



Communication Study

Expert consensus on gender criteria for assessment in medical communication education

Patrick Dielissen^{a,*}, Petra Verdonk^b, Ben Bottema^a, Anneke Kramer^a, Toine Lagro-Janssen^{a,c}^aRadboud University Medical Centre, Department Primary and Community Care, Nijmegen, The Netherlands^bDepartment of Medical Humanities, VU Medical Center, Amsterdam, The Netherlands^cRadboud University Medical Centre, Women's Studies Medical Sciences, Nijmegen, The Netherlands

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ABSTRACT

Objective: The aim of this study is to develop gender criteria that can be included in communication skills assessment in medical education.**Methods:** A three-round Delphi study was conducted. The invited 59 participants were experts in the field of gender medicine education ($n = 28$) and doctor–patient communication ($n = 31$). Each Delphi round comprised a questionnaire, an analysis, and a feedback report. In the first round, gender experts explored gender themes in doctor–patient communication from which initial gender criteria were defined. The second and third rounds were used to validate the importance and feasibility of gender criteria. Consensus was defined as a 75% panel agreement and a mean of 4 or higher on a 5-point Likert scale.**Results:** Four gender criteria achieved consensus after the third round. The importance of including the gender criteria in communication skills assessment was rated consistently higher than its feasibility. Gender criteria relating to the patients' perspective, to gathering information and to gender and power were considered the most important.**Conclusion:** Using a Delphi study, we have developed gender criteria for inclusion in communication skills assessment to promote good communication between doctors and patients.**Practice implications:** Gender influences medical communication. Incorporating gender in communication skills assessment may be useful to improve the teaching and learning of communication skills.

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1. Introduction

Doctor–patient communication is recognized as an important aspect of health care. Effective communication enhances patient satisfaction, improves understanding of information, and helps to establish more efficiently which problems or issues a patient wishes to address [1,2]. As a result, teaching and assessment of communication skills are considered key content for both undergraduate and postgraduate training of future doctors [3,4]. Gender is an important aspect of doctor–patient communication and medical encounters [5–7]. Therefore, doctors need to learn how and when to consider gender in the communication with their patients.

Previous research has highlighted the influence of gender on doctor–patient communication [8–12]. Doctors' gender has been shown to affect communication proficiency with female doctors

generally communicating more effectively than male doctors [13–16]. For example, female doctors provided higher quality HIV-specific communication than male doctors [17]. In addition, patients' gender has been identified as a characteristic to affect communication. Studies show that women with chronic pain syndromes reported negative experiences during medical encounters, that pain treatment disparities by gender exist and that pain reporting is influenced by gender [18–22]. Research has suggested that aspects of the male role interfere with the reporting of symptoms of depression and help-seeking patterns [23]. Doctors should consider the importance of male role norms including self-reliance and courage in communicating with male patients. These aforementioned studies show us that in doctor–patient communication gender is likely to play an important role.

Communication skills assessment of future doctors by faculty staff is an important tool to provide insight and feedback into communication behavior and to develop new, more desirable behavior [24]. However, gender-sensitive communication behavior in medical encounters is rarely assessed and little is known about how to best examine gender-specific communication [25]. The growing awareness of the role of gender in doctor–patient communication is reflected in international consensus statements

* Corresponding author at: Radboud University Medical Centre, Department Primary and Community Care, P.O. Box 9101, 6500 HB Nijmegen, The Netherlands. Tel.: +31 243615300; fax: +31 243619553.

E-mail address: P.Dielissen@elg.umcn.nl (P. Dielissen).

Box 1. Gender competency for communicator role (CanMEDS).

Key competency

The graduating student will be able to elicit and synthesize information from a patient, family or community from a gender perspective, outline sex and gender based influences on health and describe approaches for dealing with them.

Enabling competencies (objective)

1. Demonstrate sensitivity to all forms of difference (economic, cultural, sexual, religious, etc.) when communicating with patients and/or their families.
2. Demonstrate an ability to find common ground, respect for autonomy and empower patients for their own health acknowledging marginalized populations may have had negative health care experiences or have not accessed health services for fear of this.
3. Demonstrate an ability to interpret sex and gender based difference for patients and engage in a discussion of the effect of social factors on health.

on communication skills but the focus so far is primarily on determining objectives and competencies, not on specific skills assessment [3,4]. Also, the concepts and terminology generally used in texts about medical communication, such as patient-centered and effective communication, are not conducive to the acceptance and implementation of gender in communication assessment [26]. Finally, gender competencies are defined on the basis of the seven roles of CanMEDS [27]. The seven CanMEDS roles, i.e. communicator, are a comprehensive definition of the competencies needed for medical education and practice and the roles are integrated by doctors on a daily basis in practice. Unfortunately, the disparate layers of a competence do not lend themselves to easy measurement (Box 1). In sum, the transfer of gender theory to practice is meager. We think that starting from practical experiences in gender and communication can be a viable way to integrate theoretical notions into educational actions.

The aim of this is to support the assessment of gender in doctor–patient communication education in medical education. To be able to do that, we want to develop gender criteria that should reflect the future doctors' degree of mastery over this domain of doctor–patient communication using a Delphi study. This paper reports the views of experts and the gained consensus on gender and communication assessment criteria.

2. Methods

Between April 2010 and March 2011, we conducted a Delphi study to try to reach consensus on gender criteria for communication skills assessment. The aim of consensus methods, such as the Delphi method, is to try and obtain agreement on a given issue, especially when scientific knowledge is lacking. The Delphi technique has been used widely in health research and medical education [28–30]. The technique is an iterative process designed to use expert opinion to establish group consensus [31–33].

The Delphi technique uses a series of structured questionnaires, most often referred to as rounds. In this way the knowledge and opinions of a panel of experts is captured and structured. The questionnaires are completed anonymously by the participants. As a part of the process, the results from each round are fed back in summarized form to the participants and a next questionnaire is based on the results of this summary. Repeat rounds are carried out until consensus has been reached or saturation has taken place. The method has been used to develop and identify group consensus on a given topic, for example in the identification of

Table 1

Characteristics of the participants of the Delphi study.

| | First round | Second round | Third round |
|---------------------------------|-------------|------------------|-------------|
| No. of participants | 17 | 27 | 24 |
| No. of gender experts | 17 | 14 (52%) | 12 (50%) |
| No. of DPC experts ^a | – | 13 (48%) | 12 (50%) |
| Total response | – | 82% ^b | 89% |
| Female | 16 (94%) | 21 (71.4%) | 19 (79.2%) |
| General practice | 13 (76%) | 16 (59.3%) | 14 (58.3%) |
| Psychology | 2 (12%) | 7 (25.9%) | 7 (29.2%) |
| Public health | 1 (6%) | 2 (7.4%) | 2 (8.3%) |
| Sociology | – | 1 (3.7%) | 1 (4.2%) |
| General internal medicine | 1 (6%) | 1 (3.7%) | – |
| The Netherlands | 8 (41%) | 18 (66.7%) | 17 (70.8%) |
| North-America | 4 (18%) | 5 (18.5%) | 4 (16.7%) |
| Europe | 5 (29%) | 4 (14.8%) | 3 (12.5%) |

^a Doctor–patient communication experts.

^b Gender experts only.

performance indicators, communication skills and behaviors, and key elements of curricula [28,29,34,35]. There are no formal, universally agreed guidelines on the use of the Delphi technique. In the modified Delphi, the content of the first round is obtained from the literature rather than the qualitative views of the participants. Within the classical Delphi, round one begins with an open-ended set of questions and it is well accepted to use this approach in which round one is used for the generation of primary data [31,32,36]. We used the classical Delphi because we were interested in obtaining expert opinion to generate ideas among individuals who have special interest and knowledge to share. Also, in this way we hoped to link theory and practice on gender and communication to aim a realistic approach in evaluation and assessment in medical education.

2.1. The expert panel

We identified 59 experts who are active in gender medicine education and/or doctor–patient communication education. The experts were scholars on (1) gender medicine education and doctor–patient communication education at affiliated institutes in the Netherlands and abroad, (2) authors of key articles on gender medicine education [37–42] and doctor–patient communication [24,43–45] and (3) key designers of doctor–patient assessment instruments [44,46–53]. Our original list consisted of 28 gender experts and 31 communication experts from Europe and North-America whose disciplines include primary care, psychology, sociology, public health and medical education (Table 1).

2.2. Design and analysis

We conducted a Delphi study with three iterative rounds. Communication was in English. In the first round, the gender experts were invited to participate in the Delphi via an e-mail informing them of the purpose of the study, the process and the estimated time expenditure. We explained that responses were confidential and that agreeing to participate was taken as informed consent. The email contained a hypertext link to the online Delphi questionnaire. Responses to the first questionnaire were collected and the study team developed gender criteria on the basis of these initial responses.

Another e-mail was sent to invite the gender and communication experts to participate in the second and third round of the Delphi study. For rounds two and three, questionnaires with the supposed gender criteria were sent to the experts by e-mail. E-mail was also used for two reminders if experts failed to reply. In the

second and third rounds, the gender and communication experts were asked to rate the importance and feasibility of, respectively, the preliminary and final gender criteria. After each round, the participants were provided with feedback of the results including the mean scores, percentage of agreement and text comments. Details of each round are outlined below.

2.2.1. Round 1

Round 1 was exploratory in nature to identify gender issues in doctor–patient communication. We sent a semi-structured questionnaire and three open-ended questions to the gender experts only. First, we asked them to provide examples of observable gender-specific behavior with regard to the CanMEDS gender competencies (semi-structured questionnaire) [27]. For example, what observable behavior should a GP trainee display to demonstrate gender-sensitivity when communicating with patients? Second, we presented the gender experts with three questions to enable them to voice their opinion on gender issues and doctor–patient communication: (1) in your opinion, and based on your experience, what gender issues are central in doctor–patient communication?; (2) what topics in the area of gender and doctor–patient communication do you feel should be included in medical education? and (3) what verbal and non-verbal behavior in the area of gender and doctor–patient communication can be used for assessment in medical education? Responses to the questionnaire and questions were grouped to identify recurring themes across participants' responses. PD carried out the main text analysis. A subsample of the responses and themes was read independently by TLJ. Emerging and recurring themes were then discussed, agreed with all authors and transcribed into preliminary gender criteria for the second round.

2.2.2. Round 2

The aim of the second round was to establish consensus about the importance and feasibility of the preliminary gender criteria emerging from the first round. The second round questionnaire listed these preliminary gender criteria and included an explanation of each criterion in terms of observable and measurable behavior. The experts were asked to rate importance and feasibility of each criterion and its explanation. Importance was defined as how essential it would be to include the criterion in a communication assessment tool. Feasibility was defined as the likelihood that this criterion could be successfully implemented in a communication assessment tool. Experts were also invited to clarify each criterion, to modify its explanation, or to add issues regarding to gender and communication. The experts received the results of their rating from the second round.

2.2.3. Round 3

The aim of the third round was to achieve final consensus on the gender criteria. The third round questionnaire contained no new criteria but only those gender criteria that were retained, modified, merged or redeveloped from the second round responses. The third round also allowed experts to edit and to comment on the gender criteria.

2.2.4. Data analysis round 2 and 3

Likert scales were used to quantify and compare the importance and feasibility of the gender criteria in rounds two and three. A 5-point Likert scale was used, where 1 indicated "strongly disagree" and 5 indicated "strongly agree". Positive consensus was defined as a mean score of 4 and higher on the five-point Likert scale with a standard deviation (SD) of less than 1, and as 75% or more of the experts scoring 4 or 5 (75% panel agreement). Criteria on which positive consensus was obtained in the second round were retained for the third round in their original form or with

suggested modifications. SPSS version 16.0 was used for the quantitative analyses.

3. Results

3.1. Participants

In the first round 28 gender experts were invited to participate in the Delphi study and 17 agreed to take part in the first round (61%). Of those 17 participants 14 also completed the second round (82%) and 12 of those 14 completed the third round too (86%). The majority of the gender experts were GP ($n = 9$) and all were female (Table 1). In the second round 31 doctor–patient communication experts were invited. Of them, 14 agreed to take part of the study (47%); 12 of them completed the third round (86%). The communication experts (5 males, 7 females) had a variety of backgrounds, including general practice ($n = 5$), psychology ($n = 5$), sociology ($n = 1$) and public health ($n = 1$). Seven communication experts were female (58%). Overall, 27 experts completed round two and 24 completed round three. As is customary in a Delphi study, a decline in responders occurred after every round but it was limited. The entire process took 11 months.

3.2. Results Delphi process

3.2.1. Round 1

Round one generated 47 gender statements. Similar responses were combined and themes were grouped, resulting in three major gender themes. First, recognition of the role of the patient's gender, for example in the patient's expectations, disease presentation, decision-making and management, ranked highest among the list of themes with 27 statements. Second, understanding gender and power, including gender-based violence, was the second major theme with 10 statements relating to an awareness of power and gender inequality. For instance, depending on gender of doctor and patient, is the patient's participation encouraged and is his/her autonomy respected. Third, 6 statements related to recognition of the role of the doctor's gender in the medical interview, for example the doctor's gender awareness and his/her gender-based values. There were 4 responses that covered gender medicine in medical education in general, for example "importance of gender-specific education programs" and "understanding of gender competence". These responses were not further clarified.

When asked how doctors could display gender-specific communication in relation to the communicator role of the gender CanMEDS competencies, responses included the following examples in the semi-structured questionnaires (number of statements): offer gender knowledge in the medical interview (19); show gender awareness relating to patient's perspective (19); express gender awareness relating to power in the medical interview (19); demonstrate high index of attention to gender issues and pick up gender-sensitive remarks (13). More general responses relating to communication included: express non-judgemental attitudes towards patients (9) and show good general, patient-centered, communication skills (11).

The study team used the results from the first round to develop 11 preliminary gender criteria for the second round.

3.2.2. Round 2

On the basis of the results from round 1, the 27 gender and communication experts were presented with 11 preliminary gender criteria for the assessment of doctor–patient communication skills (Table 2). Of these, 2 reached immediately consensus on importance and feasibility and were retained with minor text modifications. They were about gender and patient's perspective,

Table 2
Gender criteria and rating on round two.

| Gender criteria | Importance Mean (SD) | % Agree | Feasibility Mean (SD) | % Agree | Major comments |
|---|----------------------|---------|-----------------------|---------|---|
| 1. Asks questions about the patients' personal and family history considering gender in a non-judgemental way to minimize embarrassment of discomfort of male and female patients | 4.7 (0.46) | 100.0 | 4.4 (0.57) | 96.2 | - Essential skill, but not only gender-related - Not always applicable - Not easy to do in a non-judgemental way |
| 2. Recognizes and responds appropriately to a feminine communication style that can hamper doctor–patient communication. | 4.0 (0.97) | 81.4 | 3.5 (0.97) | 59.2 | - Combine criteria 2 and 4 - Difficult to observe or to assess - Criterion might be perceived as prejudiced |
| 3. Ask for barriers in help-seeking behavior and access to health care service that are related to femininity. | 4.2 (0.89) | 85.1 | 3.9 (0.84) | 74.1 | - Important but only in specific cases - Could be taken as patronizing if articulated by a male physician |
| 4. Recognizes and responds appropriately to a masculine communication style that can hamper doctor–patient communication. | 4.2 (1.03) | 81.4 | 3.7 (1.02) | 66.6 | - Same as criterion 2, but regarding men - Women can communicate using a masculine style and vice versa |
| 5. Asks for barriers in help-seeking behavior that threat or promote masculinity. | 4.2 (1.00) | 85.1 | 3.7 (0.98) | 70.4 | - Combine criterion 4 and 5 - Be aware of time investment as it can hamper the feasibility |
| 6. Avoids the pitfall of power issues in terms of status, control and relationship building in the male–female patient dyad. | 3.9 (1.12) | 81.4 | 3.7 (1.14) | 66.6 | - Focus on behavior that should be displayed - Difficult to classify it as gender as it is a part of general good communication practice |
| 7. Recognizes and clarifies the association between gender and sexual victimization. | 4.5 (0.84) | 85.2 | 4.2 (0.78) | 85.1 | - Concentrate on sexual violence - Not relevant in ordinary consultations - Important as it focus on both genders |
| 8. Detects and intervenes appropriately to gender-related communication styles in the same-sex interaction that can hamper the doctor–patient communication and relation. | 4.0 (1.14) | 77.7 | 3.3 (1.21) | 51.8 | - Good example of a combination of 2 and 4 - Needs insight in one's own gender awareness |
| 9. Verifies male nonverbal communication associated with the masculine gender role (dominant, autonomous, instrumental) that may lead to misperception of symptoms. | 4.1 (0.86) | 88.9 | 3.4 (1.00) | 51.8 | - Not feasible for all medical interviews - Could be combined with male/female verbal communication criteria |
| 10. Verifies female nonverbal communication associated with the feminine gender role (expressive, sensitive, submissive, emotional) to avoid misperception of women's health. | 3.9 (1.10) | 81.5 | 3.2 (1.05) | 44.4 | - Merge with criterion 9 |
| 11. Asks information that can influence help-seeking behavior considering gender roles which are associated with men versus women or that differentiate between men and women. | 3.8 (1.17) | 66.6 | 3.6 (1.20) | 66.6 | - Similar to other criteria - Overlaps other criteria |

and gender and power, in particular sexual violence/intimate partner abuse (gender criteria 1 and 7).

Six gender criteria reached consensus on importance but not on feasibility (gender criteria 2, 3, 4, 5, 8 and 9). However, the experts proposed several modifications, ranging from five to twelve per criterion, to improve the feasibility (free text suggestions, combining criteria). The most important comments were related to overlap in criteria and suggesting they should be combined.

Three gender criteria did not achieve consensus on either importance or feasibility and were dropped (gender criteria 6, 10 and 11). The items that scored low on importance and feasibility were related to power issues in the male doctor–female patient dyad (criterion 6), female nonverbal communication associated with feminine gender role (criterion 10) and gender and help-seeking behavior (criterion 11). The consensus on criterion 10 and 11 was considerably lower because of overlap with respectively criterion 9 and criterion 1.

The study team used the results (wording changes, text suggestions, combining criteria) from the second round to develop 4 final gender criteria for the third round.

3.2.3. Round 3

In round 3, the 27 experts were presented with four gender criteria and they were asked to re-rate these criteria (Table 3). All gender criteria now achieved consensus on both importance and feasibility. The mean score ranged from 4.5 to 4.8 on importance (SD 0.41–0.71) and from 4.0 to 4.4 on feasibility (SD 0.82–0.95).

The level of agreement ranged from 95.8% to 100% for importance and 83.4–91.7% for feasibility.

Some experts expressed concerns about wording or how to assess a criterion. For example, how does one assess whether a doctor asks questions sensitively, or whether behavior is appropriate or not? Other experts commented on the generalizability of the gender criteria as they may not apply to all medical interviews. For example, most of the issues are relevant in response to specific signs and symptoms or contextual factors and strict application to all consultations is therefore not advisable. The authors reviewed the comments and made minor textual revisions to the retained gender criteria.

3.3. Differences between gender and communication experts

Rating by the gender experts was consistently higher for both importance and feasibility compared to the communication experts. In round two the gender experts rated the importance of gender criteria 2, 4, 6, 7, 9 and 11 significantly higher than the communication experts ($p < 0.05$). Also, gender criteria 7 and 11 were rated significantly higher on feasibility by the gender experts. In round three, gender experts only rated the feasibility of gender criterion 3, relating to intimate partner abuse, significantly higher than the communication experts (mean score 4.83 versus 3.9; $p < 0.00$).

In the written comments there were differences between gender and communication experts too. Some gender experts

Table 3

Gender criteria identified through expert consensus for doctor–patient communication assessment instruments.

| |
|---|
| <p>Gender criterion one</p> <p>If necessary, asks patients about their personal and family history avoiding gender stereotypes and gender-based assumptions.</p> <p>Explanation in manual:</p> <p>Asks both men and women, if relevant, questions about living arrangements, marital status, work, childcare and sexual orientation avoiding stereotypic gender roles or making assumptions, e.g. women care, man work, assumed heterosexuality.</p> |
| <p>Gender criterion two</p> <p>If necessary, considers gender in the communication with patients, in help-seeking behavior, in the physical examination and in the doctor–patient relationship.</p> <p>Explanation in manual:</p> <p>If appropriate, checks and clarifies gender issues in (1) communication, e.g. male autonomy and rapport, female dependence and relate; (2) help-seeking behavior, e.g. female unequal social position, male risk taking behavior; (3) physical examination, e.g. respects patient's wish for a doctor of the same sex, sensitivity to interpersonal space; (4) relationship, e.g. power in doctor–patient contact and cultural issues.</p> |
| <p>Gender criterion three</p> <p>Takes a sensitive and non-judgemental approach in handling gender issues in the communication with patients who are victims of intimate partner abuse or sexual violence.</p> <p>Explanation in manual:</p> <p>Asks sensitively for gender issues about sexual violence and intimate partner abuse, e.g. female victimization, blaming the victim, female social isolation, sexual coercion and controlling behavior by the perpetrator. Avoids making assumptions, or checks them out with regard to intimate partner abuse, e.g. partner abuse taking place in homosexual and lesbian relationships, and the possibility of men being abused by female partners.</p> |
| <p>Gender criterion four</p> <p>Recognizes and responds, if necessary, to verbal and non-verbal cues of gender issues in the doctor–patient consultation to achieve a better understanding of patients' problem solving behavior and coping strategies.</p> <p>Explanation in manual:</p> <p>Picks up and responds to cues of masculinity in (1) coping with disease (involving and placing load on spouse, problem-focused coping style); (2) social roles, e.g. concern about their ability to work and physical weakness; (3) expectations to gender roles, e.g. in relationships, risk taking behavior; and (5) evasive coping strategies, e.g. venting emotions, use of alcohol and drugs, disengagement.</p> <p>Picks up and responds to cues of femininity in (1) coping with disease, e.g. turning to family other than husband first, not want to bother others with their health problems, difficulties interpreting their symptoms; (2) social roles, e.g. focus on resuming housekeeping activities first; (3) expectations to gender roles, e.g. tensions between roles of wife, mother and worker; (4) passive coping strategies of communication styles, e.g. depressive reactions, denial and blame.</p> |

expressed concerns about the risk of gender stereotyping and the dichotomization of gender. They worried that the use of examples of typical masculine and feminine behavior or communication styles may be interpreted wrongly. A binary view of gender in the preliminary gender criteria was problematic to them because it might reinforce gender stereotypes. Communications experts expressed some concern about when the gender criteria should be used. Remarks included: “This criterion can be very important and sometimes very unimportant” and “For me the *if appropriate* and some concrete examples to help observers define what is appropriate in which situation remain a key issue”.

4. Discussion and conclusion

4.1. Discussion

In this study, we developed four criteria that can be used to assess gender-specific communication skills in medical education. The proposed gender criteria cover both content and context of the doctor–patient communication. For the communication content the patient's perspective is key. The effect that an illness has on the patient's life, i.e. gender role, often predicts their expectations, coping strategies or help-seeking behavior, and therefore needs to be carefully taken into consideration. The communication context is important for instance when patient discloses partner abuse or sexual violence [54,55]. The level of emotional involvement and the patient's humiliation and abuse change the content as well as the context of the interview considerably. The gender criteria are close to current best practices and so there is no need to introduce corresponding new skills for gender-sensitive issues. Instead these gender criteria are helpful to make doctors aware what gender-specific communication is and how it can be used with greater focus depending on content and context of the medical interview.

The basic framework of the medical interview represents initiating the session, gathering information, physical examination, explanation and planning, and closing the session [24]. Gender awareness within established practice guidelines for doctor–patient communication, if mentioned at all, is mostly

limited to gathering information, in particular eliciting the patient's perspective [3,4]. The experts in our Delphi study suggest a more expanded view of how gender should be conceptualized in the medical interview. They suggest that gender-sensitive communication should also be considered when building the doctor–patient relationship and enabling behavior related to treatment of the disease (explanation and planning). Therefore, information giving is explicitly included in the gender criteria. Our experts' consensus is an indication that they perceive the gender criteria as feasible, needed and a valuable addition for all the different segments of the medical interview.

A prominent dilemma in this Delphi study was how gender-sensitive behavior in communication skills assessment can be best explained. Gender experts expressed concerns about using the classification of masculinity and femininity to define gender-sensitive communicative behavior because they feared gender generalization, gender stereotyping and dichotomization of gender. The introduction of the term gender was based on the idea that differences between men and women are more social than natural but also to help our understandings of those differences [56]. No individual can be definitively classified as being masculine or being feminine because no trait is uniquely masculine or feminine. The way in which the respective genders of doctor and patient influence the medical interview depends on the specific medical situation in which judgements are made about what is feminine and masculine [57]. When teaching gender awareness in communication education attention must be paid to the fact that masculinity and femininity are not clearly defined opposites but shifting categories and that they depend on the context of the medical encounter (behavior, communication styles, disease presentation). Earlier research shows that depending on the educational method, teaching gender awareness in medical education does not result in gender stereotyping [58]. Also, there is a strong level of agreement among the experts about the use of examples of stereotypical masculine and feminine behavior. Based on these findings, we make a plea for a more precise and measurable use of gender in medical communication education by using examples of more masculine and more feminine communication styles. Defining criteria and with that adopting a more

precise approach will improve the understanding of gender in medical communication [26].

The success of a curriculum depends on the implementation of assessment and feedback. What is assessed and which methods are used will play a significant part in what is learnt [59,60]. Not every gender-sensitive behavior is relevant in every medical interview, but including gender in assessment of doctor–patient communication education limits the chance of mismatch between what is taught and what is learned. The four gender criteria derived in this study offer a starting point for a gender-based assessment within any communication curriculum in medical education. We suggest that the criteria be used as modifications or additions to existing assessment instruments. Our framework for assessment of gender awareness in medical communication is based on different levels of communication that are usually covert in these assessment tools: content skills (including gender in gathering and giving information), process skills (verbal and non-verbal gender-sensitive communicative behavior) and perceptual skills (handling emotions and gender-sensitive attitude) [24]. This will make the gender criteria suitable for many of these tools. Within this context it will also be important to evaluate how effective the gender criteria are in doctor–patient communication assessment. A future evaluation should be based on students and faculty staff feedback and students' performance. To be able to ensure competence in this field, medical institutes should make every effort to ensure that gender-specific assessment is valid and reliable before it is used to assess trainees' communication skills.

A major strength of our study is that, even though gender medicine education is a relatively young domain with a limited number of experts, twenty-four experts in gender medicine education and doctor–patient communication education participated, making for a representative panel. Also, a majority of participants were engaged throughout the entire process, ensuring continuity and validity. Their engagement and numerous comments and suggestions are evidence of their commitment to this Delphi study. Finally, the results of this study show a high rate of consensus and imply that the experts strongly agree about the importance and feasibility of the four final gender criteria. A strong improvement in consensus level was observed between the second and third round of the study. The group as a whole showed more convergence of opinion and a decline in dispersion of their views as the rounds unfold. This improves the reliability of the reached consensus.

There are also some limitations to our study. First, our results cannot be interpreted as representing all the views of experts in the field of gender medicine education and/or doctor–patient communication, as they were mostly European and female. More male experts might have influenced the outcomes of this Delphi study. Female teachers and doctors assess gender important to a higher degree than men [61,62]. Second, selection bias may have occurred, as the recruitment depended on which institution we are affiliated with and may not cover all experts. This applies mainly to the gender experts. Third, some gender experts were not familiar with general practice and/or medical education and may not have had sufficient knowledge about gender and doctor–patient communication in the medical education setting to answer a number of questions. Also, the Delphi method in itself has limitations. Opinions were equally weighed regardless of level of expert experience and consensus about our criteria does not automatically mean that they are correct or true. To enhance validity and reliability of our gender criteria we suggest pilot testing.

4.2. Conclusion

This Delphi study provides gender criteria for the assessment of gender-sensitive communication in medical education. The

criteria should enable observers and those who are observed in the medical education setting to improve their communication as female or male doctors as well as their communicative interaction with their female and male patients. To strengthen the importance and feasibility of the available gender criteria, further research is warranted to identify the context. More research specifically designed to actually assess gender-sensitive behavior in doctor–patient communication is also needed. Combining observation of doctors' behavior and including patient characteristics in for example direct observations will be of use to pilot test the criteria. Defining better operational definitions of gender-sensitive communication alongside with theoretical refinements of the gender criteria may be necessary. Last, we need to enhance faculty development for gender-sensitive communication skills teaching and assessment by increasing faculty members' knowledge base and communications skills.

4.3. Practice implications

Gender is one of the many factors that influence the doctor–patient communication. Doctors and medical education institutes need to be aware that both doctor and patient gender, and the interaction between them, has an impact on the communication. For individual doctors, the gender criteria may raise awareness of the influence of gender in doctor–patient communication. The enhanced gender criteria help teaching faculty relate more easily to gender-sensitive communication skills feedback and assessment. At a policy level, it can help to identify curricular deficiencies in teaching communication skills.

Competing interests

The authors declare that they have no competing interests.

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