

## Preference for Patient -Urologist Gender Similarity and Its Implications for Urology Departments: A Systematic Narrative Review and Thematic Analysis

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**Purpose:** To evaluate the evidence that could help health system policy makers to approach the preference for same-gender urologists.

**Methods:** We performed this systematic narrative review according to the PRISMA guidelines. We searched MEDLINE, Web of science, EMBASE, CINAHL and Google Scholar for articles focused on the preference for patient-urologist gender similarity in the male-dominated department from 1999-2019. Finally, a narrative synthesis of studies meeting the inclusion and quality criteria was conducted in accordance with the nature of the evidences. We applied a thematic analysis using inductive approach for synthesizing studies employing heterogeneous research methods and designs.

**Results:** Of 208 titles and abstracts screened, 23 were included and three major themes including reasons, impacts, and implications were identified. Overall, patients with urologic problems prefer same gender urologists and females were more likely to prefer the same gender urologist than males. Many women delays care due to a perceived lack of female urologists. The major identified reasons for the same-gender preference are religious believes, cultural background, emotional relationship, past experiences, and sensitive examinations. The results indicate that the urologists-patients gender similarity improves the quality of primary care. Our review reveled that urologists prefer to perform more same gender-specific procedures. Besides, female urologist and residents perceived to underestimate from their male counterparts.

**Conclusion:** This study could help health system to honor the patient's preference for same gender urologist. The findings may help medical education and health policy makers to move the male-dominated urology departments towards a culture supportive of female urologists.

**Keywords:** patient preference; same-gender; sensitive cares; thematic analysis; urologist gender; urology department; women

### INTRODUCTION

Urologic problems are highly sensitive issues for patient's regarding to the gender of physician.<sup>(1-3)</sup> Moreover, when patients have conditions that they perceive to be sensitive, communicate better with same gender physician. The urologist-patient relationship is the critical component of a medical encounter, and gender is a crucial factor influencing the quality of urologist-patient communication in clinical cares and surgical departments.<sup>(1-4)</sup> It is known that patient preferences for same-gender urologists impact urologist-patient communication, patient satisfaction, particularly regarding female patients.<sup>(2-5)</sup> Meanwhile, it cannot be ignored that patient's values plays an important role in their preference for urologists' gender.<sup>(3-5)</sup>

Traditionally, urology is a male-dominated specialty<sup>(6)</sup> and female patients unavoidably require medical care from male doctors.<sup>(2,7)</sup> Previous studies showed that some patients with urologic problems delay care seeking due to lack of availability of same-gender urologists.<sup>(3,5)</sup> Other studies revealed that female patient's experiences with male urologists were unpleasant.<sup>(1-3)</sup>

Several studies have found that the majority of women prefer female urologist because they can talk easily to same gender than to men, feel being understood, and feel more at ease during physical examinations involving pelvic and genital areas.<sup>(1,8)</sup>

It has been shown that female and male urologists differ in their way of practicing and communicating with patients. Also female urologists devote more time to psychosocial issues. On the other hand, female patients have been demonstrated to have more participatory visits than male patients.<sup>(1-4)</sup> These communicational behaviors as the basis of a patient-centered interaction may have several consequences involving patient satisfaction, treatment adherence, and health outcomes.<sup>(3,8)</sup>

Although the growing body of literature has accompanied the same-gender preference in urologic care<sup>(1-7)</sup>, there is no clear collated synthesis of the evidence for the impacts of patient- urologists gender similarity in urology departments. We aim to examine "How effective is patient-urologist gender similarity in comparison of no-gender similarity on patient satisfaction and health outcome?", and "How urology departments could

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**Table 1.** Criteria for inclusion and exclusion of studies.

Criteria	Inclusion	Exclusion
Time period Language Setting	after January 1999 ENGLISH Focusing on Urology and related treatment centers, including: primary care, urology outpatient clinics, Emergency urologic cares, Urology surgical departments, Academic male dominated Surgical Departments.	September 2019 Other language Care setting not providing urologic care and urologic consultation or urologic physical examinations involving pelvic and genital areas  Studies focusing exclusively on (ob/gyn)
Type of studies	No restrictions for study design Quantitative Studies (experimental – non –experimental ), and Qualitative survey	Reviews and studies irrelevant to the research question. Non-research publications including commentaries, letters, and editorials.
Participants/ population	Patients who seek care from Urologists and resident physicians, and Urologists/Surgeon and residents who provides urologic treatments and surgeries for patients.	Patients who did not attend in urologic care clinics and did not seek for urologic cares. Urologists/Surgeon and residents who provides urologic treatments and surgeries for patients.
Aim; to explore Patient Preference for same-gender Urologists and its implications	Literature points out the reasons and effect or challenges for patient- urologist(surgeons) gender similarity in urology and male dominated surgical departments	Literature does not cover the reasons and effect or challenges for patient- urologist(surgeons) gender similarity in urology the male dominated surgical departments

plan forward to better respond to patients request for same gender urologists?”. We performed this study to answer these questions in order to synthesis the related evidences.

The objective of this systematic review was to determine the extent to which the “preference for patients-urologist gender similarity and it’s implication in academic and surgical urology departments has been researched and to synthesize the findings.

## METHODS

### Search strategy

We conducted a systematic research focused on patient preferences for same gender urologist and its implications. We searched the optimal combination of electronic databases<sup>(9)</sup> including Pubmed/MEDLINE, Web of science core collection, EMBASE, Google Scholar, and CINAHL Plus, in September 2019 which was limited to the studies published after January 1999. To find any possible new publication, the search was updated. The keywords included in the search strategy were urologists, gender preference, same gender, gender similarity, communication style, health outcome, urology departments, sensitive care, female urologists, educational leadership, and Boolean logic using ‘AND, OR’ was used to refine a number of articles. Also, we used the reference lists in the literature manually.

### Inclusion and exclusion criteria

We included the articles if the title and/or abstract indicated the report of results of original research studies using quantitative, qualitative approaches. We selected studies reflecting the patients’ preference for same gender urologist and its implication if they were published within the past 20 years. We also included studies that explored urologists and resident’s viewpoints on these issues. Electronic abstracts of all retrieved articles, were reviewed by two authors. Duplicate references were re-

moved. Studies irrelevant to the research question were excluded, as well as reports, commentaries, and letters. Considering the possibility of the selection, publication biases as well as language bias during the search, all studies deemed relevant were reviewed in full text. In **Table 1** criteria for inclusion and exclusion of studies are listed.

### Screening Procedures

Following the search, we reached 283 publications. Afterwards, duplicate article were removed, and 208 titles were screened. After abstract screening based on the study inclusion/exclusion criteria 127 articles were excluded. We selected the remaining 53 publications for full review. Two authors reviewed the full texts of potentially relevant articles to examine eligibility for inclusion. After quality appraisal, 23 full-text articles were included in the study. (**Figure 1**)

### Appraisal of primary studies

There is no universally accepted framework that can be applied to the wide range of methodologies, and little empirical evidence exists about what approaches improve the quality of the study. However, transparency of reporting can ensure that readers are able to make their own assessment of rigor and transferability of the findings to their own setting.<sup>(10)</sup> All of the included studies had a basic level of quality. We used the BEME criteria (Best Evidence in Medical Education systematic review) to evaluate the methodological quality, internal validity of the quantitative articles for more meaningful comparisons with the published literature.<sup>(10)</sup> BEME quality criteria<sup>(11)</sup> also addresses research question, study subjects, data collection methods, completeness of data, risk of bias assessment, analysis of results, conclusions, reproducibility, and ethical issues.<sup>(12)</sup> We also used COREQ (consolidated criteria for reporting qualitative research) to evaluate the quality of qualitative studies included<sup>(10)</sup>, and trustworthiness of the findings

**Table 2.** Summary of studies included in the Systematic narrative Review, main results and synthesized themes

First Author/ year/ Region	Study population / Numbers	Interventions	Comparison / to compare	Summary of finding	Study design/ Research Method	Critical appraisal	Theme
Kim Sun-Ouck./ 2017 /Korea	Patients attending urologic clinics . N=270	Gender of Urologist	urologists' gender preference between male and female Patients attending urologic clinics	More than half the female participants had a preference for the same gender of urologist. There is an increasing demand for women urologists.	Quantitative / survey questionnaire	-Small sample -Non validated Tool	1,3
Tempest H. V. 2005/ UK/	Patients attending NHS urology clinic in a N=496	Gender of Urologist	urologists' gender preference between male and female Patients attending urologic clinics	The majority of patients had no preference. Of the patients had a preference, females were more likely to prefer the same gender urologist than males.	Quantitative / survey		1
Ficko Z ./2018/ USA	Urology clinic patients./ N=477	Gender of Urologist	those with and those without gender preference	Patients had a statistically significant preference for the gender of their urologists. Urology is a Sensitive Area	Quantitative / survey and multivariate analysis	convenience sample affects Generalizability	1
Amir H./ 2018 / Middle east/	Jewish Male Patients Seek urology care./ N=119	Gender of urologist	urologists' gender preference for intimate procedures versus non-intimate procedures	-Most patients (97%) preferred a male urologist for physical exam & surgery .They felt less embarrassed, more satisfied for religion belief.	Quantitative / written survey	--Selection bias (female patients were not included)	1,2
Nolen HA./ 2016/ Birming ham, Alabama	Patient at emergency depart. (ED)/ N=200	Gender of Urologist	urologists' gender preference for routine' visits vs. 'sensitive' visits between female and male patients	In the setting of 'sensitive' medical visits, there was a propensity for same-sex physician preference.	cross-sectional survey study	convenience sample affects Generalizability	1
Alyahya G. ./2019/ Saudi/	Saudi patients/ N=3015	Urologist gender	the preferences for the gender of specialists in different fields between female and male patients	Regarding Urologic examination, the majority of patients from both gender, preferred to be examined by a same gender urologist.	cross-sectional survey	No baseline data regarding patient's previous clinical experiences	1,2
Schmitt diel J./ 2000/ USA/	Patients in HMO Preventive Care centers N=10,205	Gender of treating Urologist	the Doctors(D) gender association with Patient(P)satisfaction in 4 dyad (female D-f P) (male D-mP) (f D-mP)(mP-fD)	Female patients were more likely to have chosen female physicians. There are difference in patient satisfaction related to the patient-physician gender similarity in Preventive Care	Cross-sectional mailed survey Random Sample	Did not explore patients criteria for satisfaction	1,2
Moettus A./ 1999 /USA/	Patients/ Attending in a university hospital. N=167	Urologist gender	perceived pain and embarrassment during emergency examination carried out by male examiners vs. female	In Emergency Pelvic Exams, female patients reported significantly more embarrassment with male physician, affecting patient comfort and physician-patient communication.	Prospective comparative study	convenience sample affects Generalizability	1,2
Siu J.Y ./ 2015/ Hong Kong./	Female overactive bladder (OAB) patients/ n=30	Male urologists	to compare communication experience between female patients and male urologists	The participants' communication experiences with male urologists were unpleasant .this experience negatively affects patients' treatment compliance.	A qualitative research semi-structured interviews	No baseline qualitative data for patient's experiences with female urologist	1,2
Alqufly A.E./ 2019/ Saudi Arabia	Female Muslim patients at ED)/ N=399	Gender of treating Urologist	To explore the reasons for delaying the urologic medical care at emergency department (ED)	Most of Muslim female patient and their first-degree male relatives prefer female urologists in non-life threatening cases.	cross-sectional study, Questionnaire	-Selection bias -Did not evaluate other influencing factors	1
Milkie Vu. 2016 /USA/	American Muslim women N=244	Availability of female urologist	To compare the Delayed Urologic care Seeking in Presence and lack of female urologist	Many women delays care due to a perceived lack of female clinicians. The results highlights the need for same gender- providers in culturally sensitive care	surveys	-Sampling strategy limit the generalizability - did not define delay	1,2

McLean M./ 2010 / (UAE)/	Emirati women in outpatient clinics N=218	Gender of treating residents	Comparing women's attitudes towards male & female residents in the clinical encounter	In pelvic and abdominal problems, Muslim women's would generally refuse male students	cross-sectional study, a structured interview	Selection bias - did not explore other factors.	1, ,3
Oberlin DT./ 2016/ USA/	Urologists 6,166	gender-based procedures	urologists' Practice Patterns in Urologic gender-specific procedures	Urologists have performed significantly more same gender-specific procedures. Female surgeons operated more	a cohort study. ( 2003 -2012)	Risk of lack of information	1,3
Wallis CJ. 2017/ Canada	Patients undergoing one of 25 surgical procedures /N=104630	Surgeon Gender	postoperative outcomes among patients treated by male and female surgeons	Patients treated by women surgeons had a small but statistically significant decrease in 30 day mortality and similar surgical outcomes, compared with those treated by men.	A population based matched cohort study. (2007- 2015)	Risk of lack of information no measure for socio-economics& health status differences n	2,3
Bertakis KD./ 2009/ USA	Patients N=509 visited by resident N=105	Gender similarity	the influence of patient and resident gender similarity in Patient-centered care (PCC)	Female physicians provided increased PCC. The greatest PCC was seen in the female patient-female physician gender dyad.	Interview & Observation. PCC was measured by coding the videotapes	Random assignment -No control for different variables	2,3
Klea D./ 2009/ USA/	physicians participate in PCC (N=100)	Gender similarity	the influence of gender similarity between urologist and physician	The same- gendered visits exhibited higher aspects of physician communication Component scores.	Observation (Encounters analyzed with standard Measures )		1,2
Lightner D.J./ 2005/ USA,	American trained women in urological surgery	female urologists	To compare the Status of women in urology university urologists	Threats to successful practice, gender based role limitation and inadequate mentoring, were commonly reported.	Survey electronic		3
Saltzman A./2016 /USA/	Women Urologist of the American Urologic Assoc.	Women Urologists	To compare the Women Urologists: Changing Trends in the Workforce	Women urologists in the United States are younger than their male counterparts and most work full-time in	Survey electronic	23% response rate raises issues of Generalizability	
	N=365			urban academic centers.			
Cochran A./2013 /USA/	senior surgical residents & faculty (70 women ,84 men )	academic surgeons gender	To determine the perceived gender-based barriers to careers in academic surgery	Female academic surgeons perceived to differ from their male counterparts in the male dominant culture in departments of surgery.	online survey	Risk of lack of information	3
Spencer ES./ 2016/ USA /	practicing urologists of American urology Association N=848	Women in Urology departments	Female urologist in comparison to men with regard to income, workload, and job satisfaction.	Female urologists are significantly less compensated compared to male urologists after adjusting for several factors likely contributing to compensation.	Survey	self-reported survey selection and reporting biases	3
Sonnad SS./ 2002/ USA/	Academic Surgeons. 772 female , 994 male	academic surgeons gender	surgeon perception about balancing family and work life in both genders and department support.	it is necessary to further understand women's perceptions of their role in academic surgery and to address obstacles that exist for both men and women	a national survey of academic surgeon	.	3
Svhoren A T./ 2004/ USA	academic surgeons / N=317	surgeons gender	differences between women & men surgeons career development	Men and women differed in academic rank, tenure status, career aspirations, and income.	Survey (mailed)	Issues of Generalizability	.3
Lerner LB./ 2010/ USA/	American board certified women urologists: N=365	Women in Urology departments	Satisfaction of women urologists before and after maternity	Work factors /residency related issues were cited for dissatisfaction with maternal leave.	Survey 69% responded		3

across three domains: research reflexivity, study design (participant selection, setting, data collection) and analysis. In addition, we assessed the generalizability of each study.

**Data extraction and analysis**

Two reviewers extracted all data, and the discrepancies were resolved after consulting. A PICO-based data extraction form was used to ensure systematic retrieval of the following information: author, year, country/

region, discipline, population & number, intervention, comparison, study design, summary of main results/ outcomes, critical appraisal as well as potential risk of bias. For all included items, structured data extraction was performed drawing out descriptive information and content against the review aims and questions (Table 2). After data extraction, the findings were discussed by the two authors. Data synthesis was conducted in accordance with the nature of the evidence base and a narrative thematic approach was adopted as the best

**Table 3.** Reasons for patient's preferences for urologist's gender similarity in urologic procedures classified in 3 categories:

Religious Considerations	Socio-Cultural Considerations	Psychological Factors(Emotional Considerations)
The more religious beliefs, the greater importance patients attached to the gender preference of their urologist, due to modesty. The nature of religious were identified that correlated to the preference of same-gender urologist: (Muslims are more sensitive for the gender similarity in physical examinations involving pelvic and genital areas.)	Socio-cultural values, Ethnic origin were identified that correlated to the preference of same-gender urologist. Asian women are more sensitive for the gender similarity in pelvic examinations.  The age factor was also reported to be important among Men with regard to the gender of Their urologists.  A study that demonstrated Correlations between marital status and age to same gender Preference of women for their urologist  Responder's characteristics, Marital status, were i correlated to the preference of same-gender urologist.  Spouse's also preferred a female urologist for their partner	Previous examination by a same-gender urologist.  Feeling less embarrassed and shame with same gender urologist.  Feelings of being understood with same gender physicians.  Talking easily to same gender, and feel more at ease during physical examinations  Same gender urologists can reveal more Empathy towards patients suffering  Female urologists respond to socialization demand of their female patient with their care, warmth, patience, and empathy.  Female urologists are more likely to exhibit rapport building behaviors such as supporting reinforcement, lowered dominance, and positive talk.

approach for combining studies employing divergent methods. Meta-analysis was not considered appropriate for this body of literature because of the wide variability of the studies.<sup>(13)</sup>

#### **Appraising systematic review**

This systematic review was carried out in accordance to the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA guideline<sup>(14,15)</sup> to increase its transparency and applicability. In a meeting, the items were checked by authors to reach the agreement.

#### **Narrative Synthesis**

Narrative methods of synthesis can be used to synthesize both quantitative and qualitative studies. Narrative synthesis (NS) is commonly used in systematic reviews, especially when there is a high level of heterogeneity in the included experimental and non-experimental studies.<sup>(16)</sup> Therefore, for reviews of quantitative data where statistical synthesis is not possible, NS of quantitative data is often the alternative method of choice. As used here NS refers can be used in systematic reviews focusing on a wide range of questions, not only those relating to the effectiveness of an intervention. However, unlike quantitative synthesis that converts information into a metric and synthesizes these data using statistical meta-analysis, qualitative synthesis aims to synthesize qualitative data, which is commonly text-based. Such reviews adopt a narrative, as opposed to statistical, approach to research synthesis and seek to generate new insights by going beyond the summary of findings.<sup>(16-17)</sup>

#### **Thematic analysis in narrative synthesis**

Thematic analysis, a common method used in the analysis of qualitative data, can be used to identify systematically the main themes across multiple studies involving quantitative data or data from mixed method studies.<sup>(17,18)</sup> We used Thematic analysis to identify key themes

from the selected articles. Thematic analysis provides a means of organizing the findings from large, diverse bodies of research.<sup>(19)</sup> Our thematic analysis developed in an inductive manner without a complete set of a priori themes to guide data extraction and analysis from the outset.

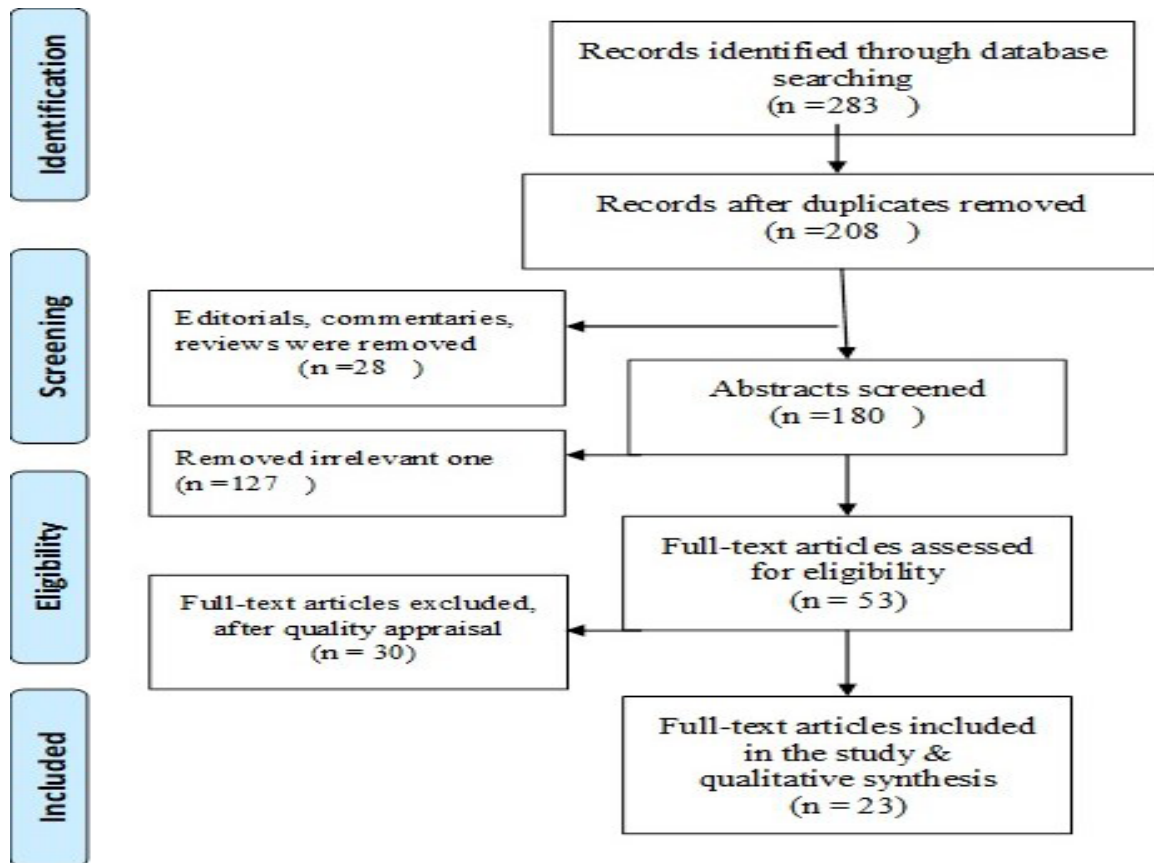
We followed these analytical principles: (1) Coding of the primary studies results (open coding), (2) organizing Codes into descriptive sub themes, (3) developing main themes. Findings were discussed and synthesized into a total of three key themes. Any discrepancies were discussed by both authors and resolved by consensus. Trustworthiness criteria for thematic analysis outlined by "Lincoln and Guba" have been met. We did not use Computer software for data management (e.g. to store data, group and retrieve codes).

## **RESULTS**

The authors identified 3 major themes about Patients Preference for same gender urologists and its implications for urology departments.

#### **Theme 1: Reasons for the patients' preference for same-gender urologists**

Awareness of the features affect the demand for same gender urologist can help medical educators and clinical department managers to enhance urologist -patient gender similarity in urologic care and surgical settings. In our narrative review, a considerable number of studies have investigated the patient' demand for same gender urologist<sup>(1,19-21)</sup>. Most of the studies investigated the preferences for urologist-patient gender similarity reported only patient viewpoints on the gender of their physicians in sensitive procedures<sup>(1,19-27)</sup>; three articles investigated the Muslim women preferences<sup>(28-30)</sup>, and two articles investigated the Asian women preferences for same gender physician urologists<sup>(1,20)</sup>. One study performed to explore Jewish male patients preference



**Figure 1.** Flow of information through the different phases of the review.

for their urologist gender.<sup>(19)</sup> In one article, the urologists were included and the study evaluated the impact of urologists gender on their surgical practice patterns<sup>(22)</sup>. Each of the above mentioned articles reported a number of reasons for patient-urologist gender similarity in sensitive examinations. We classified the reasons in Table 2. Summarizing their findings, we came up with three categories, including religious considerations<sup>(19, 24, 28-30)</sup>, socio-cultural considerations<sup>(1, 20, 23-25)</sup>, and emotional considerations.<sup>(1, 20, 23, 27)</sup> Considering the different reasons of patient's preferences for same-gender urologists, different studies have mentioned a variety of features, including the need to be sensitive to cultural issues and patient concerns in preserving modesty, and religious beliefs particularly for sensitive examinations.<sup>(19, 28-30)</sup>

Regarding the second category, there are many socio cultural considerations that affect the patient preference especially female patient for same gender physicians. In religious societies, spouses also preferred a female urologists for their partner.<sup>(25, 28)</sup> The more traditional and religious beliefs, the greater patients attach to the gender preference of their urologists, due to modesty.<sup>(19, 28)</sup> For example a study proposed that in educational hospitals, where most female patients are Muslim, alternative educational options such as manikins would be necessary for male medical students and residents.<sup>(29)</sup>

A number of papers in this theme moved beyond religious, socio-cultural reasons and stated the patient's psychological factor.<sup>(20, 25, 27)</sup> Less embarrassment, feeling more comfortable, feeling more support and empa-

thy have been indicated by some authors as the reasons for the patient demand for same gender urologists.<sup>(1, 17, 23-34)</sup> Some studies indicated that female communication patterns and establishing good relationships with patients are the reasons for women preference for female urologists<sup>(1, 24, 30-31)</sup>. Female urologists can reveal more affective behaviors such as concern, empathy than male physicians.<sup>(1, 24, 26)</sup> Better interpersonal skills and rapport building behaviors, also were highlighted in articles<sup>(20-24)</sup>. Several researchers also emphasized the type of procedure and medical practice. Patients exhibited more same gender preference for sensitive physical examination involving pelvic and genital areas or urological surgery.<sup>(1, 23-30)</sup> One study showed that most of patients felt less embarrassed with a same-gender urologist.<sup>(31)</sup> Two studies in this category moved beyond patient preference for same gender urologist and stated the important of patient gender for urologists.<sup>(22)</sup> One study revealed that female urologists provided their female patients more preventive cares.<sup>(34)</sup> Another study showed that female American urologists operated on a significantly higher percent of female patients than their male peers.<sup>(22)</sup> Female surgeons performed significantly more female specific procedures, such as slings, than their male counterparts. Male urologists performed significantly more male specific procedures than their female colleagues, including 3 times as many vasectomies and more than twice as many prostatectomies. These trends were consistent across all subspecialties and geographic regions.

Another theme achieved from data analysis was related

to the association between patient – urologist gender similarity and health care outcome. A number of studies suggests that female urologists devote more time on the preventive care and they provided female patients with more preventive counseling services.<sup>(23-26)</sup> Two studies investigated the effect of urologist's gender on women's perceived pain during pelvic and urologic examination<sup>(14,21)</sup>. Five investigations revealed the positive effects of urologists and patient gender similarity on patient satisfaction and lower embarrassment and pain during urologic examinations<sup>(13,14,21-24)</sup>. One study investigated the association of patient-surgeon gender similarity with better health outcome and lower mortality rates after surgery<sup>(24)</sup>. One of the studies discussed that Muslim women delayed care seeking due to lack of availability of same-gender providers in sensitive cares and its associations with adverse health outcome<sup>(7)</sup>. The results indicate that the urologists-patients gender similarity improves the quality of primary care, and increases the control of risk factors among female patients<sup>(21-24)</sup>, as well as providing a patient-centered care<sup>(26,32-34)</sup>. A cohort study showed that urologists have performed significantly more same gender-specific procedures. This study also showed that female urologists performed significantly more female specific procedures, than their male counterparts and male urologists performed significantly more male specific procedures than their female colleagues.<sup>(34)</sup>

Overall, we noted a wide range of obstacles regarding patient-urologist gender similarity in urology departments. Many studies emphasized on the institutional obstacles such as gender inequality and male dominant culture in urology departments, and the unfriendly work structure for female surgeons.<sup>(35-40)</sup> One investigation collaborated with the American Urological Association revealed that adjusted salaries among female urologists were less than those of men.<sup>(38)</sup>

Women are disproportionately underrepresented in educational and administrative positions of urology departments.<sup>(37-38)</sup> We identified some strategies in our review for promoting the patient-urologist gender similarity in hospitals. These strategies include offering new directions for gender equality in urologic surgical departments, regulation of time and development of gender similarity in hospitals<sup>(36-38)</sup>, empowering women surgeons<sup>(35-38)</sup>, addressing obstacles faced by female faculty and facilitating the female mentors promotion as role models in the male-dominated surgical departments.<sup>(38)</sup> Additionally, increasing flexibility in training and work pattern for female surgeons and providing institutional support for creating family-friendly working conditions are highly advised.<sup>(38,34)</sup>

## DISCUSSION

Through this review and synthesis of evidence, it is possible to clearly describe the necessity and importance of responding to patients' demand for same gender urologists in urology departments and clinical settings. To the best of our knowledge, this systematic narrative review is the first work to provide such a synthesis of evidences that could help health system policy makers to promote urologist-patient gender similarity in surgical settings.

In our first theme, we analyzed the articles which had gathered data from the perspective of patients and urologists, and used qualitative or quantitative methods to

present detailed information about the reasons of patient preference especially women for same gender urologists. We classified the patient considerations for selecting the same gender urologists in 3 categories including religious, socio-cultural norms, and emotions. (Table 3)

We identified almost most of women prefer female surgeons with regard to their cultural and religious values.<sup>(1,20,23-25,28-30)</sup> Muslim women usually seek out a female surgeon.<sup>(4,28-30)</sup> Studies revealed that the feelings of embarrassment among patients hindered them from communicating effectively with their urologists.<sup>(28,30)</sup> Embarrassment during the urinary organs examination which are very close reproductive organs was the major reason for same-gender preference.<sup>(1-3)</sup> The perception of bladder problems among the participants also contributed to their embarrassment.<sup>(20)</sup> Also, there is an increasing preference for female urologists with regard to their practice style.<sup>(10,13,24)</sup> Female surgeons respond to socialization demand of their female patient with their care, warmth, patience, and empathy.<sup>(5,10,30,32)</sup> Women find female surgeons more desirable for sensitive procedures.<sup>(1,3,21,23,24)</sup> A study in 2019 showed most of the women with pelvic floor disorders had a preference for the same gender uro-gynecologists.<sup>(3)</sup> Another study in 2018 performed in religious context showed that more than half the female participants had a preference for the same gender urologist and this trend will increase demand for women urologists in the near future.<sup>(1)</sup>

In our second theme, we found that patient and urologist gender similarity were associated with health outcomes.<sup>(22-24)</sup> The quality of patient- urologists relationship and the level of patient satisfaction of medical encounter influence the health care outcome<sup>(2,8)</sup>. The female patients' satisfaction in receiving medical care especially in sensitive visits and physical examination from female physician has a positive impact on the result of medical procedures.<sup>(24)</sup> In addition, studies indicate that patient and physician gender similarity improves the quality of primary care<sup>(5,26,32,33)</sup>, increases the risk factor control in diabetes and cardiovascular diseases and decreases heart attack mortality among female patients<sup>(41,42)</sup>.

Raising awareness of the positive effects of same gender urologists on patient's health outcome could help the health policy makers to develop the long term strategies in this regard.<sup>(43,46-47)</sup>

Despite the potential barriers for female urologists in male dominated academic urology departments, there is an increasing trend in the proportion of females applying to urology.<sup>(3,6,45-46)</sup>

The tendency for women in medicine to continue their education in specialty and subspecialty programs and provide specialty care, especially for female patients, would have long term effect on women's health.<sup>(3,44)</sup> A lack of presence of same gender urologist in clinical settings can be a barrier to timely care.<sup>(28,30)</sup> Some patients have refused male urologists even in emergency situations, and some patients have refused male specialists even in non-sensitive procedures when female specialists were not available.<sup>(29,30,34)</sup> Delayed care seeking is associated with adverse health outcomes. Our synthesis suggests that gender similarity between patients and urologists resulted in the on-time care seeking.

Considering our third theme, our review findings have added to the current literature by explaining the useful

strategies for enhancing and improving women presence in surgical departments' attitudes and traditions related to masculine nature of surgery and culture of male dominance in surgical departments are perceived obstacles to career success for women.<sup>(27-30)</sup>

We came up with some studies that described female surgeon's experiences.<sup>(36,46,47)</sup> Despite the increased entry of women into specialty and subspecialty training programs, there remains a gross under-representation of women at senior levels of surgical departments. A study with the collaboration of the American Urological Association showed that female urologists are significantly less compensated compared to male urologists.<sup>(37)</sup> Studies showed that female academic surgeons experience challenges that are perceived to differ from their male colleagues.<sup>(3,44-47)</sup>

Historically the specialty department like urologic surgery has been male-dominated, and in these departments women are disproportionately underrepresented when it comes to educational and administrative positions of leadership<sup>(6,10,26,27)</sup>. Lack of female colleagues and bias against women pursuing career in some surgical fields are other obstacles. Female surgeons perceived discrimination by the male power structure in surgery and feel excluded from the male dominant culture.<sup>(27,30)</sup> Addressing the differences between men and women academic surgeons is critical in fostering career development.<sup>(3,46,47)</sup>

Many studies have emphasized on the institutional obstacles such as gender inequality, and the unfriendly work structure for female surgeons.<sup>(36-39)</sup> Increasing flexibility in training and work pattern for female physicians and providing institutional support for creating family-friendly working conditions are highly recommended. Structural supports including flexibility in working shifts, lower on-call duties, and part-time working practice arrangements to fit family responsibilities, providing adequate facilities for childcare, are recommended to attract more female physicians to surgical fields and retain female surgeons.<sup>(39-40)</sup> Attempting the deeper changes in this culture will allow attract and retain the best surgeons regardless of gender.<sup>(39,45)</sup> Increasing female faculty and role models in urology department, and developing rich networks among female urologists would produce meaningful change in the currently male-dominated culture.<sup>(36-39)</sup> Considering flexible Promotion and partnership track for female urologists are suggested.<sup>(39-40)</sup>

It is also worth mentioning that considering population diversity (immigration and generational differences), the health system need to be sensitive to cultural differences, values, religious, and also societal norms.<sup>(4,26,29-30)</sup>

Urologic surgical departments should honor the patient preference for urologist gender that are based on the individual patient's history. Taking a comprehensive approach to fulfill the patients' need for same gender urologists in educational hospitals and health care services across urology department is recommended. Because of the heterogeneous nature of the included studies in terms of study design, sample size, outcomes, it was not be appropriate to meta-analyze estimates of intervention effects. However, we used narrative review and thematic synthesis of quantitative studies, which are often the alternative method of choice where statistical synthesis is not possible. Only English reported studies

were included. We used the mentioned combination of electronic to guarantee coverage of evidences and produce the most unique reference. However, we believe that the results of this synthesis can be used to support future studies on the development programs that foster urologist-patient gender similarity in clinical settings.

## CONCLUSIONS

The existing empirical and theoretical studies were synthesized to provide more comprehensive recommendations. The gender differentials between the patients and their urologists made their communication unpleasant. Most of the patients prefer same gender Urologists in clinical and surgical settings due to their religious belief, socio-cultural values, emotional expectations, and their past medical visit experience. Furthermore, less embarrassment, feeling more comfortable, more supports are the reasons for the patient demand for same gender urologists. The female patients' preference for same gender urologists has a profound effect on their delayed healthcare seeking behaviors. This delay can endanger patients' treatment outcome.

Urologic surgical departments should honor the patient preference for urologist gender that is based on the individual patient's values. Although altering such social and cultural values would be different, empowering female urologists in this male dominated specialty may be a feasible solution for improving the treatment experiences and thus the treatment outcomes of female patients with urologic problems. The findings themes may help move the male-dominated urology departments towards a culture supportive of female urologists. Future efforts should be made by medical educationalists to empower female urologists' qualifications and to help promote to academic leadership positions. Also, the findings of this review could form the foundation of a comprehensive program in order to improve urologists-patient gender similarity in clinical and surgical departments.

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## CONFLICT OF INTERESTS

None declared.

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