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#### **Research Paper**

# The impact of gender on medical visit communication and patient satisfaction within the Japanese primary care context

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#### ABSTRACT

*Objective*: This study was designed to address significant gaps in the predominantly western-centric research literature by examining the influence of gender concordance in medical communication and patient satisfaction within the Japanese context.

*Methods*: New primary care patients (54 male and 49 female) were randomly assigned to study internists (6 males and 5 females). Recorded visits were coded with the Roter Interaction Analysis System (RIAS). Post-visit, patients completed a Japanese version of the Medical Interview Satisfaction Scale (MISS).

*Results*: Female concordant visits showed higher levels of patient-centeredness than all other gender combinations. Female physicians substantially modified their communication based on patient gender while male physicians did not. Gender concordance was associated with higher female, but lower male patient satisfaction relative to gender discordant visits.

*Conclusion:* Contrary to normative experience of medicine as a male dominated profession in Japan, and gender-based power differentials, male-gendered clinical communication is less likely to satisfy male than female patients, while female-gendered communication is positively associated with female patient satisfaction.

*Practice implications:* Patient satisfaction ratings reflect greater gender flexibility in terms of acceptable physician behavior than Japanese norms would suggest.

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#### 1. Introduction

While numerous studies have linked physician gender to communication style, few of these studies have been conducted outside of western medical contexts. The conclusions drawn from the western studies are robust; female physicians communicate differently with their patients than their male counterparts. They spend more time with their patients, more frequently ask about and address psychosocial issues, explicitly respond to patients' emotions, are more positive, both verbally and non-verbally, and more actively elicit patient disclosures in the medical dialogue [1–5]. Physician gender also has a significant influence on patient

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communication; patients of female physicians, both male and female, speak more overall, disclose more biomedical and psychosocial information, and make more positive statements than they do when with male physicians [3]. A synthesis of this research concludes that female physicians and their patients engage in communication that can be more broadly conceptualized as patient-centered than their male colleagues [4]. Furthermore, gender concordance may strengthen these communication effects; a systematic review found that medical visits of female concordant physician-patient dyads are more patient-centered than all other gender combinations [5].

This literature largely reflects western medical settings and little is known about whether the gender-linked communication styles described would generalize to the Japanese medical context. A recent study conducted by Noro and colleagues [6] examining the impact of medical student gender on communication during the course of an Objective Structured Clinical Examination (OSCE)

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suggests that it might. The study findings largely replicated gender-linked communication patterns reported in the published literature; however, since all of the simulated patients in the study were female, it was impossible to disentangle the communication differences found between male and female medical students from effects of gender concordance on communication. This is an important question as there is reason to speculate that gender concordance or discordance may play a significant role in guiding professional and social role expectations.

Although not focused on physician gender, another study conducted within the context of Japanese medical visits is relevant. Ishikawa and colleagues [7] observed 140 patients and their physicians at the National Cancer Center Hospital in Tokyo to describe visit communication and its relationship to patient satisfaction. The authors concluded that the communication patterns observed were largely consistent with those described in western studies. Patient satisfaction was positively related to physician use of open-ended questions and negatively related to physician directions, as found in western studies. However, additional findings were not consistent with the literature; patient satisfaction was inversely related to physicians' emotional responsiveness and unrelated to physician verbal dominance, discussion of psychosocial topics or overall patient-centeredness [7]. Since 11 of the 12 study physicians were male, it was not known if the study findings would generalize to patient satisfaction with female physicians.

The well-documented Japanese "gender gap" reflected in substantially fewer women in political, social or economic leadership positions in Japan relative to the US and Europe [8], and Japan's rating in the lowest quartile of countries worldwide on measures of gender equity [9], suggests that women may defer to males when performing professional roles. This is particular relevant in the practice of medicine; Japan has the lowest level of female participation in the physician workforce among all countries surveyed by the Organization for Economic Co-operation and Development [10].

The current study was developed to address the gap in the predominantly western-centric research literature on gender effects in medical communication by examining the role of gender and gender concordance on medical communication within the context of Japanese primary care visits. Considering both the broad research literature on gender-linked communication in medicine and the position of women within the Japanese societal context, we propose 4 hypotheses: (1) Female physicians communicate in a more patient-centered manner, including greater emotional responsiveness, facilitation and partnership, psychosocial questioning and counseling, and positive talk with their patients than their male counterparts; (2) Higher levels of patient-centeredness will be found in female concordant visits than in visits that include a male patient or physician; (3) Considering communication in gender concordant dyads as indicative of a gendered style, female physicians will modify their communication style when with male patients more than male physicians will modify their style when with a female patient; (4) Patient satisfaction will not differ by physician gender, but will be higher in gender concordant rather than discordant dyads.

#### 2. Methods

#### 2.1. Participants and settings

This study was conducted between April 2009 and October 2010. All 11 internists (5 female and 6 male) who work at the four Tokyo institutions (the Jikei University School of Medicine, Nomura Hospital, Oji Co-op Hospital and Seikyo Ukima Clinic) recruited to

the study agreed to participate. A total of 156 new patients were recruited to the study and 116 (74%) consented to participate. Forty patients refused participation because they were feeling ill, were reluctant to fill out questionnaires or had no interest in the study.

Eligibility criteria included being seen for the first time by their physician and sufficiently healthy, both physically and cognitively, to be judged by the research assistant to adequately engage in an informed consent discussion. Participants were told that study participation included random assignment to a study physician, audio recording of their medical visit, and the completion of a postvisit satisfaction questionnaire. Recruitment occurred while patients waited for their scheduled appointment. Immediately before entering the physician's office, an investigator placed a digital voice recorder on the desk and left the office. The recorders were collected after the visit was completed. Patients completed the post-visit satisfaction questionnaire as they waited to pay for their visit.

The study was approved by the ethics committees of the Jikei University School of Medicine, Nomura Hospital, Oji Co-op Hospital and Seikyo Ukima Clinic and all participants formally consented to participation.

#### 2.2. Analysis of communication

Verbal behavior was coded using the Roter Interaction Analysis System (RIAS), the most widely used system to code medical interaction in both western and non-western medical settings [11]. The first published studies using RIAS in Japan some 15 years ago demonstrated high levels of reliability and predictive validity in studies by Ishikawa et al. [7].

RIAS coding in the current study was conducted by two coders trained by the Japanese RIAS group. As in all language applications of the RIAS, the unit of analysis is a complete thought, defined as the smallest discrete statement to which a code classification may be assigned. Codes are mutually exclusive and exhaustive; all statements are coded and each statement is assigned to only one code category.

The large number of individual codes was reduced following convention into 10 communication composites: (1) social talk (personal remarks/social conversation); (2) positive talk (laughing, agreeing, backchannel response, approval, compliment); (3) negative talk (disapproval, criticism); (4) emotionally focused talk (empathy, concern, legitimation, reassurance); (5) facilitative behaviors (cues of interest, asking for opinion, permission, repetition, paraphrase, and checks for understanding); (6) medical information and counseling (regarding medical condition or therapeutic regimen); (7) psychosocial information and counseling (regarding psychosocial issues or lifestyle); (8) medical questions (open or closed questions regarding medical condition or therapeutic regimen); (9) psychosocial questions (open or closed questions regarding psychosocial issues or lifestyle); and (10) orientation (instructions and transitions).

The total number of physician and patient statements in each of the communication composites was calculated as well as visit length, physician verbal dominance and patient-centeredness. Physician verbal dominance was assessed as the proportion of physician statements relative to the total number visit statements. Patient-centeredness was calculated as: the sum of physician psychosocial questions, psychosocial and lifestyle information and counseling, all patient questions, patient psychosocial and lifestyle statements, emotional exchange (from both patient and physician), and physician facilitative behaviors divided by the sum of all physician medical/treatment questions, physician orientation statements, and both physician and patient medical/treatment informational statements [4,7,12].

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