

## Original Article

# Comparison of Nurses' and Nursing Students' Attitudes toward Care Provision to Opposite-Gender Patients

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## INTRODUCTION

Nursing is known as a female profession in many countries.<sup>[1]</sup> However, many men have entered

### ABSTRACT

**Background:** Nurses often have to care for the patients of the opposite gender. This can be challenging for both nurses and patients in Iran due to the Iranians' cultural and religious beliefs. **Objectives:** The aim of this study was to compare nurses' and nursing students' attitudes toward care provision to opposite-gender patients. **Methods:** This cross-sectional study was conducted in 2018 on a random sample of 107 nurses who worked in four teaching hospitals, and 95 bachelor's and master's nursing students from the Hamadan University of Medical Sciences, Hamadan, Iran. A 21-item researcher-made self-report questionnaire was used for data collection. The data were analyzed through the independent samples *t*-test and the linear regression analysis. **Results:** The mean scores of nurses' and nursing students' attitudes were  $72.54 \pm 15.47$  and  $66.87 \pm 14.80$ , respectively ( $P = 0.02$ ). The significant predictors of nurses' and nursing students' attitudes were their educational degree, history of care provision to opposite-gender patients, and clinical work experience. **Conclusion:** Many nurses and nursing students have moderate attitudes toward care provision to opposite-gender patients. Nursing students' poorer attitudes compared with nurses highlight the need for revisions to the nursing academic curriculum to prepare them for quality care provision to the patients of both genders.


**KEYWORDS:** Attitudes, Nursing care, Opposite gender

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nursing in recent decades and played significant roles in its development.<sup>[2]</sup> Male nurses constitute 9.6% of the total population of nurses in the United States, 5.8% in Canada, and 1% in China, denoting the severe shortage of male nurses.<sup>[1-3]</sup> The ratio of male-to-female nurses in Iran in 2013 was 1:7, whereas about 50% of all patients are male.<sup>[4]</sup>

Patients in Iran are hospitalized in separate rooms and even wards according to their gender. Similarly, nurses are often selected from the same gender as patients. However, due to the shortage of male nurses, many nurses are compelled to provide care to the patients of the opposite gender.<sup>[5,6]</sup>

Nursing care provision to the patients of the opposite gender may be challenging.<sup>[3,7]</sup> A study showed that male nurses have great concerns over being accused of sexual abuse of their female patients during care provision so much so that they attempt to minimize contacts and provide care to them only in the presence of others.<sup>[8]</sup> On the other hand, female nurses also have difficulties in care provision to male patients, particularly when there is a need for exposing patients' genital area. This situation not only violates patient privacy but also causes severe tensions for both patients and female nurses.<sup>[9,10]</sup> A study reported that 95.7% of female nursing students had difficulties in providing care to male patients.<sup>[10]</sup> Another study revealed that 90% of female nurses experienced negative psychological feelings such as hatred, stress, embarrassment, and discomfort while providing care to male patients.<sup>[11]</sup>

Sociocultural and religious factors can also affect nurses' feelings during care provision to opposite-gender patients. For instance, although the Holy Quran equates the saving of a human with the saving of all humans, direct skin contact with a stranger of the opposite gender is forbidden in Islam unless it is absolutely necessary.<sup>[12]</sup> Thus, Muslim nurses may experience tensions and difficulties in providing care to opposite-gender patients. Similarly, patients may also dislike or even refrain care services provided by opposite-gender nurses.<sup>[13,14]</sup> Such limitations may require nurses to modify their behaviors in dealing with the patients of the opposite gender.<sup>[14]</sup> A study in Iran, a Muslim country, showed that gender difference is a barrier to effective nurse-patient communication.<sup>[12]</sup> These problems make it necessary and important to assess the attitudes of nurses and nursing students toward care provision to the patients of the opposite gender.

## Objectives

The aim of this study was to compare nurses' and nursing students' attitudes toward care provision to opposite-gender patients.

## METHODS

### Design and participants

This cross-sectional study was conducted from February to April 2018. Study participants were 107 nurses who worked in Behesht, Shahid Beheshti, Farshchian, and Ekbatan teaching hospitals in Hamadan, Iran, as well as 95 bachelor's and master's nursing students from the Hamadan University of Medical Sciences, Hamadan, Iran. Sampling was done randomly through stratified random sampling. Inclusion criterion for bachelor's students was internship experience in clinical settings and for nurse's inclusion criteria was willing to participate in the study. Exclusion criterion for all participants was incomplete response to the study instrument.

Sample size was estimated to be 112 based on a confidence level of 95%, a power of 90%, and a significant difference in attitude scores of 5 ( $d = 5$ ) that was derived from the results of a pilot study in which the test and retest mean scores of students' attitudes were 55.23 and 62.27, respectively. However, given the small size of the study population (nurses = 924 and nursing students = 604), sample size was modified based on the size of the population using this equation:  $n_c = n/(1 + n/N)$ . The results showed that 101 nurses and 95 students were needed for the study.

### Instruments and data collection

The data collection instrument was a researcher-made questionnaire consisting of demographic questionnaire and 21 items about attitudes toward care provision to the opposite gender. The items of the attitude questionnaire were scored on a three-point scale from 1 ("Strongly agree") to 5 ("Strongly disagree"), except for the items 5, 6, and 9 which were reversely scored. Thus, the possible range of the total score of the questionnaire was 21–105, with higher scores indicating more positive attitudes toward care provision to the opposite gender. The total score of the questionnaire was categorized into three levels and interpreted as poor attitude (scores: 21–49), moderate attitude (scores: 50–77), and good attitude (scores: 78–105). However, in this manuscript, we aggregated the participants' responses of agree and strongly agree as agree, and disagree and strongly disagree as disagree.

Based on the literature review and expert opinions, initial questions were designed. For content validity assessment, the attitude questionnaire was assessed by ten nursing faculty members, and then, content validity ratio and index were calculated to be 0.81 and 0.85, respectively. Face validity was also assessed by 15 nurses and nursing students, resulting in an item

impact score of 1.73. For reliability assessment, the questionnaire was twice filled out by 30 participants with a 2-week interval. The test-retest correlation coefficient was 0.929. Moreover, the Cronbach's alpha of the questionnaire was 0.863 in the pilot study and 0.705 in the main study. Participants completed the questionnaires in a private environment at their nursing school or workplace, respectively.

### Ethical considerations

This study was approved by the Student Research Committee of the Hamadan University of Medical Sciences, Hamadan, Iran, with the ethical approval code of IR.UMSHA.REC.1396.279. All participants were provided with explanations about the aim of the study and were ensured about the confidentiality of their information and the voluntariness of participation. All of them provided written informed consent for participation.

### Data analysis

Participants' characteristics and attitude scores were described through the measures of descriptive statistics, namely, frequency, mean, and standard deviation. The independent sample *t*-test was conducted to compare nurses with nursing students and male participants with female participants respecting their attitude mean scores. Moreover, we used the linear regression analysis to determine the relationships of attitude scores with demographic characteristics. All statistical analyses were performed using the SPSS software (v. 16.0, SPSS Inc., Chicago, IL, USA) at a statistical significance level of  $<0.05$ .

## RESULTS

Participating nurses and nursing students aged, respectively,  $30.5 \pm 5.31$  and  $26.07 \pm 4.35$  years, on average. Most of them were female (69% and 62%). Most nurses were married (63.5%), whereas most students were single (77.9%). Most of the participants had the history of care provision to opposite-gender patients [Table 1].

Around 46% of male nurses and 42% of female nurses agreed that care provision to opposite-gender patients negatively affects the quality of physical care. Moreover, 81% of male nurses and 49% of female nurses did not like (disagreed) working in hospital wards where most patients are of the opposite gender. In addition, 91% of male nurses and 94% of female nurses agreed that care provision to opposite-gender patients can violate patient privacy. Only 3% of male nurses and 4% of female nurses agreed that university education had prepared them for care provision to opposite-gender patients [Table 2].

**Table 1: Participants' characteristics**

Characteristics	Participants	
	Nurses, <i>n</i> (%)	Students, <i>n</i> (%)
Age (years), mean $\pm$ SD	30.05 $\pm$ 5.31	26.07 $\pm$ 4.35
Clinical experience (years), mean $\pm$ SD		
Male	7.22 $\pm$ 5.11	1.82 $\pm$ 1.5
Female	6.30 $\pm$ 4.71	1.77 $\pm$ 1.63
Gender		
Male	31 (29)	36 (38)
Female	76 (71)	59 (62)
Educational degree		
Bachelor's	99 (92.5)	74 (77.8)
Master's	8 (7.5)	21 (22.2)
Marital status		
Married	68 (63.5)	21 (22.1)
Single	39 (36.5)	86 (77.9)
Positive history of care provision to opposite-gender patients		
Male	28 out 31 (90.3)	31 out 36 (86.1)
Female	74 out 76 (97.4)	53 out 59 (89.8)

SD: Standard deviation

Around 53% of male students and 36% of female students agreed that care provision to opposite-gender patients negatively affects the quality of physical care. In addition, 99% of male students and 84% of female students did not like (disagreed) working in hospital wards where most patients are of the opposite gender. Moreover, 97% of male students and 71% of female students agreed that care provision to opposite-gender patients can violate patient privacy [Table 3].

The mean scores of students' and nursing students' attitudes toward care provision to opposite-gender patients were, respectively,  $72.54 \pm 15.47$  and  $66.87 \pm 14.80$ , indicating that they had moderate attitudes toward care provision to opposite-gender patients. However, nurses' attitudes were significantly better than nursing students' attitudes ( $P = 0.02$ ). Moreover, the attitude mean scores of female nurses and female nursing students were significantly greater than their male counterparts ( $P < 0.05$ ), though all of them had moderate attitudes. Moreover, both male and female nurses obtained significantly higher attitude mean scores compared with their student counterparts [ $P < 0.05$  and Table 4].

The linear regression analysis showed that only the variables of educational degree, history of care provision to opposite-gender patients, and clinical work experience could significantly predict nurses' and nursing students' attitudes toward care provision to opposite-gender patients. The R-squared showed that, respectively, 20% and 26% of attitude score in nurses and nursing

**Table 2: The frequency distributions of nurses' responses to the items of the attitude questionnaire**

Items	Responses					
	Agree <sup>a</sup> , n (%)		Undecided, n (%)		Disagree <sup>b</sup> , n (%)	
	Male	Female	Male	Female	Male	Female
Care provision to opposite-gender patients negatively affects the quality of physical care	14 (46)	24 (32)	11 (35)	32 (42)	6 (19)	20 (26)
Care provision to opposite-gender patients negatively affects the quality of emotional support for patients	8 (26)	11 (15)	12 (38)	36 (47)	11 (35)	29 (38)
I don't like working in hospital wards where the majority of patients are of the opposite gender	25 (80)	49 (65)	3 (10)	14 (18)	3 (10)	13 (17)
Care provision to opposite-gender patients can violate patient privacy	27 (90)	72 (94)	2 (5)	2 (4)	2 (5)	2 (4)
A male nurse can provide care to a female patient	4 (12)	28 (37)	13 (41)	27 (35)	14 (47)	21 (28)
A female nurse can provide care to a male patient	8 (26)	16 (20)	16 (51)	30 (39)	7 (23)	31 (41)
Care provision to an opposite-gender patient is stressful for me	7 (23)	9 (11)	17 (54)	16 (22)	7 (23)	51 (67)
Care provision to an opposite-gender patient prevents me from showing my professional competencies	7 (23)	12 (15)	14 (45)	36 (48)	10 (32)	28 (37)
University education has not prepared me for physical care provision to opposite-gender patients	1 (3)	4 (6)	14 (43)	20 (27)	16 (54)	52 (67)
University education has not prepared me for emotional support provision to opposite-gender patients	5 (15)	10 (14)	12 (38)	25 (33)	14 (47)	41 (53)
Recruitment of new students to the profession should be based on patient gender distribution	11 (35)	28 (37)	12 (39)	37 (49)	8 (26)	11 (14)
Patients should be allocated to same-gender nurses	24 (78)	56 (74)	6 (19)	14 (18)	1 (3)	6 (8)
Patients should be hospitalized in distinct hospital wards according to their gender	4 (13)	12 (16)	21 (68)	55 (72)	6 (19)	9 (12)
Clinical nursing education for students should be provided in same-gender hospital wards	7 (23)	12 (15)	20 (64)	54 ()	4 (13)	11 (14)
Because of the necessity of care provision to opposite-gender patients, I don't recommend nursing as a career choice to my friends and relatives	5 (16)	7 (9)	11 (36)	33 (44)	15 (48)	36 (47)
Care provision to opposite-gender patients has negative effects on the public image of nursing	12 (38)	21 (28)	16 (52)	43 (56)	3 (10)	12 (16)
My family disagrees with my care provision to opposite-gender patients	5 (15)	10 (13)	14 (45)	23 (30)	12 (40)	44 (57)
Care provision to opposite-gender patients causes patients' family members to show negative reactions and feel tension	9 (29)	8 (10)	9 (29)	8 (10)	13 (42)	61 (80)
Care provision to opposite-gender patients contradicts with my religious beliefs	2 (6)	3 (4)	6 (19)	8 (10)	23 (75)	65 (86)
Care provision to opposite-gender patients causes stress and dissatisfaction for patients	6 (19)	7 (9)	15 (48)	48 (63)	10 (33)	21 (28)
Care provision to opposite-gender patients puts me at risk for abuse or violence by patients or their family members	3 (10)	10 (13)	17 (55)	43 (57)	11 (35)	23 (30)

<sup>a</sup>Sum of strongly agree and agree, <sup>b</sup>Sum of disagree and strongly disagree

students could be explained by aforementioned variables [ $P < 0.05$  and Table 5].

## DISCUSSION

The results of this study showed that both nurses and nursing students had moderate attitudes toward care provision to opposite-gender patients, indicating that they had experienced some challenges while providing care to the patients of the opposite gender. However, the

code of ethics for Iranian nurse emphasizes that nurses should not discriminate among patients on the grounds of their gender.<sup>[13]</sup>

The fear over being accused of abuse when touching a female patient may require male nurses to minimize their skin contacts with female patients and provide care to these patients only at the presence of others.<sup>[14,15]</sup> Such fear can negatively affect male nurses' attitudes toward care provision to the patients of the opposite gender.



**Table 3: The frequency distributions of nursing students' responses to the items of the attitude questionnaire**

Items	Agree <sup>a</sup> , n (%)		Undecided, n (%)		Disagree <sup>b</sup> , n (%)	
	Male	Female	Male	Female	Male	Female
Care provision to opposite-gender patients negatively affects the quality of physical care	20 (55)	23 (39)	10 (28)	26 (44)	6 (17)	10 (17)
Care provision to opposite-gender patients negatively affects the quality of emotional support for patients	14 (39)	18 (30)	13 (36)	27 (46)	9 (25)	14 (24)
I don't like working in hospital wards where the majority of patients are of the opposite gender	34 (94)	49 (83)	1 (3)	6 (10)	1 (3)	4 (7)
Care provision to opposite-gender patients can violate patient privacy	35 (97)	42 (71)	0 (0)	8 (14)	1 (3)	9 (15)
A male nurse can provide care to a female patient	3 (8)	13 (22)	12 (33)	24 (41)	21 (59)	22 (37)
A female nurse can provide care to a male patient	9 (25)	26 (44)	20 (56)	24 (41)	7 (19)	9 (15)
Care provision to an opposite-gender patient is stressful for me	10 (28)	6 (10)	15 (42)	35 (59)	11 (31)	18 (31)
Care provision to an opposite-gender patient prevents me from showing my professional competencies	6 (17)	5 (8)	18 (50)	23 (39)	12 (33)	31 (53)
University education has not prepared me for physical care provision to opposite-gender patients	3 (8)	5 (8)	19 (53)	27 (46)	14 (39)	27 (46)
University education has not prepared me for emotional support provision to opposite-gender patients	5 (14)	17 (29)	12 (33)	25 (42)	19 (53)	17 (29)
Recruitment of new students to the profession should be based on patient gender distribution	13 (36)	22 (38)	10 (28)	25 (42)	13 (36)	12 (20)
Patients should be allocated to same-gender nurses	25 (7)	47 (80)	3 (8)	5 (8)	8 (22)	7 (12)
Patients should be hospitalized in distinct hospital wards according to their gender	4 (11)	13 (22)	17 (47)	25 (42)	15 (42)	21 (36)
Clinical nursing education for students should be provided in same-gender hospital wards	5 (14)	9 (15)	19 (53)	29 (49)	12 (33)	21 (36)
Because of the necessity of care provision to opposite-gender patients, I don't recommend nursing as a career choice to my friends and relatives	1 (3)	2 (3)	18 (50)	31 (53)	17 (47)	26 (44)
Care provision to opposite-gender patients has negative effects on the public image of nursing	3 (8)	15 (25)	17 (47)	27 (46)	16 (45)	17 (29)
My family disagrees with my care provision to opposite-gender patients	6 (17)	9 (15)	10 (28)	20 (34)	20 (55)	30 (51)
Care provision to opposite-gender patients causes patients' family members to show negative reactions and feel tension	9 (25)	11 (19)	16 (44)	8 (14)	11 (31)	40 (67)
Care provision to opposite-gender patients contradicts with my religious beliefs	4 (11)	0 (0)	13 (36)	20 (34)	19 (53)	39 (66)
Care provision to opposite-gender patients causes stress and dissatisfaction for patients	5 (14)	3 (5)	10 (28)	29 (49)	21 (58)	27 (46)
Care provision to opposite-gender patients puts me at risk for abuse or violence by patients or their family members	1 (3)	1 (2)	12 (33)	24 (41)	23 (64)	44 (57)

<sup>a</sup>Sum of strongly agree and agree, <sup>b</sup>Sum of disagree and strongly disagree

Female nurses also have difficulties and experience challenges in providing care to male patients, though their problems and challenges are less severe than the problems and challenges male nurses experience in care provision to female patients. The challenges of care provision to male patients can negatively affect female nurses' attitudes, particularly in the area of protecting patient privacy.<sup>[9,10]</sup> Previous studies in Iran

and other countries also confirmed that a majority of female nurses perceived care provision to male patients more difficult than care provision to female patients,<sup>[10]</sup> experienced psychological problems and discomfort at care provision to male patients, and were reluctant to provide some certain kinds of care services to male patients.<sup>[11]</sup> Thus, nurse-patient gender difference is considered as a major barrier to effective

nurse–patient communication.<sup>[6]</sup> The most important factors contributing to Iranian nurses' moderate attitudes toward care provision to opposite-gender patients are cultural and religious factors. Muslim nurses prefer to provide care to the patients of the same gender and Muslim patients prefer to receive care from the nurses of the same gender.<sup>[5]</sup> Although many attempts are made in Iran to facilitate the same gender care provision, nursing staff shortage and environmental constraints are still the major barriers to such care provision.<sup>[4]</sup>

The results of the present study also revealed that the majority of participating nurses and nursing students did not like working in hospital wards where most patients were of the opposite gender. Similarly, nursing students in an earlier study reported that care provision to opposite-gender patients was more difficult than care provision to the same-gender patients.<sup>[10]</sup> Moreover, more than 95% of our participants reported that their university courses had not prepared them for care provision to opposite-gender patients. Previous studies also showed the insufficiency of educations in this area and recommended theoretical and practical training courses for improving nurses' ability to provide care to the opposite gender.<sup>[16-18]</sup> Therefore, the academic curriculum for nursing students should be revised to prepare students for care provision to the patients of both genders.

**Table 4: Comparisons of male and female nurses and students respecting their attitude mean scores**

Gender	Attitude score		<i>t</i>	<i>P</i> <sup>a</sup>
	Nurses	Students		
Male (mean±SD)	65.52 ± 20.87	60.92 ± 14.09	2.14	0.03
Female (mean±SD)	74.14 ± 12.85	69.10 ± 10.11	2.71	0.04
<i>t</i>	3.74	2.31		
<i>P</i> <sup>a</sup>	0.01	0.001		
Total	72.54 ± 15.47	66.87 ± 14.80	2.10	0.02

<sup>a</sup>The results of the independent-sample *t*-test. SD: Standard deviation

Another finding of this study was that nurses obtained significantly higher attitude mean scores than nursing students. Previous studies also reported that care provision to the patients of the opposite gender is embarrassing for nursing students.<sup>[10,17]</sup> As linear regression analysis revealed, lack of clinical experience may be one of the probable reasons behind nursing students' poorer attitudes toward care provision to the opposite-gender patients. Greater clinical work experience enables nurses to more effectively communicate with patients of both genders. Another reason for this finding may be the lack of university educations for them about effective communication with and care provision to opposite-gender patients. Therefore, specific courses in this area may be needed to improve students' communication skills and empower them for care provision to the patients of both genders.

We also found that the attitude mean scores of both male nurses and male nursing students were significantly less than their female counterparts. This finding may be attributable to the dominance of female nurses in the profession,<sup>[1,19,20]</sup> resulting in more difficult acceptance of male nurses by female patients. A study reported that patients' reaction to nurses' gender can affect nurses' desire and attitudes toward care provision.<sup>[21]</sup> It is noteworthy that although female nurses have less difficulties in providing care to male patients,<sup>[16,22]</sup> female patients, particularly the younger ones, prefer to receive care from the nurses of the same gender.<sup>[21,23]</sup>

The results of regression analysis in the present study showed that the significant predictors of nurses' and nursing students' attitudes toward care provision to the opposite gender were educational degree, history of care provision to opposite-gender patients, and clinical work experience. Similarly, previous studies reported that work experience and educational degree have direct relationships with the quality of patient care.<sup>[24,25]</sup> Although

**Table 5: The results of the linear regression analysis for the predictors of attitude towards care provision to opposite-gender patients**

Variables	Nurses					Students				
	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>T</i>	<i>P</i>	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>T</i>	<i>P</i>
Constant	87.08	8.86		9.82	<0.001	103.06	16.94		6.08	<0.001
Age	0.90	0.30	0.19	0.68	0.08	1.70	3.30	0.17	0.44	0.65
Gender	1.70	3.33	0.17	0.50	0.61	1.58	3.2	0.16	1.10	0.63
Educational degree	2.58	6.58	0.28	0.89	0.01	4.52	4.95	0.27	2.27	<0.001
Marital status	0.16	3.27	0.18	0.50	0.95	0.30	0.71	0.16	0.53	0.58
Positive history of care provision to opposite-gender patients	4.91	3.58	0.30	1.37	0.01	8.31	3.60	0.28	2.25	<0.001
Clinical work experience	2.63	0.08	0.26	2.99	0.01	2.32	0.83	0.20	2.76	0.03
<i>r</i> <sup>2</sup>			0.20					0.26		

SE: Standard error

the aim of nursing education in Iran is to empower nursing students for care provision to both genders, nursing students are mostly assigned with same-gender patients during their clinical courses, and hence, they may gain limited experience in establishing effective communications with opposite-gender patients. However, as they get more clinical work experience through clinical practice, they achieve greater competence in effectively communicating with the patients of both genders and will experience less negative feelings at establishing communications with opposite-gender patients. On the other hand, the significant effects of nurses' and nursing students' educational degree on their attitudes toward care provision to opposite-gender patients may be due to the fact that higher educational degree are associated with higher levels of professionalism and closer adherence to the principles of ethical practice such as quality care for all patients irrespective of their gender. The results of regression analyses also showed that, respectively, 0.20% and 0.26% of the nurses' and nursing students' attitude scores could be explained by the variables we entered the models. In other words, a considerable amount of the attitude score might be explained by variables we did not consider in this study. Then, further studies might be needed to reveal the other factors affecting nurses' and nursing students' attitude toward caring for opposite-gender patients.

One limitation of the present study was that participants were selected from a university and four teaching hospitals in only one city in Iran, and hence, findings may not be easily generalizable to nurses and nursing students in other settings and cities. Moreover, this was a cross-sectional study, and the relationships found in these studies are not powerful enough to show cause and effect relationships. Large-scale multicenter studies are recommended to produce more generalizable findings. Qualitative studies are also recommended to produce more in-depth data about nurses' and nursing students' attitudes toward care provision to opposite-gender patients.

## CONCLUSION

This study shows that despite the emphasis of the code of ethics for Iranian nurses on quality care for all patients irrespective of their gender, many nurses and nursing students have poor attitudes toward care provision to opposite-gender patients. Moreover, nursing students have poorer attitudes compared with nurses toward care provision to opposite-gender patients, highlighting the need for revisions to the nursing academic curriculum to prepare students for quality care provision to patients of both genders.

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## Conflicts of interest

There are no conflicts of interest.

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