BURNOUT IN PRIMARY CARE PHYSICIANS AND INTERVENTIONS — AN EVIDENCE-BASED REVIEW

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ABSTRACT

Family practice, like other fields of medicine involving daily direct contact with patients, is rewarding but can lead to burnout. Ideas about burnout have evolved through time and the concepts and terms used have become more refined, and more commonly agreed. Earlier publications were mostly descriptive but later ones have begun to look into possible interventions to combat burnout. Validated scales are increasingly being used as outcome measures of the intervention strategies, some in randomised control trials which have contributed to the evidence base. This paper is an evidence-based review of the definition, causes, and interventions published in current literature indexed in PUBMED.

**Keywords:
Primary Care Physicians, Family Physicians, Burnout, Interventions.**

INTRODUCTION

Family physicians are exposed to high levels of stress when working with patients. It has been found that up to 45.8 percent of physicians have reported at least one symptom of burnout. In a study by the European General Practice Research Network Burnout Study Group,[1] which involved 1,400 family physicians in 12 countries, up to 43 percent had at least one dimension of burnout and 12 percent suffered from burnout in all 3 dimensions of burnout. From the perspective of patient safety, it is important to note that physicians who are burned out tend to commit more medical errors.[2] Doctors with burnout are more likely to self report sub-optimal care and intention to leave clinical practice. It contributes to physician attrition, patient non-compliance and a deterioration of the doctor-patient relationship. Burnout can be seen as the missing link in quality care or as a neglected quality indicator in medicine.[3]

OBJECTIVE

The aim of this paper is a review of the definition of this commonly encountered syndrome, its causes, and evidence-based interventions.

METHODOLOGY

Multiple literature searches were done in Nov 2015 in PUBMED using the search terms: "family physicians", "primary care physicians", "general practitioners", "burnout", and "interventions". A hand search was also made of the relevant articles that were quoted in the papers. Articles shortlisted were those which dealt with burnout in family physicians or studies done in the primary care setting instead of the hospital setting; articles which study only medical students, nurses or allied health were excluded. A total of 15 of the papers shortlisted provided the findings that were incorporated in this review. Supplementary Google searches provided 3 additional references.

DEFINITION AND DIMENSIONS OF BURNOUT

In 1974, psychoanalyst Herbert Freudenberger described the state of exhaustion in the helping professions as "burnout syndrome". In 1981, work done by psychologist Maslach helped to define what is now widely accepted as the 3 dimensions of burnout. This framework forms the basis for the Maslach Burnout Inventory (MBI).[5] Most studies thereafter have been carried out with reference to the MBI. Maslach (2001) defines burnout as a prolonged response to chronic emotional and interpersonal stressors on the job, and has the three dimensions of exhaustion, depersonalisation (or cynicism), and inefficacy (which is described as lack of a sense of personal accomplishment or fulfilment).[4] See Table 1.

Burnout is a process and Maslach describes it as "… an erosion of engagement with the job. What started out as important, meaningful, and challenging work becomes unpleasant, unfulfilling, and meaningless. Energy turns into exhaustion, involvement turns into cynicism, and efficacy turns into ineffectiveness. Accordingly, engagement is characterised by energy, involvement, and efficacy—the direct opposites of the three burnout dimensions."[4]

There seems to be a sequential development progression of the 3 dimensions. Whether emotional exhaustion occurs first and leads to depersonalisation or vice versa has been a source of debate.

Maslach suggests that exhaustion occurs first, leading to cynicism, which leads subsequently to inefficacy. The last link from cynicism to inefficacy is less clear.[4] As one's emotional resources depletes, the tendency is to conserve energy when interacting with patients by withdrawing, becoming less personable, or by showing cynicism. One way is to adopt a biomedical instead of a bio-psycho-social style of consultation, focusing on informational and instructional content rather than being patient-centred.[6]

Emotional exhaustion and depersonalisation, as individual components, have been found to be independently associated with lower patient satisfaction. Interestingly, there was no association found between physicians' sense of personal accomplishment and patient satisfaction. Hence, in terms of

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Table 1: The 3 Dimensions of Burnout (Adapted from Maslach, 2001[4])	
Emotional exhaustion (or simply, "Exhaustion")	The exhaustion component represents the basic individual stress dimension of burnout. It refers to feelings of being overextended and depleted of one's emotional and physical resources. In a sense, there is no more fuel left for the fire.
Depersonalisation (or "Cynicism")	The depersonalisation (or cynicism) component represents the interpersonal context dimension of burnout. It refers to a negative, callous, or excessively detached response to various aspects of the job.
Lack of personal accomplishment (or "inefficacy")	The component of reduced efficacy or accomplishment represents the self-evaluation dimension of burnout. It refers to feelings of incompetence and a lack of achievement and productivity at work.

patient satisfaction, a lack of sense of accomplishment plays a minor role in burnout as compared with the other 2 dimensions. It was suggested that emotional exhaustion and depersonalisation are harmful to the doctor-patient relationship while the physician's sense of accomplishment plays a minor role. By reducing burnout via planned intervention programmes at the organisational (workplace) and individual levels, as well as training in communications skills, it was suggested that patient satisfaction in primary care consultations will improve.[6]

In a study by Houkes, the development of each dimension of burnout differs in men and women due to the differences in gender socialisation. Men tend to score higher for cynicism and women for exhaustion. Men tend to use avoidance coping skills, and depersonalisation is the first component which triggers the burnout process. However, the overly detached male may find it difficult to build a good doctor-patient relationship and this will affect the delivery of care.[7]

In women, it is emotional exhaustion which is the triggering factor. Unlike men who tend to use depersonalisation as a coping mechanism to deal with the emotional stress, women tend to use emotion-focused coping which wears them out, causing emotional exhaustion. In later stages, women, like the men, eventually develop depersonalisation. Men tend to delegate patient care tasks while women hold onto them, which means women are less likely to depersonalise but more likely to become emotionally exhausted. Women may then start to feel guilty and less certain about the quality of care they provide, then leading to a lower sense of accomplishment. In addition, women have a greater household role and responsibility which leads to greater work-family conflict.[7]

It has been suggested that a certain level of "detached concern" may be protective against burnout in both men and women. However, in both men and women, there is no one valid burnout model. There is a case for considering gender and cultural differences in future research. This is important as more women are entering the primary care medical workforce, leading to a higher proportion of female family physicians.[7]

CAUSES OF BURNOUT

In primary care, work factors such as time pressure, emotional demands, patient factors (e.g. difficult patients) and work-family conflicts or interference are important causes for burnout. The MEMO Study (Minimizing Error, Maximizing Outcome, 2001-2005) showed that working conditions were strongly associated with adverse physician outcomes such as stress, burnout, dissatisfaction and intention to leave.[7]

Hence, there are many causes for physician burnout. Here, we explore several factors which can be classified into three groups: 1) Predisposing factors, 2) Difficult encounters, 3) Work-family conflicts (WFC).

1. Predisposing Factors
Professional socialisation. The socialisation process in medical training plays a role in planting the seeds for future burnout. There is an emphasis on perfectionism, denial of personal vulnerability and delayed gratification. Traits such as compulsiveness, guilt and self-denial may lead to success during the educational years but unfortunately also lead, in later practicing career, to increased sense of inadequacy and lack of fulfillment or sense of accomplishment. In a professional culture which stigmatises weakness and frowns upon self-care, these can lead to burnout.[8]

Intolerance to uncertainty. For junior doctors such as those in a study of a group of Australian general practice residents, burnout was related to a lack of tolerance of or coping with uncertainty. As they transition in their careers from medical school, residents face being held accountable for their medical decisions for the first time. However, it found lower prevalence

of burnout among Australian GP registrars than expected. It concluded that this observed resilience was linked to high compassion satisfaction, higher tolerance of both general and clinical uncertainty and, hence, lower burnout.[3]

2. Difficult Patient Encounters

Encounters are said to be difficult when there are requests for diagnostic tests, greater chronic disease burden, chronic pain, serious but undiagnosed illness, significant or suspected depression, and suspected substance abuse.[9] Difficult patient encounters or consultations can form up to 15 percent of patient volume.

Frustration and despair. Some encounters may trigger anger, frustration and despair, leading to emotional exhaustion and burnout. It also frustrates the patient, leading to unmet expectations and repeat visits to get what they want. It has been found that up to a third of patient requests are not fulfilled.

Resulting conflicts in the doctor-patient relationship. The physician will view the patient as demanding or controlling while the patient may view the physician as uncaring or un-attentive to their needs, thus causing tension and conflict in the doctor-patient relationship.

Gatekeeper role. Time is a scarce resource in family practice and difficult cases require time and effort to manage well. Family physicians are often given the gatekeeper role in making specialist referrals and in ordering diagnostic tests. A request for a diagnostic test which is not in accordance with clinical practice guidelines puts a physician in an uncomfortable dilemma. Some physicians may perceive it as a challenge to their authority. Saying "no" will mean having to take time and effort to explain why the test is not needed, as well as facing the worry of missed diagnosis and the consequential malpractice risk. Patients who request diagnostic tests may share personality traits and communication styles which add to the difficulty of a visit.[9] Most difficult encounters have factors contributed by both sides of the physician-patient dyad, with each party bringing something to the table.[10] This is an area for further research.

High personal expectation and lack of reciprocity. Physicians with burnout who have high or unrealistically high expectations for themselves tend to rate their performance in interacting with patients as suboptimal. They tend to underestimate their patients' positive attitude towards them or may be overly- sensitive to patients' high expectations which they feel they are unable to meet. They tend to rate their encounters and relationships with patients as less than satisfying, thus perceiving themselves to have a higher proportion of "difficult" patient relationships. Physicians who feel a lack of reciprocity in the doctor-patient relationship are more prone to burnout.[11]

Empathy-boundary conflict. The need for empathy versus boundary setting in each patient encounter is a tricky balance to maintain in order to avoid experiencing secondary traumatic stress. This is more acute in women physicians who tend to score higher for empathy than men.[11]

3. Work-Family Conflict (WFC)

The typical physician has 2 roles to play: one at work and one at home with the family. Work-family conflict (WFC) arises when the pressure of these 2 roles becomes mutually incompatible, such that participation in one role is compromised by participation in the other. Increased workload usually increases WFC and is explained by the Scarcity Hypothesis (Goode, 1960) which is based on the assumption that the resources of time, energy and attention are limited. In line with social expectations, physicians and their families tend to concur in putting the interests of the patients above their own, rendering the physician prone to spending inordinate amounts of time at work to the detriment of time with family. Exhaustion sets in when these scarce resources are depleted due to conflicts between the responsibilities of work and family life.[12]

EVIDENCE-BASED INTERVENTIONS IN BURNOUT

"The past 25 years of research has established the complexity of the construct, and places the individual stress experience within a larger organizational context of people's relation to their work. Recently, the work on burnout has expanded internationally and has led to new conceptual models. The focus on engagement, the positive antithesis of burnout, promises to yield new perspectives on interventions to alleviate burnout."[4] (Maslach, 2001.)

Interventional studies fall broadly into 2 levels: individual and organisational. Four RCTs in PUBMED were selected in this review. One paper involved intervention at the organisational level[13] (Linzer, 2015), while the remaining 3 involved individual interventional strategies. The results are summarised in Table 2.

1. Workplace study

In the randomised controlled trial by Linzer et al (2015) called the Healthy Workplace Study (HWP), 3 broad groups of workplace interventions were found to have positive effect on burnout. These are changes to: (1) workflow redesign; (2) improved communications, especially among clinicians and staff; and (3) quality improvement projects directed at clinician concerns.

Problem areas in the workplace dealt with by the interventions were: burden of electronic health record keeping, inefficiencies in office practice, lack of teamwork, time pressure during office visits, serving minority patients, lack of control in the workplace, and a lack of career fit for time to do what one is passionate about.[13]

The data from this study showed that workplace interventions can lead to improvements in meaningful clinician outcomes,

Table 2: Evidence-based Papers on Burnout Interventions			
Author, Year, Study Design	Sample size	Intervention(s)	Results/ Remarks
Linzer et al. 2015. RCT	135	Also called Healthy Work Place (HWP) study: 1) Improved communication, particularly among clinicians and staff; 2) changes in workflow; 3) targeted quality improvement projects that addressed specific clinician concerns.	• More intervention clinicians showed improvements in burnout (21.8 % vs 7.1 % less burned out (p=0.01), and satisfaction (23.1 % vs 10.0 % more satisfied (p=0.04). • Burnout improved with workflow interventions. Odds Ratio (OR) of improvement in burnout was 5.9, (p=0.02). • Burnout improved with targeted QI projects. OR 4.8, (p=0.02). • Interventions in communication or workflow led to greater improvements in clinician satisfaction OR 3.1 (p=0.04), and showed a trend toward greater improvement in intention to leave OR 4.2 (p=0.06).
Edgoose et al. 2015. RCT.	57	A self-awareness, mindfulness and breathing technique for dealing with difficult encounters, called BREATHE-OUT as a mnemonic.	The total Physician Satisfaction Scale (PSS) Score – Mean(SD) -- was used and showed effective outcome compared to control group (p<0.001). • Intervention group (60 participants) showed PSS score 36.6 (7.6) vs Control group (46 participants): 42.8 (8.6)
West et al. 2014. RCT.	74	Nineteen biweekly facilitated physician discussion groups incorporating elements of mindfulness, reflection, shared experience, and small-group learning for 9 months. Protected time (1 hour of paid time every other week) for participants was provided by the institution.	• Empowerment and engagement at work increased by 5.3 points in the intervention arm vs a 0.5-point decline in the control arm by 3 months after the study (P = .04). An improvement sustained at 12 months (+5.5 vs +1.3 points; P = .03). • Rates of high depersonalisation at 3 months had decreased by 15.5% in the intervention arm vs a 0.8% increase in the control arm (P = .004). This difference was also • The proportion of participants strongly agreeing that their work was meaningful increased 6.3% in the study intervention arm but decreased 6.3% in the study control arm and 13.4% in the non-study cohort (P = .04).

Asuero et al. 2014. RCT	68	Mindfulness-Based Stress Reduction program (MBSR). Consisted of presentations of clinically relevant topics, mindfulness-based coping strategies, yoga, and group discussions.	The intervention group improved in the 4 scales measured. - The magnitude of the change was large in - Total mood disturbance (difference between groups −7.1; standardised effect-size [SES] 1.15) and - Mindfulness (difference between groups 11; SES 0.9). - The magnitude of the change was moderate in the - Burnout scale (difference between groups −7; SES 0.74) and - Empathy scale (difference between groups 5.2; SES 0.71).

including less burnout, lower levels of dissatisfaction and, perhaps, reduced instances of intention to leave clinical practice. The most powerful intervention was workflow re-design and modifications. The next most powerful intervention was improvements in communication among staff and clinicians. It has been estimated that for each physician who leaves clinical practice in the US, the replacement cost is about $250,000.[13]

2. BREATHE-OUT technique

A self-awareness, mindfulness and breathing technique for dealing with difficult encounters, called BREATHE-OUT as a mnemonic by Edgoose et al is an intervention based on self-awareness and self-reflection first pioneered by Balint. It is a structured intervention based on strategies such as asking questions about one's bias, and using emotional content and breathing, with an openness to the unexpected.

The objective is the prevention of burnout when dealing with difficult encounters. It was created by the principal investigator of the group. The technique is unique in that it requires very little background training in meditative practice.

It uses the Physician Satisfaction Scale (PSS) as a validated scale for outcome measurement. This study stood out as the only one which specifically investigated the effect of the intervention in improving physician satisfaction with difficult encounters.

It was easy to use and found to be helpful for well-experienced physicians as well as clinical learners. Interestingly, female practitioners reported worse PSS scores compared with their male counterparts despite using BREATHE OUT (P = .009). Female clinicians tend to perceive themselves as having more difficult patients and experience more burnout than male

clinicians. The authors concluded that clinician satisfaction was significantly improved by using the BREATHE-OUT programme and suggested its use when working with difficult patients.[10]

3. Small-group curriculum

West and his group used a facilitated small-group curriculum with 1-hour protected time at work every fortnight. It applied journalling, reflective exercises and small-group discussions as an intervention to improve meaning and engagement at work. It used the following validated scales to measure outcomes: the Physician Job Satisfaction Scale, the Medical Outcomes Study Short-Form Health Survey, Maslach Burnout Inventory, Jefferson Scale of Physician Empathy, and the Empower At Work Scale.

Since the promotion of physician well-being is a shared responsibility between physicians and healthcare organisations, the authors suggested that the ideal approach would be to combine organisational interventions with personal strategies. The authors concluded that facilitated small-group curriculum for physicians with protected time provided by the organisation can improve physician well-being in such areas as meaning, empowerment, engagement at work, and reduced distress, including depersonalisation, with sustained results at 12 months after the study.

4. Mindfulness practice

Mindfulness practice is the specific component in the intervention applied by Asuero and his group and incorporates presentations of clinically relevant topics, mindfulness-based coping strategies, yoga, and group discussions.

Activities employed include:
1) Educational topics: such as awareness of thoughts and

feelings, perceptual biases and filters, dealing with pleasant and unpleasant events, conflict management, burnout prevention, setting boundaries, exploring self-care, caring for suffering patients, and end-of-life care examination.

2) Formal mindfulness meditation: capacity for lowering one's own reactivity to challenging experiences; the ability to notice, observe, and experience bodily sensations, thoughts, and feelings even when unpleasant; acting with awareness and attention (not being on autopilot); and focusing on experience, not on labels or judgements.

3) Narrative and appreciative inquiry exercises: write and share brief stories about personal experiences in medical practice.[15]

Asuero et al used a few outcome measures including the Maslach Burnout Inventory (burnout), Profile of Mood States (mood disturbances), Jefferson Scale of Physician Empathy (empathy), Baer's Five Facets Mindfulness Questionnaire (mindfulness), and a questionnaire on changes in personal habits and mindfulness practice. Measurements were performed at baseline and after 8 weeks.

Asuero et al concluded that mindfulness-based training can reduce burnout and improve well-being in at least one facet of empathy, with contribution to positive changes in attitudes toward better self-care, being present, and professionalism. It is suggested that mindfulness-based approaches be adopted as part of continuing professional education to reduce and prevent burnout, promote positive attitudes among health professionals, strengthen patient-provider relationships, and enhance well-being.[15]

Other Interventional Strategies To Consider

Gender-tailored interventional strategies. It has been suggested that there is a need for gender-tailored interventional strategies since men and women react differently to stress. For men who tend to depersonalise, focus could be on coping skills in order to prevent avoidance behaviour and withdrawal. For women, since the tendency is to become exhausted, the focus could be on boundary setting and specific factors related to fatigue.[7]

Early intervention. One danger in burnout is physicians' delay in seeking medical care due to reluctance to play the sick role. It is a paradox that physicians find barriers in seeking healthcare when they are sick. It is as if while being providers of healthcare, they are themselves a disadvantaged and at-risk group. A Malaysian study has confirmed that physicians tend to delay seeking treatment for chronic and serious illnesses.[16] Some of the factors are denial and minimisation of symptoms, self-diagnosis and self-treatment, seeing the call for help as a sign of weakness, worry about loss of confidentiality and privacy, and impact on fitness to practice. In becoming a patient, the physician has to undergo the following processes: changing of roles in the healthcare setting; loss of control; being in a lower position in the hierarchical relationship with other doctors; and feeling a sense of vulnerability.

Collegial support. Another area of intervention is that of collegial support. As people who care for patients, we can also take better care of each other as fellow professionals. One such example is the Psychiatrists' Support Service which is a free telephone advice and support service to members of the Royal College of Psychiatrists. There is a useful simple guide entitled "How to look after yourself". In it, there is a list of questions which can be used for self screening and for reflection. The questions cover: monitoring your own health, stress levels and sleeping pattern; healthy living, which includes regular meals and exercise; monitoring your own coping strategies to stress, including alcohol or substance use; being a part of a network of support and interests outside work; making changes to your work-life balance; supervision/mentoring and local peer groups or mentoring relationships; and seeking help for health problems.[17]

DISCUSSION

Burnout as a research subject has progressed in the past decades with great evidence base from numerous systematic empirical studies and refined theoretical models. The common framework used in medical literature is still the 3-dimension model developed by Maslach. In research, the most widely applied scale is the Maslach Burnout Inventory (MBI), developed by Maslach and Jackson (1981). The factors causing burnout can be broadly divided into organisational and individual. In this paper, we highlighted and discussed the role of 3 groups of factors: individual pre-disposing factors; difficult patient encounters; work-family conflicts and high workload.

What is new?

Interventional studies reviewed have shown promise. The intervention can be based on the individual or the organisation or workplace. At the individual level, the tool employed is usually educational and emphasis is on self-care and in building resilience. At the workplace, changes in workflow, communications, and quality improvements have been shown to have a positive effect on burnout. In 2015, the work by Mark Linzer was incorporated into the American Medical Association's "Steps Forward" programme, which is a 7-step programme disseminated to its members with the aim of reducing and preventing burnout at the workplace.

Interventions are often employed at the individual level, on one's own personal time. Workplace interventions on paid time and within the working environment can be beneficial. Changes in workplace conditions in combination with personal interventions would be ideal. This, however, requires employer or organisational buy-in as it adds to the costs and need for other resources.

Limitations of this review

This review has some limitations. It used only PubMed for its literature search and did not include the results of non-English-language published research. There was a lack of randomised controlled trials in some of the studies found. Typically, the sample size in most burnout intervention studies

is small, of about less than a hundred. Few were longitudinal studies which are needed to study the sustainability of the improvements found.

Where do we go from here?

For future research, there is a need for larger sample size studies and greater collaboration between research centres in each country as well as across borders. While there are many studies from Europe and North America, there are very few studies done in the Asian context where cultural differences and social contexts differ. More studies need to be done for healthcare workers in the Asian context. These would be useful for cross-border and cross-cultural comparative studies.

CONCLUSION

Over 3 decades of research has enhanced our knowledge base of this widespread syndrome. An understanding of the causes of burnout and the interventions used is crucial when formulating prevention and interventional strategies. Further research into these strategies is needed, perhaps with greater sample sizes and collaboration.

The nature of medical practice is stressful and there is always a risk of burnout which is impossible to eliminate completely. Hopefully, with greater research leading to better understanding and interventions, the next generation of doctors may not need to face the scourge of burnout as severely as the previous generation did.

ACKNOWLEDGEMENT

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LEARNING POINTS

- **Physician burnout is a real problem but is seldom discussed, therefore, poorly understood by the physicians themselves.**
- **Burnout has aetiologic factors, processes and characteristics which can be defined and studied. It occurs at all stages of the continuum from the early years in medical school up till the day of retirement.**
- **Through individual and organisational interventions, burnout can be prevented or attenuated by gaining understanding through self-awareness and other exercises.**
- **In randomised controlled trials, interventional strategies have been shown to work at both the personal and organisational level.**
- **From a medico-legal viewpoint, with increased risk of medical errors and poorer patient satisfaction with a burntout physician consultation, burnout can lead to greater incidences of medical negligence and malpractice litigations.**