Burnout in Health Care Providers

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Many factors have been linked to burnout, such as demonstrating a lack of resiliency, being over worked, and under poor leadership. Social constructs, such as inter-professional collaboration, may impact the experience of burnout. This study fills a gap in the organizational psychology literature regarding methods of preventing burnout, considering these methods in relation to gender, ethnicity, health-training status, and years in service. Eighty-seven people from three categories of health-training status were surveyed using the Inter-professional Collaboration Scale and Maslach Burnout Inventory. Multiple regressions were computed to predict burnout. Findings are discussed in the context of relevant theories.

Keywords: burnout, physicians, nurses, inter-professional collaboration, career longevity, resiliency, ethnicity

INTRODUCTION

Burnout in health care has been thoroughly examined (Bruce, Conaglen, & Conaglen, 2005; Norgaard, Ammentorp, Kyvik, & Kofoed, 2012; Schaufeli, Leiter, & Maslach, 2009; Schaufeli, 2012). Interestingly, little research has been done on the longevity of years worked and how that influences burnout in the healthcare population. The few studies that do exist looked mostly at physicians and reported inconsistent results when compared to other studies (Goldberg et al., 1996; Popa et al., 2010). These studies examined years worked but did not consider the employees' entire careers. Longevity reported for burnout in other research was only seven years (Arora, Asha, Chinnappa, & Diwan, 2013; Goldberg et al., 1996; Popa et al., 2010). The present study attempted to examine burnout over a span of 21years or longer.

Ethnicity has not been studied extensively as a predictor for burnout; Maslach[8] mentioned that future research was needed on the topic. Dyrbye et al. (2007) indicated that ethnicity is a cause of distress for minorities in medical school; however, European American medical students reported higher levels of burnout. Another study, looking only at pediatric employees, showed no significant findings for gender or ethnicity (Jacobs, Nowaz, Hood, & Bae, 2012).

Burnout can affect the quality-of-life of medical care associates. Burnout that is caused by emotional exhaustion and depersonalization could be linked to employee turnover, absenteeism, inefficiency, psychological problems, or poor self-worth or self-efficacy (Bruce, Conaglen, & Conaglen, 2005; Serin & Balkan, 2014); Shanafelt et al., 2012; Shanafelt, Dyrbye, & West, 2017). Patient care is a big concern for psychologists when the medical workforce is so impacted by burnout (Green, Albanese, Shapiro, & Aarons, 2014). The phenomenon of burnout can be explained by the social cognitive theory, in which the perceptions of health care workers may be negatively impacted by their social environment and learned experiences early in their career (Bandura, 1977; Bandura, 2001). Depending on how these health care workers respond to this experience may indicate their level of resilience or burnout. This study aimed to predict burnout in physicians, nurses, and other patient care staff over a span of 21 years or longer, throughout different ethnic groups in health care.

METHODS

The participants were selected using purposeful sampling within a non-probability design (Breaugh, 2008). Only practicing physicians, nurses, and other patient care staff at the selected facility (a Southeastern USA medical center) were eligible to participate in the study. An approved email describing the details of the study with a link to participate through SurveyMonkey® was sent out to 700 employees targeting selected health training statuses such as physicians, nurses, and other patient care staff. A total of 87 participants took part in the survey; this study used a non-experimental survey design, ensuring 29 participants in each health-training category. Demographics were collected at the beginning of the survey.

The informed consent for the study took place online using SurveyMonkey®. Participants were given a short description of the study after clicking on the link provided in the email. After the description was read, participants knew why the study was being conducted, and they had the option to click on agree (consent to research) or disagree (do not consent to research). Following acceptance of the consent, the

participants were directed to the survey. Inclusion criteria were practicing physicians, nurses, and other patient care staff in general good health. Participants needed to be employed at the study site. Exclusion criteria were any other individuals who were not employed in the professions mentioned above. Members of this population suffering from mental or physical health issues that could influence their responses were ineligible to participate as well; this was indicated through self-report.

The quantitative outcome variable burnout was measured by the widely validated Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981). This measure has three levels consisting of Emotional Exhaustion (9 items; $\alpha T1 = 90$, and $\alpha T2 = \alpha T3 = .91$), Depersonalization (5 items; $\alpha T1 = .73$, $\alpha T2 = .77$, and $\alpha T3 = .78$), and Personal Achievement (McManus, Winder, & Gordon, 2002). The third level (personal achievement) has been removed because it did not fit within the scope of this study. The validity for this measure was found in the abbreviated version of the MBI (McManus, Winder, & Gordon, 2002). The number of items were reduced from 22 to six using the abbreviated version of the MBI with the two levels Emotional Exhaustion (3 items), and Depersonalization (3 items; McManus Winder, & Gordon, 2002; McManus, Smithers, Partridge, Keeling, & Fleming, 2003). It measured the responses on a 7-point Likert scale from 0 (never) to 6 (daily) on how they feel (Hakanen & Schaufeli, 2012; Maslach & Jackson, 1981; Maslach, Jackson, & Leiter, 1996). All survey questions were placed on the same page (page three) of survey. The psychometrics of the measure remained the same because his measure has been used in this format many times (Chang, Eddins-Folensbee, & Coverdale, 2012; Fortney, Luchterhand, Zakletskaia, Zgieraka, & Rakel, 2013; Hayes, Douglass, & Bonner, 2015). The results were analyzed using a standard multiple regression and a one-way ANOVA in (SPSS) version 22 (IBM Corp., 2013).

Sample size Calculation

A G-power analysis using a F-test linear regression fixed model determined the sample size (N=85) with a medium effect size set at .15, an alpha of .05, and power at 80%, using a total of four or more predictors to correctly identify the problem (Faul, Erdfelder, Lang, & Buchner, 2007; Faul, Erdfelder, Buchner, & Lang, 2009). To make sure there were an equal number of participants in each group, 87 participants were enrolled of the 700 participants that were recruited. This allowed for 29 participants in each health-training status group [practicing physicians (n=29), nurses (n=29), and other patient care staff (n=29), N=87].

RESULTS

The majority of our study's population consisted of females and European Americans. The distribution of participants' job is given in Table 1. Participants in the "other patient care staff" group held the following job titles sonographers, respiratory therapists, and patient care technicians.

Five predictors including years in service, ethnicity, gender, professional collaboration, and training status explained 14% of the variance [$R^2 = .193$, $F(5, 81) = 3.884$ p<.003]. Predictors of burnout are shown in Table 2. Only ethnicity and years in service variables reached statistical significance.

The ethnicity predictive effect was shown by ($\beta = -.288$, $t = -2.550$, p= .013), indicating European American participants had more burnout than other ethnic groups. Ethnicity predicted burnout with a large effect size and an observed power of .448.

The years in service predictive effect was shown by ($\beta = -.122$, $t = -2.857$, p= .005). The model shows that fewer years worked corresponded more with burnout. Years in service predicted burnout with a large effect size and an observed power of .525.

TABLE 1
CHARACTERISTICS OF COHORT

	N	%
Gender		
Male	30	34.48
Female	57	65.52
Ethnicity		
European Americans	72	82.67
Other	15	17.24
Training Status		
Physicians	29	33.33
Nurse	29	33.33
Other	29	33.33
Years in Service		
1-5 years	15	17.24
6-10 years	18	20.69
11-15 years	13	14.94
16-20 years	9	10.34
21 years or beyond	32	36.78

TABLE 2
ASSOCIATIONS BETWEEN BURNOUT AND SELECTED INFLUENTIAL FACTORS

	Unstandardized Coefficients		Standardized Coefficients		
Model	β	Std. Error	β	t	Sig.
1 (Constant)	2.551	.469		5.440	.000
Gender	.225	.155	.163	1.453	.150
Ethnicity	-.228	.089	-.257	-2.550	.013
Training Status	-.123	.089	-.153	-1.388	.169
Professional Collaboration	-.090	.125	-.075	-.718	.475
Years in Service	-.122	.043	-.288	-2.857	.005

Note: Dependent Variable: Burnout

Even though Table 2 shows that health training status is not a significant predictor of burnout, Table 3 indicates that there is a significant difference between the different health training statuses and burnout [$F(2, 84)= 4.965$, $p= .009$]. Figure 2 depicts that difference in relation to high burnout, which indicates nurses reported higher burnout than the other health training statuses.

TABLE 3
BURNOUT AND HEALTH TRAINING STATUS

Model	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.954	2	1.977	4.965	.009
Within Groups	33.448	84	.398		
Total	37.402	86			

Note: One way ANOVA

FIGURE 1
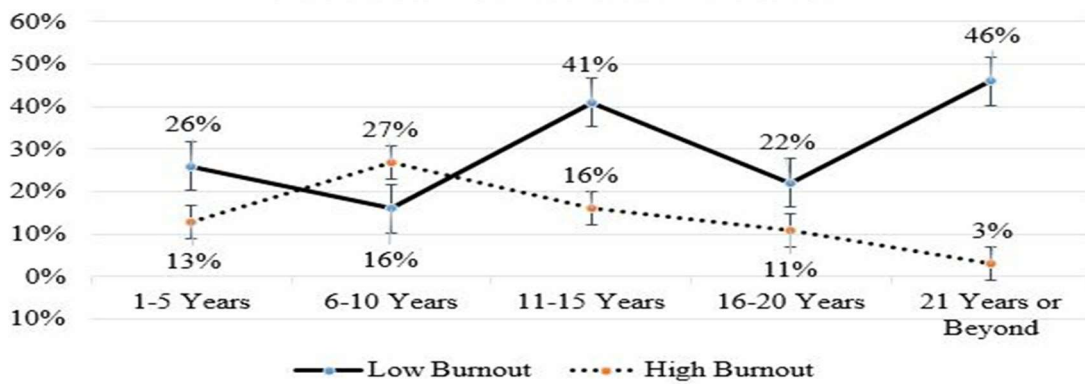**HIGHEST AMOUNT OF BURNOUT REPORTED IN TRAINING STATUS**
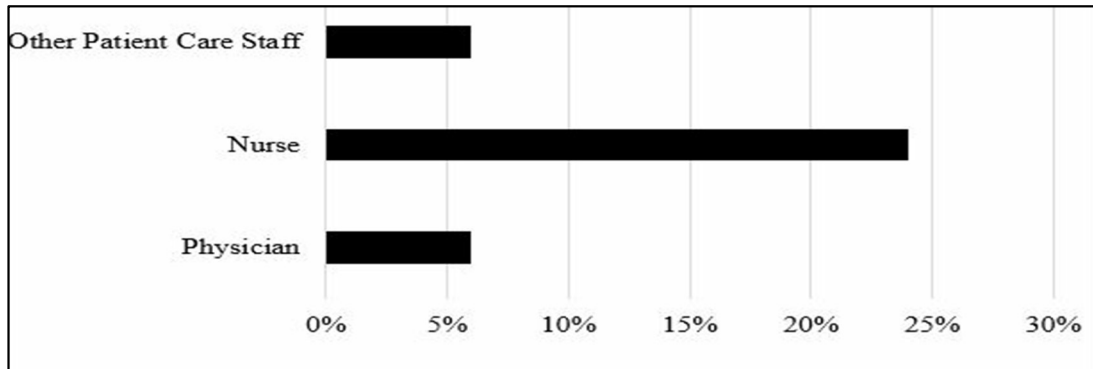
When all other predictor variables have been controlled, there is a significant relationship with years in service predicting burnout in practicing physicians, nurses, and other patient care staff. Figure 1 shows a combination of all three health training status's in each category of years in service. Figure 2 also shows that low burnout is more prevalent in those participants' who worked 21 years or longer and "high burnout" was reported to decline over the span of 21years.

Table 4 shows how each health training status responded to burnout at 21years or beyond. In Figure 1, nurses are shown to have the highest amount of burnout overall.

TABLE 4
HIGH AND LOW BURNOUT IN 21 YEARS OR BEYOND

	Percentage of Burnout in 21years or Beyond	
Health Training Status	High Burnout	Low Burnout
Physician	6%	31%
Nurse	6%	20%
Other Patient Care Staff	13%	37%

FIGURE 2
REPORTED BURNOUT IN YEARS WORKED

When all other predictor variables have been controlled, there is a significant relationship with ethnicity predicting burnout in practicing physicians, nurses, and other patient care staff. Figure 3 shows that European Americans reported elevated levels of higher burnout than minorities. Ethnicity did predict

burnout as shown in Table 2 (β= -.228, t= -2.550, p= .013), with an effect size of .157 and an observed power of .448.

FIGURE 3
ETHNICITY REPORTS OF HIGH BURNOUT

DISCUSSION

This study may have been the first study to find a link between the number of years worked and the amount of burnout this population feels on a daily bases. However, other studies suggest longevity on the job may reduce burnout (Śliwiński et al., 2014).

In this study, burnout was reported higher in employees who worked less than 21 years; herein, those employees who worked 21 years or beyond significantly reported lower burnout in all health-training statues. Nurses were shown to report the highest amount of burnout in this population. This supports other studies' findings of "young and energetic nurses," not having enough professional emotion in the work place, which may lead to negative feelings. Younger and less experienced employees may need more support. Other studies have suggested that social support could significantly improve the attitudes of health care employees (Wei, Ji, Li, & Zhang, 2017; Xie, Wang, & Chen, 2011; Dyrbye et al., 2007).

The ethnicity effect reported in this study was significant; however, the majority of the population was European Americans. Our findings are in agreement with previous research that states that European Americans indicate higher levels of burnout (Dyrbye et al., 2007).

This study sought to demonstrate how inter-professional collaboration (IPC) along with control variables such as gender, ethnicity, years in service, and health-training status could predict burnout in practicing physicians, nurses, and other patient care staff. IPC is a social construct that is derived from the social cognitive theory. It is used in effective communication especially among medical personnel (van den Eertwegh, van Dulmen, van Dalen, Scherpbier, & van der Vleuten, 2013; Fedesco, 2015). Other social constructs of the social cognitive theory need to be explored as possible predictors of burnout; the impact of learned experiences, a person's environment, and how people choose to respond to stressful situations have the potential to be directly linked to burnout.

This study had a few limitations. The instrument used to measure burnout was the abbreviated version from (McManus, Winder, & Gordon, 2002). The original version may have worked better for this population. The abbreviated version was used to help minimize the amount of questions asked. Another limitation is that the study did not compare different departments within the university, which may have revealed different levels of burnout within the different disciplines. A third limitation is that burnout could have been reported lower in those individuals who worked 21 years or longer because less resilient employees could have already left the medical field, meaning those employees who were less resilient quit their job many years prior. If this were the case, it would be difficult to make a determination if burnout was reported less with those employees who worked longer or if the lower resilient employees were just weeded out by this time; however, these findings do support other research in the field (Śliwiński et al.,

2014; Wei, Ji, Li, & Zhang, 2017; Xie, Wang, & Chen, 2011). The final limitation is that this research was done in a Southeastern university in the United States, and the results may not extrapolate to other areas of the world.

CONCLUSION

Together, the current findings show that European Americans employees in medical care are at a higher risk of burnout. Also, experienced health care employees have lower levels of burnout than those employees who have less experience in their field, suggesting the need for longitudinal assessment of resiliency and the development of interventions to improve resiliency traits in the health care system.

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