Final Year Medical Students' Experience of Bullying: A Study at the University of Cape Town

Dr AAK Fakroodeen[1]

Corresponding Author:
[1]Department of Psychiatry, University of Cape Town, Cape Town, South Africa

MMED Supervising Psychiatrist:

Professor Dan Stein

Plagiarism Declaration

"This thesis/dissertation has been submitted to the Turnin module (or equivalent similarity and originality checking software) and I confirm that my supervisor has seen my report and any concerns revealed by such have been resolved with my supervisor."

"This research is based on independent work by the candidate, no part or whole of this thesis has been submitted to another university and it has not been published prior"

Name: Adam Abdul Kader Fakroodeen

Student number: FKRADB001

Signature

Abstract

Background:

Medical bullying has been identified as a growing concern internationally, with multiple studies showing a high prevalence in medical students and residents However, several questions remain unanswered, including a) the prevalence of experienced bullying within our local, socioeconomic and ethnically diverse population, b) which population groups are most likely to bully medical students, c) significant demographic data which may impact on severity, frequency and type of bullying experienced, d) what is the correlation between severity, frequency and types of bullying with psychological distress in our local population. This study aims to 1) examine the association between bullying frequency and bullying types with demographic variables in this population, 2) to investigate the association of bullying severity, bullying frequency and psychological distress, and 3) to gather qualitative data on medical bullying in respondents

Methods:

The data for this research were collected from final year medical students. The questionnaire included the modified Quinne questionnaire assessing different types of bullying and related frequency, and the CORE-GP questionnaire assessing psychological distress. Descriptive statistics were used to analyse the quantitative data, and thematic analysis was used to assess the qualitative data.

Results:

There was a high prevalence of reported bullying (86.8%), with no significant differences of overall bullying across demographic variables. However, certain types of bullying were more commonly experienced by female and black students. Consultants and registrars were reported to bully students more frequently than nurses. Increased bullying frequency was significantly associated with higher levels of psychological distress. The main themes to emerge in the qualitative analysis were 1) Negative

emotions relating to demographic bullying, 2)Systemised bullying within specific departments which according to the student are repetitive and expected, and 3) Feelings of academic pressure and fear associated to the bullying they have encountered

Conclusion:

This study suggests that the frequency of perceived bullying in South African medical students is consistent with rates reported in the literature. Bullying may follow the lines of medical hierarchies (with consultants being perceived as most likely to be the bully). Further, social disparities seem to be associated with increased bullying, with female and black students more often targeted. Specific interventions are needed to address bullying and associated psychological distress.

Background

Bullying by seniors doctors and other staff members is particularly prevalent in the medical profession, including in medical students and registrars (Ahmer et al., 2008; Quine, 2002), and has been found to be associated with negative physical and psychological effects such as low job satisfaction, stress, depression, anxiety and low self-esteem (Dingle, 1999; Larsson & Allebeck, 2003; Tepper, 2000). While historically a certain level of belittling treatment towards medical residents was accepted as a 'right of passage' into the medical profession, current thinking questions the impact and implications of this practice (Becker, 2002; Field, 2002; Vogel, 2016).

Several studies have contributed to understanding risk factors for bullying. The high prevalence in the medical profession (Hubert & van Veldhoven, 2000; Shinsako, Richman, & Rospenda, 2001), has been ascribed to its hierarchical structure, (Berk, 2009; Wear, Aultman, Zarconi & Varley, 2009). The hierarchical structure of medicine ensures that medical students and physicians-in-training undergo professional acculturation, where they must meet the academic and organisational demands of clinical practice while learning the culture of medical practice

Several questions remain to be explored. First, in contexts where there are historical inequities across gender and population groups, few studies have examined the association between bullying frequency and bullying types and such demographic variables. Second, the association of medical bullying severity and types with psychological distress has not often been studied in low- and middle-income countries such as South Africa. Third, studies of medical bullying have not often used mixed methods, integrating quantitative and qualitative data to ensure comprehensive understanding.

In order to begin to address these key questions, this study focused on final year medical students at the University of Cape Town. The South African context provides an important example of a society that has transitioned from a non-democratic to democratic regime, but where ongoing social inequities remain. The aims of the study were 1) to examine the association between bullying frequency and bullying types with demographic variables in this diverse cohort, 2) to investigate the association of bullying severity, bullying frequency and psychological distress, and 3) to gather both quantitative and qualitative data on medical bullying in respondents. I begin, however, with a review of the relevant literature.

Literature Review

This review attempts to cover a number of key questions in the field, including 1) prevalence of bullying behaviour amongst medical professionals, 2) to explore the workplace bullying literature available in South Africa, 3) to assess different types of bullying, 4) to investigate the culture and demographics which may be significant in experienced workplace bullying, and 5) to outline the impact on the psychological well-being of populations who experience significant bullying

Prevalence of bullying in medical training

Evidence of medical students and residents being the recipients of bullying behaviour from senior staff is well documented globally. Researchers ascribe this phenomenon to a variety of structural, cultural and psychological factors (Brooks & Bosk, 2013; Einarsen, 1999). Workplace bullying has been defined by Einarsen and Raknes (1997) as repeated actions and practices that are unwanted by the victim, which are done deliberately or unconsciously to humiliate, or cause offense or distress to the recipient, thereby creating an unpleasant work environment which may interfere with job satisfaction and performance. Bullying may also be used to induce submission by actual or threatened adverse consequences and can include: public humiliation or criticism, verbal abuse, social exclusion, intimidation, inaccurate accusations, the spreading of rumours, ignoring for prolonged periods of time, and the undermining of the recipient's professional status (Escartin, Rodriquez-Carballeira, Zapf, Porrúa & Martin-Peña, 2009).

In the United Kingdom, Quine (2002) found that 87% of medical registrars had experienced one of more bullying experiences and 37% identified themselves as victims of bullying in the workplace and similarly a study in the United States found that 83% of medical students experienced some form of mistreatment during in hospital training (Cook, Arora, Rasinski, Curlin, & Yoon, 2014) A recent literature review of comparable studies conducted by Leisy and Ahmad (2016) found that rates of bullying experienced by medical trainees were considered high in Saudi Arabia , the United States, New Zealand, Japan, Pakistan, India, Southern Australia and Nigeria; with percentages of students experiencing bullying ranging from 50% in New Zealand to 89% percent in Oman. Cyber-bullying by peers and senior staff has also been identified as a concern for intern doctors. A study in the United Kingdom (Farley, Coyne, Sprigg, Axtell, & Subramanian, 2015) reported that 46.2% of its sample had experienced at least one incident of cyber-bullying online.

There is currently limited South African research specifically exploring the issue of bullying at medical universities. Qualitative accounts of experiences of bullying during medical training as well as experiences of discrimination on grounds of gender and race have emerged (Breier, & Wildschut, 2006; Thackwell et al, 2016; Yach, 2011, Wildschut & Gouws, 2013) and anecdotal claims of bullying and abuse of medical trainees have surfaced in the media. In 2016, an intern came forward with allegations and audio recordings of incidents of bullying and sexual harassment, which captured widespread media attention ("Old Boys Club", 2016). Furthermore, reported allegations of interns being forced to work in excess of 30 hour shifts have also raised concerns of abuse ("Review demanded of SA junior doctors", 2016). These accounts point to the relevance of gaining cross-sectional data to explore prevalence rates of bullying experiences at South African medical universities, as well as its implications.

Workplace bullying is not clearly defined in South African labour law and terms such as 'discrimination' and 'harassment' have been used generally to encompass selected examples of bullying experiences. This has been identified as problematic because without discrete distinction from cases of harassment and discrimination, incidents of bullying may be minimised and remain uninvestigated (Porteous, 2002; Rycroft, 2009). Researchers in the field of bullying identified that due to broad definitions and the subjective nature of bullying experiences that rely on self-report methods, it can be difficult to measure the full extent of bullying within an organisation (Einarsen & Skogstad, 1996; Quine, 2002). This points to the relevance of supplementing quantitative scales with qualitative research.

In a South African study of workplace bullying, with participants from six different business sectors (of which medicine was not one), Cunniff & Mostert (2012) reported that 31% of participants reported frequent incidents of bullying, with persons with lower socioeconomic status being more likely to be the victim of bullying. Another study conducted with participants in the South African National Defense Force (SANDF) and an engineering company (Power Group) found that rates of workplace bullying were as high as 60% at the SANDF and 22% in Power Group. This study found no significant groups at risk but cautioned that the specific demographic composition of the organisation, and its prevailing culture, can influence which groups are most targeted (Kalamdien, 2013).

Types of workplace bullying

In a model for workplace bullying Rayner and Hoel (1997) categorise bullying behaviours into five groups, namely: 1) Threat to professional status: which may include

belittling remarks; persistence criticism; public humiliation; intimidation and inaccurate accusations, 2) Threats to personal status, including: humiliation, attacking the private sphere, verbal or physical threats/aggression, shouting or starting rumours, 3) Isolation, including: withholding information, ignoring, exclusion and unreasonably refusing applications for leave or promotion, 4) Overworking the recipient, setting unrealistic deadlines, or excessive monitoring, 5) Destabilization: setting meaningless tasks, setting unrealistic targets, persistent attempts to demoralise and removing responsibilities. These five categories form the basis of the bullying questionnaire (Quine, 2002) which will be used in this proposed study.

Wilkinson et al. (2006) identified humiliation by a senior staff member as the most commonly reported adverse experience reported by medical trainees. Being the object of such ridicule has been historically understood as a part of the professional socialisation of junior doctors and a means to establish hierarchy (Berk, 2009). Furthermore cynicism and derogatory humour by senior medical staff has been seen to provide a possible means of coping with the stressful and sometimes demoralising work environment that medical professionals face (Wear, Aultman, Zarconi & Varley, 2009). However, such practices, if pervasive, can serve to dehumanise and ridicule in a way that is tantamount to bullying.

The culture of medicine

The culture of medicine is an important factor in perpetuating behaviours, both good and ill, thus it is discussed here. In their literature review of 62 articles related to workplace bullying of medical interns, Leisy and Ahmad (2016) identified six key themes that emerged to aid understanding of the kind of workplace environments where bullying experiences typically take place, namely: 1) Hierarchy: Bullying was typically perpetrated by those of higher rank and was seen to be more prevalent in workplace cultures that are strictly hierarchical in structure; 2) Silence: Workplaces that promote silence and stoicism, rather than providing appropriate channels to voice concerns, are seen perpetuate a bullying culture; 3) Incognizance: A lack of knowledge by recipients of what constitutes bullying or abusive behaviour is likely to perpetuate it; 4) Fear: Incidents may remain unreported due to fear of retaliation and a lack of trust in health systems to deal with complaints sensitively; 5) Acceptance/Denial: The medical profession has traditionally been accepted as being one of professional dominance (Brooks & Bosk, 2013) and trainees may feel that bullying or abuse is something that needs to be tolerated; 6) Legacy of abuse: Bullying treatment is taught and perpetuated, entrenching it in workplace systems and occupational culture, thus rendering it resistant to change.

The culture of medicine is implicated as an underlying factor that can be seen to covertly promote bullying treatment and potentially disrupt interventions targeted at reducing bullying. Stevens (2013) argues that while bullying or intimidating behaviour may be part of the culture or "personality" of surgical disciplines, such behaviour impairs effective communication and erodes workplace morale and teamwork in a way that can impact upon patient safety. In response, some medical educators have argued that positive and engaging learning spaces in medicine are more productive (Bezuidenhout, Cilliers, Van Heusden, Wasserman, & Burch, 2011; Vogel, 2016).

Demographic factors

In a survey of registrars conducted at UCT in 2009, London, Kalula, and Xaba reported that Black students (50%) were more likely to describe UCT as unwelcoming that white students (12%) and some South African studies have concluded that certain previously disadvantaged groups are more vulnerable to bullying; including those with lower socioeconomic status, lower educational level, people of color (POC) and women (Cunniff & Mostert, 2012; Pietersen, 2007; Steinman, 2003). Similarly, in hospital settings, workers of lower professional rank in hospital settings have been shown to be more likely to experience bullying from higher ranking workers (Norton et al., 2017). However the literature is unclear around whether demographic variables predict the likelihood of experiencing bullying and due to a lack of clear legislative guidelines around bullying in the workplace some have argued that bullying which does not take the form of racial of gender discrimination, may be underreported, making it difficult to predict which groups are most vulnerable (Kalamdien, 2013).

Subjective well-being and bullying

Medical professionals and trainees are vulnerable to compromised physical and mental well-being due to high rates of stress and demanding workloads (Rotenstein et al., 2017; Baldassin et al; 2008; Jamali et al, 2013). If coupled with experiences of bullying and harassment the health of trainees may be further compromised and this may contribute to more serious health outcomes such as increased rates of depression, anxiety, substance use, post-traumatic stress symptoms, social isolation and even suicide in extreme cases (Alexandrino-Silva et al., 2009; Baldwin et al., 2006; Heru, Gagne, & Strong, 2009; Kivimaki, Elovainio, & Vahtera, 2000; Quine, 2002; Rugulies et al., 2012). A national survey conducted in Australia found that junior doctors suffered far higher rates of psychological distress and attempted suicide more than the general population, and female doctors were particularly affected (National Mental Health Survey of Doctors and Medical Students, 2013, October). Victims of bullying also score

lower on measures of self-esteem and assertiveness (McGuckin, Lewis & Shevlin, 2001), and underreporting is common due to a perceived threat of loss of professional status (Rees & Monrouxe, 2011).

In South Africa there is limited research on the interaction between well-being and bullying experiences in medical training, however studies have been conducted in other sectors such as corporate construction (Bernstein & Trimm, 2016), where experiences of bullying had a negative impact on psychological well-being, self-esteem, job satisfaction and attrition. Similarly, studies that have explored burn-out, and intra-professional violence in the nursing profession (Engelbrecht, Heyns, & Coetzee, 2017; Levert, Lucas, & Ortlepp, 2000) suggest an impact on employees' psychological and physical health, when workplace environments are experienced as overly stressful and hostile.

Aims:

This study aims to 1) examine the association between bullying frequency and bullying types with demographic variables in this population, 2) to investigate the association of bullying severity, bullying frequency and psychological distress, and 3) to gather qualitative data on medical bullying in respondents

Method

Subjects

This study was a cross-sectional survey of final year medical students. Data was collected in the form of voluntary self-administered, paper-based questionnaires in english. The author was present at data collection sessions to explain and answer questions relating to the study. Participants were sampled on a convenient-sample basis. All data was collected in a single day, groups completed the survey immediately after the end of year clinical skills exit exam. A total of 206 students participated, which is comparable to similar studies - 342 (Ahmer, 2008), 106 (Muhktar, 2010), 58 (Al-Shafaee, 2013). All 2017 final year medical students included, none were excluded.

Measures.

The questionnaires could be completed within 10-15 minutes. They consisted of the Work Place Bullying Questionnaire and the Core GP scale.

The Workplace Bullying Questionnaire (Quine, 2002), was developed for a study of the bullying of junior doctors in the British National Health Service (NHS), and has since been used in other settings (Hoosen & Callaghan, 2004). It was adapted to the South African context by making the following changes: a) the names of groups who are perceived to inflict bullying were altered to reflect professional titles used in South Africa, and b) ethnic demographic data which was adapted to more accurately represent groups in the South African context . This provides information on 1) bullying severity, and 2) types of bullying, including verbal, physical, sexual and work related.

The Core GP scale (Evans, Connell, Audin, Sinclair, & Barkham, 2005), which is a 14-item, 5 point validated Likert scale used to measure psychological distress in general populations. It has been widely used as a means to broadly assess the psychological

well-being and overall functioning of participants, and has been demonstrated as a valid measure of student wellbeing in the South African context (Young & Campbell, 2014).

Within psychometrics, Cronbach's Alpha value was used to test reliability, and a factor analysis of the Core GP and Bullying scale was undertaken to assess validity in the sample population. t-Tests and Pearson's Correlations were included to further validate results.

Ethical issues

Students completed informed written consent. Students were informed that participation was completely voluntary and confidential. No names or other identifiers were collected or connected to the survey information gathered. Discussion with Student Counseling was had prior to the data collection, and students were encouraged to seek debriefing sessions if required. This study was approved by the University of Cape Town Human Research Ethics Committee, the Departmental Research Committee and conducted in close collaboration with faculty.

Data Analysis

The survey data was captured by a blinded, independent data capturer. Factor analysis, Chi square and Cronbach's Alpha scoring were used to assess the psychometrics used, while ANOVA was used to assess statistically significant differences across groups. Descriptive analysis of quantitative data was undertaken using Statistical Package for the Social Sciences (SPSS 2015). Qualitative data was not the focus of this study, although emergent themes are discussed. No specific program or model was used to assess the qualitative data. The qualitative aspects of this study were primarily exploratory and limited in scope.

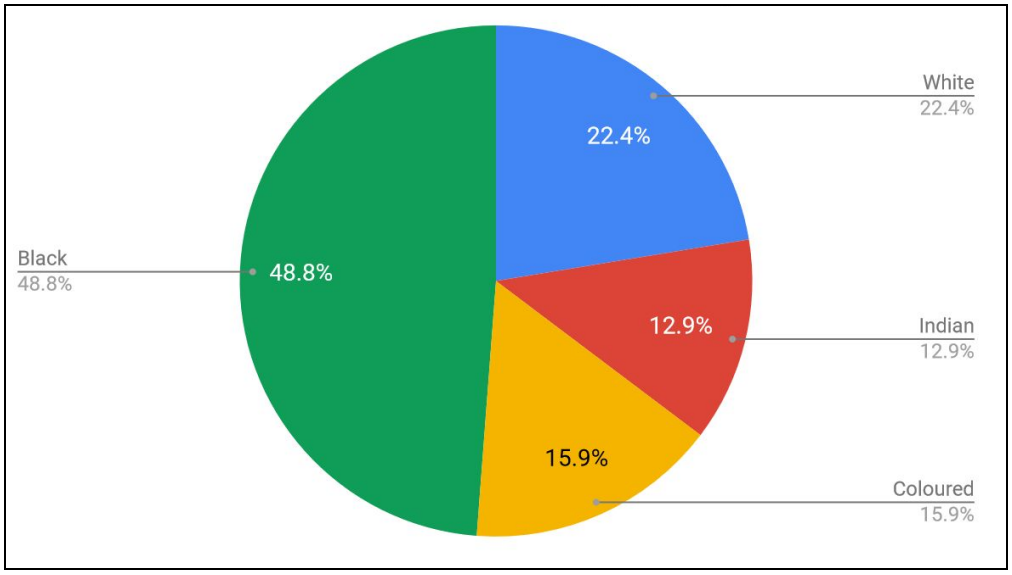
Results:

Demographic variables

The study consisted of a sample population of 236 final year medical students, of which 205 voluntarily participated in the survey, a response rate of 86%. 38.5% of the participants were male and 61.5% female.

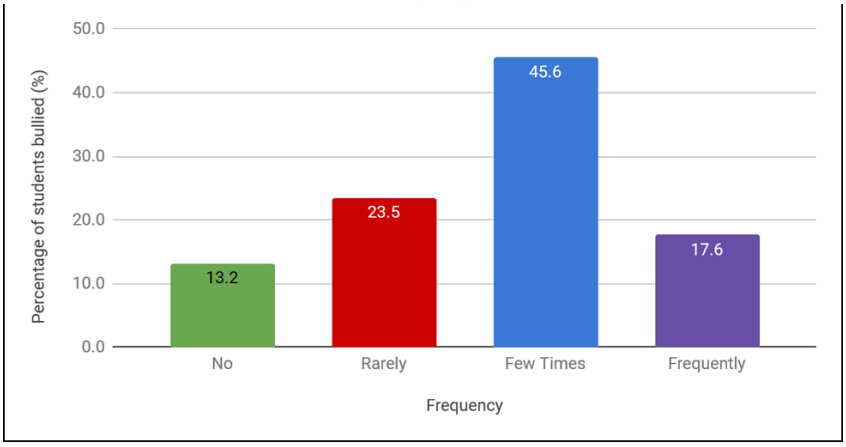
The mean age of participants was 25 years old, with the lowest age being 23 and the highest 36 years old.

CHART 1: ETHNIC DISTRIBUTION OF PARTICIPANTS



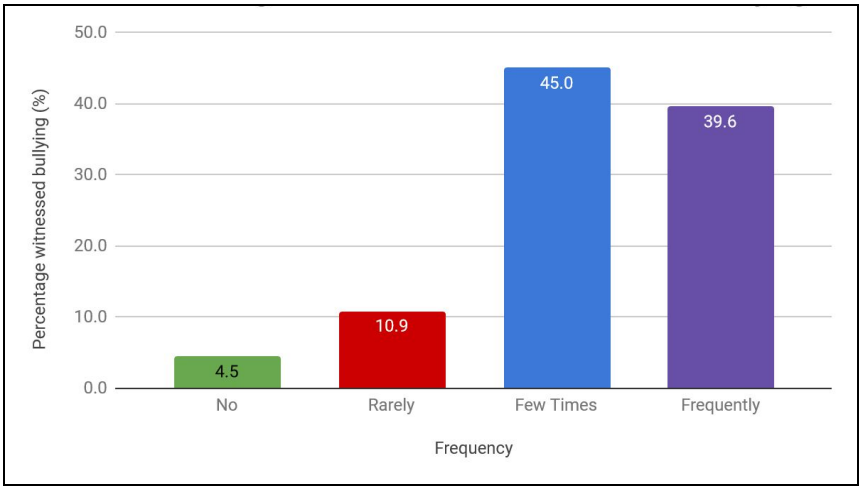
We emphasize that these terms simply reflect the sociocultural constructs created by apartheid, but suggest that their ongoing use in medical research may be useful in studying ongoing health disparities and social inequalities.

CHART 2: PERCENTAGE OF STUDENTS THAT HAVE BEEN A VICTIM OF BULLYING IN THE LAST 12 MONTHS



86.8% of participants reported experiencing some form of bullying within the last 12 months

CHART 3: PERCENTAGE OF STUDENTS THAT HAVE WITNESSED BULLYING IN THE LAST 12 MONTHS



95.5% or participants reported witnessing an act of bullying within the last 12 months.

Psychometrics

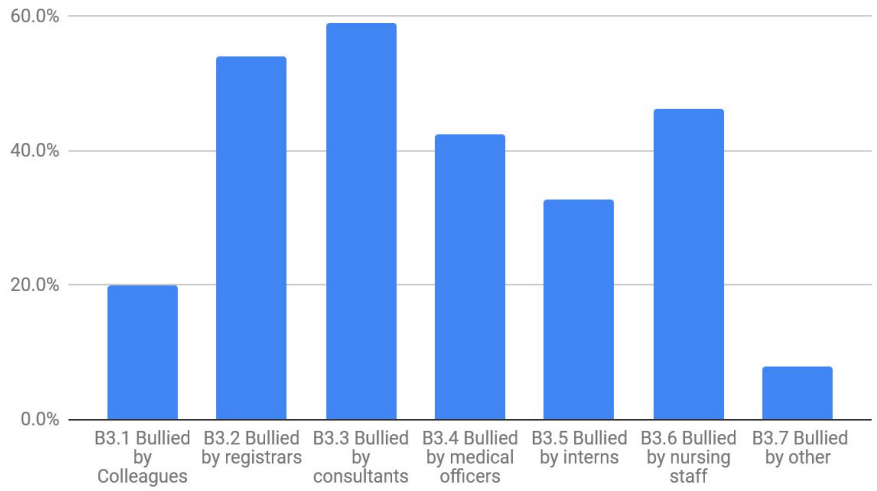
A factor analysis of the bullying scale assessed the validity found a percentage variance of 42.6, with all questions loading onto a single factor with the exception of question 11 (violence to property). This question was therefore excluded from the data set. The bullying scale showed a Chi square testing of 340.76 (p- < 0.01) confirming the statistical validity of the test. The reliability of this scale was confirmed with a Cronbach's Alpha value of 0.94..

The validity of the CORE GP scoring was assessed using factor analysis which showed a 36.06 percentage of variance. All questions loaded onto a single factor, but 3 sub factors were identified. A Chi square test value of 175.62 (p- < 0.01), provided support for the validity of this scale. Cronbach's Alpha was 0.86, indicating high reliability.

Perpetration of Bullying and Demographic Variables

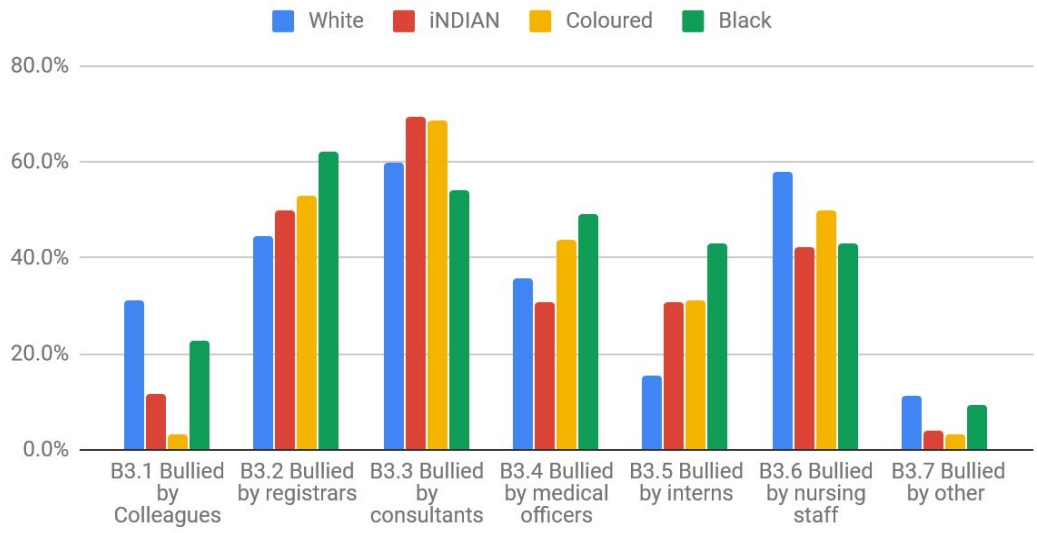
In regards to the 1st variable (the various groups who bullied participants), 20% of participants indicated that they had been bullied by colleagues, 54.1% said they had been bullied by registrars, 59% reported consultants, 42.4% by medical officers, 32.7% reported experiencing bullying from nursing staff, and 7.8% by other groups.

CHART 4: DISTRIBUTION OF GROUPS REPORTED TO BE BULLYING PARTICIPANTS



When divided across gender, 19% of males and 20.8% of females felt they had been bullied by colleagues, 55.7% of males and 53.2% of females experienced bullying by registrars, 62% of male participants and 57.1% of females reported bullying from consultants, 31.6% of males and 49.2% of females said they had been bullied by medical officers, 27.8% of males and 35.7% of females experienced bullying from interns, 32.4% of males and 54% of females reported bullying from nursing staff, whilst 3.8% of males and 10.3% of females said they had been bullied by another group.

CHART 5: DISTRIBUTION OF GROUPS REPORTED TO BE BULLYING PARTICIPANTS BY ETHNICITY

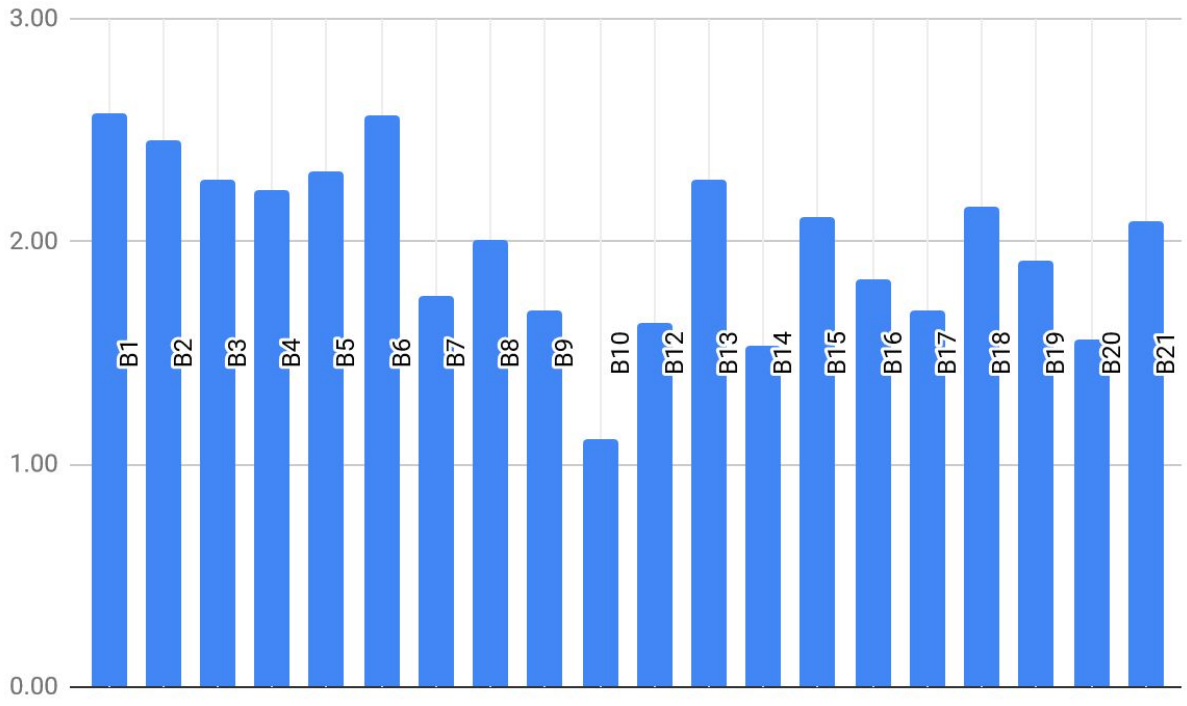


In regards to differences among ethnic population groups, bullying by colleagues was reported by 31.1% of white, 11.5% indian, 3.1% coloured and 22.7% of black participants. Bullying experienced by registrars reported in 44.4% of white, 50% of indian, 53.1% of coloured and 62.2% of black respondents. In regards to reported bullying by consultants, 60% of white, 69.2% of indian, 68.8% of coloured and 54.1% of black participants reported feeling bullied. Bullying by medical officers was reported in 35.5% of white, 30.8% of indian, 43.8% of coloured and 49.0% of respondents. With interns, 15.6% of white, 30.8% of indian, 31.3% of coloured and 42.9% of participants reported bullying.57.8% of white, 42.3% of indian, 50% of coloured and 42.9% of black students said they had felt bullied by nursing staff. The remaining other category was split 11.1% white, 3.8% indian, 3.1% coloured and 9.2% black.

Bully Severity and Frequency by Demographics

Differences in number of groups bullying participants, frequency of bullying experienced, and psychological distress were compared across gender using t-tests. The mean scores for the number of groups who bullied the respondents (variable 1) for males was 2.3 and females 2.8 a t-1.84(p-0.067) was not significant . The bullying frequency scale (variable 2) mean score amongst males was 1.8 and females 2.0 with a t-1.59(p-0.113). which was not significant The CORE-GP scale measure of distress (variable 3) had a mean score of 22.4 for males and 25.5 for females with a significant t-2.11(p-0.035) indicating females had a statistically significantly higher distress score.

CHART 6: TOTAL MEAN AVERAGES OF BULLYING SCALE QUESTIONS



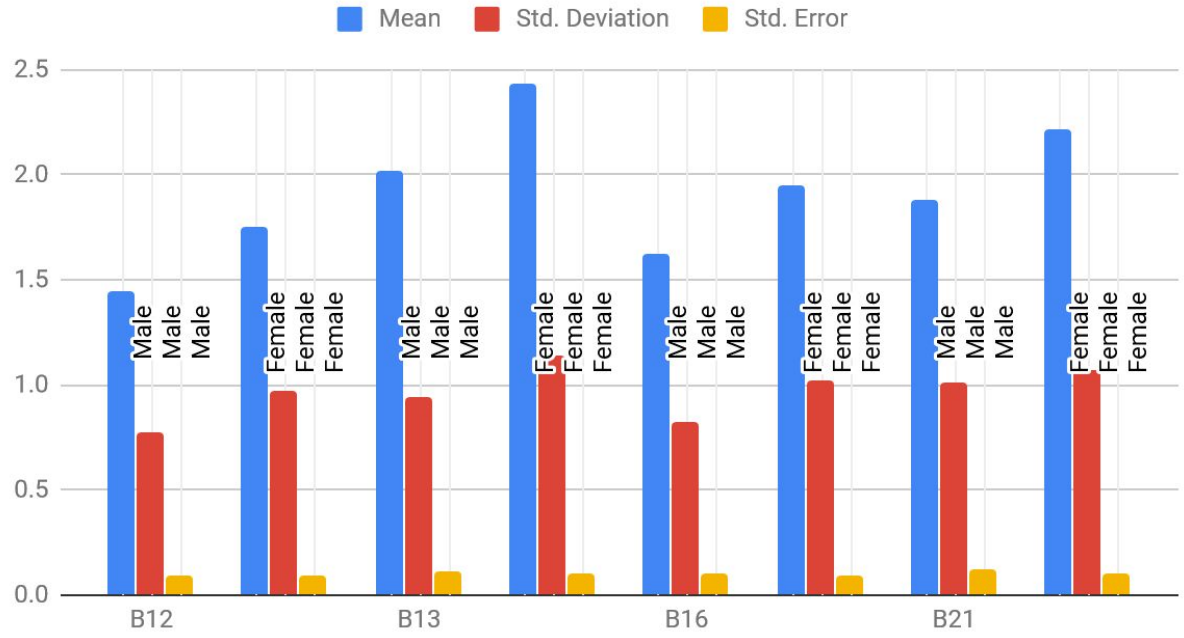
B1 - B21 refers to the specific questions on the questionnaire

When these questions were divided according to gender, and analysed with the aid of the analysis of variance (ANOVA), statistically significant differences were found in 4 of the 20 questions (20%). B12 - Withholding necessary information from you (females > males, p-0.03), B13 - Freezing out, ignoring or excluding (females > males, p-0.01), B16 - Setting of impossible deadlines (females > males, p-0.03), and B21 - Discrimination of racial or sexual grounds (females > males, p-0.04).

CHART 7: MEAN AVERAGE DIFFERENCES ACROSS STATISTICALLY SIGNIFICANT QUESTIONS

		Mean	Std. Deviation	Std. Error
B12	Male	1.45	0.777	0.094
	Female	1.75	0.976	0.089
B13	Male	2.01	0.947	0.114
	Female	2.44	1.140	0.104
B16	Male	1.62	0.824	0.099
	Female	1.95	1.024	0.094
B21	Male	1.88	1.008	0.121
	Female	2.22	1.075	0.099

CHART 8: STATISTICALLY SIGNIFICANT QUESTIONS ACROSS GENDER



Deeper analysis of the individual questions, using ANOVA once again, found statistically significant differences among 10 of the 20 questions (50%) between ethnic groups. B1 - Persistent attempts to belittle and undermine your work (p-< 0.011 highest in black students), B2 - Persistent and unjustified criticism and monitoring of your work (p- 0.024 highest in black students), B5 - undermining your personal integrity (p-0.04 highest in black students), B6 - Destructive innuendo and sarcasm (p-0.01 highest in coloured students), B7 - Verbal and non verbal threats (p-0.029 highest in black students), B8 - Making inappropriate jokes about you (p-0.04 highest in black students), B12 - withholding necessary information from you (p-0.0 highest in black students), B13 - Freezing out, ignoring or excluding (p-0.018 highest in black students), B17 - Shifting goal posts without telling you (p-0.05 highest in Indian students), B21 - Discrimination on racial or sexual grounds (p-0.0 highest in black students).

For bullying severity (number of groups bullying participants) white participants had a mean score of 2.56, indian 2.38, coloured 2.53 and black 2.83 which did not differ significantly (p-.63). For bullying frequency across all types of bullying, white respondents had a mean of 1.81, indian participants 1.89, coloured 1.80 and black respondents 2.11 which differed significantly (p-0.02). On the CORE-GP distress scale

white students had a mean score of 21.8, indian 24.6, coloured 22.8 and black participants 26.4 (which did not differ significantly: p-06).

Post-hoc analysis when the ANCOVA reached significance yielded 2 significant findings. In terms of the bullying scale, the black ethnic group had a significantly higher score in relation to their white counterparts, with a p-0.01 (confidence interval of 95%) and across the CORE-GP, black respondents showed higher levels of distress when compared to white respondents with a p-0.012 (confidence interval of 95%).

Associations between Bullying Severity/Frequency and Psychological Distress

With regard to correlations between the 3 outcome variables, a Pearson correlation score was applied. This revealed a positive association between the number of people who bullied the respondent (variable 1) and frequency of bullying experienced (variable 2) with a Pearson score of 0.58 ($p- < 0.01$) and a slightly less strong correlation with general distress having a Pearson score of 0.29 ($p- < 0.01$). There was also a strong correlation between the frequency of bullying (variable 2) and general distress (variable 3) with a Pearson score of 0.40 ($p- < 0.01$).

Thematic Analysis

The main themes to emerge were:

1) Negative emotions relating to demographic bullying with the participants reflecting on the strain it had taken on their mental health, “It has been years of depression” said one student.

2) Systemised bullying within specific departments which according to the student are repetitive and expected, although multiple departments where highlighted, ranging in numeracy from 1 student’s report (psychiatry) to several (0BGY/GYN) with one student noting “Gynaecology unreasonable department in all spheres”.

3) Feelings of academic pressure and fear associated to the bullying they have encountered. Students pointing to the hierarchical structure of medicine as a contributing factor, noting: “Clear hierarchical structure in medicine is extremely susceptible to abuse of power”.

4)They also reported feeling demeaned and verbally abused in situations which should have been learning experiences, this was especially distressing when done in front of patients as one student laid out: “Insulted on ward round around patients bed when you don’t know a differential diagnosis”.

Discussion:

This study found a high prevalence of reported bullying. Certain types of bullying were more commonly experienced by female and black students. Consultants and registrars were reported to bully students more frequently than nurses. Increased bullying frequency was significantly associated with higher levels of psychological distress. The main themes to emerge were 1) Negative emotions relating to demographic bullying, 2) Systemised bullying within specific departments which according to the student are repetitive and expected, and 3) Feelings of academic pressure and fear associated with the bullying they have encountered.

The prevalence of bullying in final year medical students was found to be high, with 86.8% of participants having experienced bullying in some form, 63.2% a few times or frequently. This is in keeping with international literature (Ahmer, 2008; Al-Shafaee, 2013), and speaks to a culture of bullying within the medical fraternity (Baldassin, 2008). Some might argue that perhaps the students are merely too soft or sensitive, however this argument would not account for the sheer number of people who reported such experiences in the past 12 months.

There were statistically significant differences within individual questions and types of bullying related to gender and ethnicity, both variables were analysed separately for the purposes of this study. Female students reported feeling excluded and ignored , as well as being discriminated against along gender and ethnic lines, at significantly higher rates than their male colleagues. Medicine as a whole, has historically been dominated by men, and although valiant attempts have been made to reform the profession in recent years, this research suggests the culture of female exclusion is still evident today (Cunniff & Mostert, 2012; Pietersen, 2007; Steinman, 2003).

When split along gender, 20% of the questions were significantly different, however, when ethnicity was factored in, this number rose to 50%. With significantly higher responses, ranging from destructive innuendo (B6) to being the butt of inappropriate jokes to shifting goal posts. A disturbing and undeniable trend emerged whereby black

students consistently reported higher rates of various types of bullying, often by large margins. This is a historically marginalised group, appearing to have a higher vulnerability to bullying and harassment. Overall, our research suggests that the type of bullying experienced is impacted by both gender and ethnicity, an area which should warrant further investigation and would necessitate investigation for opportunities of change in the clinical environment.

Consultants, registrars and nursing were perceived to be the most common bullies, which closely mirrors the power structures of most hospitals (Leisy and Ahmad, 2016). This is significant for two reasons, firstly it follows that power is closely linked to bullying, as those in power have the most influence and capacity to negatively impact a student's life. Consultants and registrars are often tasked with supervising student work and entrusted with the role of teacher and mentor, this, naturally, lends them a certain amount of power over their charges. The most common types of bullying reported were verbal, with high rates of belittlement and unjustified criticism. Criticism and learning can often go hand in hand, and one could argue that perhaps the students are misperceiving well meaning lessons, but unjust and needlessly harsh critiques and those who cross into undermining a student's personal integrity, and destructive innuendo are harder to defend, and make a case for a toxic learning environment and it is concerning that their direct supervisors are cited as their primary bullies. This study does not explore the impact of academic performance and achievement in subjects where the students have experienced bullying in relation to their average academic performance.

Given the above information, it may be expected that greater levels of psychological distress would be found in female and black participants. A statistically significant difference was indeed found in women, and the difference for black students approached statistical significance. This could be due to how often these students seem to be bullied, and the specific types of bullying they receive. This suggests that these groups are perhaps the most vulnerable to the impact of being bullied.

There is a direct correlation between the frequency of bullying and psychological distress. This study could not comment on causation, however, given international literature, it is not unlikely that a bidirectional relationship exists, with those with underlying psychological vulnerability being both more likely to experience bullying and be impacted more severely by it. Although there is a significant correlation between the frequency of experienced bullying and associated distress level, the number of groups of bullies does not correlate as strongly with experienced distress. This suggests that the frequency of bullying is more distressing to these students than the number of

groups who they may be bullied by. Given that the literature shows the experience of bullying is affected by previous exposure to trauma/victimisation, further research is required to explore how other factors, such as a participant's underlying psychological vulnerability and trauma, could contribute to experienced bullying prevalence.

Several common themes arose amongst those impacted by bullying.

Limitations

Several limitations of this work should be noted. First, given that the study only represents a single site in terms of data, this study was conducted at UCT medical school and as such may not be generalizable. Given the nature of data collection within an academic environment, convenience-sampling after tests was used, and may have impacted responses. Questions related to sexual orientation, body type, socioeconomic status and accent or other relevant variables were not gathered and presented an opportunity for future study. Previous trauma, psychiatric history, substance use or other factors which may contribute to an individual's experience of bullying were not gathered and beyond the scope of this study.

To address such limitations, further study may include the qualitative exploration of the episodes of bullying that have occurred, as well as past experiences by the students which may worsen their symptoms of distress. Sexual orientation as well as physical attributes were not included in the questions of the questionnaire, however did feature with the qualitative data as reasons for possible bullying.

Conclusion

This study suggests that the frequency of perceived bullying in South African medical students is consistent with rates reported in the literature. Bullying may follow the lines of medical hierarchies (with consultants most likely to be the bully as perceived by medical students). and further, social disparities seem to lead to increased bullying, (with female and black students more often targeted according to this study).Given the associated distress levels, specific interventions are required to reduce bullying in the clinical environment, improve the psychological wellbeing of medical students, and aim to foster a space of equality in the medical environment.

Further study is needed within the South African context, extending the scope to other universities and years of study may yield interesting results. This study did not delve

deeply into the qualitative data, and this may be expanded upon in future studies. The qualitative aspects of this study were primarily exploratory and not the focus.

Acknowledgments:

Thanks must be given to my supervisor Professor Dan Stein (University of Cape Town) who assisted with numerous suggestions, edits and who agreed to enthusiastically take on this sensitive subject. Mz. Megan Cambell, who initially began supervising this project until she unfortunately retired from the department, her willingness to support this project was invaluable. Lastly Dr. Nabeela Kajee who assisted with snacks and moral support when the author felt he couldn't possibly type another word.

References

1. Ahmer, S., Yousafzai, A., Bhutto, N., Alam, S., Sarangzai, A. K., et al. (2008). Bullying of Medical Students in Pakistan: A Cross-Sectional Questionnaire Survey. PLoS ONE 3(12), e3889. doi:10.1371/journal.pone.0003889

2. Al-Shafaee M, Al-Kaabi Y, Al-Farsi Y, White G, Al-Maniri A, Al-Sinawi H, et al. (2013). Pilot study on the prevalence of abuse and mistreatment during clinical internship: a cross-sectional study among first year residents in Oman. British Medical Journal Open, 3(2),1–7.

3. Alexandrino-Silva, C., Pereira, M. L. G., Bustamante, C., Ferraz, A. C. D. T., Baldassin, S., Andrade, A. G. D., & Alves, T. C. D. T. F. (2009). Suicidal ideation among students enrolled in healthcare training programs: a cross-sectional study. Revista Brasileira de Psiquiatria, 31(4), 338-344.

4. Baldassin, S., Alves, T. C. D. T. F., de Andrade, A. G., & Martins, L. A. N. (2008). The characteristics of depressive symptoms in medical students during medical education and training: a cross-sectional study. BMC medical education, 8(1), 60.

5. Baldwin, J. N., Scott, D. M., Agrawal, S., Bartek, J. K., Davis-Hall, R. E., Reardon, T. P., DeSimone, E. M. (2006) 2nd: Assessment of alcohol and other drug use behaviors in health professions students. Substance Abuse, 27, 27-37.

6. Becker, K. (2002). Both sides need help when bullying happens. British Medical Journal, 324,786.

7. Berk, R. (2009). Derogatory and cynical humour in clinical teaching and the workplace: The need for professionalism. Medical Education, 43, 7–9. doi:10.1111/j.1365-2923.2008.03239.x

8. Bernstein, C., & Trimm, L. (2016). The impact of workplace bullying on individual wellbeing: The moderating role of coping. South African Journal of Human Resource Management, 14(1), a792. http://dx.doi. org/10.4102/sajhrm. V14i1.792

9. Breier M, Wildschut A. (2006). Doctors in a divided society: the profession and education of medical practitioners in South Africa. HSRC Research Monograph. Cape Town: HSRC Press

10. Brooks, J.V., & Bosk, C. L. (2013). Bullying is a systems problem. Social Science & Medicine, 77, 11-12. http://dx.doi.org/10.1016/j.socscimed.2012.11.002.

11. Bezuidenhout, J., Cilliers, F., Van Heusden, M., Wasserman, E., & Burch, V. C. (2011). Alienation and engagement in postgraduate training at a South African medical school. Medical Teacher, 33(3), 145-153.

12. Cook, A. F., Arora, V. M., Rasinski, K. A., Curlin, F. A., & Yoon, J. D. (2014). The Prevalence of Medical Student Mistreatment and Its Association with Burnout. Academic Medicine : Journal of the Association of American Medical Colleges, 89(5), 749–754. http://doi.org/10.1097/ACM.0000000000000204

13. Cunniff, L., & Mostert, K. (2012). Prevalence of workplace bullying of South African employees. South African Journal of Human Resource Management, 10(1), 1–15. http://dx.doi.org/10.4102/sajhrm.v10i1.450

14. Dingle, F. (1999). Self-reported depression and suicide attempts among US women physicians. American Journal of Psychiatry, 156, 1887–1894.

15. Einarsen, S. (1999). The nature and causes of bullying at work. International Journal of Manpower, 20(1/2), 16–27.

16. Einarsen, S, & Raknes, B. I. (1997). Harassment in the workplace and the victimization of men. Violence and Victims. 12(3), 247-263.

17. Einarsen, S., & Skogstad, A. (1996). Bullying at work: Epidemiological findings in public and private organizations. European Journal of Work & Organizational Psychology, 5(2), 185.

18. Engelbrecht, N., Heyns, T. & Coetzee, I. M. (2017). South African undergraduate nursing students experience of intra-professional violence. Gender & Behaviour, (15)1, 8492-8508.

19. Escartin, J., Rodriquez-Carballeira, A., Zapf, D., Porrúa, C., & Martin-Peña, J. (2009). Perceived severity of various bullying behaviours at work and the

relevance of exposure to bullying. Work & Stress, 23(3), 191−205. http://dx.doi.org/10.1080./02678370903289639

20. Evans, C., Connell, J., Audin, K., Sinclair, A., & Barkham, M. (2005). Rationale and development of a general population well-being measure: Psychometric status of the GP-CORE in a student sample. British Journal of Guidance & Counselling, 33(2), 153–173. http://doi.org/10.1080/03069880500132581.

21. Farley, S., Coyne, I., Sprigg, C., Axtell, C., & Subramanian, G. (2015). Exploring the impact of workplace cyberbullying on trainee doctors. Medical Education, 49, 436–443.
22. Field, T. (2002). Bullying in medicine. British Medical Journal. 324 (7340), 786. doi:10.1136/bmj.324.7340.786/a

23. Heru. A., Gagne, G., & Strong, D. (2009). Medical student mistreatment results in symptoms of posttraumatic stress. Academic Psychiatry, 33(4), 302-6. doi: 10.1176/appi.ap.33.4.302

24. Hoosen, I., & Callaghan, R. (2004). A survey of workplace bullying of psychiatric trainees in the West Midlands. Psychiatric Bulletin, 28, 225-227. http://dx.doi.org/10.1192/pb.28.6.225

25. Hubert, A., & Van Veldhoven, M. (2001). Risk sectors for undesirable behaviour and mobbing. European Journal of Work and Organisational Psychology, 10, 415–24.

26. Jamali, A., Tofangchiha, S., Jamali, R., Nedjat, S., Jan, D., Narimani, A., & Montazeri, A. (2013). Medical students' health‐related quality of life: roles of social and behavioural factors. Medical education, 47(10), 1001-1012.

27. Kalamdien, D. J. (2013). The nature and prevalence of bullying behaviour in the Western Cape- A South African study. Unpublished Master’s thesis. Stellenbosch University: Stellenbosch

28. Kivimäki, M., Elovainio, M., & Vahtera, J. (2000). Workplace bullying and sickness absence in hospital staff. Occupational and Environmental Medicine, 57(10), 656-660.

29. Larsson, C., & Allebeck, P. (2003). Sexual and gender-related harassment in medical education and research training: results from a Swedish survey. Medical Education, 37, 39–50.

30. Leisy, H. B., & Ahmad, M. (2016). Altering workplace attitudes for resident education (A.W.A.R.E.): Discovering solutions for medical resident bullying through literature review. BMC Medical Education 16(1).

31. Levert, T., Lucas, M., & Ortlepp, K. (2000). Burn-out in psychiatric nurses: Contributions of the work environment and sense of coherence. South African Journal of Psychology, 30(2), 36−43.

32. London, L., Kalula, S., & Xaba, B. (2009). A survey of trainee specialists experiences at the University of Cape Town (UCT): Impacts of race and gender. BMC Medical Education, 11, 1-11. doi:10.1186/1472-6920-9-26.

33. McGuckin, C., Lewis, C.A., & Shevlin, M. (2001, May). The Impact of Workplace Bullying on the Self-esteem of Nurses. Paper presented at the 10th European Congress on Work and Organizational Psychology, Phara: Norway

34. National Mental Health Survey of Doctors and Medical Students (2013, October). Australia: Beyondblue. Retrieved August 01, 2017 from https://www.beyondblue.org.au/docs/default-source/research-project-files/bl1132-report---nmhdmss-full-report_web.pdf?sfvrsn = 2)

35. Noble, V. (2004). Life was always like a state of emergency: Black medical student experiences at the University of Natal Medical School, 1950–1990. Paper presented at: History and African Studies Seminar; 2004. http://scnc.ukzn.ac.za/doc/EDU/UnivColl/UKZN/Noble-V_Life_State_of_Emergency_Black_ medical_student_Medical_school.pdf. Accessed 29 Sep 2017.

36. Norton, P., Costa, V., Teixeira, J., Azevedo, A., Roma-Torres, A., et al. (2017). Prevalence and determinants of bullying among healthcare workers in Portugal. Workplace Health Safety, 65, 188-196.

37. ‘Old Boys Club’ of racist, sexist, bullies in SA hospitals. (2016, August, 3). Medical Brief. Retrieved from https://www.medicalbrief.co.za/archives/old-boys-club-racist-sexist-bullies-sa-hospitals/

38. Porteous, J. (2002). Bullying at work – The legal position. Managerial Law, 44(4), 77-90.

39. Pietersen, C. (2007). Interpersonal bullying behaviours in the workplace. South African Journal of Industrial Psychology, 33(1), 59–66. http://dx.doi.org/10.4102/sajip. V33i1.256

40. Quine, L. (2002). Workplace bullying in junior doctors: Questionnaire survey. British Medical Journal, 324 (7342), 878–879. ISSN 0959-8138. PMC 101400 . PMID 11950736. doi:10.1136/bmj.324.7342.878

41. Rayner, C. & Hoel, H. (1997). A summary review of literature relating to workplace bullying. Journal of Applied Social Psychology, 7,181-91.

42. Rees, C. E., & Monrouxe, L. V. (2011). "A Morning Since Eight of Just Pure Grill": A Multischool Qualitative Study of Student Abuse. Academic Medicine: Journal of the Association of American Medical Colleges, 86(11), 1374-1382. DOI: 10.1097/ACM.0b013e3182303c4c

43. Review demanded of SA junior doctors' working hours. (2016, June, 15). Medical Brief. Retrieved from https://www.medicalbrief.co.za/archives/review-needed-junior-doctor-working-hours/

44. Rotenstein, Lisa & Ramos, Marco & Torre, Matthew & Bradley Segal, J & Peluso, Michael & Guille, Constance & Sen, Srijan & Mata, Douglas. (2016). Prevalence of Depression, Depressive Symptoms, and Suicidal Ideation Among Medical Students: A Systematic Review and Meta-Analysis. JAMA. 316. 2214. 10.1001/jama.2016.17324.

45. Rugulies, R., Madsen, I.E., Hjarsbech, P.U., Hogh, A., Borg, V., Carneiro, I.G., et al. (2012). Bullying at work and onset of a major depressive episode among Danish female eldercare workers. Scandinavian Journal of Work, Environment and Health, 38(3), 218–227. http://dx.doi.org/10.5271/sjweh.3278

46. Rycroft, A. (2009). Workplace bullying: Unfair discrimination, dignity violence or unfair labour practice? Industrial Law Journal, 30, 1431-1450.

47. Shinsako, S. A., Richman, J. A., & Rospenda, K. M. (2001). Training-related harassment and drinking outcomes in medical residents versus graduate students. Substance Use Misuse, 36(14), 2043–63.

48. Steinman, S. (2003). Workplace Violence in the Health Sector: Country Case Study South Africa. Geneva: ILO/ICN/WHO/PSI.

49. Stevens, S. C. (2013). Surgeons' professional identity and patient safety: Time for change. Social Science & Medicine, 77(9)

50. Tepper, B. J. (2000). Consequences of abusive supervision. Academic Management Journal, 43(2), 178–90.

51. Thackwell, N., Swartz, L., Dlamini, S., Phahladira, L., Muloiwa, R., & Chiliza, B. (2016). Race trouble: experiences of Black medical specialist trainees in South Africa. BMC International Health and Human rights, 16(1), 31.

52. Vogel, L. (2016). Bullying still rife in medical training. Canadian Medical Association Journal, 188(5), 109-5237 DOI:10.1503/cmaj.

53. Wear, D., Aultman, J., Zarconi, J., & Varley, J. (2009). Derogatory and cynical humour directed towards patients: views of residents and attending doctors. Medical Education, 43, 34–41.

54. Wilkinson, T. J., Gill, D. J., Fitzjohn, J., Palmer, C. L., & Mulder, R. T. (2006). The impact on students of adverse experiences during medical school. Medical Teacher, 28(2),129–135

55. Wildschut, A., & Gouws, A. (2013). Male(volent) medicine: Tensions and contradictions in the gendered re/construction of the medical profession in South Africa. South African Review of Sociology, 44(2), 36–53. doi:10.1080/21528586.2013.802536.

56. Young, C., & Campbell, M. (2014) Student wellbeing at a university in post-apartheid South Africa: a comparison with a British university sample using the GP-CORE measure. British Journal of Guidance & Counselling, 42(4), 359-371, http://dx.doi.org/10.1080/03069885.2013.779638

57. Yach, D. (2011). Equality Impact Assessment report of the Student Experience: Stellenbosch University: Stellenbosch.