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A Quantitative Analysis Investigating the Prevalence of “Manels” in Major Urology Meetings

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Abstract

Background: Female representation in urological meetings is important for gender equity.

Objective: Our objective was to examine the prevalence of “manels” or all-male speaking panels at urological meetings.

Design, setting, and participants: Urology meetings organized by major urological associations/societies from December 2019 to November 2020 were reviewed. Meeting information and details of the faculty were retrieved.

Outcome measurements and statistical analysis: Primary outcomes were: (1) the percentage of male faculty in all included sessions and (2) the overall proportion of manels. We made further comparisons between manel and multigender sessions. Male and female faculty were stratified by quartiles of publications, citations, and H-index, and their mean numbers of sessions were compared.

Results and limitations: Among 285 meeting sessions, 181 (63.5%) were manels. The mean percentage of male faculty was 86.9%. Male representation was very high in urology meetings for most disciplines and urological associations/societies, except for female urology meeting sessions and those organized by the International Continence Society. Nonmanel sessions had higher numbers of chairs/moderators ($p = 0.027$), speakers ($p < 0.001$), and faculty ($p < 0.001$) than manel sessions. A total of 1037 faculty members were included, and 900 of them (86.8%) were male. Male faculty had longer mean years of practice (23.8 vs 17.7 yr, $p < 0.001$) and was more likely to include

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professors (43.2% vs 17.5%, $p < 0.001$) than female faculty. Male faculty within the first quartile (ie, lower quartile) of publications and H-index had a significantly higher number of sessions than female faculty within the same quartile.

Conclusions: Our study showed that manels are prevalent in urology meetings. There is evidence showing that males received more opportunities than females. A huge gender imbalance exists in urology meetings; urological associations and societies should actively strive for greater gender parity.

Patient summary: Women are under-represented in urology meetings. Urological associations and societies should play an active role to ensure a more balanced gender representation.

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1. Introduction

Women are under-represented in academia. Women physicians were less likely than men to be promoted to the rank of associate or full professor, and there was no apparent narrowing over a 35-yr period [1]. In urology, there were also fewer female urologists at senior academic positions than male urologists [2]. Even in national and international meetings, poor female representation was consistently shown across all surgical specialties, despite the steady increase of women in all residency programs [3–7]. The number of female speakers in surgical specialty conferences was found to be 9.8% less than that in medical specialty conferences [8]. Many conferences were male dominated, with more than one-third of the panels composing of men only [9]. All-male speaking panels are known as “manels”. This phenomenon of gender imbalance was also noted in the American Urological Association (AUA) annual meetings. Three recent studies highlighted the consistently low proportion of female panelists, moderators, presenters, and speakers in the AUA annual meetings throughout the period of 2017–2019 [10–12].

Gender disparity appears to be a significant problem particularly in the field of urology. The Medscape Physician Compensation Report 2019 found that urology is the specialty with the second lowest percentage of women physicians of only 12% [13]. The gender gap in surgical residencies is extremely wide, and it was estimated that urology would require 56 yr and 71 yr to reach the levels of female representation comparable with that of the overall trainee population and US population, respectively [14]. Male domination in academia and scientific meetings would have a significant impact on expanding academic careers for female urologists, and role modeling for female students and residents.

Academic meetings are opportunities for physicians and surgeons to meet and connect with worldwide colleagues, share experiences, discuss about research projects, learn about the updates in the field, and improve career opportunities. Selection of speakers and faculty should be based on clinical, scientific, and technical competency instead of gender. Some may argue that the apparent differences in male and female representation do not necessarily reflect gender inequality. In this study, we aimed to investigate the prevalence of manels in urology

meetings and to compare speaker qualifications by gender through a comprehensive and exhaustive analysis of urology meetings within the past year.

2. Patients and methods

The scientific program of the urology meetings and webinars organized by major urological associations and societies including the AUA, European Association of Urology (EAU), Endourological Society, International Continence Society (ICS), Societe Internationale d'Urologie (SIU), and Urological Association of Asia (UAA) during a 1-yr time period from December 2019 to November 2020 was reviewed. Both the association/society websites and the DocMeetings archive [15] were screened to ensure a comprehensive coverage of urology meetings. Both face-to-face and virtual meetings conducted in English were included. Meeting information including the number of sessions within a meeting, duration of each session, details of chairs/moderators and speakers, and topics by subspecialty were recorded. For each included faculty (including both chairs/moderators and speakers), its perceived gender, mean year of practice, location of practice, specialty, and position were retrieved from the faculty's institutional websites or his/her personal professional websites. Their number of publications, number of citations, and H-index [16] were retrieved from Web of Science [17] as a surrogate for academic achievements.

Primary outcomes were: (1) the overall percentage of male versus female faculty (as chairs/moderators or speakers) in all included sessions and (2) the overall proportion of manels (ie, men-only chairs/moderators plus men-only speakers). Secondary outcomes included the percentages of male participants as chairs/moderators and speakers respectively, and the proportions of sessions with men-only chairs/moderators and men-only speakers respectively. The study outcomes were presented as a whole and further stratified by association/society and by subspecialty.

The meeting sessions were then divided into “manel” and “nonmanel” sessions. The duration of meeting sessions, number of chairs/moderators, speakers and faculty, organizing association/society, and topic by subspecialty were compared. Further analyses between male and female faculty were performed by comparing their years of practice, location of practice, specialties, and positions. In order to analyze whether male and female faculty with similar levels of academic merits received equal amount of opportunities, we compared their mean number of sessions, stratified by quartiles of publications, citations, and H-index. Male and female faculty were grouped together in order to define the quartiles of publications, citations, and H-index.

All parametric continuous variables were analyzed by independent samples t test. All nonparametric continuous variables were analyzed by Mann-Whitney U test or Kruskal-Wallis test where appropriate. Categorical variables were compared using the chi-square test. A p value of <0.05 was considered statistically significant. All statistical analyses were performed using SPSS version 20.0 (IBM Corp., Armonk, NY, USA).

Table 1 – Baseline information of the included meetings

N = 285	
Mean duration (min)	82.4 ± 59.0
Mean number of chairs/moderators	1.6 ± 1.4
Mean number of speakers	4.0 ± 4.4
Mean number of faculty	5.3 ± 5.2
Organizing association/society, n (%)	
American Urological Association	34 (11.9)
Endourological Society	27 (9.5)
European Association of Urology	91 (31.9)
International Continence Society	27 (9.5)
Societe Internationale d'Urologie	64 (22.5)
Urological Association of Asia	42 (14.7)
Topic by subspecialty, n (%)	
General urology/mixed	43 (15.1)
BPH/LUTS	37 (13.0)
Female urology	8 (2.8)
Stone	32 (11.2)
Uro-oncology	109 (38.2)
Infertility/sexual medicine	11 (3.9)
Pediatric urology	5 (1.8)
Renal transplant	2 (0.7)
Others	38 (13.3)

BPH = benign prostatic hyperplasia; LUTS = lower urinary tract symptoms.

3. Results

3.1. Overview

From December 2019 to November 2020, a total of 285 meeting sessions were included in our study. The mean duration of each meeting session was 82.4 min. The mean numbers of chairs/moderators, speakers, and faculty for each meeting session were 1.6, 4.0, and 5.3, respectively. Among the meeting sessions, 31.9% were organized by the EAU and 38.2% were uro-oncology sessions. The baseline information of the included meetings is summarized in [Table 1](#), and the list of included meetings can be found in the Supplementary material.

3.2. Male participation and manels by association and society

Overall, 86.9% of all faculty members in the included urological meetings were male. The mean percentages of male participants were mostly over 85% across the urological meeting sessions arranged by the AUA, EAU, Endourological Society, SIU, and UAA. Of note, 98.4% of chairs/moderators, 96.1% of speakers/panelists and 96.9% of faculty were male in the urology meetings organized by UAA. ICS was the only society that organized urology meetings with a more balanced gender representation. Overall, 63.5% of all included urology sessions were manel sessions. The proportions of manels ranged from 55.9% to 85.4% for the urology meeting sessions arranged by the AUA, EAU, Endourological Society, SIU and UAA. ICS had a lower rate of manels (25.9%). There were significant differences between the different associations and societies for both the mean percentages of male participants and the proportions of manels (All $p < 0.001$). The results are summarized in [Table 2](#).

3.3. Male participation and manels by subspecialty

The mean percentages of male participants were mostly over 85% across different subspecialties ([Table 3](#)). The mean percentages of male participants were the lowest in the meeting sessions on female urology (chairs/moderators: 62.5%; speakers 41.7%; all faculty: 50%). The proportions of manels were mostly over 60% across different subspecialties. The proportion of manel sessions was the lowest in the meetings on female urology (37.5%). The mean percentages of male participants were significantly different between the different subspecialties ($p = 0.015$), but there were no significant differences on the proportions of manels ($p = 0.097$). Results on the subgroup comparisons are presented in the Supplementary material.

Table 2 – Male representation, overall and by association and society

	Total (N = 285)	AUA (n = 34)	EAU (n = 91)	Endourological society (n = 27)	ICS (n = 27)	SIU (n = 64)	UAA (n = 42)	p value
Chairs/moderators								
Mean male %	89.1 ± 28.8	91.5 ± 25.1	92.8 ± 21.7	95.1 ± 20.1	52.0 ± 51	91.5 ± 25	98.4 ± 9	<0.001
Sessions with men-only chairs/moderators (%)	85	84.8	86.7	92.6	52	87.3	96.9	<0.001
Speakers								
Mean male %	85.2 ± 26.2	83.2 ± 26.1	89.9 ± 15.6	90.7 ± 27.9	51.2 ± 42.1	87.5 ± 22.3	96.1 ± 14	<0.001
Sessions with men-only speakers (%)	67.3	58.8	65.9	88.9	33.3	67.2	85.4	<0.001
Faculty (including both chairs/moderators and speakers)								
Mean male %	86.9 ± 22.2	85.9 ± 19.6	90.5 ± 14	92.9 ± 15.8	51.2 ± 39.4	90.6 ± 13.6	96.9 ± 11.1	<0.001
Manel sessions (%)	63.5	55.9	61.5	81.5	25.9	65.6	85.4	<0.001

AUA = American Urological Association; EAU = European Association of Urology; ICS = International Continence Society; SIU = Societe Internationale d'Urologie; UAA = Urological Association of Asia.

Table 3 – Male representation, overall and by subspecialty

	Total (N = 285)	General urology (n = 43)	BPH/LUTS (n = 37)	Female urology (n = 8)	Stone (n = 32)	Uro-oncology (n = 109)	Infertility/sexual medicine (n = 11)	Pediatric urology (n = 5)	Renal transplantation (n = 2)	Others (n = 38)	p value
Chairs/moderators											
Mean male %	89.1 ± 28.8	91.8 ± 23.9	76.7 ± 43	62.5 ± 51.8	94.4 ± 21.2	94.3 ± 18.0	100 ^a	90.0 ± 22.4	100 ^a	80.7 ± 39.5	0.15
Sessions with men-only chairs/moderators (%)	85	84.2	76.7	62.5	92.6	88.4	100	80	100	78.1	0.2
Speakers											
Mean male %	85.2 ± 26.2	91.6 ± 23.7	86.6 ± 25.6	41.7 ± 49.6	84.9 ± 29.9	89.9 ± 17.1	87.8 ± 22.5	90 ± 22.4	100 ^a	72.8 ± 32.2	0.009
Sessions with men-only speakers (%)	67.3	76.7	73	37.5	75	66.1	72.7	80	100	47.4	0.065
Faculty (including both chairs/moderators and speakers)											
Mean male %	86.9 ± 22.2	92.4 ± 18.7	83.7 ± 25.2	50 ± 46.3	89.6 ± 18.6	91 ± 14.8	89.9 ± 18	90 ± 22.4	100 ^a	76.9 ± 27.4	0.015
Manel sessions (%)	63.5	72.1	62.2	37.5	75	63.3	72.7	80	100	44.7	0.097

BPH = benign prostatic hyperplasia; LUTS = lower urinary tract symptoms.

^a All sessions included had 100% male participants; hence, no standard deviation was provided.

3.4. Comparison between manel and nonmanel sessions

Among the 285 included sessions, 181 (63.5%) were manel and 104 (36.5%) were nonmanel sessions (Table 4). The mean duration was 76.9 min in manel sessions and 92.2 min in nonmanel sessions, but it did not reach statistical significance ($p = 0.057$). Nonmanel sessions had significantly higher mean numbers of chairs/moderators ($p = 0.027$), speakers ($p < 0.001$), and faculty ($p < 0.001$) than manel sessions. In terms of the organizing association/society, there were significant differences with 30.9% of manel sessions organized by the Endourological Society and 33.7% of the nonmanel sessions organized by the EAU ($p < 0.001$). Regarding the topic by subspecialty, no significant differences were noted between manel and nonmanel sessions ($p = 0.097$).

3.5. Comparison between male and female faculty

A total of 1037 faculty were included in this analysis. Among them, 900 (86.8%) were male and 137 (13.2%) female faculty. Male faculty had longer mean years of practice than female faculty (23.8 vs 17.7 yr, $p < 0.001$). The location of practice differed significantly between male and female faculty ($p < 0.001$); 33.9% of male faculty and 53.3% of female faculty were based in North America, 41.0% of male faculty and 38.7% of female faculty were based in Europe, and 22.3% of male faculty and 3.6% of female faculty were based in Asia (Table 5). Regarding the specialty, 87.8% of male faculty and 66.9% of female faculty were specialized in urology; female faculty were more likely to have nonurology specialties such as medical oncology, radiology, and gynecology ($p < 0.001$). Regarding professional positions, male faculty were more likely to be professors and female faculty were more likely to be of other positions such as nurses ($p < 0.001$).

3.6. Number of sessions stratified by quartile of publications, citations, and H-index

For all faculty, the mean number of publications, number of citations, and H-index were 186.3, 3658.3, and 23.1, respectively. The mean number of sessions per faculty was 1.51. For those within the first quartile (ie, lower quartile) of publications, male faculty had a significantly higher mean number of sessions than female faculty (1.37 vs 1.17, $p = 0.029$). For those within the first quartile (ie, lower quartile) of H-index, male faculty had a significantly higher mean number of sessions than female faculty (1.30 vs 1.15, $p = 0.045$). For those within the first quartile (ie, lower quartile) of citations, the mean number of sessions was 1.29 per male faculty and 1.14 per female faculty, which is not significantly different ($p = 0.068$). With increasing publications, citations, and H-index (from second to fourth quartiles), there were no significant differences in the number of sessions between male and female faculty. The results are summarized in Table 6.

Table 4 – Comparison between manel and nonmanel sessions

	Total (N = 285)	Manel sessions (n = 181)	Nonmanel sessions (n = 104)	p value
Mean duration (min)	82.4 ± 59.0	76.9 ± 49	92.2 ± 72.4	0.057
Mean number of chairs/moderators	1.6 ± 1.4	1.49 ± 1.27	1.88 ± 1.49	0.027
Mean number of speakers	4.0 ± 4.4	3.03 ± 2.13	5.67 ± 6.37	<0.001
Mean number of faculty	5.3 ± 5.2	4.2 ± 2.7	7.4 ± 7.5	<0.001
Organizing association/society (%)				
American Urological Association	11.9	10.5	14.4	
European Association of Urology	9.5	12.2	33.7	<0.001
Endourological Society	31.9	30.9	4.8	
International Continence Society	9.5	3.9	19.2	
Societe Internationale d'Urologie	22.5	23.2	21.2	
Urological Association of Asia	14.7	19.3	6.7	
Topic by subspecialty (%)				
General urology/mixed	15.1	17.1	11.5	0.097
BPH/LUTS	13.0	12.7	13.5	
Female urology	2.8	1.7	4.8	
Stone	11.2	13.3	7.7	
Uro-oncology	38.2	38.1	38.5	
Infertility/sexual medicine	3.9	4.4	2.9	
Pediatric urology	1.8	2.2	1	
Renal transplant	0.7	1.1	0	
Others	13.3	9.4	20.2	

BPH = benign prostatic hyperplasia; LUTS = lower urinary tract symptoms.

4. Discussion

There has been an increasing concern about the prevalence of manels in the medical profession. A higher percentage of male presentation in urology meetings has been shown before [10–12]. Since the previous studies were mostly focused on AUA meetings [10–12], we know very little about the prevalence of manels in urology meetings from a global perspective. Therefore, we conducted this study to investigate the prevalence of manels in major urology meetings worldwide, and to have an in-depth analysis to investigate whether male and female urologists with similar levels of academic merits receive equal number of opportunities in terms of participation in urology meetings. By comparing

between manel and nonmanel sessions, we sought to gain some insights into how we can improve the situation.

Our study included a total of 285 sessions within a 1-yr time period. The percentages of male chairs/moderators, speakers, and faculty were very high across most associations and societies. Although the formation of a manel, defined as 100% male representation within a panel, may seem to be numerically difficult, we found that >60% of the panels were in fact manels across all urology meetings. Our results showed that the organizing association/society could play a crucial role in dissolving the manel. ICS is a good example achieving a gender balance in both chairs/moderators and speakers in its meeting sessions, although this might be explained by the composition of male/female

Table 5 – Comparison between male and female faculty

	Male faculty (n = 900)	Female faculty (n = 137)	p value
Mean years of practice	23.8 ± 9.9	17.7 ± 9.4	<0.001
Location of practice (%)			
North America	33.9	53.3	<0.001
South America	0.7	0.7	
Europe	41.0	38.7	
Africa	0.8	0	
Australia & New Zealand	1.3	3.6	
Asia	22.3	3.6	
Specialty (%)			
Urology	87.8	66.9	<0.001
Oncology	4.3	10.8	
Radiology	2.1	3.6	
Others (eg, gynecology)	5.8	18.7	
Position (%)			
Professor	43.2	17.5	<0.001
Associate professor	19.0	20.4	
Assistant professor	7.3	11.7	
Consultants	28.9	26.3	
Trainees/registrars/fellows	1.2	5.8	
Others (eg, nurses)	0.3	18.2	

Table 6 – Mean number of sessions for male and female faculty, stratified by quartile of publications, citations, and H-index

Mean number of sessions	Male faculty	Female faculty	p value
Stratified by quartile of publications			
1st quartile	1.37 ± 1.05	1.17 ± 0.46	0.029
2nd quartile	1.25 ± 0.53	1.26 ± 0.50	0.9
3rd quartile	1.54 ± 1.03	1.43 ± 0.90	0.6
4th quartile	1.94 ± 1.62	2.00 ± 1.46	0.9
Stratified by quartile of citations			
1st quartile	1.29 ± 0.84	1.14 ± 0.44	0.068
2nd quartile	1.37 ± 0.95	1.35 ± 0.55	0.9
3rd quartile	1.56 ± 0.97	1.36 ± 0.83	0.3
4th quartile	1.89 ± 1.61	1.86 ± 1.36	0.9
Stratified by quartile of H-index			
1st quartile	1.30 ± 0.84	1.15 ± 0.44	0.045
2nd quartile	1.38 ± 0.98	1.32 ± 0.54	0.8
3rd quartile	1.57 ± 0.99	1.46 ± 0.84	0.6
4th quartile	1.87 ± 1.60	1.89 ± 1.49	1.0

urologists within its subspecialty. For the comparison between manel and nonmanel sessions, significant differences were also noted in the organizing association/society. In fact, being doctors, we have the obligation to stand for social fairness and value diversity in all dimensions. The *Lancet* group has adopted a “no all-male panel” policy, which states that the editors will not serve as panelists at a public conference or event when there are no women on the panel [18]. Similarly, we hope that major urological associations and societies can take the lead to ensure that women are adequately and fairly represented in future urology meetings.

Increasing female representation within the organizing committee is a good start to improve gender balance and representation in our field. Previous studies have noted a positive association between the number of female organizers for scientific meetings and the number of female speakers [19]. These findings were echoed in a recent study of urological oncology meetings, in which women were more likely to speak in sessions with another woman as the chair [20]. In our study, the lowest proportion of manels in meetings organized by ICS may also relate to the fact that almost half of the chairs/moderators in their meetings were females. Therefore, inclusion of a diverse group of organizers and session chairs for scientific meetings is an important step to reduce gender bias and promote diversity. Interestingly, our study showed that nonmanel sessions had a higher number of chairs/moderators (manel: 1.49, nonmanel: 1.88, $p = 0.027$), speakers (manel: 3.03, nonmanel: 5.67, $p < 0.001$), and faculty members (manel: 4.2, nonmanel: 7.4, $p < 0.001$) than the manel sessions. Increasing the number of faculty members within a session may be a possible way to dilute gender imbalance, and it may be a good bridge trying to gradually overturn the current over-representation of male faculty in urology meetings.

It is also important to raise awareness of this issue within the scientific community. There are many dedicated social media accounts that call attention to manels, such as @manelWatch on Facebook, which transitioned to Twitter (@manelWatchUS), and similar accounts

from many other countries around the world (eg, @manelWatchAu, @manelWatchKenya, @manelWatchPk, and @manelWatchDK). Within the field of urology, the problem of manels has been called out through the hashtags #ILookLikeASurgeon and #ILookLikeAUrologist [21,22]. Social media platforms have a large global reach, making them important channels through which to raise a spotlight on this issue and drive change. With a positive and affirming mission, these campaigns underscore the fact that surgeons/urologists represent a diverse array of both women and men from a variety of cultures and backgrounds [23]. Another way to combat manels is the creation of searchable databases with female speakers. An example is the “SayNoToManels List Kenya”, which is a Google form including the name, area of expertise, social media handles, and links to previous speaking engagements [24]. Such platforms can provide conference organizers with a readily accessible way to identify qualified female speakers. Similar efforts are underway in the field of urology, including the Society of Women in Urology Speaker Database.

It is fair that the opportunity to participate as a faculty member should be based on academic merits. Hence, one may argue that the mere description on the percentages of male faculty or the proportion of manels is not sufficient to demonstrate gender inequality. To investigate further, we compared male and female faculty with similar levels of academic achievements (based on the number of publications, the number of citations, and H-Index). We found that male faculty in the first quartile (ie, lower quartile) of publications and H-index had a higher mean number of sessions than female faculty. This suggests that male faculty with similar levels of academic merits might actually receive more opportunities than female faculty. This gender inequality may lead to the vicious cycle of having male-dominated meetings or the dominance of manels in the long run. Opportunities should be offered to both male and female faculty in order to achieve gender equality.

To our knowledge, this is the first study to provide objective evidence that gender imbalance exists in major urology meetings, and gender equity should be considered a major goal. Our study reviewed 1 yr of major urology

meetings, and we believe that the results were representative of what we are facing in the urology community. However, there are also several limitations in this study. First, certain subgroup analysis was limited by a small sample size. For example, there were only five pediatric urology and two renal transplantation sessions; data from these sessions must be interpreted with caution. Second, the percentage of male representation was overwhelming. Although we have already included 1037 faculty, only 137 of them were females. Subgroup analyses were limited by the relatively small number of female faculty. Third, only meetings conducted in English were included. The decision to include English meetings only was due to difficulty in data extraction for both meeting and faculty information due to language barriers. It is possible that these results may not apply to non-English meetings. Fourth, the actual ratio of female to male urologists globally is unknown, and further correlation with meeting representation is not possible.

The authors agreed that the existence of manels could be subconscious, and might not be intentional or personal. This study is important to confirm the existence of gender imbalance within the urology community globally, and we must take an extra step to stand up for gender equity. Having more female participation on panels could be the first step to achieve broader female representation and embrace the goal of gender balance in the academic meetings. Promoting diversity will only make our world a better one.

5. Conclusions

Our study confirmed that there was a lack of female representation in major urology meetings. Manels were consistently demonstrated across major urological associations/societies. Manels were also consistently observed across different subspecialties, except for female urology. Urological associations and societies should take a lead in actively promoting diverse representation in future meetings.

Author contributions: Jeremy Yuen-Chun Teoh had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Study concept and design: Teoh, Murphy, van Oort, Loeb, Ribal.

Acquisition of data: Teoh, Castellani, Mercader, Sierra, Heldwein, Chan.

Analysis and interpretation of data: Teoh, Castellani, Mercader, Sierra, Heldwein, Chan.

Drafting of the manuscript: Teoh, Castellani, Chan.

Critical revision of the manuscript for important intellectual content: Wroclawski, Sepulveda, Cacciamani, Rivas, Murphy, van Oort, Loeb, Ribal.

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Appendix A. Supplementary data

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