

## ORIGINAL ARTICLE

## TURNOVER INTENTION AMONG SPECIALIST MEDICAL PRACTITIONERS IN SABAH: A STATEWIDE MULTICENTER CROSS SECTIONAL STUDY

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## ABSTRACT

Movement of highly skilled physicians from the public sector to the private sector is interrupting progress towards Universal Health Coverage (UHC) and subsequently Sustainable Development Goals (SDG). There is insufficient information to understand factors associated with turnover intention among specialist medical practitioners in Sabah, a state in Malaysia with the least number of clinical specialists for all specialties. This study intended to determine prominent factors affecting turnover intention using a cross sectional study conducted among Ministry of Health's specialist medical practitioners across Sabah. Respondents were chosen using convenience sampling technique to complete a self-administered questionnaire consisting of sociodemographic information, work characteristics, the 10 item Warr-Cook-Wall (WCW) job satisfaction scale, a question on private sector employment offer and turnover intention. Descriptive and bivariate analyses were used to identify significant factors affecting turnover intention. A total of 101 completed questionnaires were analysed. A total of 75 (74.3%) respondents were younger than 40 years old and 57 (56.4%) of them were male. Almost one third (31.7%) of specialist medical practitioners in Sabah were actively seeking alternative employment. Factors associated with turnover intention were low job satisfaction score ( $t = 3.516$ , 95% CI 2.64-9.49,  $p < 0.005$ ) and career development opportunities ( $\chi^2 = 5.766$ ,  $p < 0.05$ ). Turnover intention among specialist medical practitioners in Sabah was significantly associated with low job satisfaction and dissatisfaction with career development opportunity. There is a dire need for an effective retention strategy to retain these limited highly skilled health personnel.

**Keywords:** Specialist medical practitioners, Job satisfaction, Turnover intention, Malaysia, Sabah

## INTRODUCTION

A motivated, knowledgeable, and skilled health workforce is essential for achieving Universal Health Coverage (UHC) and subsequently achieving the Sustainable Development Goals (SDG)<sup>1</sup>. Globally, the shortage of healthcare labour<sup>2</sup> was estimated at 17.4 million in 2013, of which 2.6 million were doctors<sup>3</sup>. The number of specialist doctors in Malaysia is 3.42 per 10,000 population, far behind the average for selected Organisation for Economic Co-operation and Development (OECD) countries, which is 14.13 per 10,000 population<sup>4</sup>. It was reported that the increase in specialist medical practitioners is much slower compared to the growing number of population in the country. In 2018, the selected OECD countries had an average density of specialists almost six times higher than Malaysia with the density of psychiatrists of high income countries 15 times higher than Malaysia<sup>5</sup>.

There is a key concern in the public sector as the outflow of specialist medical practitioners from public to private sector will be affecting healthcare services delivery since the provision of care for complex cases, majority of hospital beds and clinical training for all categories are provided in the public sector. Attrition rates among specialist medical practitioners in

Malaysia has been slowly increasing with 4.2% specialist medical practitioners resigning in 2011 compared to 1.9% in 2008, not including senior specialist medical practitioners who retired from service<sup>5</sup>. With limited number of resources and challenges in hiring and training of health workforce, it is important to retain highly experienced specialist medical practitioners to accelerate the progress towards UHC.

There are numerous factors related to attrition among physicians. These factors are country specific and vary geographically. For example, there had been a mass exodus of health care professionals from Iraq as a consequence of the ensuing UN sanctions and 1991 Gulf War<sup>6</sup>. In lower income countries, financial incentive is a major theme in discussing physician's choice of workplace while professional work environment is a key concern in high income countries. Thus, understanding the local context is important in order to determine factors related to attrition among specialist medical practitioners to further plan for retention intervention.

Sabah is a state in Malaysia with a population of 3.9 million and an area of 73,904 km square<sup>7</sup>. Despite being the second largest state in Malaysia, unequal distribution of specialist medical practitioners has resulted in Sabah being

the state with the lowest number of specialists per 10,000 population for all clinical specialties<sup>4</sup>. With a doctor to population ratio of only 1:1029 in 2017 and expanded health needs of the population over time in the state, the retention of skilled healthcare professional is even more critical.

Turnover intention is viewed as the final step in the decision-making process before a person actually leaves their workplace, in which members of a profession actively consider quitting and searching for alternative jobs or professions<sup>8</sup>. As turnover intention has been identified as the major prediction of attrition, it is important to identify factors associated with turnover intention before further analysis of attrition and retention strategy can be done. At the moment, there are very limited publications related to turnover intention among specialist medical practitioners in Sabah. This study intended to determine the factors affecting turnover intention among public sector specialist medical practitioners in Sabah. Attrition is a threat to the health workforce and can be prevented if the factors are known and addressed appropriately. Exploring factors associated with turnover intention which is a predictor to attrition could benefit in planning of retention and consequently ensuring quality healthcare services to the population.

## METHODS

A cross-sectional study was conducted in Sabah, Malaysia from 1<sup>st</sup> March until 31<sup>st</sup> June 2020. The study population was specialist medical practitioners who worked with the Ministry of Health. All specialist medical practitioners who worked with Ministry of Health during the study period and consented to participate were included in the study.

### Sampling method and sample size

Sample size was calculated based on Cochran Formula for Sample Size in Smaller Populations<sup>9</sup>. Statistical significance of 95% confidence interval and 0.05 level of precision were used in this study. By using the prevalence of specialist medical practitioners with turnover intention of 36% based on a previous study<sup>10</sup> and after adjusting for 20% non-response correction, the calculated sample size was 196. A list of all 282 specialist medical practitioners was obtained from Sabah State Health Department. All 196 eligible and consenting respondents were contacted and given the self-administered questionnaire using a web-based form. Due to enforcement of the Movement Control Order (MCO) following the Covid-19 pandemic which restricted movement in Malaysia, random sampling was not feasible. Hence, convenience sampling method was used to collect the data.

### Study Instrument

The validated<sup>11</sup> self-administered questionnaire used in this study included questions on sociodemographic information, work characteristics, private sector job offer, a 10 item Warr-Cook-Wall job satisfaction questionnaire with seven-point Likert scales<sup>12</sup> and one question on turnover intention<sup>13</sup>. All questions were in English and the questionnaire was pre-tested among 30 doctors for validity and reliability before being used in the actual study.

### Dependent Variables

A question on turnover intention as the dependent variable was asked to all participants in this study. Specialist medical practitioners' turnover intention was assessed by asking one statement, "I am actively seeking alternative employment"<sup>13</sup>. Responses were measured with a four-point Likert scale ranging from 1 = strongly disagree to 4 = strongly agree and were dichotomized into (0) disagree (original categories 1 and 2) and (1) agree (original categories 3 and 4).

### Independent variables

Independent variables were categorized into four groups which are sociodemographic factors, work characteristics, job satisfaction and private sector demand. Sociodemographic data collected included current age, gender, marital status, presence of children, hometown and preferred residential area. Work characteristics included questions related to hours of work per week, type of employment, duration of service, type of specialty and place of work. Additionally, questions on the way manager handled staff, satisfaction with infrastructure and equipment, training and education opportunities, staffing and other resources, professional work environment, doctor-patient relationship is excellent were measured with a four-point Likert scale ranging from 1 = strongly disagree to 4 = strongly agree and were dichotomized into (0) disagree (original categories 1 and 2) and (1) agree (original categories 3 and 4).

A validated 10 item Warr-Cook-Wall job satisfaction questionnaire was used in this study using a seven-point Likert scale. The question started with how "satisfied are you with" before the question on 10 items related to job satisfaction. Responses were measured with a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. Private sector demand was assessed by asking "have you ever received an employment offer from the private sector?" and response given as either yes or no.

### Data Collection and Data Analysis

Data was collected using a web-based self-administered questionnaire form and one respondent was only allowed to submit one response. Respondents were allowed to take one month to submit the form before they were

categorized as non-responsive. Reminders were given for up to four times (follow up once every week) to ensure response. All data collected was organized in Microsoft Excel before analysis. Data collected was subsequently analysed by using Statistical Package for Social Science (SPSS) Version 26. Descriptive analysis was performed, and all continuous data was described either using mean (SD) or median (IQR) whereas categorical data was described as frequency (%). Chi square test was used in the bivariate analysis for categorical variables while independent t test was used to compare overall job satisfaction level between specialist medical practitioners with turnover intention and those without. A 95% confidence interval and significance level of  $p < 0.05$  was used in this study.

### Ethical Considerations

The study was conducted in accordance with the Declaration of Helsinki. Two ethical approvals were obtained from the Medical Research Ethics Committee (MREC) (NMRR-19-3784-52257) and University Malaysia Sabah Research Ethical Board (JKEtika 1/20 (2)). A formal permission from the Sabah State Health Department was obtained and written consents were taken from all the participants using forms given through the online platform. All information is confidential and owned by University Malaysia Sabah.

### RESULTS

All the numerical data was checked and tested for normality. Data was normally distributed as

assessed by comparing mean, median and standard deviation, graphical exploration using histogram, q-q plot and box and whisker plot.

### Descriptive statistics on sociodemographic data, work characteristics, job satisfaction, private sector demand and turnover intention

A total of 101 completed questionnaires were analysed. A total of 75 (74.3%) respondents were younger than 40 years old and 57 (56.4%) of them were male. More than two thirds (77.2%) of the specialist medical practitioners were satisfied with training and educational opportunities and 81 (81.2%) were satisfied with their professional work environment. Among specialist medical practitioners in Sabah involved in the study, 49.5% reported that they had been offered jobs by the private sector and 31.7% of them reported that they had been actively seeking alternative employment.

### Descriptive result on job satisfaction

The number of specialist medical practitioners who were satisfied with their job were 72 (71.3%) and the mean (SD) value for the total job satisfaction score was 51.99 (8.52). The highest satisfaction level was reported on the item for "your colleagues and fellow workers" ( $m = 5.73$ ,  $SD = 0.90$ ) while the lowest satisfaction was on "your income" item ( $m = 4.60$ ,  $SD = 1.61$ ) (Table 2).

**Table 1a: Descriptive results on sociodemographic, work characteristics, private sector demand and turnover intention**

Respondent Characteristics	Category	N	Percentage (%)
Age	< 40 years old	75	74.3
	> 40 years old	26	25.7
Gender	Male	57	56.4
	Female	44	43.6
Marital Status	Married	71	70.3
	Single	30	29.7
Presence of Children	Yes	63	62.4
	No	38	37.6
Hometown	Peninsular Malaysia	84	83.2
	Sabah/Sarawak	17	16.8
Preferred Residential Area	Peninsular Malaysia	58	58.4
	Sabah/Sarawak	42	41.6
Hours of work per week	< 40 hours	5	5
	> 40 hours	96	95
Type of Employment	-Government only	97	96
	-Government and Private (Dual Practice)	4	4
The way manager handled staff is effective	Disagree	17	16.8
	Agree	84	83.2
Infrastructure and Equipment	Dissatisfied	55	54.5
	Satisfied	46	45.5
Doctor Patient Relationship is excellent	Disagree	3	3
	Agree	98	97

**Table 1b: Descriptive results on sociodemographic, work characteristics, private sector demand and turnover intention**

Respondent Characteristics	Category	N	Percentage (%)
Duration of service	< 15 years	68	67.3
	> 15 years	33	32.7
Place of work	Health Clinic	21	20.8
	Health Offices	11	10.9
	Hospital	68	67.3
	Other	1	1.0
Field of specialty	-Clinical Specialist	67	66.3
	-Public Health Medicine Specialist	13	12.9
	-Family Medicine Specialist	21	20.8
Training and Educational Opportunities	Dissatisfied	23	22.8
	Satisfied	78	77.2
Career Development Opportunities	Dissatisfied	31	30.7
	Satisfied	70	69.3
Staffing and other resources	Dissatisfied	59	58.4
	Satisfied	42	41.6
Professional work environment	Dissatisfied	20	19.8
	Satisfied	81	81.2
Job satisfaction	Dissatisfied	29	28.7
	Satisfied	72	71.3
Private Sector Demand	No	51	50.5
	Yes	50	49.5
Turnover intention	No	69	68.3
	Yes	32	31.7

**Table 2: Descriptive results on job satisfaction**

No	Item	Turnover Intention	
		Yes Mean (SD)	No Mean (SD)
1	Physical Working Condition	4.69 (1.12)	4.96 (1.10)
2	Freedom to Choose Your Own Method of Working	4.97 (1.307)	5.32 (1.144)
3	Your Colleagues and Fellow Workers	5.41 (0.98)	5.88 (0.83)
4	Recognition you get for good work	4.22 (1.475)	5.28 (1.247)
5	Amount of responsibility you are given	5.03 (1.47)	5.57 (0.96)
6	Your income	4.13 (1.755)	4.83 (1.50)
7	Opportunity to use your ability	4.81 (1.40)	5.48 (1.066)
8	Your hours of Work	4.91 (1.11)	5.51 (1.052)
9	Amount of variety in your job	5.03 (1.23)	5.49 (1.22)
10	Taking everything into consideration, how do you feel about your job?	4.66 (1.49)	5.61 (0.83)
11	Overall job satisfaction	47.84 (9.72)	53.91 (7.19)

**Factors associated with turnover intention in bivariate analysis**

Cross tabulation indicated that there was no association between sociodemographic factor and turnover intention in this sample. As for job characteristics, career development opportunities was the only variable in work characteristics which showed significant statistical association with turnover intention as assessed by cross tabulation ( $\chi^2= 5.766$ ,  $p < 0.05$ ). In this study, out of 51 respondents who All of the mean scores for 10 items in the Warr Cook Wall Job Satisfaction scale are lower in

did not receive private sector job offers, 16 (31.4%) of them were actively seeking alternative employment. From the 50 respondents who received private sector job offers, 16 (32%) of them reported to have turnover intention. However, private sector demand did not show significant statistical association in this sample.

**Association between job satisfaction and turnover intention**

those who had turnover intention compared to those who did not. Overall job satisfaction was

higher in specialist medical practitioners who did not have turnover intention (m = 53.91, SD = 7.19) than respondents who were actively seeking alternative employment (m = 47.84, SD = 9.72). A statistically significant difference (t = 3.516, 95% CI 2.64-9.49, p < 0.005) was reported which indicates an association between overall job satisfaction and turnover intention. In this study, the job satisfaction scale used shows high

reliability with Cronbach's Alpha of 0.881, exceeding the accepted level proposed by Nunnally<sup>14</sup>. Overall job satisfaction score was used to correlate job satisfaction with turnover intention since confirmatory factor analysis does not recommend individual factors to be analysed separately due to high correlation of the factors with each other<sup>15</sup>.

**Table 3: Association between sociodemographic factors, work characteristics, private sector demand and turnover intention using Chi Square test**

Variable	Category	Turnover Intention		X <sup>2</sup>	p value
		Yes N (%)	No N (%)		
Age	< 40 years old	22 (29.3)	53 (70.7)	0.743	0.389
	> 40 years old	10 (38.5)	16 (61.5)		
Gender	Male	21 (36.8)	36 (63.2)	1.609	0.205
	Female	11 (25.0)	33 (75.0)		
Marital Status	Married	22 (31.0)	49 (69.0)	0.054	0.817
	Single	10 (33.3)	20 (66.7)		
Presence of Children	Yes	21 (33.3)	42 (66.7)	0.211	0.646
	No	11 (28.9)	27 (71.1)		
Hometown	Peninsular Malaysia	24 (28.6)	60 (71.4)	2.233	0.135
	Sabah/Sarawak	8 (47.1)	9 (52.9)		
Preferred Residential Area	Peninsular Malaysia	18 (30.5)	41 (69.5)	0.090	0.764
	Sabah/Sarawak	14 (33.3)	28 (66.7)		
Hours of work per week	< 40 hours	1 (20.0)	4 (80.0)	1.00*	0.491*
	> 40 hours	31 (32.3)	65 (67.7)		
Type of Employment	Government only	31 (32.0)	65 (66.0)	1.000*	0.622*
	Government and Private (Dual Practice)	1 (25.0)	3 (75.0)		
The way manager handled staff is effective	Disagree	8 (47.1)	9 (52.9)	2.233	0.135
	Agree	24 (28.6)	60 (71.4)		
Infrastructure and Equipment	Dissatisfied	19 (34.5)	36 (65.5)	0.457	0.499
	Satisfied	13 (28.3)	33 (71.7)		
Doctor Patient Relationship is excellent	Disagree	2 (66.7)	1 (33.3)	1.000*	0.235 *
	Agree	30 (30.6)	68 (69.4)		
Duration of services	< 15 years	20 (29.4)	48 (70.6)	0.496	0.481
	> 15 years	12 (36.4)	21 (63.6)		
Place of working	Health Clinic	6 (28.6)	15 (71.4)	0.683*	0.877*
	Health Office	4 (36.4)	7 (63.6)		
	Hospital	22 (32.4)	46 (67.6)		
	Other	0 (0.0)	1 (100)		
Training and Educational Opportunities	Dissatisfied	10 (43.5)	13 (56.5)	1.914	0.166
	Satisfied	22 (28.2)	56 (71.8)		
Field of specialty	-Clinical Specialist	21 (31.3)	46 (68.7)	0.373	0.830
	-Family Medicine Specialist	6 (28.6)	15 (71.4)		
	-Public Health Medicine Specialist	5 (38.5)	8 (61.5)		
	-Specialist	5 (38.5)	8 (61.5)		
Career Development Opportunities	Dissatisfied	15 (48.4)	16 (51.6)	5.766	0.016
	Satisfied	17 (24.3)	53 (75.7)		
Staffing and other resources	Dissatisfied	20 (33.9)	39 (66.1)	0.322	0.571
	Satisfied	12 (28.6)	30 (71.4)		
Professional Work Environment	Dissatisfied	9 (45.0)	11 (55.0)	2.043	0.153
	Satisfied	23 (28.4)	58 (71.6)		
Private sector demand	No	16 (31.4)	35 (68.6)	0.005	0.946
	Yes	16 (32.0)	34 (68.0)		

\*Corrected with Fisher Exact Test



Table 4: Association between job satisfaction and turnover intention

Variable	Turnover intention		t-statistic	Mean difference	p value <sup>a</sup>
	Yes	No			
Overall Job Satisfaction Score	Mean (SD) 47.84 (9.72)	Mean (SD) 53.91 (7.19)	3.516	6.06	0.001

<sup>a</sup> Independent t-test

## DISCUSSION

In this study, almost one third (31.7%) of the specialist medical practitioners surveyed had turnover intention and were actively seeking alternative employment. This finding is comparable with a nationwide study done in Malaysia in which the prevalence of medical specialists reported to have turnover intention was 36.3%<sup>10</sup>. In countries facing security threats such as Iraq, turnover intention among doctors could be as high as 55%<sup>11</sup>. In contrast, a study involving 2423 full-time physicians in Taiwan found a lower prevalence of turnover intention among their doctors at 14.5%<sup>16</sup>. Turnover intention level is country specific and varies geographically, hence understanding local context is important. The proportion of specialists serving in the public sector in Sabah is higher than those in the private sector due to the existence of a smaller number of private facilities in comparison with other regions in Malaysia. As a state with the least number of specialists for all specialities in Malaysia, the turnover intention reported in this study can be considered as relatively high.

This study indicated that overall job satisfaction was negatively associated with turnover intention. The findings are similar to other studies done in China<sup>17</sup>, Saudi Arabia<sup>18</sup>, Ghana<sup>19</sup>, Pakistan<sup>20</sup>, Lebanon<sup>21</sup>, and Palestine<sup>22</sup>. However, it differs with a local study's finding in which medical specialists were reported to have higher turnover intention despite having a higher level of job satisfaction compared to other job designations in the Ministry of Health. Nevertheless, the aforementioned study did not directly compare or find association between job satisfaction and turnover intention per se<sup>10</sup>. The lowest satisfaction score was reported on 'your income' item, which might be related to better remuneration in the private sector<sup>10,23</sup>.

According to Rasiah et al., the private share of healthcare expenditure has been increasing from 45.7% in 2000 to 55.6% in 2007 with the expansion of private healthcare in the country as well as medical tourism development. This likely will lead to a further outflow of doctors from public facilities to the private healthcare sector<sup>24</sup>. However, in this study, private sector demand was not associated with turnover intention among specialist medical practitioners in Sabah. Almost half of the specialist medical

practitioners reported that they had received private sector job offers while 50.5% of them had never received such offers. Only 32% of respondents who received private sector job offers had intention to leave. Interestingly, respondents who never received private job offers were reported to be actively seeking alternative employment (31.4%), despite not being offered jobs in the private sector. There are fewer private health facilities in Sabah and the Federal Territory of Labuan in comparison to Peninsular Malaysia<sup>5</sup>, hence, this might create less private sector demand as well as a mismatch in demand and turnover intention among respondents in this study due to fewer available options.

In this study, career development opportunities were significantly associated with turnover intention. This finding is similar to several studies done among specialist doctors including in South Africa where career opportunities were poorly perceived. Career progression was among the important factors related to why specialists were leaving the public sector for the private sector in South Africa<sup>25</sup>. In Uganda, professional development which is related to career development was reported to be contributing to dissatisfaction and intention to stay among Ugandan physicians<sup>26</sup>. A literature search revealed that only subspecialties under hospitals have a clear framework while subspecialty pathways for family medicine and public health are not clearly constructed in Malaysia<sup>27</sup>. Moreover, several subspecialties require a significant amount of resources before the subspecialty can be set up which might contribute to this finding.

This study was conducted during the period of Movement Control Order (MCO) in Malaysia due to the Covid-19 pandemic. Hence, there are several limitations to this study. As movement was restricted during the Movement Control Order to prevent the spread of Covid-19, the initial plan to conduct this study using simple random sampling method was not possible. Due to time constraints and difficulty in contacting respondents, convenient sampling method was used in this study. This could lead to bias due to the reason that some respondents chose to take part while others did not. This resulted in no information being obtained about the non-respondents and whether they differed from the respondents is unknown.

As a cross sectional study, this study is useful in establishing an association between turnover intention and job satisfaction as well as career development opportunities. However, it cannot establish causality between the variables. This study also measured intention to leave rather than actual attrition. Actual attrition may differ from intention measured.

### Way Forward

This study has contributed to several grey areas in the literature related to human resources in health management in Malaysia, especially in Sabah. This will shed light on evidence-based design of effective retention strategies in the future. The results may be useful for policy makers and health administrators wishing to retain the existing highly trained physicians or to stop the exodus of more specialist medical practitioners in Sabah. Urgent and tangible strategies must be developed that focus on job satisfaction as well as work characteristics affecting turnover intention. A specific attention must be given to career development opportunities, remuneration, physical working condition and recognition given for good work. This can be achieved by providing a conducive working environment and developing clear career development opportunities and assistance as well as encouragement for pursuing them. Boosting commitment and motivation by offering competitive wages, providing appreciation and recognition as well as non-financial incentives are recommended to achieve the aims above.

Since job satisfaction is a great predictor of turnover intention as documented by numerous studies, it is recommended for healthcare management to periodically conduct job satisfaction surveys. This will enable them to adopt evidence-based intervention strategies which are most likely to be effective. This is not only for increasing job satisfaction and motivation among specialist medical practitioners but most importantly to address turnover intention and prevent the outflow of this highly skilled health workforce.

Healthcare management have faced difficulties in ensuring satisfaction among specialist medical practitioners by means of financial incentives with the limited resources available. Attention should be given to boosting motivation and commitment through offering competitive wages, revamping the current promotion scheme, and providing better career development pathways. Non-financial incentives such as recognition for specialist medical practitioners probably based on merit or simply giving appreciation can be considered in order to improve satisfaction and subsequently manage attrition.

It was reported that the rate of increment in the number of specialists from 2014-2018 was higher

in the private sector compared to the public sector<sup>5</sup>. This might be related to the limited postgraduate training opportunities offered by local universities, limited sponsorship quotas for postgraduate study, as well as limited specialties that have a recognised parallel training to produce new specialists. With the challenge of Malaysia becoming an ageing nation and increasing non-communicable disease burden, addition of new specialists alone might not be able to promise adequacy of specialist per population in this country. Hence, retention strategies must be strengthened together with the training of new specialists. Allowing contract doctors to pursue their postgraduate studies and providing better career pathways for them is critical in order to ensure that health services in this country can provide satisfactory specialist services.

### CONCLUSION

It is concluded that almost one third of specialist medical practitioners in Sabah are actively seeking alternative employment. This intention was found to be significantly associated with job dissatisfaction as well as dissatisfaction with career development opportunities. As a state with the lowest number of clinical specialists for all specialties in Malaysia, this figure is alarming. There is an urgent need for an effective retention plan to avoid the undesirable exodus of highly trained and limited specialist medical practitioners in this state.

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### Conflict of interest:

The authors declare that they have no competing interests.

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