Physician burn-out, transformational and servant leadership

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ABSTRACT

Background Physician burn-out was associated negatively with physicians' health, patient outcomes and healthcare system performance. Reducing physician burn-out may potentially benefit physicians and patients, improve healthcare performance and reduce societal healthcare costs.

Aim The purpose of this study was to clarify the relationship between transformational and servant leadership behaviours and physician burn-out.

Methods A cross-sectional, non-experimental quantitative correlation study was conducted using scores on the Maslach Burnout Inventory, Global Transformational Leadership Scale and Servant Leadership Behaviour Scale–6-item Short Form. The data were obtained by an online survey of physicians working at a metropolitan hospital in Australia.

Results 82 physicians participated in the study. The result showed significant correlations between transformational and servant leadership and lower physician burn-out, particularly in supporting fellow physicians' personal accomplishments, a burn-out construct (Pearson r=0.42 and 0.32, respectively). Among the constructs of transformational leadership, leaders who are clear about their values and demonstrate them in their actions correlate strongly with the constructs of burn-out. In servant leadership behaviours, helping subordinates generate meaning out of everyday work was the most influential factor in fellow physicians' burn-out. The finding may be related to the effects of observing the positive values and actions of their supervisor and the physicians' own understanding of the value of their work.

Conclusions A positive role model and the meaning of everyday work could be protective against physician burn-out. Positive role modelling and mentorship may be relevant in physician supervisor training. Encouraging physicians to discover meaning from their everyday work may help to promote physician well-being.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Physician burn-out is a serious healthcare issue globally. Leadership is likely to be part of the solution to physician burn-out, as burn-out was shown to be related to many factors that may be influenced by leadership. Limited literature addressed how physician leadership styles and behaviours may affect their subordinates' burn-out.

WHAT THIS STUDY ADDS

⇒ Both transformational leadership and servant leadership were associated with lower physician burn-out, particularly in enhancing the personal accomplishment construct of burn-out. Leading by example and helping subordinates generate meaning out of life at work are the most influencing behaviours.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Role modelling of the physician leader and an emphasis on positive values and meanings at work and demonstration of these values in practice could be important in reducing burn-out in fellow physicians.

INTRODUCTION

Physician burn-out is a serious issue globally. According to a recent study,[1] the physician burn-out rate was 56.6% in the USA. Reducing physician burn-out may potentially benefit physicians, patients, healthcare performance and cost.[2]

Leadership is likely to be part of the solution to physician burn-out, as burn-out was shown to be related to many factors that may be influenced by leadership. Examples of these factors include emotional intelligence,[3 4] self-efficacy,[5] motivation,[6] resilience,[7] teamwork,[8 9] job satisfaction,[10] generational identity[11 12] and organisational issues.[2 13–15] Not surprisingly, leadership styles influence burn-out.[9 10 16–19]

Limited literature addressed how physician leadership styles and behaviours may affect their subordinates' burn-out. There were several studies on the effects of physician styles on burn-out, which was associated with stress and low job satisfaction.[9 10] There has been a lot of interest in transformational physician leadership styles in the last decade. Transformational leadership is defined as the process by which "occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality".[20] It was associated with job satisfaction and the psychological well-being of healthcare workers.[18]

A recent systematic review analysed the findings of 11 studies on leadership styles and burn-out in a behavioural health/mental health setting from 1997 to 2017.[19] The results showed that transformational leadership was associated with well-being and a reduced risk of burn-out among the followers. All studies were in behavioural health services, not the wider healthcare setting. However, it was uncertain which component of burn-out, emotional exhaustion, depersonalisation or the lack of personal

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accomplishment was related to this positive effect of transformational leadership in a healthcare setting.

The idea of servant leadership has become more popular in recent years. Servant leadership is defined as a process in which 'leaders assume the position of servants in their relationships with fellow workers.'[21] Servant leaders are driven by the desire to serve others first.[22] While both transformational and servant leadership emphasise supporting and motivating the followers, transformational leaders focus primarily on the organisation and its goals. In contrast, servant leadership is focused on the well-being and development of the people within the organisation. While transformational leadership is well-established and studied, Kelly and Hearld[19] pointed out that there was a lack of studies on the effects of servant leadership on burn-out.

It is apparent that guidance was needed for the developers of physician leadership training to emphasise the most critical behaviours that may alleviate physician burn-out. The purpose of this quantitative study was to elaborate and clarify the relationship between transformational[23] and servant leadership[24] styles and physician burn-out in Australian public health service.

METHODS

Research design

This study examined the relationship among measurable variables: burn-out, transformational and servant leadership. This quantitative research has a non-experimental correlational design.

Participants

Population

The study's setting was Victoria, Australia's second most populated state.[25] The term physicians in this study refers to medical practitioners/doctors, including those who are in postgraduate medical training after medical school. The target population was physicians who work in a metropolitan public health service, as the majority of the hospital physicians work substantial hours in their institutions. Moreover, the public hospital environment is more hierarchical than private hospitals or community settings. Therefore, the impact of leadership behaviours could be more significant.

Sampling plan

All physicians working at the health service were invited to an online survey. The participants were physicians who responded to the online survey, gave their consent and completed the demographics section and the survey questions.

Staff who worked for less than 20 hours a week were excluded. The reason for the exclusion is to reduce the confounding due to work factors at other health services, which cannot be measured in this survey. Examples of these factors include the work conditions and supervisors from different institutions for different part-time jobs.

Data collection and analysis

Instrumentation

The Maslach Burnout Inventory

The most widely used construct of burn-out was developed from the work of Maslach and Jackson,[26] who pioneered the objective measurement of burn-out, now known as the Maslach Burnout Inventory (MBI). The current version of MBI consists of 22 statements of job-related feelings. The scale was labelled from 0 to 6 on a Likert scale with '0' being never, through '3' being a few times a month, to '6' being every day. The three most important constructs identified were emotional exhaustion, depersonalisation (an unfeeling and impersonal response towards the recipients of care or service) and the lack of personal accomplishment (feelings of competence and successful achievements). In terms of reliability, the internal consistency (Cronbach's coefficient alpha of 0.83–0.84), reliability coefficients (0.72–0.89) and test–retest reliability (0.62–0.82) were significant. Convergent validity from job satisfaction and personal outcome and discriminant validity from other psychological constructs were also confirmed.[26]

The conventional criteria of burn-out are emotional exhaustion greater than or equal to 27 or depersonalisation greater than or equal to 10, or both, on the MBI.[1] The licence to use MBI was purchased from Mind Garden.[27] The MBI - Human Services Survey version (MBI-HSS) was used in this study.

Global Transformational Leadership Scale

Carless *et al*[28] developed the Global Transformational Leadership Scale (GTLS) to measure transformational leadership by surveying about 1400 workers in a large Australian finance organisation. This instrument had seven items that captured seven elements in the concept of transformational leadership, including communicating a vision, developing staff, providing support, empowering staff, being innovative, leading by example and being charismatic. The response of each item was captured by a 5-point Likert scale ranging from rarely or never to very frequently. There is evidence of satisfactory reliability, discriminant validity and convergent validity with the Leadership Practices Inventory[29] and Multifactor Leadership Questionnaire.[30] Professor Leon Mann granted permission to use GTSL for the research.

Servant Leadership Behaviour Scale–6-item short form

Servant Leadership Behaviour Scale–6-item short form (SLBS-6)[31 32] is a short version of the existing standard SLBS,[33] which was developed from existing databases with a population of 3072, including samples from various industrial sectors (eg, banking, education, mining) and different employment levels in Indonesia and Australia. The SLBS-6 consists of six items to measure six significant servant leadership behaviours: voluntary subordination, authentic self, covenantal relationship, responsible morality, transcendental spirituality and transforming influence. There is evidence of its construct validity.[31–33] The response of each item was captured by a 5-point Likert scale ranging from strongly disagree to strongly agree. This instrument was used as it is shorter than other servant leadership measurements in order to reduce the burden on the participants completing the survey and potentially enhance participation. Professor Sen Sendjaya granted permission to use SLBL-6 for the research.

Data collection

The instruments and demographic questions were formatted for the anonymous online survey. The online survey platform used was SurveyMonkey. A link to the survey was included in the regular eNewsletters in the surveying period from the chief medical officer to all the physicians who work at the health service. The health service has about 1630 interns, residents and registrars and 720 senior medical officers/specialists who work more than 20 hours per week. A total of 2350 potential participants. The eNewsletters were sent about four times in the surveying period, which included the Christmas and New Year holidays. It is uncertain how many physicians read the eNewsletters or the advertisement during that time.

The participants were asked the first screening question to confirm that they were working at the health service for an average of 20 hours or more per week. If the answer were confirmed, the survey would proceed to the consent form. After the consent was given by checking the proper box at the end of the consent, the survey proper would commence. The participants completed the online survey. This online survey took approximately 10 min to complete. Reminder emails were also sent from the Well-being Officer of the health service to the junior physicians (registrars/fellows/residents/interns). The survey was only administered once and opened for 8 weeks.

Data analysis

After collecting all the data by Survey Monkey, they were formatted to import to IBM's SPSS for analysis. Descriptive statistics were organised and tabulated. The scores in each of the three constructs (emotional exhaustion, depersonalisation and personal accomplishment) on the MBI were calculated and tabulated. Pearson's correlation coefficient (r) was used to test the correlation between the scores on the MBI and each item on GTLS and SLBS-6.

Patient and public involvement

Patients were not involved in this study.

RESULTS

Participant characteristics

Of the potential 2350 physicians, 123 physicians responded to the invitation (5.2% response rate). Eight respondents were rejected as they worked less than 20 hours per week in the health service. 94 proceeded to give consent to the study. One participant withdrew at the end of the survey. 11 respondents who did not complete the MBI, GTLS and SLBS-6 were excluded. As a consequence, the final number of participants was 82.

The demographic characteristics are shown in table 1. Aboriginals and Torres Islanders are Australian First Nations people. There is a strong interest in their well-being in Australia. There were no Aboriginal and Torres Strait Islander physicians. Table 2 illustrates the professional practice of the participants. Table 3 shows the mean and SD of the three constructs of burn-out.

Table 1 Participant demographics

	Number	Percentage
Gender		
Male	31	37.8
Female	51	62.2
Other or undisclosed	0	0.0
Generations		
1925–1945 (Silent Gen)	1	1.2
1946–1964 (Baby Boomers)	3	3.7
1965–1979 (Gen X)	20	24.4
1980–1994 (Gen Y/Millennials)	31	37.8
1995–2010 (Gen Z)	27	32.9
Aboriginal and Torres Strait Islander		
No	82	100.0
Yes	0	0.0
Total respondents	123	
Total sampling population	2350	
Respond rate	5.2%	
The final number of responses analysed	82	

Table 2 Professional practice of the participants

	Number	Percentage
Professional position		
Consultant/specialist	32	39.0
Registrar/fellow	28	34.1
Resident	17	20.7
Intern	5	6.1
Medical schools		
Australian or New Zealand	71	86.6
Other	11	13.4
Specialist status		
Specialist	35	42.7
Not specialist	47	57.3
Specialty of practice		
Medicine	43	52.4
Surgery	8	9.8
Paediatrics	5	6.1
Obstetrics and gynaecology	0	0.0
Mental health/psychiatry	3	3.7
Emergency medicine	9	11.0
Diagnostic specialties or medical administration	5	6.1
Other clinical specialties	6	7.3
Prefer not to answer	3	3.7

In Australia, the most junior postgraduate medical trainees are interns. They then become residents before becoming the registrars, usually when they commit to a specialty.

Diagnostic specialties are medical imaging and pathology. Medical administration is a recognised specialty in Australia for medical leadership and administration. Heads of clinical departments are experienced specialists in a clinical discipline, rather than specialists in medical administration. Diagnostic specialties and medical administration were grouped together as they do not usually deal with direct patient care. Other specialties include physicians in a specialty not listed in the survey, such as addiction medicine, dermatology, general practice, occupational and environmental medicine, public health medicine, pain medicine and anaesthetics.

TRANSFORMATIONAL LEADERSHIP BEHAVIOURS

The transformational leadership behaviours of the physician's supervisor(s) were measured using the GTLS.[28] Table 4 shows the means and SD of the seven constructs and the total GTLS scores.

82 participants completed both the MBI and GTLS. Scores on the GTLS and the scores on the three burn-out constructs on the MBI were correlated using a Pearson's r test. The relationship between the total score in GTLS and the presence of personal accomplishment of the fellow physician was significant, moderate to strong and positive, $r\ (80)=0.42$, $p<0.001$. The relationship between all constructs of transformational leadership and the presence of personal accomplishment of the fellow physician was significant, with the rating of leading by example

Table 3 Burn-out constructs

Constructs	M	SD
Emotional exhaustion	28.19	12.20
Depersonalisation	9.45	5.44
Personal accomplishment	30.72	8.61

Table 4 Transformational leadership constructs as measured by GTLS

Constructs	M	SD
Vision	3.13	1.11
Staff development	3.79	1.09
Supportive leadership	3.43	1.10
Empowerment	3.60	1.09
Innovative or lateral thinking	3.39	1.19
Lead by example	3.65	1.67
Charismatic leadership	3.65	1.12
Total GTLS score	24.63	6.58

GTSL, Global Transformational Leadership Scale.

showing the strongest positive correlation, r (80)=0.49, p<0.01. In addition, the relationships between leading by example and the presence of emotional exhaustion, and leading by example of transformational leadership and the presence of depersonalisation of the fellow physicians were weak to moderate and negative. Table 5 illustrates the correlations between the constructs of transformational leadership and burn-out.

Servant leadership behaviours of the physician's supervisor(s) were measured by SLBS-6.[31 32] Table 6 shows the means and SD of the six constructs and the total servant leadership scores. 81 participants completed both the MBI and SLBS-6. Scores on the SLBS-6 and the scores on the three burn-out constructs on the MBI were correlated using a Pearson's r test. The relationship between the total score in SLBS-6 and the presence of personal accomplishment of the fellow physician was significant, moderate and positive, r (79)=0.32, p<0.05. For the constructs of servant leadership, the relationship between transcendental spirituality and all constructs of burn-out of the fellow physicians was significant with weak to moderate or moderate correlations. The relationships between covenantal relationships and the presence of personal accomplishment and transforming influence and the presence of personal accomplishment of the fellow physician were weak to moderate and positive. Table 7 shows the correlation results.

DISCUSSION

The study showed statistically significant relationships between the transformational leadership behaviours of the supervisor(s) and the three constructs of burn-out of fellow physicians. The relationship between the transformation leadership style overall was strongest and positive with the presence of personal accomplishment. Among relationships with the seven constructs of transformational leadership and the presence of personal accomplishment, the relationship was strongest with leading by example. Leading by example also has a weak to moderate negative relationship with the presence of emotional exhaustion and the presence of depersonalisation.

Shanafelt *et al*[34] showed that positive leadership behaviours were associated with an incremental reduction in the likelihood of burn-out. The benefits of transformational leaders in mitigating burn-out risk in healthcare workers were documented in the literature.[18 19 35] This study suggests that transformational leadership affects the strongest personal accomplishment construct of burn-out, and the strongest attribution of transformational leadership is leading by example.

This study showed a moderate and positive correlation between the servant leadership of the supervisor and the personal accomplishment construct of burn-out of fellow physicians. The most significant servant leadership construct is transcendental spirituality, which also has a weak to moderate negative relationship with emotional exhaustion and depersonalisation. As indicated by the statement of SLBS-6, transcendental spirituality captures the behaviours that generate a sense of meaning out of everyday life at work.

Table 6 Servant leadership constructs as measured by SLBS-6

Constructs	M	SD
Voluntary subordination	3.69	0.94
Authentic self	3.56	1.00
Covenantal relationship	3.85	0.85
Responsible morality	3.60	0.85
Transcendental spirituality	3.22	1.02
Transforming influence	3.65	1.03
Total SLBS-6 score	21.59	4.68

SLBS-6, Servant Leadership Behaviour Scale-6.

IMPLICATIONS AND RECOMMENDATIONS

This study showed lead by example, a transformational leadership construct *"my supervisor is clear about his/her values and practices what he/she preaches"*, and transcendental spirituality, a servant leadership construct *"my supervisor helps me to generate a sense of meaning out of everyday life at work"*, had the strongest association with the burn-out constructs. It could be argued that leading by example is influenced by the external values and actions the fellow physicians observe, and transcendental

Table 5 Correlation results (r) for transformational leadership and burn-out constructs

	Burn-out constructs		
Transformational leadership constructs	Emotional exhaustion	Depersonalisation	Personal accomplishment
Vision	−0.20	−0.12	0.23*
Staff development	−0.08	−0.10	0.36**
Supportive leadership	−0.09	−0.21	0.34**
Empowerment	−0.14	−0.19	0.34**
Innovative or lateral thinking	−0.08	−0.14	0.35**
Lead by example	−0.26*	−0.27*	0.49**
Charismatic leadership	−0.21	−0.26	0.32**
Total GLTS score	−0.15	−0.21	0.42**

*p<0.05, **p<0.01.
GTLS, Global Transformational Leadership Scale.

Table 7 Correlation results (r) for servant leadership and burn-out constructs

	Burn-out constructs		
Servant leadership constructs	Emotional exhaustion	Depersonalisation	Personal accomplishment
Voluntary subordination	−0.10	−0.05	0.25
Authentic self	−0.01	−0.12	0.17
Covenantal relationship	−0.17	−0.11	0.32**
Responsible morality	−0.13	−0.12	0.20
Transcendental spirituality	−0.26*	−0.25*	0.32**
Transforming influence	−0.16	−0.11	0.29**
Total SLBS-6 score	−0.16	−0.15	0.32**

*p<0.05, **p<0.01.
SLBS-6, Servant Leadership Behaviour Scale-6 item.

spirituality represents their internal values, which drive the meaning of their jobs.

The findings of this study have implications for different stakeholders. The superiors of physicians should be aware of the elements of transformational and servant leadership relevant to burn-out and the well-being of their fellow practitioners or trainees. They should consider the role they model to their fellow physicians. It is worthwhile for the supervisor to reflect on their values and how they can be communicated and demonstrated to their fellow physicians. In addition, the supervisor may support fellow physicians in exploring the meaning of their everyday work.

For physicians, it may be worth considering looking up to a physician who demonstrates positive values and actions as their mentor and their role model.[36] Regular self-reflection in their life and career ensures that they can engage in meaningful work, and at least some of the time at work should be consistent with their values and aspirations.

For healthcare organisations, there is a need to communicate the findings of this study to supervisors. Organisations should make an effort to support supervisors in reflecting on their values and provide necessary training to the supervisor, including communications, mentoring and coaching skills. Leaders should look at what attributes in the two leadership styles best suit their followers and their organisation. In addition to promoting well-being, the organisation should provide an update on the resources available for personal and professional growth. Much of professional growth is provided by in-house clinical training and updates, as well as relevant courses or workshops offered by external providers. More opportunities for personal growth training in healthcare organisations should be available.

The finding showed that the influence of the two leadership styles is strongest on the personal accomplishment dimension of burn-out. The emotional exhaustion and depersonalisation dimensions are critical in the quality of healthcare and patient safety. An emotionally exhausted physician may be unable to perform optimally and, hence, be prone to errors and misjudgments. Depersonalisation may result in physicians becoming less empathetic to the patients and poor patient-centred care. The organisation should, therefore, explore other avenues to reduce emotional exhaustion and depersonalisation by revising the policy, organisation and work practices relevant to the physicians.[15] There are areas of potential modification, including reducing administrative tasks associated with electronic health records and work hours, that are worth considering.[37]

The findings of this study highlighted potential areas where further research may be needed. Examples include the values the supervisors must impart to their fellow physicians and what practices must be demonstrated, the roles of communication, clinical skills and interaction with patients and colleagues, and the elements in work that are meaningful to physicians. There is a need to clarify which growth areas are most relevant to physician job satisfaction and well-being. To improve the generalisability of the result, the study should extend to different healthcare settings, such as smaller or regional/rural health services and community settings. Similar studies in different contexts should be repeated.

This study found that leadership styles affect mostly the personal accomplishment construct of burn-out. Further investigations into factors affecting emotional exhaustion and depersonalisation specifically are warranted. The result of such an investigation may incorporate or assist the development of further strategies for managing and preventing physician burn-out.

Limitations

The aim of the study is to investigate the relationship between burn-out and leadership styles rather than to document the severity of burn-out in Australian hospitals. The participation rate of this survey is only 5.2%. This rate cannot be used to estimate the overall burn-out rate of hospital doctors as it is a very small representative of the sample population, and estimation of the burn-out rate is not the purpose of this study.

Although the number of participants was low, the number is adequate in a correlation study.[38] Crawford *et al*[39] studied healthcare workers in community-based mental health services with a sample population of 89. The study showed that the best leadership style addresses the needs of the clients and the staff group.

There are very limited studies on the relationship between burn-out and perceived leadership style in healthcare professionals. As far as the author is aware, this study is the only recent investigation on the relationship between burn-out in medical staff and their perception of the leadership style of their supervisors. There are no theoretical reasons to suspect that the relationship between burn-out and the specific leadership style could be affected by the nature of the doctors and their willingness to participate in these surveys. However, it would be worthwhile to repeat this study on physicians with a different recruitment process to enhance the participation rate in the future to confirm the findings of this study.

Obviously, the generalisability of the result of this study is limited. First, it is carried out in Australia. The findings should be applicable in an Australian setting. Because the perception of leadership behaviours and generational identity is likely to be significantly influenced by the cultural context, this finding may also be applicable in some Western countries, such as New Zealand, European countries and North America. Applications to other contexts should be guarded. The setting of the study was a tertiary metropolitan hospital. The generalisability to other settings, such as smaller hospitals, regional centres and community clinical practice settings, can be limited. Finally, the majority of the participants are physician-in-training. The findings might, therefore, be biased towards junior physicians.

There could also be issues with internal validity.[40] The responses to the survey questions are subjective. The answer often requires recall of memory, which may not be accurate. The mood, past psychological experiences and motivation to participate may affect the response. Although the survey took only ten minutes, some physicians might not have the opportunity to participate because of a lack of time, mental exhaustion, or lack of motivation. These circumstances could also be associated with burn-out.

CONCLUSIONS

This non-experimental quantitative study investigated the influence of transformational leadership and servant leadership on physician burn-out. The result showed that both transformational leadership and servant leadership were associated with lower physician burn-out, particularly in supporting fellow physicians' personal accomplishments. Role modelling of the physician leader, as well as an emphasis on the positive values and meanings at work and demonstration in practice of these values, is particularly important. This information could be useful for physician leaders, fellow physicians and healthcare organisations to combat physician burn-out.

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