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Are Groote Schuur Hospital anaesthesiologists burnt out?

I read with interest the paper by Groenewald and colleagues, who studied the prevalence of the burnout syndrome among anaesthetists working in the Groote Schuur Hospital.[1] Having ourselves published a burnout survey among SASA members, involving 498 respondents in a previous issue of the SAJAA,[2] we are particularly interested in comparing the findings of the two studies. Fortunately, both studies employed identical survey instruments and the same cut-off thresholds for classifying scores into high, moderate and low score categories. However, we should bear in mind that our survey preceded that of Groenewald and coworkers. Thus certain Groote Schuur anaesthetists may have participated in both studies, and statistical comparisons will be invalid.

In their study[1] Groenewald and coworkers categorised their participants according to the profiles of Leiter and Maslach.[3] These authors postulated that persons subjected to various workplace stresses and mismatches may develop different manifestations of the burnout syndrome along a continuum between engagement and full-fledged burnout, and that there may be latent symptoms that would serve as early warning signs. Using a technique of latent profile analysis, they conducted two studies among healthcare workers involving 1 766 and 1 166 participants.[3] Their analysis resulted in five profiles:

1. Burnout, also termed "severe burnout":[3] high scores for all three burnout dimensions; emotional exhaustion (EE), depersonalisation (DP) and personal accomplishment (PA)
2. Disengaged: high DP, moderate other
3. Overextended: high EE, moderate other
4. Ineffective: low PA moderate other
5. Engaged: low scores for all three burnout dimensions.

For clinical purposes there is a need for a method by which to reach a dichotomous clinical diagnosis of burnout, especially considering that in several European countries, burnout warrants sick leave (ICD-10 code Z73.0). Brenninkmeijer and Van Yperen proposed the "EE+1" principle, whereby a person can be diagnosed as being clinically burnt out if he/she has a high score for EE plus either a high DP score or a low PA score.[4] The authors of the Maslach Burnout Inventory concur that the "EE+1" rule[4] defines a psychological state of sufficient severity that justifies a clinical diagnosis of burnout.[5,6] We therefore identified in our analysis those participants who would be diagnosed as being clinically burnt out according to the "EE+1" rule. In addition, we defined "extreme burnout" as high scores for all three burnout dimensions.

Groenewald and coworkers conclude that the overall burnout prevalence was low among Groote Schuur anaesthetists. However, their definition of burnout coincides with the category "extreme burnout" in our study. We undertook a further analysis of our data by categorising our respondents' scores according to the Leiter and Maslach classification. The results are presented in Table I.

Table I: Comparison of burnout-engagement profiles between two studies of burnout among South African anaesthetists

	Groenewald et al.[1] % (95% CI)	Coetzee and Kluyts[2]		
		SASA % (95% CI)	Public sector % (95% CI)	Private sector % (95% CI)
Sample size	75	498	189	309
Severe burnout†	4.0 (1.4 to 11.1)	10.6 (8.2 to 13.7)	17.5 (12.7 to 33.5)	6.5 (4.2 to 9.8)
Engaged†	2.7 (0.7 to 9.2)	21.7 (18.3 to 29.5)	11.1 (4.4 to 16.4)	28.2 (23.4 to 33.4)
Overextended†	12.0 (6.4 to 21.3)	9.6 (7.3 to 12.5)	12.2 (8.2 to 17.6)	8.1 (5.5 to 11.7)
Disengaged†	5.3 (2.1 to 12.9)	4.6 (3.1 to 6.8)	5.3 (2.9 to 9.5)	4.2 (2.5 to 7.1)
Ineffective†	12.0 (6.4 to 21.3)	14.3 (11.5 to 17.6)	11.6 (7.8 to 17.0)	15.9 (12.2 to 20.3)
Clinical diagnosis of burnout		22.7 (19.2 to 26.6)	36.5 (30.0 to 43.6)	14.2 (10.9 to 18.6)
Unclassified respondents	64.0 (52.7 to 73.9)	39.2 (35.0 to 43.5)	42.3 (35.5 to 49.5)	37.2 (32.0 to 42.7)
Clinical diagnosis among unclassified respondents		30.8 (24.7 to 37.6)	45 (34.6 to 55.9)	20.9 (14.4 to 29.2)

† Profiling along the burnout-engagement scale, according to the principles of Leiter and Maslach[3]
Severe burnout – high scores for the emotional exhaustion (EE) and depersonalisation (DP) burnout dimensions, plus a low score for personal accomplishment (PA)

Engaged – low scores for EE and DP, plus a high score for PA
Overextended – high score for EE only
Disengaged – high score for DP only
Ineffective – low score for PA only
Clinical diagnosis of burnout according to the "EE+1" principle, i.e. a high score for EE plus either a high score for DP or a low score for PA[4]
Unclassified – respondents who could not be profiled according to the principles of Leiter and Maslach[3]
Clinical diagnosis among unclassified respondents – unclassified respondents who met the criteria for a clinical diagnosis of burnout according to the "EE+1" principle
Synonyms – depersonalisation/cynicism, personal accomplishment/efficacy

On examining the prevalences and their 95% confidence intervals in Table I, the overextended, disengaged and ineffective profile prevalences appear to be similar between the two studies. The prevalence of severe burnout among our public sector respondents appears to be greater than that of Groote Schuur. The prevalence of engaged profiles among our private sector respondents appears to be greater than that of the public sector which in turn seems to be greater than that of the Groote Schuur anaesthetists. About 40% of our SASA study respondents could not be profiled, however 21–45% of these unclassified respondents fell into the category of being clinically burnt out. Considering that in the Groote Schuur study 64% could not be profiled, it would be interesting to investigate firstly what proportion of Groote Schuur anaesthetists could have been diagnosed as being clinically burnt out according to the "EE+1" rule, and secondly what proportion of those unclassified were clinically burnt out.

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Conflict of interest

The author declares no conflict of interest.

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Response to Professor J Coetzee's Letter to the Editor, SAJAA

Are Groote Schuur Hospital anaesthesiologists burnt out?

We thank Professor Jeff Coetzee, an expert in the field of Occupational Burnout, for his interest in our work on the prevalence of burnout amongst anaesthesiologists at Groote Schuur Hospital and welcome this opportunity to further discuss the implications of our study.

As Prof. Coetzee rightly points out, and as we raised in our paper, there is ongoing debate as to the definition of burnout, with some studies using single dimension constructs such as emotional exhaustion alone as a proxy to define burnout syndrome.[1] The range of methods used to define burnout make comparisons difficult, if not impossible, as highlighted in our paper and in the communication from Prof. Coetzee. In our work, we chose to retain Maslach's original three-dimensional construct of burnout including emotional exhaustion (EE), depersonalisation and personal accomplishment[2] as opposed to the simplified validated method of EE+1 to which Prof. Coetzee refers. We believe that while the EE+1 approach has validity as a simple method to dichotomise respondents into two groups with or without burnout, that this approach risks being maladroit. The EE+1 approach does not account for factors which may contribute to an individual's resilience to burnout. For example, if the EE+1 is calculated using EE plus high levels of depersonalisation, the potential buffering effect of personal accomplishment is not accounted for. Similarly, if the EE+1 is calculated using low levels of personal accomplishment, the protective effects of low levels of depersonalisation are not accounted for. By retaining the three-dimensional construct of burnout in our work, it has enabled us to explore the finer nuanced emotional conditions on the scale ranging from being engaged to being burnt out.

We have applied the EE+1 method to our results to allow comparison with those of Prof. Coetzee. We believe that comparing the results of the EE+1 analysis with the full range of emotional conditions lends further support to our approach (Table I). Using the EE+1 method, our cohort presents with a markedly different and concerningly high prevalence of burnout (46%) compared with the 4% presenting with burnout using the full profile method. Although the full profile method gives a surprisingly low prevalence of burnout, we raised our concerns in the paper about the high prevalence of at-risk individuals (individuals who are classified as burnt out using the EE+1 method). We believe it is of critical importance to look and explore the factors that, in our opinion, may have buffered these at-risk individuals against full blown burnout, for in that lies the route to being able to make an impact.

We believe that classifying people as burnt out is arguably not sufficient to enable us to make a difference in this population. We analysed our data set with the full range of profiles with the aim of initiating discussion on how to intervene and improve the working environment and lives of our doctors. By identifying at-risk individuals and exploring factors which may contribute to resilience, this is hopefully possible. This method, combined with the results from the Areas of Worklife Survey,[3] affords the ability to implement goal directed interventions in specific groups to make a real difference whilst maintaining the workforce. This offers a more nuanced approach compared to the EE+1 method which risks significant numbers of staff being diagnosed with clinical burnout and potentially booked off sick, further increasing the workload on the remaining workforce.

We would like to highlight the high degree of personal accomplishment seen in our cohort. Using the full profile analysis, personal accomplishment greatly reduced the prevalence of burnout in our cohort. We argue that this cannot be discarded, as a sense of fulfilment or achievement is vital in the resilience arsenal, an aspect that can easily be dismissed using the EE+1 method and cautioned against by Brenninkmeijer and Van Yperen.[4]

While it is interesting to compare our results to those of Prof. J Coetzee using the EE+1 method in our exploration of this serious occupational phenomenon, we believe there is value in retaining Maslach's original range of profiles to facilitate engagement with both protective and vulnerability factors as we move towards addressing the problem rather than merely describing it.

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Appendix

Table I: EE+1 Method

Profile	Number	Percentage
Engaged	2	3
Ineffective	9	12
Overextended	9	12
Disengaged	4	4
Burnout (classic/extreme)	3	4
Unclassified	48	64
EE+1 PROFILES		
EE+1 burnout (*n* = 71)	35	46
Registrars (*n* = 38)	22	57
Consultants (*n* = 33)	13	40
Unclassified with EE+1 burnout (*n* = 48)	27	56