

The Shame–Blame Game: Is It Still Necessary? A National Survey of Shame-based Teaching Practice in Canadian Plastic Surgery Programs

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Background: As understanding of poor physician mental health and burnout strengthens, it is becoming important to identify factors that detract from wellbeing. Shame-based learning (SBL) is detrimental to psychological health and can contribute to burnout, substance abuse and suicide. This study endeavoured to quantify the unknown prevalence and effects of SBL in Canadian plastic surgery programs.

Methods: An electronic survey was sent to all attending surgeons and trainee (residents and fellows) members of the Canadian Society of Plastic Surgeons. SBL was assessed using a validated questionnaire. Data was analyzed using descriptive statistics and thematic analysis.

Results: 98 responses (14.7%) comprising of 63 attending surgeons and 36 trainees were received. The majority of attending surgeons (78 percent) and trainees (67%) have been shamed. Fourteen percent of trainees and 9% of attending surgeons felt that SBL is necessary. The most common event provoking shaming for trainees was wrong answers (56%) and for attending surgeons was disagreement in clinical care (21%). For both groups, shamers were in positions of authority. The most common effect of SBL in trainees was a loss of self-confidence (53%), compared to no negative effect in attending surgeons (49 percent). Thirty-nine percent of trainees dealt with shaming events with support from fellow trainees (39 percent), while attending surgeons kept it to themselves (40 percent).

Conclusion: SBL is present in Canadian plastic surgery residency programs and has numerous detrimental effects. To foster better mental health, residency programs should identify ongoing SBL and make efforts to transition to healthier feedback strategies. (*Plast Reconstr Surg Glob Open* 2019;7:e2152; doi: 10.1097/GOX.0000000000002152; Published online 25 February 2019.)

INTRODUCTION

Physician burnout, substance abuse, and suicide are gaining increasing awareness in the medical community.^{1,2} Attention has been focused on identifying factors that influence physician mental and emotional health, of which work/training environment has been found to be an important contributor.^{1,2} Further investigation has identified

that, among others, shame-based learning (SBL) negatively impacts work/training environment and well-being.^{1,3}

SBL, a method of training that involves an instructor instilling feelings of shame upon the learner so as to direct the learner's future actions,³ is a teaching strategy used in residency education that may increase trainees' (residents and fellows) risk of poor emotional and psychological health. In the context of residency training, SBL can include verbal abuse, mocking, exclusion from clinical duties, embarrassment in the presence of colleagues, and persistent intimidation.^{4,5} In response to shame, trainees often develop maladaptive coping strategies⁴ including increased likelihood of depression, poor job performance, anxiety, an incessant need to please others, aggression, eating disorders, violence, and suicide.³ All of these approaches can contribute to burnout, mental illness, substance abuse, and suicide.³

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Surgical training, in particular, has been identified as having higher rates of shaming, harassment, and abuse.^{4,6,7} A recent study in otolaryngology residency training programs found that more than half of respondents had personally experienced shaming during their training and the majority had witnessed a colleague being shamed.⁴ Furthermore, even those that seem the most resilient to the effects of SBL still experience significant distress.¹

In an era of expanding understanding of physicians' poor mental health and high rates of burnout, it is important to understand the degree to which SBL is present in training programs and its effects on trainees. The aim of this study is to quantify the unknown prevalence and effects of SBL in Canadian plastic surgery residency programs.

METHODS

An anonymous, web-based survey was distributed to 667 current members of the Canadian Society of Plastic Surgeons. Study rationale, participant eligibility, and informed consent were outlined in a cover letter. The survey included open- and closed-ended questions related to demographics, current training status/years in practice, and questions surrounding SBL. Shame was defined in the distributed survey as detailed above in the introduction. The SBL questions were chosen from existing, validated Shame Inventories. Geographic regions were defined as Atlantic (New Brunswick, Prince Edward Island, Newfoundland, and Nova Scotia), Central (Quebec, Ontario), and Western (Manitoba, Alberta, British Columbia). Survey responses were collected from November 2016 to February 2017.

Data were exported to a Microsoft Excel (Microsoft v. 14.5.6, Redmond, Wash.) data sheet that was prepared a priori. Univariate descriptive analysis was performed for all variables. Thematic analysis was completed on comments from both trainees and attending surgeons to questions surrounding SBL. Interrater reliability for the thematic analysis was computed using Cohen's kappa (k), and values greater than 0.80 were considered acceptable. The survey was distributed using Opinio Survey Software (Object Planet, Oslo, Norway). SPSS version 24 was used for all analyses (IBM SPSS Statistics, Armonk, N.Y.). This project received institutional ethical approval from the Dalhousie University Research Ethics Board (File No. 2016-3914).

RESULTS

Demographics

A total of 98 plastic surgeons and trainees completed the survey (14.7% response rate). See Table 1 for full demographic details. Of the 98 respondents, 62 were attending plastic surgeons (63%) and 36 were plastic surgery residents or fellows (37%). There was an unequal distribution of responses between sexes as 65% of respondents were male. There was representation from all training regions and age categories (20–70 years), with approximately 70% of respondents below the age of 50 years. Participants in

Table 1. Demographic Characteristics of Canadian Plastic Surgery Attending Surgeons and Trainees Responding to a SBL Survey (N = 98)

Characteristic	Frequency (%)
Sex	
Male	64 (65)
Female	31 (32)
Declined to answer	1 (1)
Age	
20–25	2 (2)
26–30	21 (21)
31–35	17 (17)
36–40	13 (13)
41–45	5 (5)
45–50	10 (10)
51–55	9 (9)
56–60	12 (12)
61–65	7 (7)
66–70	2 (2)
Training region	
East	13 (13)
Central	46 (47)
West	37 (38)
Years of training	
1	4 (4)
2	7 (7)
3	8 (8)
4	3 (3)
5	5 (5)
Fellow	9 (9)
Attending	68 (69)
Years as attending (attending only)	
0–5	14 (22)
6–10	5 (8)
11–15	13 (21)
16–20	10 (16)
21–25	7 (11)
>25	13 (21)

training and early practice (26–40 years old) accounted for approximately half (52%) of respondents.

Shame-based Learning

The Shame Inventory questions and responses are summarized in Table 2. A total of 5 trainees (14%) and 6 attending surgeons (9%) felt that SBL is necessary in residency training. All respondents who felt that SBL is a necessary teaching strategy have been shamed in the past, either as an attending or as a resident. Twenty-eight trainees (78%) and 61 attending surgeons (90%) have observed a colleague being shamed, whereas 24 trainees (67%) and 53 attending surgeons (78%) have been shamed themselves either as an attending or as a resident. In terms of events provoking the shaming, the most common causes for trainees were wrong answer (56%), surgical error (33%), and misdiagnosis (25%). For attending surgeons, the most common reasons were disagreement in clinical care (21%) and other (15%). The location of shaming was most commonly in public areas, specifically the operating room (47%) for trainees and during teaching rounds (51%) for attending surgeons. Shamers tended to be in positions of authority. Attending surgeons (69%) and senior residents (14%) most commonly shamed trainees. Attending surgeons were most commonly shamed by more senior attendings (65%). Loss of self-confidence was the most frequent result of

Table 2. Shame Inventory Questions of Canadian Plastic Surgery Attending Surgeons and Trainees (N = 98; 36 Trainees and 62 Attending Plastic Surgeons)

Survey Question	Trainee Frequency (%)	Attending Frequency (%)
Do you feel shame is necessary?		
Yes	5 (14)	6 (9)
No	31 (86)	56 (91)
Have you observed a colleague being shamed?		
Yes	28 (78)	61 (90)
No	8 (22)	7 (10)
Have you been personally shamed?		
Yes	24 (67)	53 (78)
No	12 (33)	15 (22)
What event provoked your personal shaming?		
Wrong answer	20 (56)	0 (0)
Disagreement in clinical care	7 (19)	14 (21)
Surgical error	12 (33)	1 (1)
Misdiagnosis	9 (25)	1 (1)
Uncertain	7 (19)	1 (1)
Other	2 (5)	10 (15)
In what environment did the shaming occur?		
Operating room	17 (47)	30 (44)
Teaching	9 (25)	35 (51)
Grand rounds/conference	7 (19)	30 (44)
Clinic	10 (28)	17 (25)
In private	9 (25)	16 (24)
Who shamed you?		
Attending surgeon	25 (69)	44 (65)
Senior resident	5 (14)	16 (24)
Hospital/clinic attending	5 (14)	11 (16)
Member of a different clinical service	6 (17)	8 (12)
Peer (same year or lower)	2 (5)	2 (3)
Patient	0 (0)	0 (0)
What was the result of the shaming event?		
Loss of self-confidence	19 (53)	26 (38)
No negative effect	9 (25)	20 (49)
Poor job performance	10 (28)	8 (12)
Professional isolation	6 (17)	9 (13)
Depression	6 (17)	7 (10)
How did you deal with the shaming event?		
Kept it to myself	13 (36)	27 (40)
With support from fellow trainees	14 (39)	24 (35)
Support from family	10 (28)	13 (19)
Support from other attending	2 (5)	10 (15)
Other	4 (11)	10 (15)
Reconciliation with the shamer	4 (11)	1 (1)
Professional counseling	1 (3)	1 (1)
Support from faith community	0 (0)	1 (1)

shaming for trainees (53%), whereas attending surgeons most frequently reported no negative effect (49%), followed by loss of self-confidence (38%). Trainees most commonly dealt with shaming with support from fellow trainees (39%) and by keeping it to themselves (36%), whereas attending surgeons typically kept their feelings to themselves (40%).

Thematic Analysis

Thematic analysis of the comment sections to certain questions is summarized in Table 3. Interrater reliability was considered acceptable based on predefined parameters ($k = 0.87$). In general, attending surgeons felt that they dealt with shaming events primarily through

self-improvement or felt ambivalent about the shaming event. A smaller portion reconciled with the shamer, received counseling, or resorted to substance abuse, particularly alcohol, to deal with their emotions. A small portion of trainees talked about standing up for themselves in the face of adversity or using the shaming event to improve their skills and/or knowledge.

Attending surgeons, for the most part, did not feel that the shaming issues had long-term consequences. A number of attending surgeons described the shaming events as learning experiences that would serve to improve their practice in the future. A common theme was also the ability of shaming to make training more efficient by motivating certain types of people to become better surgeons. However, attending surgeons acknowledged that SBL only had use among certain types of people. In contrast, a substantial number of trainees felt that the shaming event caused significant emotional hardship and decreased their confidence and trust in their superiors. One trainee went so far as to say that they almost dropped out of their program due to the severity of emotional distress.

DISCUSSION

Our study indicates that the majority of plastic surgery trainees and attending surgeons have been shamed, with consequences varying from no significant negative effect to deterioration of emotional health including loss of self-confidence, depression, professional isolation, and poor job performance. All of the 11% of respondents who feel that shaming is necessary in surgical training have been shamed in the past. This is important to recognize given that those who have experienced SBL are significantly more likely to use shame as a teaching tool themselves.⁴ Thematic analysis revealed a significant discrepancy between what shamers feel the effects of their SBL are and the experience of the shamed individual. For example, one attending surgeon stated “I feel occasional shaming is important to drive home the importance of what we are doing and the stakes involved ... If a significant error is made, it should be pointed out ... after the incident, as long as learning has taken place, it is forgotten and everyone moves on.” This is contrasted to the experience of 1 trainee who, when asked about the effects of the shaming they received, said “I cried for days and couldn’t eat or think straight ... I almost quit the program.” The findings of this study are consistent with other studies in surgical and medical populations with respect to the prevalence and effects of SBL⁴ and the position of authority shamers have.⁸ Additionally, the influence of SBL is not limited to the learning experience of the shamed individual. There is evidence to support that the negative effects of SBL could lead to detrimental productivity and patient care.^{9,10}

The results of this and other studies demonstrate the unfavorable effects of SBL and its association with depression, anxiety, and poor self-confidence.^{3,8} It is understandable, then, how SBL can contribute to the development of physician burnout, substance abuse, and suicide.^{1-4,11} Given that shamers are often in positions of authority, SBL can be classified as a form of bullying and harassment.⁶

Table 3. Thematic Analysis of Comments to Shame Inventory Questions of Canadian Plastic Surgery Attending Surgeons and Trainees (N = 98)

Question	Common Themes	Select Example Quotes
How did you deal with the shaming event (attending)?	<ul style="list-style-type: none"> -Self-improvement -Forgot about it/did not care -Reconciliation with shamer -Supportive counseling -Substance use 	<ul style="list-style-type: none"> “Pulled up my socks and moved on. Shame-based learning does not always evoke a negative response” “Not an issue. I have normal self-esteem and good internal balance” “Counseling later on in my career for many months”
How did you deal with the shaming event (trainee)?	<ul style="list-style-type: none"> -Stood up for themselves -Self-improvement 	<ul style="list-style-type: none"> “Stood up for myself and did not take any abuse” “Worked hard to ensure it did not happen again”
What were the consequences of the shaming (attending)?	<ul style="list-style-type: none"> -Not an issue -Increase training efficiency -Still affects them negatively -Got accustomed to shaming 	<ul style="list-style-type: none"> “No real effect” “Learned from it and got better” “Ongoing influence on self-esteem, job site satisfaction, and professional environment”
What were the consequences of the shaming (trainee)?	<ul style="list-style-type: none"> -Significant hardship -Eroded confidence in superiors 	<ul style="list-style-type: none"> “I cried for days and couldn’t eat or think straight. I almost quit the program” “This event shot my confidence and trust in my superiors”

Recently, awareness has been drawn to the “endemic” culture of harassment in the Australian medical system localized predominantly in surgical specialties.⁶ In response, the Royal Australasian College of Surgeons has mandated learning modules and taken a zero-tolerance approach to harassment and bullying.⁶ Given the ongoing prevalence of SBL in Canadian plastic surgery programs and likely surgical programs at large, it is foreseeable that Canadian institutions may adopt similar policies.

With the negative effects of SBL becoming more understood, this is a call to action for current residency training programs to recognize shaming and transition to productive teaching strategies.^{1,6} There is a growing body of evidence supporting the use of nonthreatening methods of evaluation, which allow educators to provide constructive feedback without the repercussions of SBL.^{3,12} Given that the majority of shaming experienced by trainees occurs in the operating room, it is likely that the event inciting the shaming is related to technical skill and to knowledge. When providing constructive technical skill feedback, Hattie and Timperley¹³ demonstrated that feedback about the task itself and the strategies used to do the task were more effective than criticizing the individual giving praise or giving punishment. The foundation of feedback in a surgical setting should be directed at identifying the gaps in process learning then providing corrections in the form of next steps or alternative paths to success.¹³ Additionally, similar to coaching technical skills in sport, feedback on the effect of the movement/maneuver is more meaningful and useful than criticizing the body movement/techniques themselves.¹⁴ Practically speaking, this means providing feedback on the action and its effects rather than on the trainee themselves is better than the opposite, which is often seen in SBL.

The strengths of our study include the use of a validated SBL questionnaire, a demographically and geographically diverse sample, and investigating SBL in the plastic surgery population, which to the best of the authors’ knowledge has not previously been done. Despite our small sample size, we feel our findings are generalizable as the conclusions are congruent with studies looking at SBL in different medical fields.^{4,6,8} Unfortunately, there was a low response rate, but this could be due to potential respondents preferring not to share their SBL

experiences, much in the same way the majority of our respondents reported keeping shaming events to themselves. The responses that were received could also reflect the opinions of individuals who feel very strongly about shaming in surgical training, and thus there is possibility that the incidence of shaming found in this study is inflated. There was also a higher response rate among attendings, which may be due to the comfort of sharing their experiences now that they have completed training and are in more of a position of authority. Additionally, approximately one fifth of the total number of Canadian Society of Plastic Surgeons’ members contacted are current trainees. This means that at baseline a much higher proportion of individuals receiving the study were attending surgeons, which also likely contributed to more responses from attending surgeon responses. Importantly, this study provides a baseline of the prevalence and effects of SBL in Canadian plastic surgery residency programs.

CONCLUSIONS

As acknowledgment and understanding of physicians’ poor mental health and burnout increase, it is important to identify factors that are detrimental to trainee well-being. SBL, which is becoming increasingly scrutinized, remains widely prevalent in Canadian plastic surgery programs despite its damaging effects on mental and emotional health. Programs should actively seek to identify ongoing SBL and make efforts to transition to healthier communication and feedback strategies.

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