DOES SEX MATTER? HEALTH PROFESSIONALS' PERCEPTIONS OF PATIENTS WITH CHRONIC PAIN

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INTRODUCTION

- According to the Sociocommunications Model of Pain,[8] characteristics of both the person in pain (i.e., the "target" or the "patient") and the person receiving the pain-related information (i.e., "observers" such as health care workers, employers, or friends/family) contribute to judgements about the patient's pain, even though these may be unrelated the patient's health status.
  - Targets who are more physically attractive, lack visible cues to their pain, lack objective medical evidence for their pain, or are viewed as being responsible for their pain, are generally perceived as having lower levels of pain and less functional disability. [3,9,10,12]
- Sex is also one of these contextual factors:
  - The impact of target sex on judgements of pain is very consistent: observers judged female targets to be in more pain than male targets undergoing an experimentally induced pain treatment, even after controlling for degree of pain expressiveness. [13,14,16,17,18,19]
  - The impact of observer sex is less consistent: While two studies have found that female observers rate targets' pain significantly higher and more accurately than male observers,[16,19] others have found no significant observer sex effects.[18]

Purpose & Hypotheses

- The clinical relevance of sex of observer and target remains unclear because most researchers have examined this question in the context of experimental pain procedures (e.g., cold pressor) and have used undergraduate students as both observers and targets.
- As part of a larger study, we investigated the impact of sex of observer and patient utilizing a sample of practicing health professionals, students in the health professions and patients with chronic low back pain (LBP). On the basis of the past research noted above, we formulated two specific hypotheses:
  - ***Hypothesis 1:*** Observers, regardless of their sex, would rate the pain/disability level of female patients higher than that of male patients.
  - ***Hypothesis 2:*** Female observers would rate the patients' pain/disability level, regardless of sex of patient, higher than would male observers.
  - ***Exploratory Analyses:*** We also examined the impact of sex of observer and sex of patient on the observers' emotional reactions (e.g., willingness to help, sympathy, anger, and annoyance) to the patient.

METHOD

Participants (Observers)

Type of Participant[1] (N)	Age M (SD)	Professional Experience M (SD) Years	Years of Educ. In Program M (SD)	Self-Rated LBP Knowledge[2] M (SD)
Health Professionals (40)	39.62 (9.30)	12.73 (8.47)	--	5.15 (1.05)
Physician (20)	42.53 (8.43)	13.15 (6.87)	--	5.00 (1.21)
Physiotherapist (18)	38.00 (11.14)	13.49 (11.14)	--	5.44 (.98)
Nurse (2)	25.00 (1.41)	1.75 (.35)	--	4.00 (.00)
Students (100)	25.46 (3.04)	--	1.65 (.52)	2.73 (1.04)
Medical (64)	24.58 (2.82)	--	1.47 (.53)	2.17 (1.11)
Physiotherapy (30)	26.27 (2.97)	--	1.62 (.49)	3.77 (.82)
Nursing (6)	30.83 (5.78)	--	3.67 (.52)	3.50 (1.38)

Stimulus Materials (Patients)

- 10 patients undergoing tertiary assessments for LBP (50% female).
- Male and female patients were matched on other characteristics known to impact observer perceptions including physical attractiveness, pain expressiveness, coping style, and whether there was physical evidence for their pain condition.

Procedure

- Observers read a brief description of the patients (self-reported pain level, coping style, diagnosis, and extent to which there was physical evidence for the pain) and viewed a videotape of the patients undergoing a straight leg raise physiotherapy assessment (only facial expressions were visible).
- Observers completed 8-Point Likert-type scales measuring: (1) Pain/Disability (including pain severity, level of functional disability, need for treatment, and need for compensation); (2) Helping (including willingness to go out of their way for the patient and desire to provide the patient with extra support); (3) Anger (including anger and annoyance towards the patient); and (4) Sympathy.

RESULTS

2 (sex of observer) x 2 (sex of patient) mixed design ANOVAs revealed:

Table 2: Observers' Mean Ratings

	Male Observers M (SD)	Female Observers M (SD)	All Observers M (SD)
PAIN/DISABILITY			
Male Patients	3.10 (.65)	3.19 (.75)	3.13 (.73)
Female Patients	3.03 (.72)	3.23 (.74)	3.14 (.70)
All Patients	3.07 (.66)	3.20 (.72)	3.14 (.69)
HELPING			
Male Patients	3.04 (.91)	3.34 (1.08)	3.19 (1.01)
Female Patients	2.92 (.94)	3.31 (1.12)	3.12 (1.06)
All Patients	3.00 (.91)	3.32 (1.09)	3.15 (1.01)
ANGER			
Male Patients	.57 (.67)	.61 (.80)	.59 (.74)
Female Patients	.73 (.73)	.74 (.87)	.74 (80)
All Patients	.65 (.68)	.67 (.83)	.66 (.76)
SYMPATHY			
Male Patients	2.93 (1.04)	3.29 (1.27)	3.11 (1.17)
Female Patients	2.81 (1.09)	3.26 (1.30)	3.04 (1.22)
All Patients	2.87 (1.04)	3.28 (1.27)	3.07 (1.18)

Hypothesis 1:
✖ sex of patient was not associated with observers' ratings of Pain/Disability [$F(1, 146) = .28$, $p > .05$]

Hypothesis 2:
✖ sex of observer was not associated with ratings of Pain/Disability [$F(1, 146) = 1.58$, $p > .05$]

Exploratory Analyses:
✓ **observers** (regardless of their sex) reported significantly more Anger towards female patients [$F(1, 147) = 35.55$, $p < .001$, partial $eta^2 = .20$] but significantly more Sympathy [$F(1, 147) = 5.71$, $p = .02$, partial $eta^2 = .04$] and Helping towards male patients [$F(1, 147) = 5.93$, $p = .02$, partial $eta^2 = .04$].

✓ **female observers** expressed significantly more Sympathy [$F(1, 147) = 4.63$, $p = .03$, partial $eta^2 = .03$] and wanted to offer significantly more Help [$F(1, 147) = 4.42$, $p = .04$, partial $eta^2 = .03$] than did male observers

✖ there were no significant sex of observer by sex of patient interactions [$Fs(1, 146) < 3.59$, $ps > .05$].

DISCUSSION

- Neither sex of observer nor sex of patient was associated with perceptions of patients' Pain/Disability levels, which is inconsistent with past research. The inclusion of health professionals/health professional students in our sample differs from previous research, which has included convenience samples of undergraduate students.
  - While more research is needed, it is possible that professionals/health professional students may be less susceptible to gender-related stereotypes when judging the pain experience of their patients. This hypothesis is consistent with other research that has shown health professionals to be less susceptible to other types of stereotypes.[7]
- Nevertheless, the sex of observers and patients was linked to the professionals/health professional students' emotional responses to the patients. Regardless of the sex of the observer, more Anger was expressed toward female patients, while more Sympathy/Helping was expressed toward male patients. Also, female professionals/health professional students' reported more Sympathy and Helping toward patients than did their male counterparts.
  - The differences between male/female observers is consistent with female gender role expectations/stereotypes, which prescribe more importance to caretaking and communality to women[4]
  - The difference in emotional responses to male and female patients is consistent with gender-based stereotypes related to the experience of pain. Men are generally considered more stoic than women, and thus men who complain of pain may be taken more seriously[15]. Research has shown, for example, that male patients are offered more invasive and noninvasive interventions for chest pain[6]. This result is also consistent with the belief that women are more likely to complain of minor symptoms and more likely to have a psychiatric condition underlying or exacerbating their pain condition[6,15]. Beliefs that depression and anxiety contribute to chronic pain can lead to negative stigmatization of female patients and differential treatment[1,2,5,11]
- Our findings suggest there could be negative implications for both males and females: Differences in emotional reactions and willingness to help could increase the likelihood of differential treatment of patients' pain conditions as a result of factors that are unrelated to their pain. This could lead to the overtreatment of patients for whom health care professionals have positive emotions/desire to help (i.e., male patients) and undertreatment of patients for whom they have negative emotions/less desire to help (i.e., female patients). Gender stereotypes may also contribute to the tendency of health professionals to treat women who have chronic pain with psychiatric mediation such as sedatives, while treating men who have chronic pain with opioid or other analgesic medications. [6]

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