focused on draping in the dermatology setting.

Drawing from clinical experience and existing literature, we hypothesized that younger female patients in the dermatology setting would place greater importance on the role of draping and be more likely to experience discomfort during the TBSE. The primary aim of this study was to investigate subjective patient experiences of draping practices during TBSEs in a dermatology setting. Specifically, we aimed to further elucidate patient knowledge of draping practices, comfort with regard to skin examination and draping, potential factors influencing comfort levels, as well as perceived importance of draping.

Methods

Study Design

A cross-sectional study was performed using a paper survey (Supplemental Appendix A) to evaluate dermatology hospital clinic draping practices and comfort levels from a patient’s perspective.

Participants and Recruitment

Patients with an in-person Dermatology appointment at the Ottawa Hospital (TOH) Civic and General Campuses between November 15, 2020, and March 15, 2021, were screened for inclusion in the study. All patients that were required to remove any article of clothing as part of the assessment met inclusion criteria for the study. Patients who did not provide verbal consent were excluded from the study.

Patients seen in the dermatology clinic were approached by research investigators at the outset of their clinic visit and offered voluntary participation in the study. Surveyed clinics included all general dermatology clinics, which were each staffed by 1 dermatologist, with a total of 8 dermatologists’ clinics surveyed. It is standard practice at our organization that appointments may have included an initial assessment by a learner (dermatology resident or medical student) before dermatologist assessment. Clinic staff were blinded to all aspects of the study in order to minimize any potential bias or modification of behavior. There was no compensation or study follow-up for patients who completed the survey.

Surveys

A study-specific survey was custom-developed by the researchers (Supplemental Appendix A). The survey consisted of 3 major components: (1) demographic characteristics and reason for clinic visit, (2) 4 self-reported questions regarding experience of draping practices and factors affecting their experience of undressing for a TBSE and draping during their assessment, and (3) a free text section for patient feedback and/or comments. Questions on draping experience were rated on a 5-point Likert scale.

Outcome Measures

Primary outcomes included patients’ perceived importance of draping, physician draping frequency, and comfort level from a patient’s perspective. Comfort level was measured by factors including body weight/shape, condition of skin, sex of physician, presence of learners during the encounter, and degree of privacy offered.

Ethics Approval

Ethics approval was obtained through the Research Ethics Board at The Ottawa Hospital for patient-administered surveys. All surveys and administration were conducted according to the World Medical Association Declaration of Helsinki.

Statistical Analysis

Data collected from the surveys were compiled into a centralized, database designed specifically for the study using Microsoft Excel. The data were summarized in a table format using descriptive statistics (means, ranges). Logistic regression analysis was performed by the Ottawa Methods Center at The Ottawa Hospital Research Institute to analyze the relationship between sex and age and their ability to predict responses to survey questions. Wilcoxon rank-sum and Fisher’s exact tests were both used in our statistical analysis.

Results

A total of 150 patients who were seen at The Ottawa Hospital as well as University of Ottawa dermatology teaching clinics were included in the study. Baseline demographic information is summarized in Table 1.

Over 50% of patients surveyed felt that draping was either “very” or “pretty” important (54.7%; Supplemental Figure 1). The relationship between sex and age with ability to predict responses to survey questions is summarized in Table 2. It was found that females were significantly more likely to answer that draping during TBSE was either “pretty important” or “very important” (P < .05; Table 2), and respondents who felt this way were on average younger (52, 61.7 years) than respondents who felt that draping was not at all important (Table 2). When visiting a dermatologist, 54.6% of patients reported that they were “always” offered a drape to maintain privacy/dignity. When inquiring about the patient’s level of exposure when visiting a dermatologist, the majority
noted that they “never” or “almost never” feel overexposed (Supplemental Figure 2).

Factors that may contribute to a patient’s comfort level when undressing for a TBSE are summarized in Table 3. While the majority of patients reported that the surveyed comfort factors did not impact their comfort while undressing during the TBSE, a notable proportion of patients were impacted “a lot” or “very much,” when compared to the older median ages (range of median ages = 56-60 years) of those who reported these factors “did not at all affect,” “slightly affected,” or “neutrally affected” comfort during TBSE (Table 3).

A total of 17 comments were obtained from surveys and summarized in Supplemental Table 4. Comments that focused more on the importance of draping and being offered a drape were more common amongst patients younger than 50 years old (Supplemental Table 4).

### Discussion

The findings of this study provide insight on the subjective experience of patients with regard to draping practices during TBSEs in a dermatology setting. Important demographic differences were noted when evaluating the subjective patient experiences with draping practices during the TBSE. At least 50% of patient respondents indicated that draping is important in the dermatology clinic setting, and this perception was encountered in significantly more females than males ($P < .05$).

Respondents were significantly more likely to indicate that draping impacted their comfort level “a lot” or “very much” if they were female ($P < .01$) and younger ($P < .05$). In contrast, those who did not identify draping as important had a tendency to be older (median age: 60 years) and were mostly male. Female respondents were also significantly

### Table 1. Baseline Patient Demographic Information.

| Patient characteristics and baseline demographics ($n = 150$) | 
| --- | 
| Sex, $n$ (%) | 
| Male | 68 (45) | 
| Female | 82 (55) | 
| Age in years, mean (range) | 53 (19, 87) | 
| Race (self-identified), $n$ (%) | 
| Caucasian | 122 (81.3) | 
| Mixed or Other | 11 (7.3) | 
| African-Canadian | 10 (6.6) | 
| Asian | 6 (4) | 
| Indigenous | 1 (0.7) | 
| Reason for visit, $n$ (%) | 
| New skin check | 129 (87) | 
| New or undiagnosed rash | 15 (10) | 
| Nail changes | 2 (1.3) | 
| New single lesion | 1 (0.66) | 
| Hair changes | 1 (0.66) | 

**Table 2. Logistic Regression Models of Draping Preferences and the Effect of Sex, Age, and the Interaction of Age by Sex.**

| Survey question and dependent variables | PE | SE | $P$ value |
| --- | --- | --- | --- |
| 1. Do you think draping is important in a dermatology clinic setting? | 
| Not very important ($n = 68$; mean age 61.7) | Sex | 2.28 | 1.123 | .0426 |
| Pretty or very important ($n = 82$; mean age 52) | Age | −0.0008 | 0.014 | .9507 |
| Intercept | −0.013 | 0.02 | .5051 |
| 2. When visiting a dermatologist, are you offered a drape to maintain privacy/dignity? | 
| Not often ($n = 47$; mean age 54.0) | Sex | 1.8 | 1.12 | .108 |
| Very often/always ($n = 103$; mean age 52.3) | Age | 0.009 | 0.013 | .4816 |
| Intercept | −0.025 | 0.02 | .1998 |
| 3. Do you feel overexposed when visiting a dermatologist? | 
| Not often ($n = 146$; mean age 53.5) | Sex | 6.306 | 4.21 | .1342 |
| Very often/always ($n = 4$; mean age 35.5) | Age | 0.013 | 0.056 | .814 |
| Intercept | −0.142 | 0.096 | .1383 |


more likely to report that their comfort level during a TBSE was impacted by their body weight or shape ($P < .01$), physician of the same sex ($P < .05$), or physician of the opposite sex ($P < .05$). These findings are consistent with existing literature that elicits differences in attitudes between female and male patients in the context of skin examinations and perception of self. A study of 2126 dermatology outpatients who performed at-home total self-skin examinations (TSSE) found that female participants feel uncomfortable exposing both their upper and lower body due to a number of factors, notably dissatisfaction with the appearance of their body (eg, weight, perception of self-image).10,11

Our study similarly elicits differences in attitudes toward draping based on patient age. Our results showed a significant difference ($P < .05$) in the younger median ages of respondents who reported that any of the factors affected comfort during TBSE “a lot” or “very much,” when compared to respondents who reported they were neutral or not affected by these factors. Furthermore, the subjective comments received from patients under the age of 50 highlighted a higher degree of perceived importance of draping and privacy, in contrast to older counterparts. These findings are consistent with previous published literature on body image in young adults.12,13

Our data indicate that females are more affected by comfort factors related to the dermatologic physical exam, including the patient’s body weight or shape, the sex of the physician, and the degree of privacy offered by curtain or drapes. Younger patients are more likely to care about these comfort factors, as well as the condition of the patient’s skin and the presence of learners. Therefore, these factors should be considered when approaching the TBSE with these patient demographics. Most patients reported that they did not feel overexposed when visiting a dermatologist and were almost always offered a drape during their TBSE. Consequently, while providing the optimal environment should be a priority for all patients, special attention should be paid to younger females patients to ensure they feel as safe and as comfortable as possible.

Discomfort that may come with various factors such as the sex of the physician and the degree of privacy offered by curtain or drapes can be mitigated through various ways. First, when possible, physicians should disrobe only the necessary area of the body and cover up when finished with that particular area, but only if this does not compromise a thorough medical examination of the skin.14 Second, informing patients which area(s) will be disrobed prior to exposing the region(s) would allow the patient to prepare as well as decline if necessary.14 Additionally, a chaperone is an option that must legally be presented to patients for intimate examinations in some jurisdictions, such as Ontario, Canada.15,16

Limitations of this study include decreased clinic capacities due to the COVID-19 pandemic and a limited number of staff and residents, which may have impacted patient recruitment.

| Comfort factor when undressing for a TBSE | Percentage (%) of all patients, median age, and sex of patients who reported these factors affected comfort during TBSE “a lot” or “very much” | Percentage (%) of all patients, median age, and sex of patients who reported these factors “did not at all affect,” “slightly affected,” or “neutrally affected” comfort during TBSE | $P$ value ($<.05$) |
|------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------|
| Patient’s body weight or shape           | 12.7% (19/150) Median age: 35 Female: 78.9%                                                   | 87.3% (131/150) Median age: 56 Female: 51.1%                                                                | .001b             |
| Condition of patient’s skin              | 17.3% (26/150) Median age: 37 Female: 65.4%                                                   | 82.7% (124/150) Median age: 58 Female: 52.4%                                                               | .027a             |
| Physician of same sex                    | 9.3% (14/150) Median age: 37 Female: 92.9%                                                   | 90.7% (136/150) Median age: 56 Female: 50.7%                                                              | .019a             |
| Physician of opposite sex                | 12.7% (19/150) Median age: 52 Female: 95%                                                    | 87.3% (131/150) Median age: 56 Female: 48.5%                                                              | .036a             |
| Presence of students or leaners          | 6% (9/150) Median age: 31 Female: 77.8%                                                      | 94% (141/150) Median age: 56 Female: 53.2%                                                                | <.001b            |
| Degree of privacy offered by drapes or curtains | 25% (38/150) Median age: 47 Female: 86.8%                                                | 75% (112/150) Median age: 60 Female: 43.8%                                                                | <.001b            |

$^aP$ value $< .05$

$^bP$ value $< .01$
While patients were surveyed at all Ottawa Hospital dermatology clinics on a variety of days, there is potential that some practitioners’ patients were overrepresented in the study. Furthermore, a major limitation is the homogenous sample that was included. Comparing our patients to the demographic make-up of Ottawa, it is noted that Caucasians are overrepresented, African-Canadians are represented appropriately, and Asians and Indigenous people are underrepresented. 

17 Barriers to healthcare continue to exist for visible minorities, Indigenous persons, and persons of color, which should be considered when reviewing these results. The lack of heterogeneity in our study may limit the generalizability, given the multicultural population of Canada. Furthermore, religious preferences, education, and other sociodemographic parameters, that could play a role in the perceived importance of draping, were not collected and therefore cannot be commented on. Lastly, the choice of wording used within questionnaire may have also influenced patient response. 

Given the hospital-based setting of our study, the results and conclusions may not be transferrable to community dermatology practices where there may be less time and resources to drape patients. Linens were provided at no cost to academic clinics, therefore patients were routinely offered a hospital gown. The same extent of draping may not be feasible in a community practice where a single provider may perform 40 or more TBSE per day or globally where financial resources to support this are not available. Paper sheets are generally a less expensive option that clinicians may consider, however further study would be needed to see if sheets and gowns perform similarly in providing patient comfort during their TBSE. Patients may also feel more comfortable in a bathing suit or similar rather than their undergarments and could be offered this option in advance of their appointment, but further study would be needed to confirm this concept. In circumstances where resources or time constraints may impede the ability of the clinician to provide thorough draping during a TBSE, an explanation of what body parts will be examined and why is helpful. 

16 A curtain for patients noting their body shape or condition of their skin impacts their comfort during a TBSE, special attention might be paid to this population. 

Further studies are needed to further evaluate potential barriers to draping from a physician perspective to better optimize draping and preservation of patient dignity.

Conclusion
This study offers insights regarding the patient perspective about draping in a clinical setting. Moreover, our findings emphasize the demographic differences in terms of attitudes towards draping, with younger female patients particularly valuing the importance of draping. Although understanding demographic trends in patient preferences with regards to draping can help guide dermatologists and physicians when performing TBSEs, this study confirms that particular attention should be made with younger, female patients. This study adds to the very limited body of literature evaluating draping practices during the physical examination in healthcare settings, particularly in dermatology.

Future studies are needed to assess whether alternate methods of draping are perceived to be as effective as a hospital gown for patient comfort, for example using a paper sheet or wearing a bathing suit. This data would help develop practical tips for busy community practices to optimize patient comfort. Future research should also focus on patient comfort factors, which can be implemented into undergraduate medical and post-graduate dermatological education to ensure that clinicians administering a TBSE can optimize comfort and provide a standardized approach to draping in dermatology. Studying physician perspectives and attitudes on this topic would also highlight barriers to draping and any discrepancies between the patient and provider, which can further help guide future medical education and patient care.

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Supplemental Material
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