Sentinel Emotional Events: The Nature, Triggers, and Effects of Shame Experiences in Medical Residents

William E. Bynum IV, MD, Anthony R. Artino Jr, PhD, Sebastian Uijtdehaage, PhD, Allison M.B. Webb, MD, and Lara Varpio, PhD

Abstract

Purpose
This study explores an under-investigated topic, how medical residents experience shame within clinical learning environments, by asking residents to reflect on (1) the nature of their shame experiences; (2) the events that triggered, and factors that contributed to, those shame experiences; and (3) the perceived effects of those shame experiences.

Method
In this hermeneutic phenomenology study, the authors recruited 12 (self-nominated) residents from an internal medicine residency at a large teaching hospital in the United States. Data collection from each participant in 2016–2017 included (1) a written reflection about an experience during medical training in which the participant felt “flawed, deficient, or unworthy,” and (2) a semi-structured interview that explored the participant’s shame experience(s) in depth. The data were analyzed according to hermeneutic traditions, producing rich descriptions about participants’ shame experiences.

Results
Participants’ shame experiences ranged from debilitating emotional and physical reactions to more insidious, fleeting reactions. Participants reported shame triggers relating to patient care, learning processes, and personal goals; numerous factors contributed to their shame experiences. The effects of shame reactions included social isolation, disengagement from learning, impaired wellness, unprofessional behavior, and impaired empathy. Positive effects of shame reactions included enhanced learning, increased willingness to reach out for help, and improved relationships.

Conclusions
Shame reactions can be sentinel emotional events with significant physical and/or psychological effects in medical learners. This study has implications for learners, educators, and patients, and it may pave the way toward open, honest conversations about the role shame plays in medical education.

Shame is a powerful emotion that occurs in response to negative events such as making mistakes or experiencing mistreatment.1–3 Little research has investigated the influence of shame on the medical learner. This inattention is troubling, given the common occurrence of shame in the general population and its association with mental health problems, including depression, anxiety, post-traumatic stress disorder, and addiction.4 Furthermore, shame may be implicated in many challenges in academic medicine, including suboptimal learning environments, impaired empathy, and maladaptive responses to medical errors.5,6

Research into the psychology of shame provides a valuable theoretical foundation for understanding this emotion, particularly the work of Tracy and Robins.7–9 As a self-conscious emotion, shame arises when an individual engages in self-evaluation in response to a negative event, such as a perceived transgression or failure to reach an expectation.7,10 Shamed individuals attribute a triggering event to something global and unchanging about themselves, such as their intellect or overall capability, and fail to distinguish the self from the behavior.11 Thus, shame is associated with negative evaluations about the entire self,12 and the shamed individual struggles with feeling defective, deficient, unworthy, and/or damaged.2

Importantly, shame is different from guilt.13 Although guilt also occurs following a transgression or failure to meet an expectation, individuals experiencing guilt blame the transgression on something specific and changeable about themselves, such as their behavior or level of effort.1,10 Whereas the person experiencing guilt would say, “I did a bad thing,” the person experiencing shame would say, “I am bad.”

Although much shame research has been done in psychology, none of that work has studied medical learners. In clinical environments, learners commonly experience situations that could trigger shame: making errors, uncovering knowledge deficits, receiving difficult feedback, encountering poor patient outcomes, and failing to meet high standards of performance.5,14–18 Medical learners’ susceptibility to the effects of shame may be influenced by unique personal characteristics (e.g., perfectionism and personality type19), environmental influences (e.g., poor psychological safety and learner mistreatment20,21), and institutional limitations (e.g., poor access to mental health resources22). Thus, rather than assuming that medical learners experience shame in the same ways as other populations do, it is important...
to understand their unique shame experiences and the contextual forces that influence those experiences.

A first step toward understanding the role of shame in medical education is to characterize how medical learners experience shame in clinical learning environments. Thus, we asked medical residents to reflect on (1) the nature of their shame experiences, (2) the events that triggered and factors that contributed to those shame experiences, and (3) the perceived effects of those shame experiences.

Method

Hermeneutic design

Because we wanted to construct a rich understanding of the factors that influence residents’ experiences of shame, we chose to conduct a phenomenological study. As our study method, we selected hermeneutic phenomenology, which explores the meaning of lived experience and the contextual forces that shape it.23,24 We chose this over descriptive or transcendental approaches because it recognizes the importance of context (e.g., the clinical learning environment) in fully understanding participants’ experiences; the need to explore the deeper, potentially hidden layers of these experiences23; and the inability for researchers to “bracket off” their personal experiences—in this case, with shame—from the process of data analysis.23,25,26 Therefore, we asked participants questions that probed their assumptions and sought details of their shame experiences, including contextual forces. Recognizing that our personal shame experiences could not be removed from our interpretation efforts, we discussed our own shame experiences with one another, a practice that enhanced our ability to connect with and understand our participants’ experiences.

Participants

The study was publicized to internal medicine residents in a large U.S. teaching hospital as “an exploration of emotions experienced during residency” through e-mails, noon report announcements, and flyers posted in common areas. A total of 12 residents initially volunteered to participate in the study. After interviewing these 12 residents, we had constructed a rich and multifaceted understanding of the phenomenon reflecting the experiences described by each participant. See Table 1 for the demographics of the 12 participants.

Data collection

During 2016–2017, we conducted individual, semi-structured interviews with participants, lasting approximately two hours each. Each interview began with a written reflection exercise to stimulate active reflection on past shame experiences.26 The participant was asked to “write about a specific situation during your medical training that caused you to feel deficient, flawed, and/or unworthy.” We used these terms—all characteristics of shame from the psychology literature2,5—instead of the word shame to avoid triggering stigmas and to avoid confusion between shame and related constructs such as guilt.13 The participant had 30 minutes to write his or her reflections.

Immediately thereafter, the participant met with the interviewer (W.E.B.). While the participant waited, the interviewer read the reflection and identified areas for deeper probing during the semi-structured interview that followed.26 Sample questions from the interview guide are presented in Supplemental Digital Appendix 1 at http://links.lww.com/ACADMED/A609. The interview opened with questions about the participant’s reported emotional experience(s) and the factors influencing those experiences. Halfway through the interview, the interviewer provided a definition of shame, ensured that the participant understood the term, introduced it as a potential label for his/her experience, and asked whether shame was the emotion he/she had experienced. We used this approach to be transparent about the study’s purpose, to have participants confirm that they were, in fact, discussing a shame experience, and to prompt discussion about any additional shame experiences. Interviews were audio-recorded, transcribed by an external transcriptionist, and de-identified during transcription. (Note: W.E.B. is not a member of the department in which the study was conducted and never provided supervision for or evaluation of the participants.)

Next, the interviewer led the participant through a debriefing process to gauge his/her emotional reactions, assist him/her in processing new insights, and explain the study purpose.27 The interviewer offered participants same-day or routine referral for psychological counseling, should it be needed.

Data analysis

Data analysis was informed by the six stages of hermeneutic analysis described by Ajjawi and Higgs.26,28 This approach supports “systematic identification of participants’ interpretations and constructs (first-order constructs), which [are] then layered with the researchers’ own understandings, interpretations, and constructs (second order),”26 Table 2 describes the six stages of this approach and our specific activities at each stage. We coded data excerpts from the written reflections and interviews using Dedoose software, version 7.6.24 (SocioCultural Research Consultants, LLC, Manhattan Beach, California) to support data analyses and excerpt-retrieval.26

The participating hospital’s institutional review board approved this study.

Results

The nature of shame experiences

In all recollections of shame experiences, participants described assessing themselves as globally flawed, deficient, or unworthy in response to a triggering event. During a shame reaction, participants (Ps) labeled themselves as

• deficient (P7),
• underserving and inadequate (P6),
• not smart enough and the dumbest person here (P2),
• the worst (P5),

Table 1

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
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<tbody>
<tr>
<td><strong>Residency year, no. (%)</strong></td>
<td></td>
</tr>
<tr>
<td>First year</td>
<td>3 (25)</td>
</tr>
<tr>
<td>Second year</td>
<td>3 (25)</td>
</tr>
<tr>
<td>Third year</td>
<td>6 (50)</td>
</tr>
<tr>
<td><strong>Sex, no. (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>3 (25)</td>
</tr>
<tr>
<td>Men</td>
<td>9 (75)</td>
</tr>
<tr>
<td><strong>Age in years, mean (SD) [range]</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>31.5 (4.7) [27–42]</td>
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Table 2
The Specific Stages of the Hermeneutic Analysis Used to Analyze Data From a Qualitative Study of Shame Experiences in 12 Residents at a Single U.S. Internal Medicine Residency Program, 2017

<table>
<thead>
<tr>
<th>Stage</th>
<th>Activities</th>
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| Immersion   | • W.E.B. and L.V. read and re-read written reflections and transcripts from the first six participants and developed a preliminary understanding of the data.  
• W.E.B. and L.V. independently identified potential first-order constructs in the form of margin notes.  
• W.E.B. and L.V. expanded their understanding of the data and potential first-order constructs through a series of discussions. |
| Understanding| • W.E.B. created formal first-order constructs, or “participants’ ideas expressed in their own words and phrases.”
• L.V. reviewed first-order constructs and provided feedback.  
• A.R.A. and S.U. read four of the first six transcripts and reviewed the first-order codes created by W.E.B. and L.V.  
• Full-group meetings examined and revised the first-order constructs. |
| Abstraction  | • During ensuing full-group meetings, W.E.B. took detailed notes on the personal- and theory-based observations of other group members.  
• W.E.B. used these observations plus the first-order constructs to create second-order constructs.  
• W.E.B. reanalyzed all 12 transcripts using the second-order constructs.  
• L.V. then reanalyzed 4 transcripts and resolved disagreements and confusion about the second-order constructs with W.E.B.  
• W.E.B. and L.V. then grouped second-order codes into themes. |
| Synthesis   | • W.E.B. engaged in cycles of writing and rewriting to further elaborate the themes, taking into consideration the parts (the structures) and the whole of participants’ lived experiences.  
• The entire team then analyzed and clarified the themes, confirming their fit and credibility. |
| Illumination| • W.E.B. reconstructed the themes into an illustrative narrative form.  
• The entire team critiqued and grouped the themes into three primary elements: the nature of participants’ shame experiences, the factors that shaped residents’ shame experiences, and the effects of participants’ shame experiences. |
| Integration | • W.E.B. and L.V. independently identified potential first-order constructs in the form of margin notes.  
• W.E.B. and L.V. read and re-read written reflections and transcripts from the first six participants and developed a preliminary understanding of the data.  
• W.E.B. and L.V. expanded their understanding of the data and potential first-order constructs through a series of discussions.  
• During ensuing full-group meetings, W.E.B. took detailed notes on the personal- and theory-based observations of other group members.  
• W.E.B. used these observations plus the first-order constructs to create second-order constructs.  
• W.E.B. reanalyzed all 12 transcripts using the second-order constructs.  
• L.V. then reanalyzed 4 transcripts and resolved disagreements and confusion about the second-order constructs with W.E.B.  
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Shame reactions could be intense physical and emotional experiences. One participant recalled a shame reaction that was “absolutely debilitating for several hours where I was a completely different person” (P12), and another felt “like I was swimming in my own body” (P8). Participants often felt victimized during a shame reaction, feeling “attacked and betrayed” (P8) and put “on trial” (P3) following shame triggers. Participants also expressed fears; fears about how shortcomings would be perceived, how successful they would be as physicians, or whether they would be allowed to continue training following a shame trigger.

Shame reactions included physical discomfort for many participants. They described “a sinking feeling” (P7), like “the wind [was] taken out of you” (P11), and “like I was crawling in my skin” (P8). Participants reported effects on cognition during shame reactions, including difficulty concentrating, slowed thinking, racing and intrusive thoughts, and an altered sense of time. They also reported symptoms consistent with sympathetic activation, including cold sweats, flushing, tremor, tachycardia, and panic. These symptoms often occurred during the height of a shame reaction and could lead to acute stress responses: “So physically there’s this … heightened sense of stress, so it’s like that fight-or-flight-type response.” (P9)

Some shame reactions lasted months, while others were short-lived (only minutes) and less emotionally intense. Participants described the latter type of shame reaction as “small bursts of shame” (P3) that are “not foundationally troubling but that you notice” (P6). The less intense shame reactions typically involved minimal physical manifestations and affective feelings.

However, less intense shame events could coalesce into more significant, distressing shame reactions if they occurred frequently or in conjunction with other minor shame events, suggesting an additive effect. For example, one
participant experienced significant shame due to his perceived repeated failures at work and at home. The combination made him “feel like you’re failing all the time, no matter where you go, all day” (P9). Participants who experienced additive shame expressed many of the same affective feelings and physiological manifestations as did those who experienced more intense shame reactions.

Events that trigger and factors that contribute to shame reactions

Shame reactions were most often triggered by specific events, including events related to patient care (e.g., a medical error causing harm to a patient, inability to relieve a patient’s suffering), events related to learning (e.g., remediation proceedings, being “pimped”b by a supervisor), and events related to personal goals (e.g., failure to be selected for chief resident, rejection of a manuscript submitted to a scholarly journal). The most intense reactions were often triggered by a significant, singular event but could also result from the accumulation of multiple, smaller shame triggers. Chart 1 provides a complete list of all shame triggers reported by participants.

In evaluating why certain triggers led to shame reactions, we identified the following contributory factors: comparisons to others, focus on performance, difficulty with subjective standards, perfectionism, fear of judgment, and skewed frames of reference.

Comparisons to others. Participants’ tendency to compare themselves to others, coupled with the perception that they were less capable and/or failed to meet their own expectations, contributed to feelings of shame. Comparisons to peers were particularly prevalent early in training, with some participants engaging in comparative assessments on a near-constant basis. One participant recounted, “I think as a doctor I was comparing myself versus my peers mainly…. My ego strength was assaulted continuously comparing myself versus my peers a near-constant basis. One participant engaging in comparative assessments on in training, with some participants peers were particularly prevalent early in medical training, with some participants struggling with shame due to perceived underperformance, what level of performance would have been enough to help him overcome his shame. His answer underscored the extent to which perfectionism colored his self-evaluation:

Perfectionism. Perfectionism contributed to shame for many participants, who felt deficient or flawed when they failed to meet unattainable standards of perfect performance. Other participants voiced similar sentiments, feeling “like I had to be perfect, and if I wasn’t perfect, then I’m failing in some way” (P9) and acknowledging that “I am hard on myself and very critical about every single thing that happens” (P1). We asked one participant, who struggled with shame due to perceived underperformance, what level of performance would have been enough to help him overcome his shame. His answer underscored the extent to which perfectionism colored his self-evaluation:

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Table 1

<table>
<thead>
<tr>
<th>Shame triggers occurring during patient care</th>
<th>Shame triggers occurring during learning</th>
<th>Shame triggers related to personal goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived medical errors causing patient deatha</td>
<td>Frequently perceiving underperformance and/or inadequate/deficient knowledgea</td>
<td>Not being selected for chief residenta</td>
</tr>
<tr>
<td>Perceived medical errors not causing significant patient harmb</td>
<td>Enduring a harsh remediation process for unprofessional behaviorc</td>
<td>Perceived failure as a parentc</td>
</tr>
<tr>
<td>Inability to relieve patient sufferingd</td>
<td>Morbidity and mortality proceedings for errorsd</td>
<td>Rejection from scholarly journalsd</td>
</tr>
<tr>
<td>Impaired or absent empathye</td>
<td>Harsh treatment from a supervisor during time of strugglee</td>
<td>Rejection from dream schoolsd</td>
</tr>
<tr>
<td>Ruminating on hypothetical errorsf</td>
<td>Inability to function independently; asking for helpf</td>
<td></td>
</tr>
<tr>
<td>Crying in front of a patientg</td>
<td>Receiving negative feedbackg</td>
<td></td>
</tr>
<tr>
<td> </td>
<td>Missing questions at noon reportg</td>
<td></td>
</tr>
<tr>
<td> </td>
<td>Being wrong on roundsh</td>
<td></td>
</tr>
<tr>
<td> </td>
<td>Being “pimped” on roundsi</td>
<td></td>
</tr>
<tr>
<td> </td>
<td>Low test scoresj</td>
<td></td>
</tr>
</tbody>
</table>

*aQuestioning with the intent to maintain the power hierarchy in medical education, potentially through intentional shaming or humiliation.

*bThis shame trigger was reported in the written reflection portion of data collection.

*cThis shame trigger was reported during the semi-structured interview portion of data collection.
I don’t think I know what enough looks like. I think enough would’ve been if everybody on every single evaluation … put whatever the highest thing they can give you on everything and then “most amazing intern or resident I’ve ever worked with,” maybe that would’ve been what I was looking for. But I’m not sure if that would even be enough. (P9)

Fear of judgment. Fear of judgment was a potent contributor to participants’ shame reactions. Participants feared judgment from peers, supervisors, patients, and families in a variety of forms: answering questions inaccurately in public (particularly at noon report), having errors scrutinized in morbidity and mortality conferences, approaching supervisors for help, and discussing failures with loved ones. Public exposure heightened participants’ fear of judgment and amplified feelings of shame. Reputation was central to the anxiety invoked by these perceived judgments:

I shouldn’t be as concerned with my reputation or how people perceive me, but it’s really hard to get over for me … the thinking that people might not trust me as much. (P3)

Skewed frame of reference. Participants often analyzed themselves through frames of reference that were inconsistent with contextual realities. Self-evaluating through a “skewed frame of reference” could lead to overly harsh self-assessments and feelings of shame. This skewed frame of reference led some participants to resist situational evidence that challenged their self-blame. This phenomenon was particularly poignant for two participants who, in the midst of a shame reaction, assumed full blame for a perceived error that involved other providers and systemic inputs. As one stated:

When I was thinking about the mistake, I was thinking about what I missed, what I did wrong. I wasn’t thinking about what anybody else did wrong. (P11)

A skewed frame of reference following an error could lead to mistrust of the people who attempted to provide support, contributing to a fixed shame reaction.

I think I just still blame myself. I felt like maybe people were trying to make me feel better about it ‘cause they knew that I blamed myself for it. So, I felt somewhat I didn’t trust them. (P3)

Other participants manifested a skewed frame of reference by ignoring or downplaying evidence that they were good enough. One participant recalled getting “a lot of positive reviews, but I still felt pretty shitty about myself” (P9). Another explained that “I don’t belong, I’m not smart enough, I don’t have the aptitude, even though I’ve passed” (P3; italics are ours), suggesting that the existence of impostor syndrome, along with a skewed frame of reference, contributed to his shame.

The critical role of supervisors. Participants reported interactions with supervisors that could have opposite effects on their shame reactions: treatment by a supervisor could either amplify or mitigate their shame reactions. A participant struggling on his first ICU rotation encountered harsh treatment from a fellow who “picked on” and “crucified” him on patient rounds in response to his obvious struggles (P5). This significantly heightened the shame he was already feeling from his perceived low performance on rounds. He went on to recount the effects of a toxic, “psychologically unsafe” environment created by the supervisor:

I think we were all afraid of her [the supervisor]. She’d come into the team room and [be] very [rude], very short. So I don’t know if there was a lot of learning going on those two weeks and more a lot of like fear of getting yelled at or fear of not having the right lab. (P5)

Another participant, reeling from an error-induced shame reaction, was called in the middle of the night by a fellow to inform him that his patient had coded. The next morning, he was chided for not seeking help from the supervising fellow and was informed that a morbidity and mortality conference would be held. This treatment, which occurred before attempts to assess his emotional well-being or provide support, significantly heightened and prolonged the effects of his existing shame (P3).

On the other hand, participants also reported interactions with supervisors that mitigated the severity or duration of their shame reactions and aided in recovery. Such interactions included a debriefing session following an error (P11), attempts to understand the resident as a person (P2), acknowledgement of a resident’s performance struggles and a focus on specific behaviors to improve (P5), and efforts to “unskew” a participant’s frame of reference by establishing realistic expectations of performance (P7). Each of these behaviors helped participants process shame feelings in a productive manner, as outlined by a participant who made a medical error:

It made me really respect the power of a debrief. We just talked through the whole thing. Just getting it out in the open it felt like the pop-off valve. It was, like, okay, got it out. Now I can actually think about what the hell happened in a way that makes sense and is potentially productive. (P11)

Negative perceived effects of shame experiences

In the immediate aftermath of major shame reactions, participants consistently articulated negative effects that persisted for hours to days for some participants and from weeks to months for others. Negative effects of shame included social isolation and impaired sense of belonging, disengagement from learning, diminished psychological and physical wellness, reduced self-regulation and unprofessional behavior, and impaired empathy.

Social isolation and impaired sense of belonging. Participants commonly reported feeling alone and unmotivated to socially interact after a shame reaction. One participant recounted:

I wanted to just go home. I don’t want to see anyone. I just want to go to bed. I just want to pretend that this didn’t happen. (P8)

Participants frequently expressed feelings of impaired belonging within the profession of medicine following shame reactions. As one participant explained, “There’s certain days that I go home and I’m, like: ‘God, what the hell am I doing? I don’t belong here’” (P2). Another participant voiced a more universal form of disconnection because of his shame:

I think there was an element of losing some of … that kind of spiritual—not like your emotional—but kind of like [losing] feeling connected with others in the universe in some way, shape, or form. (P9)

Participants explained that feelings of isolation and impaired belonging made it more difficult to reach out to others for help, prolonging their emotional distress and impacting personal relationships.
Disengagement from learning. Participants described a loss of motivation to learn during a shame reaction. For example, shame related to “pimping” caused one participant to fear rounds and reflexively “shut down” if she answered a question wrong (P2). Reeling from a shame reaction, another participant recalled,

I lost my academic spark. I did not at all try to seek knowledge. If I went to a noon report or something like that, I just wouldn’t care at all” (P8).

The disengagement eventually extended into multiple areas of his involvement in the learning environment:

I didn’t much care about the things I usually did (excellent patient care, teaching interns, working to improve my residency). I stopped giving a shit. (P8)

Impaired empathy. Impaired empathy was another negative effect of shame experiences. One participant who experienced chronic shame from perceived underperformance throughout his intern year became obsessed with performance at the cost of his emotional connectedness. This emotional blunting eventually led to severely impaired empathy, disdain for his patients, and a heightened shame reaction:

Every day I have to do all this work on this patient, and I hate [the patient] for that. And every day I wanted that patient to die, which is a horrible thing to say, but I did. I wanted them to die so I would have less work to do. It had nothing to do with them as a human being. It had everything to do with; “I’m so tired of doing all this work. I’m so tired.” (P9)

Diminished psychological and physical wellness. Feelings of burnout and depression commonly accompanied major shame reactions. A participant whose shame revolved around daily feelings of inadequate performance recalled, “I was tired, burnt out. And I was, like, ‘I just don’t feel like I’m a good resident’” (P9). Another participant, experiencing shame from a major error, recalled that “in the moment you wanna throw up your hands and be, like, ‘Screw this,’ then just feel low, depressed, bad” (P3).

Impaired sleep was the most commonly reported effect on physical wellness, often due to intrusive thoughts of shame and ruminations about the triggering event. Some participants stopped exercising, and some changed their eating habits. These effects, which led one participant to “feel kind of like a sedentary bum” (P8), lasted from hours to days in some participants and weeks in others.

Reduced self-regulation and unprofessional behavior. Participants recounted that shame could lead to unprofessional behaviors via feelings of anger and defensiveness and a loss of emotional self-regulation. A participant experiencing a major shame reaction recounted its effects: “I just had zero fortitude. I had zero resilience to self-regulate and to hold back my true feelings” (P8). This contributed to unprofessional behavior (lashing out in anger) toward an attending:

I was a slave to my thoughts at that one time, and then my emotions and my higher brain centers weren’t … regulating my more base instincts. I just wanted to feel good and make someone else who I didn’t feel strongly for, just make them feel less good about themselves. It was a very primitive response. (P8)

Other unprofessional behaviors associated with shame reactions included blaming others for perceived failures, being defensive in the face of negative feedback, and disengaging from patient care responsibilities.

Positive perceived effects of shame experiences

Although participants more commonly experienced negative effects of their shame experiences, they also acknowledged positive effects. Positive effects included enhanced resilience, increased willingness to be vulnerable, improved relationships, and a desire to help other learners process shame reactions. Time, supervisor support, reaching out for help, and the ability to more accurately self-assess aided in resolution of the shame reaction and development of positive outcomes.

Participants also reflected on the positive effects of shame on learning. Participants felt that they learned more from shame experiences because the intensity of the emotion enhanced their memory:

For whatever reason, shame makes you remember things more. I would have to think a lot harder about the patient that came in with pneumonia that we treated and left better. But the one that I feel so bad about, I remember every detail. (P3)

Other participants reacted to shame by improving specific learning behaviors, including more attentive preparations for rotations, reaching out for help, and attempting to address cognitive biases. Notably, participants emphasized that although long-term effects of major shame experiences could be positive, the associated emotional distress diminished their overall value as learning events.

Discussion

In this study, we sought to characterize the nature, potential triggers, contributing factors, and effects of shame in medical residents. Our participants experienced shame in ways similar to those described in the psychology literature: shame was an intense experience that occurred as a result of a global negative self-evaluation; provoked anxiety and fight-or-flight responses; stimulated a desire to withdraw, disengage, and lash out in anger; and led to social isolation and depressive symptoms, among other types of emotional and physical distress. However, our analysis also revealed unique contextual and personal factors that provide novel insights into how shame may occur in medical residents. In this discussion, we outline the implications of these findings for learners, educators, and patients; discuss limitations of our study; and indicate future directions for this important topic.

Implications for learners

We observed that shame reactions may be sentinel emotional events for medical learners. Sentinel events in health care are events that cause death or serious physical or psychological injury to a patient and are unrelated to the natural course of illness. Similarly, shame reactions can be unexpected, jarring experiences that can have significant physical and/or psychological consequences for medical learners, including negative impacts on their well-being, engagement in the learning environment, and sense of belonging within the profession.

Our data suggest that depressed mood, burnout, impaired empathy, and social isolation may be intertwined with shame experiences. As such, shame may be a common thread in persistent challenges in medical education, including high rates of burnout and depression, impaired empathy, and suicidality in medical
learners\textsuperscript{36}; further, it may be a barrier to help-seeking in learners experiencing psychological distress.\textsuperscript{38,39} Additional studies are needed to examine the associations between shame and negative psychological outcomes and to identify factors that influence the outcomes of shame. The results of such research could enable characterization of shame resilience in medical learners and development of interventions to promote it.

Our data suggest that being in a transition period may be a particularly high-risk period for learners to experience shame. Previous studies have shown higher levels of emotional stress in medical students at transition periods,\textsuperscript{40,41} and reported transition-related stressors, include possessing insufficient knowledge, competing with students who have greater intellectual ability, and transitioning to less didactic methods of teaching.\textsuperscript{41} The reported impacts of these stressors include sympathetic activation, loss of concentration, emotional retreat, reduced enthusiasm for work, and unprofessional behavior.\textsuperscript{42} These stressors and outcomes closely resemble the contributors to and effects of our participants' shame reactions. Furthermore, most—but not all—shame experiences reported by our participants occurred during transition periods: the beginning of medical school, the transition into the clinical learning environment as a medical student, all of the intern year (but particularly early in the year), and soon after assuming new responsibilities as a senior resident. Numerous contributing factors also coalesced during transition periods, including difficulty with subjective standards, a tendency to compare one's self to others, a sense of impaired belonging, and experiencing imposter syndrome. Thus, shame may underlie the emotional distress and negative outcomes reported by learners during transition periods.\textsuperscript{40-42} For example, the psychology literature has shown a link between shame and suicidality,\textsuperscript{43,44} and unrecognized shame during transition periods may help explain Yaghmour et al's recent finding of a greater number of resident suicides in early intern year than during other times in training.\textsuperscript{45} Additional inquiry should investigate the potential relationship between shame and transition-related emotional distress in medical learners.

Finally, it appears that shame can occur during the normal course of learning: many of the shame triggers in our study were common, albeit often unexpected, learning events such as making mistakes, struggling academically, and being wrong in front of a group. Other triggers, such as being mistreated—which should never be a normal part of learning—caused significant, unnecessary emotional distress in participants. Thus, while intentional shaming must be eliminated in medical education, concomitant efforts are needed to prepare learners for the challenges inherent in learning medicine and to equip both learners and teachers to recognize and mitigate the shame they may induce.

**Implications for educators**

Our data suggest that shame may be a deep-seated, painful, and oft-hidden emotion in medical learners; educators' ability—and willingness—to recognize shame could enable them to meaningfully intervene during a major shame reaction in a medical learner. Simply checking in with a learner following a potential shame trigger may encourage the learner to share feelings of shame; however, we suggest that educators go beyond surface level inquiries (e.g., “How are you doing?”) and more deeply assess how a learner may be self-evaluating (e.g., “How are you feeling about yourself?”). Normalizing the shame and redirecting it to a guilt response (i.e., focused on specific actions that can be changed) might also facilitate a more constructive emotional response in a learner.\textsuperscript{5}

Our finding that shame may masquerade as unprofessional behavior, including anger, defensiveness, and disengagement, has significant implications. It is possible that learners who outwardly project these unprofessional behaviors are inwardly suffering from major shame reactions. Figure 1, which we created early in our data analysis, is a visual illustration of this concept. It depicts the dichotomy between the behaviors the outside world sees and the self-evaluations and thought processes the shamed individual privately experiences. As we strive to characterize, distinguish, and grade the severity of

![Figure 1](image.png)

*Figure 1* A visual depiction of the gap between what a shamed learner may feel, potentially hidden from view (in this case, behind a wall), and the behaviors people around the learner may see and subsequently label as “unprofessional.”
various unprofessional behaviors, we might also consider whether these so-called “bad behaviors” are actually manifestations of painful, unrecognized shame reactions, and whether our tactics for remediating them are having their intended effects (or making things worse).

Implications for patients
Shame may impede competent and empathic patient care through its tendency to cause learners to feel isolated, disengaged, and disconnected. A learner’s withdrawal from the learning environment may have immediate, direct effects from loss of motivation to learn. Learning environments with high degrees of intentional shaming or unmitigated omission, poor communication, and lack of empathy; it may have indirect, delayed effects on patient care through errors of commission.

Conclusion
In this study, we shine a light on shame in medical learners—a normal but potentially debilitating emotion that is often hidden from view. In addition to promoting recognition and awareness about shame, we hope our study will inspire open, honest dialogue about the emotion and the role it plays in our profession. Indeed, shame has been likened to the “elephant in the room: something so big and disturbing that we don’t even see it, [even though] we keep bumping into it.”

Our participants reported similar experiences—shame could be disorienting, disturbing, and intrusive—and yet, somewhat to our surprise, they shared their stories openly and authentically. By revealing our experiences with shame in medical education, we may begin to overcome the taboo and stigmatized nature of the emotion and confront it in a way that builds connection, community, and healing.

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Previous presentations: Research abstracts of this project were presented at the 2018 Association for Medical Education in Europe annual meeting, held in Basel, Switzerland on August 25–29, and have been accepted for presentation at the 2018 Association of American Medical Colleges Learn Serve Lead Meeting in Austin, Texas on November 2–6. Different components of the data were, and will be presented at each conference.

W.E. Bynum IV is assistant professor, Department of Community and Family Medicine, Duke University School of Medicine, Durham, North Carolina.

A.R. Artino Jr is professor, Department of Medicine, Uniformed Services University of the Health Sciences, Bethesda, Maryland.

S. Uijtdehaage is professor, Department of Medicine, Uniformed Services University of the Health Sciences, Bethesda, Maryland.

A.M.B. Webb is a fourth-year resident, Walter Reed National Military Medical Center Internal Medicine–Psychiatry Residency, Bethesda, Maryland.

L. Varpio is professor, Department of Medicine, Uniformed Services University of the Health Sciences, Bethesda, Maryland.

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