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**Corresponding Author Email Id : jillkleinmbs@gmail.com**

### Attribution Biases in Assigning Blame for Medical Error

In this issue, Han and colleagues rightly point out that there is great value in bringing social psychological theories and research into our thinking about medical education and error disclosure.<sup>1</sup> The issue of how others judge a clinician who makes an error is very relevant for developing a culture of disclosure, as is how clinicians judge themselves in the wake of an error. In this commentary, I will focus on the important role of attribution biases in judgments of the self and others.

It is important to distinguish between the attributions that we make for another person's behaviour, and the attributions we make for our own behaviour. The fundamental attribution error (FAE) is relevant in judgments of others' behaviour. As noted in the article, the FAE is our tendency to judge a person's actions as indicative of their internal characteristics, and fail to adequately consider the role of the situation. A great deal of research on the FAE in social psychology has illuminated the circumstances under which the FAE is most likely to occur<sup>2</sup> and these contextual factors can be very relevant to how the bias plays out in the wake of a clinical error. The FAE has been found to affect judgments most when: 1) the person we are judging is relatively new to us; 2) the behaviour of the other person is negative or conflicts with social norms; and 3) we are within the context of a Western rather than Eastern culture.

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As we become more familiar with someone, we can take more information into account when we judge that person's behaviour.<sup>3</sup> A supervisor who has worked with a trainee and witnessed many instances of competent medical care would be more likely to consider situational factors when learning that the trainee made a medical error, compared to a supervisor who has just started working with the trainee. Because of frequent rotations, trainees are often relatively new to their supervisors, who do not have the opportunity to encounter a large sample of the trainee's behaviour. Thus, the FAE is more likely to occur, and the trainee is more likely to be blamed for an error.

Judgments of errors are also likely to fall prey to the FAE because negative actions generally receive more attention than do positives, a tendency known as the negativity bias. In addition, negative behaviours are seen as more indicative of who someone really is.<sup>4</sup> Further, the FAE seems to be culturally dependent. Those raised in an East Asian culture are more likely to pay attention to the context and its effects on behaviour, while those raised in a Western culture are more likely to ignore the context and make dispositional attributions for behaviour.<sup>5</sup>

In addition to these caveats on when the FAE is likely to operate, the attributions we make are highly dependent on our prior views. We tend to interpret information in a way that is consistent with our expectations and desires, a tendency known as the confirmatory bias. Thus, if a disliked colleague makes an error, we are more likely to make a dispositional attribution, faulting the colleague's ineptitude or carelessness. If a respected colleague made the same error in the same context, we might fault the system or the other medical personnel involved. Attributions rarely happen in a vacuum.

There are also biases inherent in how we apportion blame for our own mistakes. The self-serving bias leads us to view ourselves as responsible for positive events, but see external factors as causing negative events. After an error, the self-serving bias would have us blame others, bad luck, or the impediments of the situation. The opposite of the self-serving bias occurs when a trainee sees the mistake as completely his or her own fault and an indication that key abilities are lacking and perhaps will always be lacking. This, of course, can lead to tremendous psychological distress. Neither of these styles of attribution promote learning from an error.

As stated by Han and colleagues, an FAE prone hospital will tend to punish doctors for their mistakes.<sup>1</sup> This culture will likely lead those who make an error to assume that they will be blamed by others, and that their abilities will be questioned. A culture of blame is the opposite of a growth mindset culture. With colleagues, I have written about the fixed versus growth mindset in medical training and in hospital culture.<sup>6</sup> Mindset theory comes from social psychology and holds that our beliefs about the origins of ability (such as intelligence) can have a profound impact on how we view mistakes or failure.<sup>7</sup> Those with a fixed mindset believe that ability is endowed and immobile, and thus a failure suggests a lack of ability. For a fixed mindset clinician, a medical error can indicate that an immutable ability is lacking, and thus the reaction is likely to be deflection (the self-serving bias) to fend off the threat, or great self-doubt. If others around the clinician also have a fixed mindset, then the error is likely to be seen as indicating a lack of fixed abilities, a tendency compounded by the FAE.

Those with a growth mindset view ability as gained through effort, experience and learning from setbacks. For a growth mindset clinician, a serious error, while still upsetting because of the consequences to the patient, is likely to be motivating. The error indicates a current lack of ability and thus the clinician is driven to learn more, try harder, and get coaching from others. If others around the clinician also have a growth mindset, then the error is seen as indicating the need for continued mentoring, and the error provides the motivation to improve the conditions and systems that may have contributed to the error.

I have focused my commentary on attribution errors, but the mindset approach also has implications for the forecasting error—known also as the affective forecasting error—discussed by Han et al.<sup>1</sup> This error leads us to underestimate our ability to recover from a setback, but with a growth mindset, we see ourselves and others as malleable, and we view setbacks as surmountable rather than predicting a permanent state.

There are many ways in which social psychology can contribute to our understanding of error reporting, and to medical education more generally. While the theories and findings discussed here and in Han et al's article<sup>1</sup> are based on a great deal of research in non-clinical contexts, there is a need to test social psychological concepts within clinical settings, to better understand their applicability to these settings, and their implications for medical education.

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## Pullouts

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