Clinical Teacher Burnout and Self-perception of Clinical Supervision Performance

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ABSTRACT

Objective: Burnout is a chronic work-related stress phenomenon that can be caused by situational factors (e.g., demanding jobs) as well as individual factors (i.e. demographic characteristics, work experience). In this study, the researcher would like to find out the prevalence of clinical teacher burnout, the association between clinical teacher burnout and self-perception of clinical supervision.

Materials and Method: The online questionnaire was sent to all clinical teachers who are actively working at the Faculty of Medicine Siriraj Hospital. The Maslach Burnout Inventory-Educator Survey (MBI-ES), the Maastricht Clinical Teaching Questionnaire (MCTQ) and open-ended questions were included in the distributed questionnaire. Continuous data were analyzed and reported in mean and standard deviation or median and range. Nominal or categorical data were analyzed and reported in frequency and percentage. Binary logistic regression and multiple logistic regression were used to analyze factors associated with other burnout profiles.

Result: The prevalence of clinical teacher burnout was 7.9%. 35.1% were categorized into engaged profile, 33.6% were ineffective, 21.1% were overextended, and 2.3% were disengaged. No statistical significance in association between demographic, work-related, clinical supervision-related factors and the four burnout profiles. Data from open-ended questionnaires showed that the clinical teachers need to improve themselves toward creating a safe learning environment. Workload, relationship with others, and self-ineffectiveness are also mentioned.

Discussion and Conclusion: Even though no significant factors in clinical supervision are associated with burnout, there are some other important demanding factors that could contribute to burnout conditions.

Keyword: Burnout, Clinical teacher, Supervision

INTRODUCTION

Burnout in healthcare professionals was firstly mentioned and studied in the mid-1970s.[1,2] It is defined as a psychological syndrome of emotional exhaustion (EE), depersonalization (DP), and decreased sense of personal accomplishment (PA) that is caused by the chronic stress related to jobs.[2] The EE dimension is defined as 'feelings of being overextended and depleted of one's emotional and physical resources'. The DP dimension is defined as 'a negative, callous, or excessively detached response to various aspects'. The PA is defined as 'feelings of incompetence and a lack of achievement and productivity at work.[2]

For doctors, many reports around the world revealed the prevalence of overall burnout in many subspecialties ranging from 0% to 80.5%.[3-6] Doctor burnout can result in a higher rate of patient safety incidents, poorer quality of care, and lower patient satisfaction scores.[7,8] The report of burnout was also found in the university teacher.[9] Teacher burnout can cause negative effects such as low productivity, professional engagement, job satisfaction, increased teacher turnover rate, higher cost of the management system, and poor student learning outcomes.[9-11] This study focuses on burnout in clinical teachers because they also work as doctors and teachers at the same time.

Clinical supervision is defined as 'the provision of guidance and feedback on matters of personal, professional, and educational development in the context of a trainee's experience of providing safe and appropriate patient care'.[12] During clinical supervision, clinical teachers run their dual roles, doctors and teachers, at the same time. Wide ranges of caring and teaching skills are needed to ensure patient safety as well as enhance their trainee's learning. These dual roles are considered as demanding factors that might lead to burnout. The clinical teacher is defined as the faculty physician who supervises the clinical supervision. The medical teacher is defined as the faculty physician who plays a role in teaching, running research, and taking care of patients.

The objectives of this study are to find out the prevalence of clinical teacher burnout in the Faculty of Medicine Siriraj Hospital, investigate the association between clinical teacher burnout and clinical supervision performance, and identify other factors related to clinical teacher burnout.

MATERIALS AND METHODS

A cross-sectional, online questionnaire-based study was done after the Institutional Review Board (IRB) approved. The online questionnaire comprised of demographic data, the Thai-version of Maslach Burnout Inventory-Educator Survey (MBI-ES), the Thai-version of Maastricht Clinical Teaching Questionnaire (MCTQ) for clinical supervisors, and open-ended questions.[13,14]

The MBI is considered as a gold standard for burnout assessment.[15] The MBI-ES is a 3-part, 22-item questionnaire, 9 items for EE, 5 items for DP, and 8 items for PA, with 7-point Likert scale in each item.[2] For psychometric property, the estimated Cronbach alpha of 0.88-0.90 were reported in EE, 0.74- 0.76 for DP, and 0.72- 0.76 for PA in the non-Thai MBI-ES version.[2] The MCTQ-ES was used for explore self-perception of the clinical teacher in clinical supervision-related issues such as modeling, coaching, scaffolding, articulation, reflection, exploration and create safe environment. The MCTQ consists of a 24-item questionnaire with a 5-point Likert Scale ranging from 1-5 in each item, an overall assessment part that asks the clinical teachers to rate their overall skills on a scale ranging from 1 to 10, and 2 open-ended questions.[14] To generate a valid Thai version of the MCTQ-ES questionnaire, it was forward translated and rechecked by 2 content experts and 1 linguist then backward translated by 2 bi-lingual people. The original and the back-translated versions were

compared and reviewed. The cognitive interview pretesting was done prior to the final review and adjudication.

The last open-ended questionnaire section, 2 open questions, was created for a more in-depth analysis of the causes of clinical teacher burnout. These additional questions may provide information that the quantitative portion does not.

The population of this study was all clinical teachers who are currently working at the Faculty of Medicine Siriraj Hospital, Mahidol University which is categorized as a tertiary university hospital. Based on the institution database, the study population was 754 clinical teachers. The inclusion criterion for the study was those who would like to complete the questionnaire. Those who could not complete the questionnaire, including those who feel uncomfortable with participating in this study were excluded.

Thus, 754 questionnaires were sent via internal electronic document (E-doc) to all clinical teachers. The online survey platform was opened between May 1, 2021 to May 31, 2021. The responses from the Google form were then exported and entered into an Excel spreadsheet.

The SPSS Statistics for Windows, version 23.0 (SPSS Inc., Chicago, Illinois, USA) was used for statistical analysis. For demographic data, continuous data were analyzed and reported in mean and standard deviation or median and range. The nominal or categorical data were analyzed and reported in frequency and percentage. Based on the MBI manual, the score of each burnout subscale, EE, DP, and PA, was calculated, categorized and interpreted into 5 burnout profiles based on suggestions from the fourth edition of the MBI manual, as following formulas and Figure1;[13]

- High Exhaustion (Emotional Exhaustion) at z = Mean + (SD * 0.5)
- High Cynicism (Depersonalization) at z = Mean + (SD * 1.25)
- High Professional Efficacy (Personal Accomplishment) at z = Mean + (SD * 0.10)

The MCTQ-ES was analyzed and reported by using mean score and standard deviation of each domain. Binary logistic regression and multiple logistic regression, enter method, were used to analyze factors associated with other burnout profiles after classifying respondents into 2 groups; (1) engaged and (2) other burnout profiles including ineffective, overextended, disengaged, burnout. Factors with a p-value of less than 0.20 in binary logistic regression will be further analyzed with multiple logistic regression.

For open-ended questions, themes, and groupings of codes, were identified with the agreement of two independent reviewers prior to the data review process. A member checking process was done periodically during the data coding process. After the individual coding process was done, two coding data sheets were compared. If any discrepancies occurred, the final code for each answer was defined by using reviewers' discussion. Then the finalized data were triangulated with the existing published documents.

RESULTS

There were 265 collected responses (35.14%). After using the burnout profile for categorization, 93 respondents (35.1%) were classified as engaged. Eighty-nine staff (33.6%) were categorized into ineffective profile, 56 (21.1%) were overextended, 6 (2.3%) were disengaged, and 21 (7.9%) were burnout.

Table 1 Demographic data, odds ratio, 95% confidence interval, and p-value grouped by using burnout profile

	Engaged n (%) Total = 93	Other burnout profiles n (%) Total = 172	Total, n (%)	OR (95% CI)	p-value
Gender					0.271
Female	54 (58.1)	82 (47.7)	136 (51.3)	1	
Male	35 (37.6)	81 (47.1)	116 (43.8)	1.524 (0.902-2.575)	
Undefined	4 (4.3)	9 (5.2)	13 (4.9)	1.482 (0.4)	
Marital status					0.448
Single	33 (35.5)	65 (37.8)	98 (37)	1	
Married, no kid	13 (14.0)	29 (16.9)	42 (15.8)	1.133(0.521-2.463)	
Married, kid	47 (50.5)	75 (43.6)	122 (46.0)	0.810 (0.465-1.412)	
Divorce	0	3 (1.7)	3 (1.1)	820164151(0)	
Age group (years)					0.276
<35	8 (8.6)	22 (12.8)	30 (11.3)	1	
35-44	48 (51.6)	93 (54.1)	141 (53.2)	0.705 (0.292-1.700)	
45-54	28 (30.1)	35 (20.3)	63 (23.8)	0.455 (0.176-1.815)	
≥ 55	9 (9.7)	22 (12.8)	31 (11.7)	0.889 (0.290-2.727)	
Work hour (hours/week)					0.033*
≤ 40	24 (25.8)	26 (15.1)	50 (18.9)	0.260 (0.091-0.743)	
41-64	63 (67.7)	121 (70.3)	184 (69.4)	0.461 (0.180-1.182)	
> 64	6 (6.5)	25 (14.5)	31 (11.7)	1	
Work experience (years)	8 (8.6)	25 (14.5)	33 (12.5)	1	0.409
0-4	23 (24.7)	48 (27.9)	71 (26.8)	0.668 (0.261-1.707)	
5-9	23 (24.7)	40 (23.3)	63 (23.8)	0.557 (0.216-1.435)	
10-14	39 (41.9)	59 (34.3)	98 (37)	0.484 (0.198-1.182)	
>14					
Educational experience					0.083
Med Ed profile	2 (2.2)	5 (2.9)	7 (2.6)	1	
workshop > 20 hours	59 (63.4)	130 (76.0)	189 (71.3)	0.500 (0.135-1.852)	
workshop <20 hours	28 (30.1)	28 (16.4)	56 (21.1)	1.102 (0.319-3.803)	
None	4 (4.3)	8 (4.7)	12 (4.5)	1.250 (0.164-9.538)	

Table 1 demonstrated demographic data, odds ratio, 95% confidence interval, and p-value that grouped by using burnout profile. All respondents were classified into 2 groups; (1) engaged respondents, (2) other burnout profiles including ineffective, overextended, disengaged, and burnout.

Table 2 The means and standard deviation of each domain and overall mean in MCTQs.

Clinical supervision domain	Mean (S.D.) n=265
Modeling	4.13 (0.61)
Coaching	3.93 (0.68)
Scaffolding	4.09 (0.65)
Articulation	4.13 (0.64)
Reflection	3.55 (0.88)
Exploration	3.90 (0.75)
Create safe environment	4.04 (0.62)
Overall (10-point rating scale)	7.46 (1.37)

Table 2 showed that the clinical supervision domain with the lowest self-rated score is reflection. Other clinical supervision domains with mean self-rated scores of less than 4 are exploration and coaching.

After the respondents were divided into two groups, (1) ≥ 4 and (2) < 4, based on how they rated themselves on their clinical supervision performance, the number and percentages of those who had engaged and other burnout profiles, odds ratio, and p-values were shown in Table 3.

Table 3 Numbers and percentage of clinical teacher self-rated score, categorized by using engaged and other burnout profiles, in each clinical supervision domain and overall score, odds ratio, and p-value

Clinical supervision domain	Engaged n (%) n=93	Other burnout profiles, n (%) n=172	Total, n (%)	OR (95%CI)	p-value
Modeling					0.009*
≥ 4	56 (60.2)	130 (75.6)	186 (70.2)	2.045 (1.190-3.515)	
<4	37 (39.8)	42 (24.4)	79 (29.8)	1	
Coaching					0.106
≥ 4	50 (53.8)	110 (64.0)	160 (60.4)	1.526 (0.914-2.548	
<4	43 (46.2)	62 (36.0)	105 (39.6)	1	
Scaffolding					0.001*
≥ 4	54 (58.1)	133 (77.3)	187 (70.6)	2.463 (1.428-4.248)	
<4	39 (41.9)	39 (22.7)	78 (29.4)	1	
Articulation					0.003*
≥ 4	60 (64.5)	140 (81.4)	200 (75.5)	2.406 (1.357-4.266)	
<4	33 (35.5)	32 (18.6)	65 (24.5)	1	
Reflection					< 0.001*
≥ 4	28 (30.1)	95 (55.2)	123 (46.4)	2.846 (1.677-4.892)	
<4	65 (69.9)	77 (44.8)	142 (53.6)	1	
Exploration					0.008*
≥ 4	46 (49.5)	114 (66.3)	160 (60.4)	2.008 (1.200-3.361)	
<4	47 (50.5)	58 (33.7)	105 (39.6)	1	
Safe Environment					0.001*
≥ 4	48 (51.6)	125 (72.7)	173 (65.3)	2.493 (1.472-4.224)	
<4	45 (48.4)	47 (27.3)	92 (34.7)	1	
Overall score					0.042*
8-10	43 (46.2)	102 (59.3)	145 (54.7)	1.694 (1.019-2.818)	
≤ 7	50 (53.8)	70 (40.7)	120 (45.3)	1	

For self-rated scores in clinical supervision domains in total numbers, there were higher proportions of clinical teachers who rated themselves as good or excellent (≥ 4) than average or lower (< 4) in the six domains except for reflection.

In binary logistic regression, significant factors affecting burnout profile were six domains in clinical supervision models except for the coaching model. Factors with a p-value of less than 0.20 in binary logistic regression were analyzed with multiple logistic regression. The multiple regression, in Table 4, showed no significant factors affecting the burnout profile.

Table 4 Multiple regression for factors affecting burnout profile

Factor	OR (95% CI)	p-value
Work hour	1.605 (0.965-2.670)	0.069
Educational experience	1.675 (0.914-3.074)	0.095
Modeling	0.902 (0.453-1.796)	0.770
Coaching	1.252 (0.661-2.370)	0.490
Scaffolding	0.686 (0.350-1.344)	0.272
Articulation	0.761 (0.368-1.570)	0.459
Reflection	0.541 (0.270-1.083)	0.083
Exploration	0.947 (0.491-1.829)	0.872
Create safe environment	0.621 (0.323-1.193)	0.152
Overall	0.828 (0.422-1.626)	0.828

For open-ended questions,

What are your strengths as a clinical teacher?

One hundred and ninety-one respondents answered this question. 'Create safe learning environment' is a major key strength that was self-identified by more than half of the respondents. Other characteristics commonly mentioned by respondents are tolerance, calm, and being a good listener.

Respondent number 41 (R41) identified his strength as *"open-minded, patient with slow learners, understands the learning climate, and is capable of adjusting teaching approaches to match the existing learning climate."*

The strength that clinical teachers less mentioned was reflection and feedback. No clinical teacher stated exploration as their strength.

What areas would you like to improve on as a clinical teacher?

One hundred and eighty respondents answered this question. Approximately two-fifths of respondents wanted to improve on "create safe learning environment." The common concerns in this model are time management, task management, and self-control.

Many areas of time and task management were noted by respondents. For example, R66 noted *"I want to spend more time on teaching. However, there is a lot of work to be done. So, I need to manage my time properly."*

The second common area that clinical teachers, mentioned by 32 respondents, wanted to improve is "reflection and feedback." For example, R155 noted, *"I feel embarrassed to give feedback or ask for reflection."*

Do you think that being a clinical teacher can lead to burnout?

One hundred seventy-four respondents answered this question. One hundred and forty-three respondents responded as "no." For example, R40 mentioned, *"I am proud of myself for being a teacher."*

Fifteen respondents responded as maybe. The remaining 27 respondents answered yes. Among these two groups, the causes of burnout they mentioned could be categorized into 3 groups: (1) too much workload, (2) relationship with trainees, and (3) self-ineffectiveness.

For example, R242 mentioned, "*Too much service work and additional teaching schedules make me lose energy*." R222 mentioned "*…I have to prepare myself for teaching. But I finally found medical students were not attentive during my clinical supervision.*" R33 stated, "*I am not good enough*."

What factors do you think contributed to your burnout while working as a medical teacher?

There are 185 responses to this question. The causes of burnout mentioned by respondents could be classified into 3 groups, as follows;

1) Workload

One hundred and twenty respondents had trouble with too many assigned tasks, displeased tasks, and research. For instance, R28 noted "*Too many assigned tasks, such as teaching and research, make me not have any free time for myself.*"

2) Relationship with others: trainees, co-workers, and boss
3) Ineffectiveness

DISCUSSION

This study used critical boundaries suggested in MBI manual fourth edition for categorization instead of the suggested cut-off points in MBI manual third edition because the cut-off point in the third edition does not have diagnostic validity.[2,13] The critical boundaries that were calculated by using means and standard deviations of the group are considered better choices for individual categorization.[13] As different cut-off points were used, the demonstrated prevalence of this study might not comparable to prior studies on healthcare professionals. However, the prevalence of other burnout profiles can lead to internal burnout-related awareness in the institution.

For burnout and demographic-related factors such as age, gender, marriage, and children, the prior studies on doctors found unclear association patterns.[5,15] No statistically significant demographic-related risk factors for burnout profiles were found in this study. Some studies found younger, and female doctors were more likely to experience burnout.[5,15] This study also found a higher odd ratio in the youngest group. Because the younger doctors, who have less experience, usually take longer time to complete tasks.[15] This study agreed with the research conducted in European family physicians, a higher odd ratio was found in male. The workload is claimed to be a predictor for burnout in male gender.[15,16] For marriage and children, mixed results were found.[5,15] This study result agreed with prior study that found lower risks for burnout in those who are married and have children.[5] The family and quality of marriage could be considered as a support system that protects doctors from burnout.[5]

Work-related pressure also caused doctor burnout. Longer or additional work hours per week could increase the risks of burnout.[5,8,15] The results from binary logistic regression analysis, found doctors who had more working hours were prone to have higher risk for the four burnout profiles. After the multiple logistic regression was done, work hour did not show as the statistically significant

risk factor for burnout profile in work-related factors. So the work hour might probably be predictive in binary logistic regression because of its association with other predictors.

The professional experience did not show any statistically significant risk factors for burnout profile in work-related factors. However, the odds ratio showed a decreasing trend of having burnout in respondents with more years of work experience that is consistent with prior studies.[5,8,16]

No prior studies have investigated the association between clinical teachers' burnout and educational training experience. From this study's results, the researcher did not observe any statistically significant factors in an educational training experience that are associated with burnout. This finding could be explained by the amount of training time that was used in this study does not guarantee training effectiveness.

No prior studies have investigated the association between clinical teachers' burnout and self-perception of clinical supervision performance. From the quantitative results, the researcher did not observe any statistically significant factors in the clinical supervision domains that were associated with burnout. From the self-reported scoring on MCTQ scores, reflection, exploration, and coaching models were the first three groups ranked with the lowest scores. The low self-rated score can be implied that the clinical teachers have insufficient resources.[17-19] So the low self-rated scores in clinical supervision performance can be considered as demanding factors that contributed to burnout. Moreover, the supportive data from the qualitative part found that many respondents stated the reflection domain as an area that they wanted to improve and no one stated the exploration domain as their strength. Additionally, workloads, time pressure, unenthusiastic trainees, and self-perceived ineffectiveness, could be considered as the job demand that can lead to burnout. The qualitative analysis added information related to clinical teachers' perspectives on burnout contributory factors in clinical supervision and other areas of work. Like other professionals, workload, relationship with trainees or co-workers, and ineffectiveness in both clinical supervision and other areas of work could lead to clinical teacher burnout.[2,13]

Profile	Emotional Exhaustion	Depersonalization	Personal Accomplishment
Engaged	LOW	LOW	HIGH
Ineffective			LOW
Overextended	HIGH		
Disengaged		HIGH	
Burnout	HIGH	HIGH	

Figure 1 Burnout profile classification

Based on the MBI suggestion, the respondents who were classified as overextended, disengaged, ineffective and burnout might require some profile-specific interventions to prevent personal burnout.[13] Reducing job demands and providing job resources are considered as useful interventions to reduce burnout.[17-19]

For the strength of this study, the study classified the MBI scores of respondents into 5 burnout profiles based on the MBI manual fourth edition suggestion.[13] This categorization added a new perspective of burnout as a continuum pattern. This study also added some qualitative data that could fill gaps of missing information from the closed-ended questionnaires like areas for improvement and causes of burnout.

This study also had some limitations. There might be response and non-response biases in the survey nature. Thus, the 35.14% might not represent the population response. The questionnaire responders might have some degree of extremely positive or negative attitudes toward the study topic. These attitudes might lead to some extreme results.[20] Moreover, the COVID-19 pandemic situation related factor can put healthcare providers at risk of burnout syndrome. Although the questionnaires were distributed during the pandemic, they were distributed prior to the peak of the third outbreak. The question bias in open-ended questions can occur. The respondents might not have identical burnout definitions. Lastly, this study was a single-center, cross-sectional design that provided only a snapshot of the clinical staff burnout profile or self-perception of their clinical teaching at a given time point. Thus, these snapshot results might not be generalized to other institutions. The researchers recommended conducting more in-depth interviews and other qualitative data to fill in the gap of some missing information in both burnout and clinical supervision-related aspects. Moreover, a longitudinal study design should be carried out as it could reveal the long-term effects of each burnout profile as well as the progression of self-perception in clinical supervision.

CONCLUSION

To summarize, the etiology of burnout is considered to be multifactorial. The clinical teacher burnout contributory factors do not exist in only the clinical supervision part but also exist in other areas of their working context. Long-term organizational development could be achieved by reducing job demands and enhancing job resources for clinical teachers.

ACKNOWLEDGMENTS

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