Are we 'gritty' enough? The importance of 'grit' in O&G training: Association of passion and perseverance with burnout, thriving and career progression

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Are we 'Gritty' enough? The importance of 'Grit' in O&G training - Association of passion and perseverance with burnout, thriving and career progression

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Short title: Are we 'Gritty' enough?

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Abstract

Background: Objective assessment of grit and its association with burnout in Obstetrics and Gynaecology (O&G) training is underexplored.

Aim: This study utilises the Short Grit Scale and the Oldenburg Burnout Inventory to investigate the association of grit with burnout, thriving and career progression among O&G trainees and Fellows in Australia/New Zealand.

Materials and Methods: A cross-sectional survey of the RANZCOG (Royal Australian and New Zealand College of O&G) members was conducted. Participants were categorised by seniority level (core trainees, advanced trainees and Fellows). Mean grit and burnout scores were compared with one-way ANOVAs. Correlation between grit and burnout was estimated using Pearson's correlation coefficient. Logistic regression models were used to determine factors associated with high vs low burnout. Grit was categorised as low/medium/high for regression models.

Results: A total of 751 (26%) participants completed the survey. Fellows reported higher mean grit than core (p=0.02) and advanced trainees (p =0.03), and lower mean burnout than core trainees (p<0.001). Moderate negative correlation was demonstrated between grit and burnout scores (r =*-0.34*). In the multivariable model, only seniority (adjusted OR:0.40 for Fellows vs core trainees, p=0.008) and grit levels (adjusted OR:4.52 for low vs high, p<0.001; 2.32 for low vs medium, p=0.001) were significantly associated with burnout.

Conclusion: This study demonstrates the protective role of grit in combating burnout among RANZCOG trainees and Fellows. While further well-designed studies are warranted, findings from our study are expected to help the College in developing targeted interventions and subsequently minimise burnout-related adverse outcomes in high-risk groups.

Keywords: Grit, burnout, obstetrics, gynaecology, resilience

Introduction:

The concept of grit and understanding its protective role against workplace burnout is highly relevant in the field of Obstetrics and Gynaecology (O&G). The plethora of stress in O&G training comes not only from balancing work and life, but also from meeting self-standards, fulfilling training requirements and mastering surgical skills. Undoubtedly, these factors are expected to result in significant burnout and subsequent adverse outcomes such as deterioration of health and training drop-out.[1-3] This is well reflected in a recent study by Ryder et al who reported alarmingly high prevalence of burnout, workplace stress and depression (55%, 62% and 45%, respectively) in Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) trainees.[1]

Grit is synonymised as a unique human trait combining passion and perseverance and is believed to be a predictor for personal achievement and career success.[4,5] Its association with the success of medical training has been repeatedly examined and reported in the literature. [6-9] Burnout is defined as emotional exhaustion secondary to frustration or prolonged stress at work and has been conceptualised much earlier than grit.[8] With the increase in recognition, a number of researchers including Halliday (2019) [7] and Cortez [9] have published studies on burnout and its adverse effects in medical practices. Certain high-demand specialities (i.e. surgical, intensive care, anaesthetic training) have been frequently examined by researchers and have shown high level of burnout among trainees/trained specialists.[9-12] Other studies have found grit to be a protective factor against burnout among medical professionals. [6,7]

It is also important to recognise the difference in concept between grit and resilience. The two traits, although related, are not synonymous. Quoting Angela Duckworth from her conversation about ‘Resilience and learning’ in ‘Educational leadership’- resilience has been defined in a number of ways but all those definitions carry a common idea which is demonstrating ‘a positive response to failure or adversity’ or ‘bouncing back from adversity, cognitive or otherwise’.[13] Grit, on the other hand, is not only about being resilient to combat the failure or adversity but also having persistent and deep commitment towards the career goal for a long period of time. Being gritty therefore is being resilient and beyond. [13,4-5]

To date, a variety of questionnaires/tools have been utilised to investigate resilience (i.e. Connor-Davidson Resilience Scale, the Ways of Coping Questionnaire), [14-15] grit (SGS),[16] and burnout (i.e. OLBI, Maslach Burnout Inventory, Perceived Stress Scale). [17-19]

The Short Grit Scale (SGS)[16] and Oldenburg Burnout Inventory (OLBI)[17] are two of the most recognised and widely validated tools. Although evidence exists in other medical speciality/subspeciality training, there is scarcity of data in the field of O&G. [20-21] In Australia/New Zealand, very limited number of studies have reviewed the concept of resilience among RANZCOG trainees and Fellows (including who are retired and/or those who had quit or changed professions).[1] To our knowledge, no previous study has utilised both the SGS and the OLBI to objectively assess grit and burnout among RANZCOG trainees and Fellows. This topical and essential issue in Australian/New Zealand O&G training context remains underexplored.

In this study, we aim to investigate the association of grit and burnout among trainees pursuing O&G career and RANZCOG Fellows pursuing life-time career journey in Australia and New Zealand by utilising the SGS and the OLBI. The key objectives were to determine grit and burnout level by seniority, understanding the relationship between grit and burnout, and to identify the factors that are significantly associated with high burnout among RANZCOG trainees/Fellows. We also aimed to perform additional sub-group analyses to assess if grit and burnout vary by baseline/demographic factors and by type of practice and subspecialisation among the Fellows.

Materials and methods

Recruitment:

Potential participants were recruited directly from the RANZCOG member pool. A formal RANZCOG CPD committee approval for the survey was obtained. Following ethics approval from the Bond University Human Research Ethics Committee (TL00185), the online survey was distributed by the RANZCOG to eligible participants. Members who were either specialist/ subspecialist trainees or RANZCOG Fellows were invited to participate in the survey that included a participant information and consent statement. Participating in the survey was considered as valid consent and participants were able to voluntarily withdraw from the study at any time.

All participants were divided into three groups by their seniority: core trainees (trainees from level one to four), advanced trainee (who have completed core training but yet to fulfil requirements for fellowship award, usually level five to seven), and Fellows (have obtained their FRANZCOG qualifications).

The survey:

The survey had three components: the SGS, the OLBI and the demographic profile (Table 1). The OLBI was utilised to measure burnout and consisted of 16 items, eight items on the disengagement, and eight items on the exhaustion dimension of burnout. Both subscales include four positively and four negatively worded items. Participants were asked to respond to the items by using a scale ranging from one (strongly agree) to four (strongly disagree). In all cases, responses were analysed in a way that high scores referred to high levels of exhaustion and disengagement. On the other hand, grittiness was measured using the SGS which consisted of 10 questions. Participants were asked to respond to the questions by using a scale ranging from one (Not like me at all) to five (Very much like me). Final grit and burnout score for each individual was calculated as an average.

Categorisation of main outcome variables:

Level of grit and burnout were the two main outcome variables. Both SGS and OLBI scores were analysed as continuous variables for determining level of grittiness and burnout in the study sample and for assessing correlation between grit and burnout. For the purpose of multivariable regression analysis on high burnout, grit and burnout were categorised as low/medium/high grit levels and low/high burnout levels, respectively. Participants were categorised as having low or high burnout based on the OLBI scores above or equal/below one standard deviation of the mean (mean= 2.21, SD = 0.45; 'high burnout' was any score > 2.66 and 'low burnout' was any score ≤2.66). [22] Due to the lack in standard definition in the literature for categorising grit, we used a similar approach as of burnout categorisation and divided grit scores in our sample into three levels: low ≤ 3.40 (mean- 1 SD), medium 3.41 – 4.39 (mean ± 1 SD) and high ≥ 4.40 (mean+1 SD).

Statistical analysis:

Descriptive statistics are presented as mean (SD) for normally distributed continuous variables and counts (%) for categorical variables. Mean Differences (MD) in participant characteristics between core trainees, advanced trainees and Fellows were compared using the one-way ANOVA for continuous variables, followed by post-hoc pairwise comparisons with Tukey's HSD. Categorical variables were compared using the chi-square test. The strength of the relationship between the grit and burnout scales was estimated using Pearson's correlation coefficient.

Prior to regression analyses, grit and burnout were categorised as above to low/medium/high levels and low/high levels, respectively. The association between participant characteristics, including their grit level, and burnout as a binary outcome was examined using univariable and multivariable logistic regression models. Analyses were carried out in SPSS, version 26. A *p*-value of <0.05 was considered as statistically significant.

Results:

A total of 751 (140 core trainees, 54 advanced trainees, and 557 Fellows), who completed the survey out of total 2,937 participants were included in the analyses. The overall response rate was 26%, with the rate being fairly similar between the trainees and Fellows (30% and 24% respectively).

Baseline data

The demographics and other baseline characteristics of each group are presented in the Table 1A. As expected, the distribution of some baseline characteristics (i.e. age group, gender, current practice location and part of FRANZCOG training obtained overseas) were significantly different between the three groups (Table 1A). This further reflects the rationale for multivariable adjusted analyses that we performed to determine factors associated with high burnout in our sample.

Grit and burnout by seniority level and other baseline variables:

Figure 1 displays boxplots of (a) grit and (b) burnout scores by seniority level. A summary of mean grit and burnout scores by seniority level and subgroups is also shown in Table 1B. Overall, Fellows reported higher grit than core (MD: 0.12; 95%CI: 0.02, 0.23, $p = 0.02$) and advanced trainees (MD: 0.17; 95%CI: 0.01, 0.33, $p = 0.03$), and lower burnout than core trainees (MD: -0.22; 95%CI: -0.31, -0.12, $p < 0.001$). Further in-depth analyses on the two different burnout dimensions shows that Fellows also reported lower disengagement (MD: -0.17; 95%CI: -0.27, -0.07, p <0.001) and exhaustion scores (MD: -0.26; 95%CI: -0.37, -0.15, p <0.001) than the core trainees.

Additional sub-group analyses show that grit and burnout did not vary by level of training for core trainees (i.e. level one to four). Overall, grit also did not vary by gender, but female Fellows reported higher burnout than male Fellows (MD: 0.21; 95%CI: 0.13, 0.29, $p<0.001$).

Subspecialist Fellows and Fellows in private practice were grittier than the non-subspecialists (MD: 0.17; 95%CI: 0.06, 0.28, p = 0.002) and Fellows who reported non-private practice (MD: 0.17; 95%CI: 0.06, 0.28, p = 0.002). In both cases, however, burnout did not vary significantly (i.e. by subspecialisation or type of practice among Fellows).

Correlation between grit and burnout:

Table 1B presents a summary of grit and burnout scores by seniority level and subgroups with their correlation coefficients and Figure 2 displays a scatterplot of mean burnout score against mean grit score, with simple linear regression line. Overall, there was strong evidence of negative correlation between grit and burnout scores (r = -0.34, p <0.001) in our sample. This significant negative correlation between grit and burnout remained consistent across gender and seniority level.

Factors associated with high burnout:

A total of 121 (16.1%) of the 751 participants were classified as having experienced high burnout, compared with 630 (83.9%) in the low burnout category. This difference was statistically significant (67.8%; 95%CI: 59.6%, 73.9%, χ^2= 236.3, p <0.001). Table 2 shows the results of univariable and multivariable logistic regression analyses of the relationships between various factors and burnout. The results showed that age, gender, seniority level and grit level were statistically significant in the univariable analyses. However, in the adjusted multivariable model, only seniority and grit levels were significantly associated with high burnout. Compared to core trainees, Fellows were 60% less likely to experience high burnout (adjusted OR: 0.40; 95%CI: 0.20, 0.78, p = 0.008). On the other hand, although not statistically significant, advanced trainees were about 40% less likely to suffer from high burnout than core trainees (adjusted OR: 0.64; 95%CI: 0.29, 1.42, p = 0.27). Respondents with low grit level were about 2 times more likely to experience high burnout than those with medium grit (adjusted OR: 2.32; 95%CI: 1.43, 3.76, p = 0.001), and compared with high grit, the odds were about 4.5 times higher (adjusted OR: 4.52; 95%CI: 2.09, 9.78, p <0.001).

The Hosmer-Lemeshow statistic showed that the multivariable model was a good fit to the data (χ_8^2= 9.8, p = 0.28). The regression model accounted for only 7.7% (Nagelkerke R^2) of the variance in burnout and correctly classified 84% of the cases.

Please note that the number of factors included in our analyses were limited due to scope of our study. There are many other potential contributors with increased burnout (i.e. factors relating to individual's personal, organisational, social, cultural, emotional and environmental status). These factors warrant further exploration with more targeted and inclusive studies.

Discussion:

In our study, seniority and grit were the only two factors that significantly predicted the level of burnout among RANZCOG trainees and Fellows. RANZCOG Fellows are grittier and experience less burnout that their junior counterparts (core and advanced trainees). In addition, a significant negative correlation exists between grit and burnout which is consistent across gender and seniority level. These findings are in line with reports from other similar studies conducted in the UK [6,7] and the US [9] and across various medical specialty and sub-specialty programs [6, 23] as well as among medical students. [24]

Authors found the difference in grit level between the RANZCOG Fellows and the trainees quite intriguing. Interestingly, this difference was not related to the length of experience in being a fellow (no difference between <5 years and > 5 years since the completion of fellowship). A few potential explanations could be the possibility of grit growing/increasing over time (and perhaps until a career or age threshold is reached), exposure of Fellows to a new set of factors as they embark on a new journey as a Fellow or, the sudden decrease in burnout/exhaustion level that was previously attributed to the speciality training (thus raising the question if high burnout causes grit suppression). Overall, these findings are consistent with other studies conducted internationally and among various other specialities. For example, a multicentre cross-sectional survey in the UK by Halliday et al found that hospital consultants had significantly higher grit scores than the trainees.[7] Another study examined grit among the ear, nose, and throat surgeons and also demonstrated similar results (i.e. consultants were significantly grittier than the trainees).[6]

Our study also shows that Fellows in private practice were significantly grittier than the Fellows who reported non-private practice. While the perceived differences in work and organisational environment between the public and private settings could be somewhat explanatory, it was not within the scope of our study to conduct in-depth analyses of possible contributing factors. We duly acknowledge that further exploration through targeted future research is warranted to shade more light on this.

Grit did not vary by gender in our study population. This finding is contrary to Shakir [25] and Camp [26] who reported lower resilience and grit in females, respectively, compared to their male counterparts. However, it is important to recognise that this inconsistency may partly be explained by power variations in different studies (i.e. variations in sample sizes, balance of gender distributions across the samples etc), effect of other variables that are not included in analyses and also by the fact that despite some overlapping, grit and resilience is not quite synonymous. In fact, Musso et al [27] investigated the relationship between grit and resilience; and concluded that grit is "related to, but distinct from, other constructs that predict resilience, such as coping mechanisms". Despite no difference in grit level, female Fellows in our study reported higher burnout than the male Fellows. Further in-depth exploration on this was beyond the scope of our study. However, authors recognise that a gendered difference in female vs male burnout would be multifactorial and needs further targeted research.

Given the expected variation in demography and baseline characteristics, we performed a multivariable analyses to determine if grit predicted burnout and whether other factors were associated with high burnout in our population. After adjusting for confounding factors, only seniority and low grit levels were significantly associated with high burnout. Compared to core trainees, RANZCOG Fellows are 60% less likely to suffer from high burnout. Although not statistically significant, advanced trainees are also about 40% less likely to suffer from high burnout than their junior counterpart. This reflects the importance of having effective and practical measures in place to protect our trainees to maintain their quality of work-life balance. The RANZCOG wellbeing campaign is a useful avenue, and this study is expected to help target further interventions to the groups at the highest risk for burnout.

One of the imitations of our study is that we did not explore other variables that could have had an impact on burnout such as relationship status, timeliness with fellowship examination, relocation for training, family matters. [28] This is also reflected by the low Nagelkerke R^2 value in our logistic regression model. Organisational factors are also important. Issues related to organisational culture and behaviour can contribute to burnout and need to be carefully addressed in addition to the individual factors such as grit when implementing targeted interventions. [29-30] The overall low response rate is also important to acknowledge due to concern of self-selection bias. While response rates were fairly similar between the trainees and Fellows, it was particularly lower among male participants compared to the females. There is also potential for inherent bias, for example, disengaged

and exhausted participants may be less likely to respond. These findings however are comparable to other studies that tested similar cohorts. [6-7,29]

Another potential challenge was related to the timing of the survey. The COVID pandemic was at different stages across Australia and New Zealand during the time of the survey distribution. We conducted ad-hoc analyses to ensure the results were not skewed by states/territories, and they showed that mean burnout score by region and by seniority level did not differ significantly. Finally, it is important to assess if a linear relationship exists between grittiness and burnout over time as trainees and Fellows reach their next level of seniority and experience. However, we were unable to investigate the trend over time due to the cross-sectional design of our study. We plan to conduct a longitudinal study to capture grit scores of our study participants over time and also, in-depth evaluation of many other potential predictors of burnout to help to answer these questions. Other research areas of interest for future studies could be focus group interviews involving psychologists' input to gain in-depth understanding on this topic.

Undoubtedly, further research is needed to help inform the College of appropriate, evidenced based and resource-effective interventions surrounding burnout and grit in the context of O&G in Australia and New Zealand. Increasing awareness of the concept of grit, how to grow grit and its association with burnout may also be helpful. In addition, the College may consider piloting of the SGS in the speciality trainee selection process. This, along with the current selection components of resume, hospital ranking and interview, may have the potential to identify trainees inherently more adaptive to workplace stress/burnout and minimisation of burnout related adverse outcomes.

To our knowledge, this study includes the largest sample size investigating the relationship between grit and burnout in a medical speciality training. The statistical model developed correctly estimated high burnout 84% of the time. This is also the first study in Australia and New Zealand to objectively test the role of grit in predicting higher burnout among the O&G trainees and Fellows. We believe that our findings will assist RANZCOG with emerging evidence to aid in designing effective tools and interventions to minimise burnout for trainees.

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Figures and Tables

Table 1:

1A. Baseline demographics of survey respondents (*N* = 751) by seniority level

Characteristic	Core trainees *n* = 140, 18.6%	Advanced trainees *n* = 54, 7.2%	Fellows *n* = 557, 74.2%	*p*-value
Age group				<0.001*
25 – 34	106 (75.7)	27 (50.0)	16 (2.9)	
35 – 44	33 (23.6)	26 (48.1)	170 (30.5)	
45 – 54	1 (0.7)	1 (1.9)	168 (30.2)	
55 – 64	-	-	131 (23.5)	
≥ 65	-	-	72 (12.9)	
Gender[†]				<0.001*
Male	18 (12.9)	7 (13.0)	194 (35.4)	
Female	122 (87.1)	47 (87.0)	348 (63.5)	
Other/Prefer not to answer	-	-	6 (1.1)	
Current location of practice				<0.001*
Tertiary hospital	90 (64.3)	37 (68.5)	234 (42.0)	
District/metropolitan hospital	26 (18.6)	11 (20.4)	163 (29.3)	
Rural/regional hospital	23 (16.4)	4 (7.4)	67 (12.0)	
Other[‡]	1 (0.7)	2 (3.7)	93 (16.7)	
Part of FRANZCOG training obtained overseas[‡‡]				<0.001*
No	139 (99.3)	51 (94.4)	369 (66.2)	
Yes	1 (0.7)	3 (5.6)	188 (33.8)	
Current training for Core trainees				
Level 1	23 (16.4)	-	-	
Level 2	34 (24.3)	-	-	
Level 3	35 (25.0)	-	-	
Level 4	48 (34.3)	-	-	
Time since Fellows obtained FRANZCOG[§]				
< 5 years	-	-	135 (24.3)	
5 – 10 years	-	-	105 (18.9)	
> 10 years	-	-	315 (56.8)	
Scope of practice for Fellows				
Non-subspecialist	-	-	492 (88.3)	
Subspecialist	-	-	65 (11.7)	

All descriptive statistics values are expressed as *n* (%). * Statistically significant $p < 0.05$.

[†] Based on 742 respondents (9 Fellows did not respond to the gender question). [‡] Includes overseas, semi-retired, private, locum etc. [‡‡] Where overseas training was a part of trainee's fellowship or any part of overseas training were counted towards fulfilling FRANZCOG training requirements (i.e. SIMG pathways and those trainees who did overseas elective year).

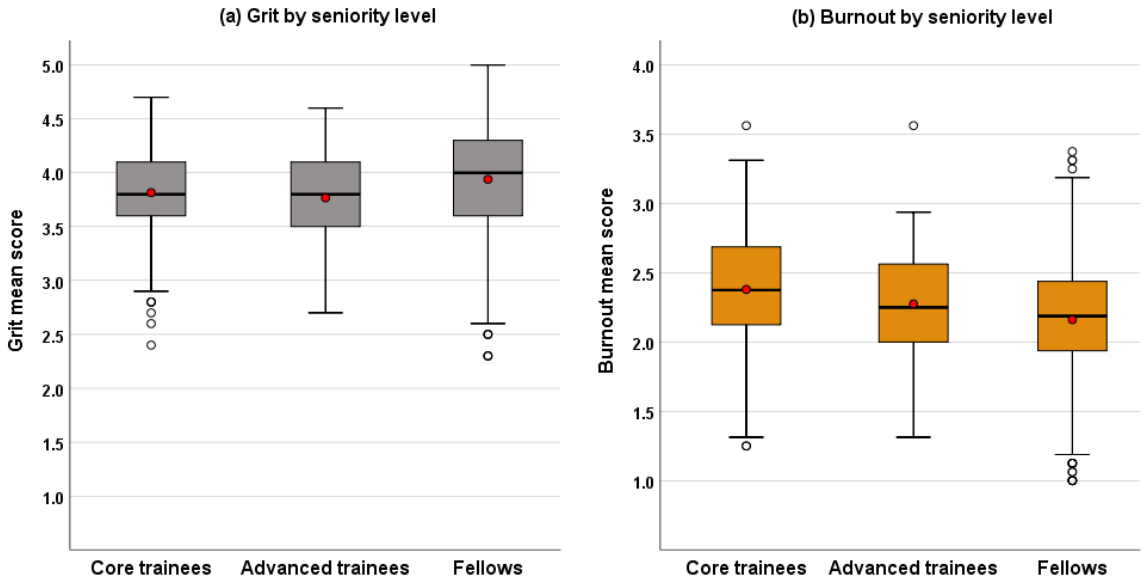
[§] Based on 555 Fellows, excluding 2 with DRANZCOG who responded 'n/a'.

1B. Grit and burnout scores by seniority level and subgroups of Core trainees and Fellows, and correlations between grit and burnout

	Grit	**Burnout**	**Correlation**
	Mean (SD)	Mean (SD)	$r^{\dagger}$
Overall:	3.90 (0.49)	2.21 (0.45)	-0.34***
Group/Subgroup			
Core trainees (*N* = 140)	3.82 (0.44)	2.38 (0.46)	-0.18*
Level 1 (*n* = 23)	3.77 (0.32)	2.47 (0.32)	0.29
Level 2 (*n* = 34)	3.74 (0.50)	2.41 (0.53)	-0.24
Level 3 (*n* = 35)	3.83 (0.41)	2.38 (0.57)	-0.47**
Level 4 (*n* = 48)	3.88 (0.45)	2.31 (0.36)	0.09
Advanced trainees (*N* = 54)	3.77 (0.44)	2.28 (0.42)	-0.38**
Fellows (*N* = 557)	3.94 (0.50)	2.16 (0.44)	-0.36***
< 5 y since FRANZCOG (*n* = 135)	3.93 (0.48)	2.18 (0.40)	-0.32**
≥ 5 y since FRANZCOG (*n* = 420)	3.95 (0.50)	2.16 (0.45)	-0.37**
Non-subspecialist (*n* = 492)	3.92 (0.51)	2.16 (0.44)	-0.36**
Subspecialist (*n* = 65)	4.09 (0.41)	2.18 (0.44)	-0.42**
Private practice (*n* = 66)	4.09 (0.41)	2.15 (0.44)	-0.21
Other (*n* = 491)	3.92 (0.51)	2.16 (0.44)	-0.38**

† $0.1 < |r| < 0.3$: small correlation; $0.3 < |r| < 0.5$: moderate correlation; $|r| > 0.5$: strong correlation.
* $p < 0.05$. ** $p < 0.01$ *** $p < 0.001$.

Figure 1. Boxplots of (a) grit and (b) burnout scores by seniority level. The circle inside the box represents the mean[†].



[†] Fellows reported higher grit scores than Core trainees (p = 0.02) and Advanced trainees (p = 0.03), and lower burnout than Core trainees (p <0.001).

Figure 2. Scatterplot of mean burnout score against mean grit score, with simple linear regression line.

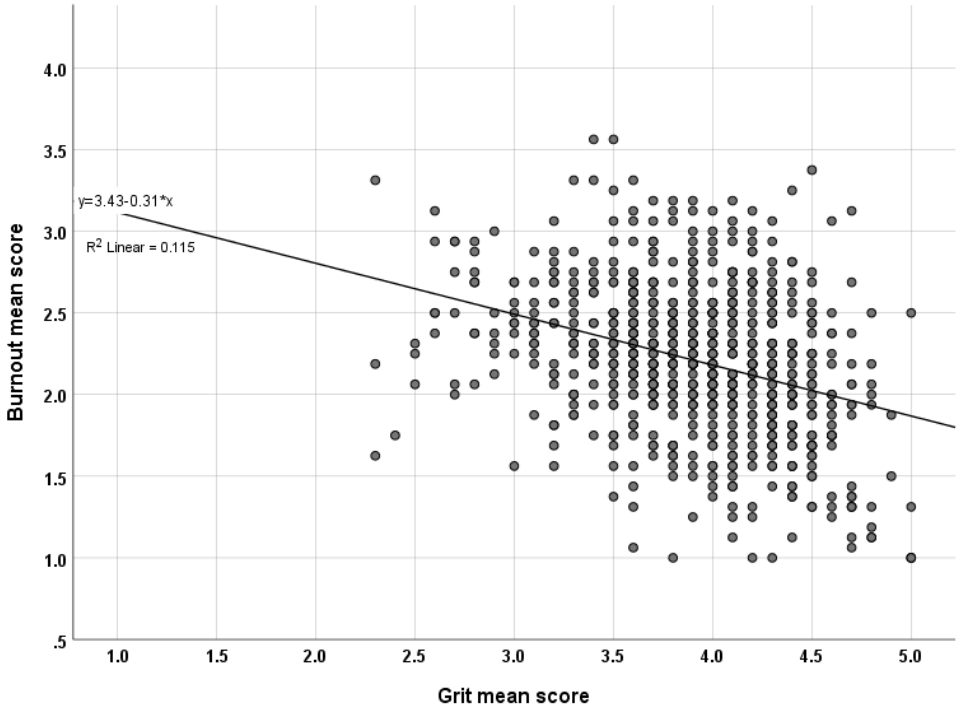


Table 2. Factors associated with burnout in O&G in Australia, and results of univariable and multivariable logistic regression on high burnout compared with low burnout

Factor	Low burnout *n* (%)	High burnout *n* (%)	Unadjusted OR (95% CI) [†]	*p*-value	Adjusted OR (95% CI)	*p*-value
Age group						
< 35 years	116 (18.4)	33 (27.3)	1.00 (reference)		1.00 (reference)	
≥ 35 years	514 (81.6)	88 (72.7)	0.60 (0.39, 0.94)	0.03*	1.35 (0.69, 2.63)	0.38
Gender						
Male	193 (31.3)	26 (21.8)	1.00 (reference)		1.00 (reference)	
Female	424 (68.7)	93 (78.2)	1.63 (1.02, 2.60)	0.04*	1.44 (0.88, 2.36)	0.15
Seniority level						
Core trainees	104 (16.5)	36 (29.8)	1.00 (reference)		1.00 (reference)	
Advanced trainees	43 (6.8)	11 (9.1)	0.74 (0.35, 1.59)	0.44	0.64 (0.29, 1.42)	0.27
Fellows	483 (76.7)	74 (61.2)	0.44 (0.28, 0.70)	<0.001*	0.40 (0.20, 0.78)	0.008*
Current location of practice						
Tertiary hospital	308 (48.9)	58 (47.9)	1.00 (reference)		1.00 (reference)	
Other	322 (51.1)	63 (52.1)	1.04 (0.70, 1.53)	0.85	1.22 (0.81, 1.85)	0.34
Part of FRANZCOG training obtained overseas[‡]						
No	463 (73.5)	96 (79.3)	1.00 (reference)		1.00 (reference)	
Yes	167 (26.5)	25 (20.7)	0.72 (0.45, 1.16)	0.18	0.97 (0.57, 1.65)	0.90
Grit level						
High: ≥ 4.40	124 (19.7)	10 (8.3)	1.00 (reference)		1.00 (reference)	
Medium: 3.41–4.39	424 (67.3)	78 (64.5)	2.28 (1.15, 4.54)	0.02*	1.95 (0.97, 3.92)	0.06
Low: ≤ 3.40	82 (13.0)	33 (27.3)	4.99 (2.33, 10.7)	<0.001*	4.52 (2.09, 9.78)	<0.001*

[†] OR (95% CI): Odds Ratio; 95% Confidence Interval.

[‡] Where overseas training was a part of trainee's fellowship or any part of overseas training were counted towards fulfilling FRANZCOG training requirements (i.e. SIMG pathways and those trainees who did overseas elective year).

* statistically significant $p < 0.05$.