

Stigma toward mental illness among higher secondary school teachers in Puducherry, South India

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ABSTRACT

Background: A majority of mental illness start during adolescent period, and teachers can be a major resource in provision of mental health services to them. Stigma is a major barrier between persons with mental illness and opportunities to recover. **Materials and Methods:** Cross-sectional analytical study was conducted to assess the stigma toward mental illness and associated factors among higher secondary school teachers in Puducherry from April 2017 to March 2018. Multistage sampling was used to select 566 teachers from 46 schools. A part of the vignette-based “Mental Health Literacy Scale” portraying depression was used to assess stigma toward mental illness. Sociodemographic and work characteristics were also obtained. Data were analyzed using SPSS v16. To identify factors associated with stigma, bivariate analysis was done using Chi-square test and multivariate analysis using logistic regression. **Results:** Among the teachers, 72.9% and 65.7% showed overall agreement to personal and perceived stigma, respectively, toward case in vignette. Teachers in lower age group [adjusted odds ratio (AOR): 4.6 (95% confidence interval (CI): 2.54–8.33)], male gender [AOR: 2.79 (95% CI: 1.85–4.24)], working in urban [AOR: 2.8 (95% CI: 1.91–4.15)], private schools [AOR: 2.58 (95% CI: 1.77–3.77)], and less teaching experience [AOR: 3.72 (95% CI: 2.4–5.88)] had significantly higher personal stigma. Similarly, lower age group [AOR: 4.6 (95% CI: 2.54–8.33)], male gender [AOR: 2.79 (95% CI: 1.85–4.24)], working in urban [AOR: 2.8 (95% CI: 1.91–4.15)] schools, and less teaching experience [AOR: 3.72 (95% CI: 2.4–5.88)] had significantly higher perceived stigma. **Conclusion:** About 70% teachers showed overall agreement to stigma toward the depressive case vignette. The significant factors influencing stigma were identified. This can act as a baseline to implement mental health training program for teachers therefore bringing an attitudinal shift to being positive toward the psychologically disturbed.

Keywords: Attitude, mental illness, school teachers, south India, stigmatization

Introduction

Mental illness is an issue of major concern with approximately 450 million people suffering globally. More than 75% of these individuals are from the middle- and low-income countries.^[1] In India, about 150 million individuals above 18 years are suffering from a mental disorder requiring active interventions.^[2] More than 50% of people with mental illness globally do not receive any treatment and this proportion reaches nearly to 90% in least

resourced countries like India.^[3] Stigma and discrimination are one of the major barriers between persons with mental illness and opportunities to recover. Although some countries have been successful in fighting stigma and increasing acceptance of the mentally ill, lack of awareness is very evident in India and other developing countries. Mentally ill people are labelled as “different” from other people and are viewed negatively by others. Studies have demonstrated that persons labeled as mentally ill are perceived with more negative attributes and are more likely to be rejected regardless of their behavior.^[2,3] Given its negative impact on treatment seeking, adherence, and effectiveness, the stigma associated with mental illness can be considered as a major public health problem.

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Adolescents (10–19 years) constitute one-sixth of the global population. Multiple physical, emotional, and social changes, including exposure to poverty, abuse, or violence, can make adolescents vulnerable to mental health problems. Mental health conditions contribute to 16% of the global burden of disease and injuries among adolescents.^[4] In India, the prevalence of child and adolescent psychiatric disorders in the community was 6.5% and among schools was 23.3%. Approximately 70% of adolescents with mental health symptoms end up suffering through their symptoms, and 50% of these do not complete high school.^[5] The consequences of not addressing adolescent mental health conditions extend to adulthood, impairing both physical and mental health and limiting opportunities to lead fulfilling lives as adults.

Management of mental illnesses in adolescents includes early recognition and providing appropriate therapy and support.^[6] Most of the adolescents are students who spend almost half of their active time in schools under observation of their teachers. Teachers interact with adolescent students daily and can spot the changes in their behavior before they develop full-blown symptoms. Hence, teachers can be a major resource in provision of mental health services to adolescents.^[6,7]

The teacher's attitude and belief toward mental illness can be considered as the most critical and neglected area.^[8] A majority of the studies are conducted in the community or on adolescent students and much less attention has been paid in assessing the stigmatizing attitudes of educators toward mental illness, who are important role models and youth influencers.^[9,10] Teachers are a major professional resource of the community and it is surprising that this resource has not been fully tapped. The scenario in India in this regard is highly disappointing with only few studies in our review.^[7,9] Viewing the above situation, this study was planned to assess the stigma toward mental illness and the associated factors among higher secondary school teachers in Puducherry, South India.

Materials and Methods

A school-based analytical cross-sectional study was carried out during April 2017 to March 2018 among teachers of both government and private higher secondary schools of Puducherry district. The district is one of the four districts of the union territory of Puducherry in southern India. According to the 2011 census, the district had a population of 950,289 with 69.2% living in the urban areas. The district of Puducherry consisted of 104 registered higher secondary schools in both the rural and urban areas as of June 2016. Of these, 43 schools were under the government sector and 61 schools under private sector. All schools run under the supervision and support of the Directorate of School Education, Puducherry, monitored by their respective principal or correspondents. The medium of education in both the category of schools was either English or Tamil (regional language). Only permanent higher secondary school teachers of government and private schools in rural and urban Puducherry

who had at least 1 year of teaching experience were included in the study. Higher secondary school teachers in this study context refers to individuals with specialities in various subjects of higher secondary schools involved in formal teaching of students in standards 11 and 12.

A minimum sample size required to detect 50% stigma among higher secondary school teachers in Puducherry with 5% absolute precision, 95% confidence interval (5% alpha error), 1.18 design effect for cluster sampling, and 20% nonresponse rate was calculated to be 566. To achieve the sample size and represent both the private and government sectors of higher secondary schools in rural and urban areas of Puducherry district, a multistage sampling technique was used. Initially, the higher secondary schools in Puducherry were stratified into four strata based on their location (rural and urban) and type (government and private). Each school was considered as a single cluster. The next step involved the calculation of the required number of schools for the study based on the sample size and average number of teachers per school. The required number of schools in each stratum from the total was calculated using probability proportional to size sampling. The schools required from each stratum were selected using simple random sampling technique. All higher secondary school teachers from the selected schools fulfilling the inclusion criteria were the participants.

The higher secondary school teachers of the selected schools were administered a semi-structured proforma capturing their sociodemographic details (age, gender, socioeconomic status, education), work characteristics (type and location of school, teaching experience), and stigma toward mental illness. Socioeconomic status of the teachers was classified as per modified BG Prasad's classification updated for June 2018. A part of the "Mental Health Literacy Scale" developed by Jorm *et al.* in 1997 was used to assess the stigma toward mental illness.^[11] This scale is a vignette-based questionnaire validated in India. A "vignette" can be a hypothetical story or situation inserted into a survey and is often used to elicit information about values, beliefs, and perceived societal norms from participants. The scale in this study consisted of a mental illness scenario (depression vignette) followed by a series of structured questions on personal and perceived stigma with 5-point Likert scale responses [Box 1]. Personal stigma is the individual's own internalization of public

Ram is 30 years old. He has been feeling unusually sad and miserable for the last few weeks. Even though he is tired all the time, he has trouble sleeping nearly every night. Ram doesn't feel like eating and has lost weight. He can't keep his mind on his work and puts off making any decisions. Even day-to-day tasks seem too much for him. This has come to the attention of Ram's boss who is concerned about his lowered productivity. Ram feels he will never be happy again and believes his family would be better off without him. Ram has been so desperate, he has been thinking of ways to end his life.

Box 1: Scenario in the Vignette-based Questionnaire

stigma, the process of accepting and applying the negative evaluations to oneself, leading to self-discrimination.^[12] Perceived stigma is the perception or anticipation of stigma which refers to people's beliefs about attitudes of the general population toward their condition and toward themselves being a member of a potentially stigmatized group.^[12]

Permissions from the author of the study tool and Directorate of School Education were obtained prior to the study. The selected schools were visited during the agreed convenient time. Wherever possible, the original English versions of the scales and questionnaires were used. In those instances where the subjects requested for a Tamil translation, the same was provided after a standard method of forward translation, back translation, pretesting, and review. The identities of the teachers were kept anonymous from the stage of data collection. Institutional Human Ethics Committee approval was obtained before the start of the study.

The data obtained were entered twice in EpiData Entry Client v 4.4.2 to check for data entry errors. Data were then exported into Microsoft Excel 2016 software and analyzed using Statistical Package for the Social Sciences (SPSS) version 16. Frequency and percentage were used to present the categorical data such as sociodemographic variables, work characteristics, and responses to Mental Health Literacy Scale. Bivariate analysis using Chi-square test was done to determine the factors associated with stigma. Multivariate analysis using binary logistic regression analysis was done to identify the independent effect of various factors on stigma. The strength of the association was expressed as crude odds ratio (OR) for bivariate analysis and adjusted odds ratio (AOR) for multivariate analysis. Cluster adjustment was done in regression to adjust the effect of the correlation among individuals within the same cluster. Statistical significance was set at *P* value of less than or equal to 0.05.

Results

Sociodemographic characteristics

A total of 566 higher secondary school teachers from 46 government and private schools participated. The mean age of the teachers was 39.8 (± 10.8) years. A majority of them were female (58.1%) in the age group of 31–40 years (29.2%) and belonging to the upper socioeconomic class (58.1%). More than half of the teachers were from urban (56.5%) and private schools (61.8%) with master's degree (56%) as the highest level of education [Table 1].

Attitudes and beliefs toward mental illness

The participants were asked to rate how strongly they agreed to each statement depicting attitudes and beliefs (personal stigma) with regard to the person described in the vignette. Totally 73% respondents agreed or strongly agreed that the case in the vignette is weak (73% agree). Most of the respondents believed that the problem in the vignette is not a real medical illness (61%).

Table 1: Baseline demographic characteristics of the participants (n=566)

Characteristics	Frequency	Percentage
Age group (years)		
21-30	125	22.1
31-40	165	29.2
41-50	141	24.9
>50	135	23.8
Gender		
Male	237	41.9
Female	329	58.1
Social class		
Upper class	329	58.1
Upper middle class	175	30.9
Middle and Lower middle class	62	11
Location of school		
Urban	320	56.5
Rural	246	43.5
Type of school		
Private	350	61.8
Government	216	38.2
Highest level of education		
Bachelor degree/B. Ed.	106	18.7
Master degree/M. Ed.	317	56
M. Phil and PhD	143	25.3
Total teaching experience (years)		
1-10	250	44.2
11-20	137	24.2
>20	179	31.6

A majority of the respondents disagreed or strongly disagreed to avoid the case in vignette (64.5%) and to the statement that the case is dangerous (49.8%) [Table 2].

Similarly, subjects were asked to rate how strongly they agreed to each statement regarding what most of other people would believe (perceived stigma) regarding the case described in the vignette. The results were similar to individual perceptions except that more than half of the participants (55.8%) agreed that other people would not tell anyone whether they had the problem in the vignette [Table 3].

Prevalence and predictors of stigma

The agreement to various statements on personal stigma and perceived stigma toward the case in vignette was consolidated to arrive at a pooled proportion for both personal and perceived stigma. The overall agreement was obtained if the respondent has agreed or strongly agreed to any one of the statements on personal and perceived stigma. Among the teachers, 413 (72.9%) showed overall agreement to personal stigma toward the case in the vignette. Similarly, 372 (65.7%) teachers showed overall agreement to perceived stigma toward the case in the vignette.

Among the sociodemographic and work characteristics measured, age, gender, location, type of school, and teaching experience were the significant predictors of personal stigma toward mental

Table 2: Personal stigma of the respondents regarding the case in vignette (n=566)

Variables	Responses, n (%)				
	Strongly Agree	Agree	Neither agree not disagree	Disagree	Strongly disagree
People with a problem like Ram's could snap out of it if they wanted	150 (26.5)	221 (39)	98 (17.3)	75 (13.3)	22 (3.9)
A problem like Ram's is a sign of personal weakness	126 (22.3)	287 (50.7)	70 (12.4)	62 (11)	21 (3.7)
Ram's problem is not a real medical illness	92 (16.3)	253 (44.7)	68 (12)	132 (23.3)	21 (3.7)
People with a problem like Ram's are dangerous	40 (7.1)	139 (24.6)	105 (18.6)	223 (39.4)	59 (10.4)
It is best to avoid people with a problem like Ram's so that you don't develop this problem	26 (4.6)	99 (17.5)	76 (13.4)	274 (48.4)	91 (16.1)
People with a problem like Ram's are unpredictable	82 (14.5)	227 (40.1)	104 (18.4)	126 (22.3)	27 (4.8)
If I had a problem like Ram's I would not tell anyone	21 (3.7)	119 (21)	94 (16.6)	244 (43.1)	88 (15.5)
I would not employ someone if I knew they had a problem like Ram's	47 (8.3)	187 (33)	126 (22.3)	158 (27.9)	48 (8.5)
I would not vote for a politician if I knew they had suffered a problem like Ram's	166 (29.3)	209 (36.9)	79 (14)	77 (14.6)	35 (6.2)

Table 3: Perceived stigma of the respondents regarding the case in vignette (n=566)

Variables	Responses, n (%)				
	Strongly Agree	Agree	Neither agree not disagree	Disagree	Strongly disagree
Most other people believe that people with a problem like Ram's could snap out of it if they wanted	109 (19.3)	230 (40.6)	99 (17.5)	110 (19.4)	18 (3.2)
Most people believe that a problem like Ram's is a sign of personal weakness	85 (15)	310 (54.8)	63 (11.1)	93 (16.4)	15 (2.7)
Most people believe that Ram's problem is not a real medical illness	66 (11.7)	279 (49.3)	77 (13.6)	120 (21.2)	24 (4.2)
Most people believe that people with a problem like Ram's are dangerous	56 (9.9)	205 (36.2)	82 (14.5)	184 (32.5)	39 (6.9)
Most people believe that it is best to avoid people with a problem like Ram's so that you don't develop this problem	46 (8.1)	168 (29.7)	74 (13.1)	221 (39)	57 (10.1)
Most people believe that people with a problem like Ram's are unpredictable	72 (12.7)	252 (44.5)	90 (15.9)	121 (21.4)	31 (5.5)
If they had a problem like Ram's most people would not tell anyone	50 (8.8)	266 (47)	100 (17.7)	115 (20.3)	35 (6.2)
Most people would not employ someone they knew had a problem like Ram's	70 (12.4)	279 (49.3)	100 (17.7)	88 (15.5)	29 (5.1)
Most people would not vote for a politician they knew had suffered a problem like Ram's	161 (28.4)	217 (38.3)	109 (19.3)	55 (9.7)	24 (4.2)

illness on multivariate analysis. Teachers in the age group of 21–30 years [AOR: 4.6 (95% confidence interval (CI): 2.54–8.33)], male gender [AOR: 2.79 (95% CI: 1.85–4.24)], working in urban [AOR: 2.8 (95% CI: 1.91–4.15)], private schools [AOR: 2.58 (95% CI: 1.77–3.77)], and teaching experience of less than 10 years [AOR: 3.72 (95% CI: 2.40–5.88)] had significantly higher overall agreement to personal stigma in comparison to their other subgroups [Table 4].

Age, gender, location of school, and teaching experience were the significant predictors of perceived stigma toward mental illness on multivariate analysis. The subgroups having significantly higher overall agreement to perceived stigma were age group of 21–30 years [AOR: 4.6 (95% CI: 2.54–8.33)], male gender [AOR: 2.79 (95% CI: 1.85–4.24)], working in urban schools [AOR:

2.8 (95% CI: 1.91–4.15)], and teaching experience of less than 10 years [AOR: 3.72 (95% CI: 2.4–5.88)] [Table 5].

Discussion

Talking about negative attitudes and stigma attached to mental illnesses, many studies have been conducted in India and elsewhere but not with teachers as the study population.^[7,10] All the studies have uniformly observed substantial negativity toward mentally ill patients. Participants in our study, when assessed for their personal attitude and beliefs toward the person described in the vignette, showed a tendency toward “weak but not sick” and “unpredictable but not dangerous” concept of the case described in the vignette. This was consistent with the study done by Yap *et al.*, in which the respondents showed similar

Table 4: Predictors of respondent's personal stigma toward the case in vignette (n=566)

Factors	Total	Agreement to personal stigma, n (%)	Crude odds ratio (95% CI) [†]	Adjusted odds ratio (95% CI) [‡]
Age group (years)				
21-30	125	106 (84.8)	4.6 (2.54-8.33)*	4.42 (2.39-8.07)*
31-40	165	131 (79.4)	3.18 (1.91-5.27)*	3.11 (1.84-5.19)*
41-50	141	102 (72.3)	2.16 (1.31-3.56)*	2.15 (1.29-3.55)*
>50	135	74 (54.8)	1	1
Gender				
Male	237	199 (84)	2.81 (1.86-4.26)*	2.79 (1.85-4.24)*
Female	329	214 (65)	1	1
Social class				
Upper class	329 (58.1)	245 (74.5)	0.85 (0.45-1.62)	0.89 (0.46-1.65)
Upper middle class	175 (30.9)	120 (68.6)	0.64 (0.32-1.25)	0.68 (0.33-1.27)
Middle and lower middle class	62	48 (77.4)	1	1
Location of school				
Urban	320	262 (81.9)	2.84 (1.94-4.17)*	2.8 (1.91-4.15)*
Rural	246	151 (61.4)	1	1
Type of school				
Private	350	281 (80.3)	2.59 (1.77-3.79)*	2.58 (1.77-3.77)*
Government	216	132 (61.1)	1	1
Highest level of education				
Bachelor degree/B. Ed.	106	81 (76.4)	1.09 (0.61-1.96)	1.03 (0.58-1.89)
Master degree/M. Ed.	317	225 (71)	0.82 (0.53-1.29)	0.78 (0.51-1.24)
M. Phil and PhD	143	107 (74.8)	1	1
Total teaching experience (years)				
1-10	250	208 (83.2)	3.83 (2.45-5.96)*	3.72 (2.4-5.88)*
11-20	137	104 (75.9)	2.43 (1.49-3.96)*	2.37 (1.45-3.9)*
>20	179	101 (56.4)	1	1

CI: confidence interval; *P<0.05; [†]OR by Chi-square test; [‡]AOR by logistic regression

tendency of “weak but not sick” and “unpredictable” concepts toward the depression case vignette.^[13] In the above study, they stated that when similar set of statements presented to assess the community's beliefs and attitudes, there was a striking difference in responses. This was less evident for depression but more evident for schizophrenia vignette.^[13] In our study, participants responded on statements describing what most of the other people would believe regarding the case described in the vignette. The responses were implying that the community would have held the case in vignette with “weak but not sick” attitude. In addition, the responses also implied that community would have considered the case described in vignette as “dangerous and unpredictable.” Jorm *et al.* had correlated that such tendencies led to higher social distancing and negative stigmatizing attitudes toward people suffering from mental illness.^[13]

About 70% of teachers in this study showed overall agreement to personal and perceived stigma toward the depression case in the vignette. Similarly, Parikh *et al.* reported 63.6% prevalence of stigma among higher secondary school teachers in Ahmedabad.^[7] Teachers, unless trained specifically in the area of mental health, are a part of the general population, and it is hardly surprising that our study revealed the widespread existence of stigmatizing attitudes toward mental illness.

The findings of this study clearly indicate the presence of negative attitude toward individuals suffering from mental illness among the teachers. These results can be related to general view in literature which suggests that people diagnosed with mental illness are considered by the majority of the society as people who are dangerous, loathed, stranger, and somebody whose actions cannot be predicted.^[14] In India, Parikh *et al.* reported widespread existence of negative attitudes and discrimination toward mental illness among teachers.^[7] Christine indicated that the more negative a teacher's feelings regarding the stigma of mental health services, the more likely the teacher would not refer a student for professional interventions.^[15]

Gender was a significant predictor of stigma toward mental illness. In this study, male teachers had more personal stigma when compared with female teachers. Few studies reported that women adopt more positive attitudes toward patients with mental illness when compared with men and are less liable to stigmatization and exclusion although they have misinformation regarding mental illness especially about treatment.^[14,16,17] There were enough evidences in literature to confirm that the higher the education, the more positive views toward people with mental illness,^[18,19] but our study could not reveal any significant association between the level of education and stigma. The teachers from urban schools exhibited higher stigma toward

Table 5: Predictors of respondent's perceived stigma toward the case in vignette (n=566)

Factors	Total	Agreement to perceived stigma, n (%)	Crude odds ratio (95% CI) [†]	Adjusted odds ratio (95% CI) [‡]
Age group (years)				
21-30	125	99 (79.2)	4.35 (2.51-7.53)*	4.12 (2.38-7.44)*
31-40	165	123 (74.5)	3.35 (2.06-5.45)*	3.26 (1.99-5.39)*
41-50	141	87 (61.7)	1.84 (1.14-2.97) *	1.73 (0.99-2.83)
>50	135	63 (46.7)	1	1
Gender				
Male	237	189 (79.7)	3.14 (2.14-4.61)*	3.17 (2.15-4.63)*
Female	329	183 (55.6)	1	1
Social class				
Upper class	329 (58.1)	217 (66)	1.14 (0.65-2.01)	1.16 (0.66-2.03)
Upper middle class	175 (30.9)	116 (66.3)	1.15 (0.63-2.12)	1.18 (0.65-2.16)
Middle and lower middle class	62	39 (62.9)	1	1
Location of school				
Urban	320	224 (70)	1.55 (1.09-2.19)*	1.57 (1.11-2.2)*
Rural	246	148 (60.2)	1	1
Type of school				
Private	350	239 (68.3)	1.34 (0.94-1.92)	1.28 (0.89-1.85)
Government	216	133 (61.6)	1	1
Highest level of education				
Bachelor degree/B. Ed.	106	72 (67.9)	0.94 (0.55-1.62)	0.91 (0.53-1.6)
Master degree/M. Ed.	317	201 (63.4)	0.77 (0.51-1.18)	0.75 (0.5-1.16)
M. Phil and PhD	143	99 (69.2)	1	1
Total teaching experience (years)				
1-10	250	192 (76.8)	3.5 (2.31-5.3)*	3.43 (2.28-5.26)*
11-20	137	93 (67.9)	2.23 (1.41-3.55)*	2.21 (1.39-3.53)*
21-30	179	87 (48.6)	1	1

CI: confidence interval; *P<0.05; [†]OR by Chi-square test; [‡]AOR by logistic regression

mental illness. A study in eastern India showed a higher stigma score among rural area than urban area.^[20]

This study had a high response rate of 96% among the teachers. This coupled with a rigorous multistage sampling methodology and the use of cluster-adjusted regression models increases the external validity of the study findings. However, there were a few limitations. The study focused on the teachers' perceptions and self-ratings. Hence, it would be inaccurate to draw definitive conclusions about how teachers are intervening with students in their classrooms. The use of a quantitative tool to record the perceptions regarding the person described in the vignette necessarily sacrifices a degree of contextual depth. The additional use of a qualitative tool could have assisted in understanding the real-world perceptions that underlie and influence behavior. The use of a self-reported questionnaire involving Likert scale responses could have exposed the participants to various types of self-report response bias. The gender of the vignette characters may have influenced respondents' view as dominant gender role ideologies have been shown to shape attitudes toward mental health.

The prevailing negative attitudes warrant an urgent need to develop a structured education training program on mental health for the teachers. The subgroups with lower mental health literacy

should be given priorities for the training. It is not enough to provide "one-off" workshops to teachers with facts about mental illnesses and expect practices to change substantially in school systems. For real changes in practice and culture to take place, teachers need to engage in continuous learning by observing each other's practice, discussing and reflecting on various approaches and strategies, and sharing with other schools engaging in similar processes. With thorough training of teachers in mental health, in general with special attention to child and adolescent mental health, they can make an attitudinal shift from being negative to being positive toward the psychologically disturbed. Very importantly, identifying abnormal behavior, sign, and symptoms of mental illness would help the children in receiving timely apt interventions.

Conclusion

In this study, about 70% of higher secondary school teachers showed overall agreement to personal and perceived stigma toward a depressive case vignette. The negative attitude toward people suffering from mental illness was evident. Lower age, male gender, working in urban schools, and less teaching experience were the significant factors depicting higher stigma toward mental illness. The study indicates an urgent need to eliminate stigma associated with mental illness among the teachers. The results can

act as a baseline to design and implement structured educational training program for teachers that address the various aspects of mental health, with special attention to child and adolescent mental health. Future research could be done among the teachers in different levels (primary, middle, high school, and college) as they too deal with educating children or adolescents and to measure the effectiveness and impact of a structured mental training module for teachers.

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Conflicts of interest

There are no conflicts of interest.

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