

Research Paper: The Role of Social Safeness and Self-compassion in Mental Health Problems: A Model Based on Gilbert Theory of Emotion Regulation Systems



Khadije Alavi*

1. Department of Psychology, Faculty of Humanities, University of Bojnord, Bojnord, Iran.



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ABSTRACT

Objective: This study aimed to investigate the role of social safeness and self-compassion, as two essential components of Gilbert's theory, in mental health. In this regard and based on theoretical foundations, the mediation model of the relationship between social safeness and mental health problems was examined through self-compassion as a mediator.

Methods: A total of 344 students from the University of Bojnord, Bojnord City, Iran, in the 2019-2020 academic year were recruited using the cluster sampling method. They were responded to the social safeness and pleasure scale, self-compassion scale (short form), and depression, anxiety, and stress scale. The obtained data were analyzed using Structural Equation Modeling (SEM).

Results: The mediation model showed a good fit (χ^2/df : 1.77; RMSEA: 0.043; CFI: 0.99; GFI: 0.98; AGFI: 0.96; NFI: 0.98; TLI: 0.98). Beta coefficients indicate significant direct effect of social safeness on self-compassion (Beta=0.57; $P \leq 0.001$), significant direct effect of self-compassion on mental health problems (Beta=-0.75; $P \leq 0.001$), as well as a significant indirect effect of social safeness on mental health problems (Beta=-0.42; $P \leq 0.001$).

Conclusion: Social safeness affects mental health problems (depression, anxiety, and stress) through self-compassion as a mediator. A high sense of social safeness protects against depression, anxiety, and stress through increasing self-compassion. However, low social safeness increases vulnerability to depression, anxiety, and stress by reducing self-compassion.

* Corresponding Author:

Khadije Alavi, PhD.

Address: Department of Psychology, Faculty of Humanities, University of Bojnord, Bojnord, Iran.

Tel: +98 (58) 32201000

E-mail: kh.alavi@ub.ac.ir

Highlights

- Social safeness has negative relationships with depression, anxiety, and stress.
- Self-compassion has negative relationships with depression, anxiety, and stress.
- Social safeness is negatively associated with depression, anxiety, and stress through self-compassion as a mediator.

Plain Language Summary

Gilbert's theory suggests a three-part emotional system. The first system (threat system) is sensitive to the signs of threat and evokes negative emotions such as anxiety and anger to protect the person. The second system (drive system) is sensitive to the signs of rewards and evokes active, positive emotions such as vitality and excitement. The third system (soothing system) is sensitive to the signs of warmth and affiliation and produces lower arousal positive emotions such as calmness, contentment, and safeness. When this system is activated, one perceives the social world as safe, warm, and soothing. This emotional state is called social safeness that plays an essential role in mental health. Also, individuals with lower levels of social safeness fail to show self-compassion (compassionate behavior and attitude toward oneself), which in turn leads to mental health problems. The present study examined a model in which social safeness is related to mental health problems (i.e., depression, anxiety, and stress) through self-compassion. A total of 344 students participated in the research. According to the results, social safety and self-compassion have negative relationships with depression, anxiety, and stress. Also, social safeness is associated with low depression, anxiety, and stress through self-compassion. So it is recommended that mental disorders prevention and treatment programs consider self-compassion a vital component.

1. Introduction

Gilbert's theory (2005; 2015) suggests a three-part emotional system. Based on this theory, mental health problems can be explained based on the activation and interaction of three affective regulatory systems. The first system is the threat and self-protection focused system, which is sensitive to the signs of threat and evokes negative emotions such as anxiety, anger, and disgust. They aim to protect the person against threats and dangers (Gilbert et al., 2009; Gilbert, 2015; Kelly & Dupasquier, 2016). This system is hyperactive in most forms of psychopathology (Kelly, & Dupasquier, 2016). The second system is the drive-seeking and acquisition focused system, which focuses on seeking/acquiring resources necessary for survival and reproduction and is sensitive to rewards signs. It evokes energizing and active forms of positive emotions such as vitality and excitement (Gilbert et al., 2009; Gilbert, 2015; Kelly & Dupasquier, 2016).

Continuous stimulation of this system leads to a competitive search for resources, increasing the risk of mental health problems (Gilbert, 2015). Threat and drive systems are very similar to the well-known systems of negative affectivity and positive affectivity, respectively (Clark,

Watson, & Mineka, 1994). Finally, the soothing and affiliative focused system, which evolves parallel with the attachment system and its activation, can suppress the threat and seeking systems and put the organism in a soothed position (Gilbert, 2005). This system is sensitive to the signs of warmth and affiliation, and in response, produces lower arousal positive emotions such as calmness, contentment, safeness, and feelings of social connectedness (Gilbert, 2005; Gilbert et al., 2009; Kelly, Zuroff, Leybman & Gilbert, 2012; Kelly, & Dupasquier, 2016).

Thus, the third fundamental affective dimension focuses neither on approach nor avoidance but on the processes of caring and attachment (Armstrong, Nitschke, Bilash, & Zuroff, 2020). The term social safeness was introduced as the status resulting from the activation of the soothing system. Gilbert defined it as the perception of the social world as safe, warm, and soothing (Gilbert et al., 2009).

According to Gilbert (2005; 2015), a developed soothing system regulates the other two systems (i.e., threat and drive systems). In other words, when people feel social safeness, they are less looking to defend themselves or achieve resources. Thus, the activation of the soothing system plays an essential role in determining mental health through down-regulating the threat and drive systems.

It has been found that social safeness is positively correlated with mental health-related variables such as self-esteem (Kelly et al., 2012), secure attachment (Kelly et al., 2012; Satici, Uysal, Yilmaz, & Deniz, 2015), life satisfaction (Satici et al., 2015), physical and psychological wellbeing (Marta-Simões, Tylka, & Ferreira, 2020), self-reassurance (Marta-Simões, Ferreira, & Mendes, 2017), perceived social support (Kelly & Dupasquier, 2016), and body appreciation, as an aspect of positive body image (Marta-Simões & Ferreira, 2020a,b). Also, social safeness is negatively correlated with some dysfunctional characteristics and mental health problems, such as self-criticism, insecure attachment (Kelly et al., 2012), shame (Marta-Simões, Ferreira, & Mendes, 2017; Silva, Ferreira, Mendes, & Marta-Simões, 2019), avoidant, paranoid, and borderline personality traits (Kelly et al., 2012), eating disorder symptoms (Ferreira, Silva, Mendes, & Trindade, 2018; Mendes, Ferreira, & Trindade, 2019; Dias, Ferreira, & Trindade, 2020), depressive symptoms (Matos, Pinto-Gouveia, & Duarte, 2015; Alavi, Asghari Moghadam, Rahiminezhad & Farahani, 2017; Kelly et al., 2012), anxiety, cyclothymia, dysthymia, and irritability (Gilbert et al., 2009).

Self-compassion is one of the essential means through which social safeness affects mental health. Gilbert (2005) defines self-compassion as the non-defensive and non-judgmental attitude toward personal suffering with the desire to alleviate it and understand its causes. Neff (2003a, b) suggests three interactive components for self-compassion. The first is self-kindness, or a self-understanding and self-kindness approach to personal pain and failure rather than self-judgment. The second component is common humanity or the individual's ability to understand and acknowledge that all human beings experience loss and pain instead of feeling isolated by one's failures and inadequacies. The third component is mindfulness or awareness of painful thoughts and emotions instead of over-identifying with them.

Self-compassion seems to be a transdiagnostic component (Krieger et al. 2019) and plays a role in various mental disorders. Studies show negative relationships between self-compassion and depression (Rosenbaum, Gillen & Markey, 2020; Joeng et al., 2017; Neff, 2003a), anxiety (Luo et al., 2019), eating disorders (Ferreira, Pinto-Gouveia, & Duarte, 2013; Turk & Waller, 2020; Marta-Simões & Ferreira, 2020b), perceived stress (Sirois, Fuschia, & Hirsch, Jameson 2019), alcohol and marijuana problems (Wisener & Khoury, 2020), body shame (Daye, Webb, & Jafari, 2014), psychological distress (Walton, Baranoff, Gilbert, & Kirby, 2020), job-burnout (Dev, Fernando, Lim, & Consedine, 2018), positive

relationships between self-compassion and wellbeing (Zessin, Dickhäuser, & Garbade, 2015), happiness and optimism (Neff, Rude, & Kirkpatrick, 2007), and emotional intelligence (Di Fabio & Saklofske, 2020).

How do social safeness and self-compassion relate to each other? In children who miss a caring/soothing parent, the maturation of the soothing system is impaired. They may have an underdeveloped soothing system and thus have difficulties experiencing a sense of safeness and calmness in adulthood (Gilbert, 2015). The development of the soothing system in children occurs through secure attachments to caregivers/parents who are compassionate toward them and soothe their distress. As a result of such compassionate behavior and attitude, the individual gradually internalizes this compassionate stance, which eventually leads to the development of self-compassion (compassionate behavior and attitude toward oneself) and, consequently, compassion toward others (Pauley & McPherson, 2010; Neff & McGehee, 2010). In other words, compassion (toward oneself and others) is an essential mechanism in explaining how problems in feeling social safeness affect mental health problems.

Compassion toward oneself and others is a critical adaptive coping strategy against life difficulties and protects the person against mental health problems (Gilbert, 2005; Gilbert, 2009). According to Gilbert (2005), the active soothing system creates a capacity for compassion toward self and others. In support of this viewpoint, Kelly and Carter (2014), Kelly and Dupasquier (2016), and Marta-Simões and Ferreira (2020) found a positive relationship between social safeness and self-compassion.

In sum, it is hypothesized that social safeness, i.e., the condition resulting from the activation of the third emotional system (the soothing system), protects the person against mental health problems through the creation of compassion, especially self-compassion. I found no published research that examined this mediation model. Unlike threat and drive systems, which have been addressed in previous conceptualizations of emotion regulation systems (i.e., negative affectivity and positive affectivity) and investigated in a wide range of studies (Watson, Clark, & Carey, 1988; Wetter & Hankin, 2009; Iqbal & Dar, 2015), the third system has been less studied.

Accordingly, the study of the model mentioned above is important for some reasons. First, it empirically examines Gilbert's emotion regulation theory and how the third emotion regulation system affects mental health. Second, it is believed that studies of mediation models help to identify the critical components of prevention

and treatment programs (MacKinnon, Fairchild, & Fritz, 2007). Therefore, given that compassion-based therapies (Gilbert, 2010; Germer & Neff, 2019) are increasingly used today, the present study can help explain why these therapies are effective based on the function of emotion regulation systems. So the present study aimed to examine the mediation model. According to this model, self-compassion mediates the relationship between social safeness (as an underlying protective factor) and mental health problems (i.e., depression, anxiety, and stress). According to this model, social safeness is negatively associated with depression, anxiety, and stress through increased self-compassion.

2. Materials and Methods

This study has a correlational research design based on structural relationships (Structural Equation Modeling [SEM]). The study participants were recruited from Bojnord University, Bojnord City, Iran, in the academic year 2019-2020. The sample size was determined according to Tabachnick and Fidell (2013), who suggested a sample size of 300 cases for the SEM. Therefore, considering the probability of dropout, 350 subjects were recruited via the cluster sampling method. Out of 350 questionnaires distributed, 344 were completely and correctly filled and entered the analysis. The inclusion criteria were being a university student, being 18 to 35 years old, and having consent to participate in the research. The exclusion criteria were having problems that made it difficult for participants to respond to the research questionnaires (such as blindness or severe visual impairment). Before administering the research questionnaires, the participants were informed about the research purpose, and their informed consent were obtained to participate in the research. SEM was used to analyze the data. Analyses were performed in SPSS v. 22 and AMOS.

The Self-Compassion Scale (SCS)-short form was developed by Rees, Pamir, Neff, and Van (2011), based on the long-form of SCS (Neff, 2003a). This self-report scale has 12 items scored on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). The scale has six subscales, and every two show the opposite poles of a continuum: self-kindness/self-judgment, common humanity/isolation, and mindfulness/over-identification. Negative poles are scored inversely; therefore, higher scores on this scale indicate higher self-compassion. Rees et al. (2011) reported the Cronbach α value of 0.87 for the total scale. Also, the correlation between the total score of the short form and the total score of the long-form was 0.97. For the Persian version, exploratory factor analysis proposed a 3-factor structure: self-kindness/

self-judgment, common humanity/isolation, and mindfulness/over-identification. The Cronbach α values of 0.86 for the total scale and 0.68 to 0.89 for the subscales were obtained. The divergent validity of the scale has also been confirmed (Khanjani, Foroughi, Sadeghi, and Bahrainian, 2016).

The Social Safeness and Pleasure Scale (SSPS) was developed by Gilbert et al. (2009) and had 11 items. Each item is scored on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). This scale shows the extent to which people experience their social world as safe, warm, and soothing. The Cronbach α coefficients for this scale were from 0.91 to 0.94. The convergent validity of this scale has also been confirmed (Gilbert et al., 2009; Kelly & Carter, 2014). The Persian version of SSPS used in this study also showed good psychometric properties. The Cronbach α was 0.91, and the test-retest reliability for a 4-week interval was 0.82. The convergent validity of this scale has also been confirmed (Alavi et al., 2017).

The Depression, Anxiety and Stress Scale (DASS-21) has 21 items and three subscales of depression, anxiety, and stress (7 items per subscale). Each item is scored on a 4-point Likert scale ranging from 0 = "did not apply to me at all" to 3 = "applied to me very much". The Cronbach α coefficients for the three subscales were from 0.87 to 0.94. The convergent validity of the scale has also been confirmed (Antony, Bieling, Cox, Enns, & Swinson, 1998). The Persian version of this scale also showed good internal consistency (the Cronbach α coefficients ranged from 0.81 to 0.87). The results of exploratory factor analysis confirmed the construct validity of the scale (Asghari Moghadam et al., 2010).

Statistical analysis

Before running the analysis, data were evaluated in terms of appropriateness for SEM. Three assumptions were assessed: 1) absence of missing data, 2) univariate and multivariate normality, and 3) absence of multivariate outliers. The data met the assumptions. Then, the measurement models were evaluated and confirmed. In the next step, the structural model (the social safeness affect mental health problem through self-compassion) was assessed.

3. Results

The study sample ($n=344$) included 271 women (78.8%) and 73 men (21.2%) with a mean age of 20.61 ± 1.9 years. Table 1 presents the distribution of the scores of participants in the research measures.

Table 1. Distribution of the scores in the research measures

Measures	Mean±SD
Social safeness	36.06±7.5
Self-compassion (total score)	38.61±6.75
Self-kindness/Self-judgment	13.01±2.91
Common humanity/Isolation	12.6±2.64
Mindfulness/Over-identification	12.99±2.84
Depression	5.82±4.09
Anxiety	5.02±3.71
Stress	7.006±3.8

Table 2 presents the correlation between the model variables, and Figure 1 shows the structural model with path coefficients and fit indices.

As shown in Figure 1, all model path coefficients are significant. According to this model, social safeness reduces mental health problems (i.e., depression, anxiety, and stress) by increasing self-compassion. The fit indices of the model also show a good fit. The description of each of these indices is given below.

To evaluate the structural model, we used the relative χ^2 (the proportion of χ^2 to df), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), the Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), the Bentler-Bonett Normed Fit Index (NFI), and Tucker-Lewis Index (TLI).

Regarding relative χ^2 , Wheaton et al. (Wheaton, Muthen, Alvin, & Summers, 1997) reported relative $\chi^2 \leq 5$, and Kline (2010) introduced relative $\chi^2 \leq 3$ as an indicator of good fitness. Therefore, the value of this index shows a good fit. The next index is RMSEA that is identified as one of the most useful goodness of fit indices (Diamantopoulos & Siguaw, 2013).

Hu and Bentler (1992) suggested that values less than 0.06 for RMSEA indicate good fitness. So, the RMSEA value also shows a good fit. CFI, GFI, AGFI, NFI, and TLI values range from 0 to 1. To the extent that these values get closer to 1, the model shows better fitness. For CFI, NFI, and TLI, the cut-off point of 0.95, and for GFI and AGFI, the cut-off point of 0.90 have been recommended (Byrne, 2010). Therefore, regarding the model of this study, CFI, GFI, AGFI, NFI, and TLI show good fitness too.

Table 2. Correlation matrix of model variables

Variables	1	2	3	4	5	6	7
1. Social safeness	1						
2. Self-compassion (total score)	0.46**	1					
3. Self-kindness/self-judgment	0.39**	0.80**	1				
4. Common humanity/isolation	0.35**	0.79**	0.43**	1			
5. Mindfulness/over-identification	0.38**	0.82**	0.38**	0.49**	1		
6. Depression	-0.41**	-0.55**	-0.39**	-0.44**	-0.49**	1	
7. Anxiety	-0.28**	-0.40**	-0.26**	-0.29**	0.43**	0.69**	1
8. Stress	-0.43**	-0.56**	-0.38**	-0.41**	-0.54**	0.81**	0.73**

** P<0.01

Table 3. Total, direct, and indirect effects of variables in the model

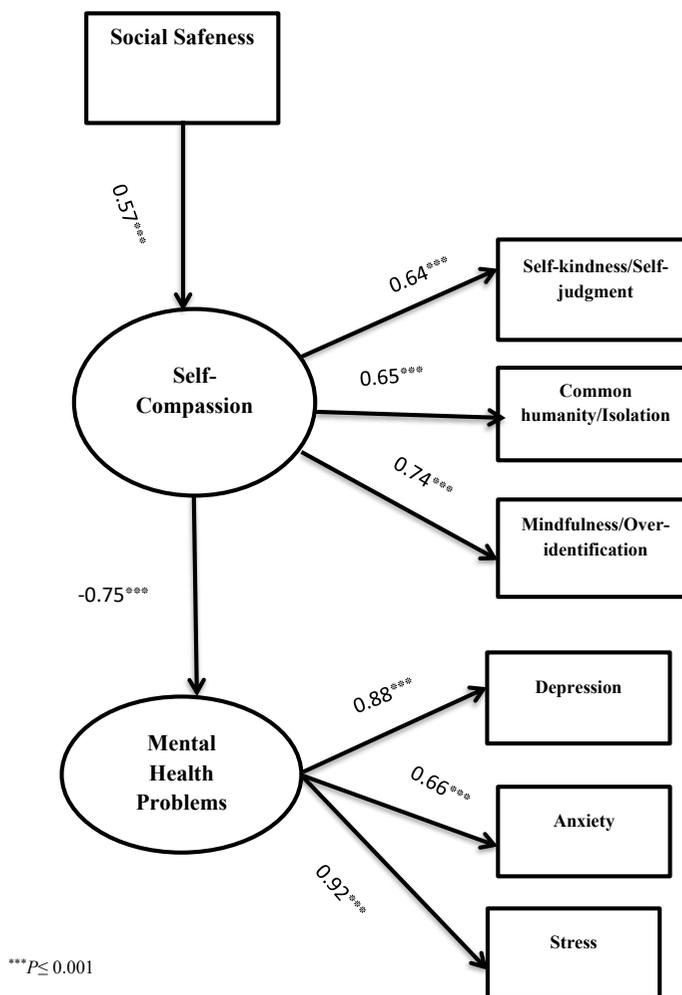
Variables	Total Effect	Direct Effect	Indirect Effect
Social safeness → Self-compassion	0.57***	0.57***	
Self-compassion → Mental health problems (depression, anxiety, and stress)	-0.75***	-0.75***	
Social safeness → Mental health problems (depression, anxiety, and stress)	-0.42***		-0.42***

*** P≤0.001

To investigate the indirect effects (mediation analysis), we used the bootstrap method (Preacher & Hayes, 2008). The reproduction number was 2000, and the CI was %95. Results (Table 3) showed that self-compassion mediates the relationship between social safeness and mental health problems (Beta=-0.42; P≤0.001).

4. Discussion

The present study investigated a relationship model between social safeness and mental health problems mediated by self-compassion. The results showed that social safeness and self-compassion are protective factors against mental health problems (depression, anxiety, and



***P≤ 0.001

χ^2/df : 1.77; RMSEA: 0.043; CFI: 0.99; GFI: 0.98; AGFI: 0.96; NFI: 0.98; TLI: 0.98

Figure 1. The mediation model of the effect of social safeness on mental health problems through self-compassion

stress). According to these results, social safeness is associated with low depression, anxiety, and stress through self-compassion. The study results are consistent with previous studies that show a negative relationship between social safeness and mental health problems, including depression (Alavi et al., 2017; Kelly & Carter, 2014; Kelly et al., 2012) and anxiety (Gilbert et al., 2009). Also, the present study findings are in line with studies that have reported significant negative relationships between self-compassion and depression (Neff, 2003b; Rosenbaum et al., 2020; Joeng et al., 2017; Lopez, Sanderman, & Schroevers, 2018), anxiety (Luo et al., 2019), and stress (Sirois et al., 2019).

The mediation model examined in this study indicates how the two fundamental variables of Gilbert's theory (social safeness and self-compassion) are effective in determining mental health. This theory identifies the variables affecting mental health from a depathologizing view and deals with psychopathology in terms of the lack of adaptive responses to difficult conditions. The model of the present study was formulated based on explaining how the soothing system works as the third fundamental emotional system in Gilbert's theory. According to this theory, social safeness results from activating a developed soothing system in the individual. The environmental condition necessary for developing this system is secure attachment to the parent: a parent who has a compassionate attitude towards the person and proportionately reassures and calms him in times of distress. As a result, the person gradually internalizes compassion toward oneself (Pauley & McPherson, 2010; Neff & McGehee, 2010). From a biological point of view, the third emotional system, i.e., the opiate/oxytocin system, evokes positive emotions such as contentment, a sense of calmness and safeness, and a tendency to care for and be compassionate toward oneself and others (Gilbert, 2005). People with a developed soothing system (and therefore a sense of social safeness) can respond to distress with compassion toward themselves and others. However, individuals with immature soothing systems and lower levels of social safeness fail to show compassion toward themselves and others (Gilbert, 2005; 2015). Accordingly, a mature soothing system and the representation of this system's activation, i.e., social safeness, protect the individual against mental health problems (including depression, anxiety, and stress) through self-compassion (as an emotion regulation strategy). People's compassionate attitude toward themselves and others enables them to cope with challenging emotions and challenging conditions with more understanding and self-care (Pauley & McPherson, 2010). This means that

mental health problems can be explained by the lack of social safeness and self-compassion.

The author did not find any published study examining this model. The present study provided initial empirical support for this model. An earlier study examining a relatively similar mediation model found that self-compassion mediates the relationship between insecure attachment (avoidant and anxious) and depression and anxiety (Joeng et al., 2017). Furthermore, an interesting finding from a recent study investigating the effects of the COVID-19 pandemic and the resulting social distancing across 21 countries shows that the COVID-19 pandemic affects social safeness negatively through fear of compassion (Matos et al., 2021).

Finally, it is necessary to consider that a significant part of the present study sample consisted of females (79%). This limitation of the present study can reduce the generalization of results to males. Future studies can examine and confirm the generalizability of the results by examining this model in relation to males. The use of self-report questionnaires is another limitation of the present study that can lead to biases in responding to items, including social desirability bias (Demetriou, Ozer, & Essau, 2015). Finally, although the SEM method allows causal inference, the cross-sectional nature of the present study limits such inference (Bollen & Pearl, 2013).

5. Conclusion

The present study findings have practical implications for the prevention and treatment of mental health problems. Self-compassion is a transdiagnostic factor that mediates the effect of a developmental and underlying depathologizing factor, i.e., the development of the emotional soothing system and the development of social safeness, on mental health (and from a psychopathological perspective mediates the effect of a developmental and underlying harm, i.e., an underdeveloped soothing system and low social safeness, on mental health). So it can be a good target for interventions in prevention and treatment programs. In this regard, researchers have suggested that self-compassion interventions can increase social safeness (Cuppige, Baird, Gibson, Booth, & Hevey, 2018) and reduce mental health problems and improve wellbeing in individuals with insecure attachments (Raque-Bogdan, Ericson, Jackson, Martin, & Bryan, 2010; Joeng et al., 2011).

Ethical Considerations

Compliance with ethical guidelines

This research has been approved by the Research Ethics Committee of Bojnord University (Ethics Code: IR.UB.REC.1400.002). All ethical principles are considered in this article. The participants were informed of the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information. Moreover, they were allowed to leave the study whenever they wanted, and if desired, the research results would be available to them.

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Conflict of interest

The authors declared no conflict of interest.

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