



January 2023

Burnout Syndrome Among Respiratory Therapists in Saudi Arabia

Waleed A. Asiri

King Faisal Specialist Hospital & Research Centre,, waleed.rt92@hotmail.com

Rachel Culbreth

Georgia State University, rculbreth@gsu.edu

Douglas S. Gardenhire

Georgia State University, dgardenhire@gsu.edu

Follow this and additional works at: <https://nsuworks.nova.edu/ijahsp>



Part of the [Medicine and Health Sciences Commons](#)

This Manuscript has supplementary content. View the full record on NSUWorks here:

<https://nsuworks.nova.edu/ijahsp/vol21/iss1/12>

Recommended Citation

Asiri WA, Culbreth R, Gardenhire DS. Burnout Syndrome Among Respiratory Therapists in Saudi Arabia. *The Internet Journal of Allied Health Sciences and Practice*. 2023 Jan 04;21(1), Article 12.

This Manuscript is brought to you for free and open access by the College of Health Care Sciences at NSUWorks. It has been accepted for inclusion in *Internet Journal of Allied Health Sciences and Practice* by an authorized editor of NSUWorks. For more information, please contact nsuworks@nova.edu.

Burnout Syndrome Among Respiratory Therapists in Saudi Arabia

Abstract

Background: Burnout (BO) is a consequence of chronic work-related stress exposure and impacts healthcare workers' performance, efficiency, and quality of care. **Purpose:** The study aimed to assess the BO among respiratory therapists (RTs) in Saudi Arabia and examine the association between BO and sociodemographic data and professional satisfaction. **Methods:** A cross-sectional study involving a convenience sample of RTs in Saudi Arabia was conducted utilizing the Maslach Burnout Inventory (MBI) in addition to questions regarding sociodemographic information and professional satisfaction. Three dimensions typify BO syndrome in the MBI questionnaire: emotional exhaustion, depersonalization, and low personal accomplishment. Statistical Package for the Social Sciences (SPSS) version 27.0 was used to analyse the data. To make comparisons between two continuous variables, independent samples t-tests were used. A one-way ANOVA test was used for factors with more than two categories. Two hundred thirty-six RTs (N=236) were surveyed in this study. The majority of the respondents were male n=130 (55.1%), single n=140 (59.3%), and lived in the central region n=136 (57.6%). The age of the participating RTs in the study ranged from 20 to 58 years, with an average of 28.5 years (SD±5.08). **Results:** The results showed that RTs had a high level of emotional exhaustion with a mean of 31.97, a moderate level for depersonalization with a mean of 11.39, and a moderate level for lack of personal accomplishment with a mean of 33.58. Age, gender, the role of the RTs, hours of work, and shift schedule of the participants were associated with BO. The workload was the most work factor among RTs associated with BO. Professional satisfaction of work-life balance, the current job, and monthly income were related to the burnout levels across the three subscales. **Conclusion:** This study was the first to explore BO by MBI and related factors among RTs in Saudi Arabia. Burnout seemed to be a common problem among RTs in Saudi Arabia and was associated with sociodemographic information and professional satisfaction. The findings may help to develop effective intervention strategies to limit and prevent BO. More prospective studies are required with a larger number of participants of RTs.

Author Bio(s)

Waleed A. Asiri, MScRT, BsRT, is a Respiratory Therapist at King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia.

Rachel Culbreth, PhD, MPH, RRT, is an Assistant Professor at Georgia State University, GA, USA.

Douglas S. Gardenhire, EdD, RRT-NPS, FAARC is a Chair and Clinical Professor, Governor's Teaching Fellow at Georgia State University, GA, USA.



The Internet Journal of Allied Health Sciences and Practice
Dedicated to allied health professional practice and education
Vol. 21 No. 1 ISSN 1540-580X

Burnout Syndrome Among Respiratory Therapists in Saudi Arabia

Waleed A. Asiri¹
Rachel Culbreth²
Douglas S. Gardenhire²

1. King Faisal Specialist Hospital and Research Centre
2. Georgia State University

Saudi Arabia and United States

ABSTRACT

Background: Burnout (BO) is a consequence of chronic work-related stress exposure and impacts healthcare workers' performance, efficiency, and quality of care. **Purpose:** The study aimed to assess the BO among respiratory therapists (RTs) in Saudi Arabia and examine the association between BO and sociodemographic data and professional satisfaction. **Methods:** A cross-sectional study involving a convenience sample of RTs in Saudi Arabia was conducted utilizing the Maslach Burnout Inventory (MBI) in addition to questions regarding sociodemographic information and professional satisfaction. Three dimensions typify BO syndrome in the MBI questionnaire: emotional exhaustion, depersonalization, and low personal accomplishment. Statistical Package for the Social Sciences (SPSS) version 27.0 was used to analyse the data. To make comparisons between two continuous variables, independent samples t-tests were used. A one-way ANOVA test was used for factors with more than two categories. Two hundred thirty-six RTs (N=236) were surveyed in this study. The majority of the respondents were male n=130 (55.1%), single n=140 (59.3%), and lived in the central region n=136 (57.6%). The age of the participating RTs in the study ranged from 20 to 58 years, with an average of 28.5 years (SD±5.08). **Results:** The results showed that RTs had a high level of emotional exhaustion with a mean of 31.97, a moderate level for depersonalization with a mean of 11.39, and a moderate level for lack of personal accomplishment with a mean of 33.58. Age, gender, the role of the RTs, hours of work, and shift schedule of the participants were associated with BO. The workload was the most work factor among RTs associated with BO. Professional satisfaction of work-life balance, the current job, and monthly income were related to the burnout levels across the three subscales. **Conclusion:** This study was the first to explore BO by MBI and related factors among RTs in Saudi Arabia. Burnout seemed to be a common problem among RTs in Saudi Arabia and was associated with sociodemographic information and professional satisfaction. The findings may help to develop effective intervention strategies to limit and prevent BO. More prospective studies are required with a larger number of participants of RTs.

Keywords: respiratory therapists, burnout

INTRODUCTION

Respiratory therapists (RTs) are healthcare professionals that provide care and treat patients who suffer from acute or chronic respiratory disease. Burnout (BO) is a condition that affects healthcare providers whose jobs need them to deal with continual demands and intense contact with people with significant physical and emotional requirements.¹ Burnout syndrome is defined as a "prolonged response to chronic emotional and interpersonal stressors on the job," and it was first classified in 1974 by Herbert Freudenberger, an American psychoanalyst. In 1981, BO was further described by Maslach and Jackson as having three primary elements consisting of emotional exhaustion, depersonalization, and lack of personal accomplishment. Emotional exhaustion is characterized by lack of emotional energy and absence of motivation because of heavy work demands. Emotional exhaustion leads to depersonalization that could develop into negative feelings and dehumanization toward the subjects. Lack of personal accomplishment is characterized by feeling less self-confidence, unproductivity, and dissatisfaction at work.²

Burnout is associated with many adverse outcomes, including decreased physical and psychological energy, relationship issues, poor judgment, cynicism, guilt, emotions of ineffectiveness, insomnia, headache, hypertension, anxiety, alcoholism, myocardial infarction, fatigue, and sadness.^{1,3} These adverse outcomes may lead to higher absenteeism and turnover rates, which have a detrimental impact on care quality and economic outcomes for employers.^{1,3} Burnout has also been linked with organizational factors, such as organizational commitment, work overload, working hours, inadequate pay, inadequate incentives, role conflict and ambiguity, poor career progression, a lack of justice, and lack of feedback. Individual factors associated with BO have included age, sex, marital status, work-home interference, demographic variables, personality characteristics, job satisfaction, job withdrawal, and lack of social support. These factors were linked to BO among healthcare professionals.⁴

Respiratory therapists assess, monitor, and handle different patient categories, including adult, pediatric, and neonate. The American Association for Respiratory Care determined responsibilities to cover care such as managing the airway and mechanical ventilators, providing patient education, and responding to emergency cases.⁵ Respiratory therapists are accessible in practically all healthcare settings, including but not limited to intensive care units, emergency rooms, operating rooms, sleep labs, and home care.⁶ Like any healthcare provider, the respiratory therapist is vulnerable to job stress that leads to BO. Burnout among critical care healthcare workers including medical doctors, nurses, and respiratory therapists in the United States was more than 50% and was considered the highest rate compared to other departments.⁷ A study was conducted in 2021 in the United States to assess BO and leadership dimensions among RTs.⁸ Burnout was indicated by 79% of respondents, with 10% having severe BO, 32% having moderate BO, and 37% having mild BO.⁸ During the COVID-19 epidemic, RTs specifically experienced a lot of BO.⁶ Burnout was linked with insufficient personnel, inability to finish tasks, and a BO environment, whereas good leadership was protective against BO.⁸

There remains a gap in knowledge on BO among Saudi Arabian RTs specifically, which comprise a large percentage of the RT global population. This cross-sectional study aims to approximate the BO among RTs in Saudi Arabia using a convenience sample. This study seeks to identify work factors, professional satisfaction, and sociodemographic variables most strongly associated with BO. The long-term goals of this research include informing the development of BO prevention strategies and wellness programs for RTs.

METHODS:

This cross-sectional study consisted of an electronic survey using Google Forms administered to a convenience sample that included RTs working either at public or private hospitals in Saudi Arabia. The survey was distributed in August 2021 through an online link on social media. The social media applications chosen were Twitter and WhatsApp. A reminder posting for Saudi RTs were chosen randomly to optimize the convenience sample. The participants were not compensated for this research. Twitter is an online microblogging service that allows users to send short messages to groups of people via computer or mobile phone. The survey was distributed by the primary investigator account through an online link on the Twitter™ app, which resulted in 107 retweets and 53 likes. Well-known RTs in Saudi Arabia also retweeted the study during the first week and the following week of distributing the survey. A total of 80 messages were sent by the primary investigator account to Saudi RTs through WhatsApp™. The Saudi RTs have been selected in WhatsApp™ groups chosen randomly. The Institutional Review Board approved this study (protocol number:H22039). The inclusion criteria incorporated all qualified and accredited RTs working or who worked in Saudi Arabia with a diploma, bachelor's, master's, or doctoral degree. According to the Saudi Commission for Health Specialties (SCFHS), the Saudi RTs are 2345 out of 3863 RTs in Saudi Arabia.⁹ In contrast, other health care providers, such as nurses and physicians, were excluded. Additionally, non-Saudi RTs, RT interns, and RT students were excluded.

The researchers used a 36-item survey consisting of the Maslach Burnout Inventory (MBI) questionnaire for Medical Personnel, which is the most commonly used self-assessment tool to determine the risk of BO. It was designed and structured by Maslach and Jackson.² The Maslach Burnout Inventory for Medical Personnel includes a seven-point Likert scale of 22 items self-reported (0=never, 6=every day), and is divided into three subscales that correlate to three dimensions that assess

the probable indications of BO: emotional exhaustion, depersonalization, and lack of personal accomplishment.² The permission and licenses were obtained from Mindgarden to use the copyrighted measure for this online study. Higher emotional exhaustion and depersonalization subscale scores indicate a higher degree of burnout.¹⁰ Lower personal accomplishment subscale scores signify a higher level of burnout.¹⁰ The range of scores of the Maslach Burnout Inventory (MBI) are displayed in Table 1.

Table 1: Maslach Burnout Inventory (MBI) scoring

Category	High	Moderate	Low
Emotional Exhaustion	27 or over	17-26	0-16
Depersonalization	13 or over	7-12	0-6
Personal Accomplishment	39 or over	32-38	0-31

*Ref: MBI third edition

The second part of the survey contained the work characteristics that were previously associated with BO and questions on professional satisfaction. The third part of the survey consisted of sociodemographic questions. Sociodemographic factors were divided as appropriate. For example, age was divided into two categories (20-30 years or above 30 years), and years of experience were classified into two categories (1-5 years or more than six years).

Statistical Package for the Social Sciences (SPSS) version 27.0, SPSS Inc. in Chicago, IL, was used to analyse the data. Descriptive analyses were conducted. For examining comparisons between two continuous variables, independent samples T-Tests were used to assess the relationship between each sociodemographic factor and the degree of BO. Additionally, a one-way ANOVA test was used for factors with more than two categories. Independent samples t-tests were also calculated to investigate the association between professional satisfaction and BO. Statistical significance was defined as a *p* value of less than 0.05. The assumptions for using t-test and ANOVA were normally distributed. Cronbach's alpha coefficient was calculated in this study. Cronbach's alpha is an essential concept in evaluating assessments and questionnaires.¹¹ To add validity and precision to the interpretation of their data, assessors and researchers would estimate this quantity.¹¹

RESULTS:

A total of 236 participants responded and successfully completed the survey. The majority of the respondents were male 55.1%, single 59.3%, and lived in the central region 57.6%. Significantly, more than three-quarters of participants had a bachelor-level respiratory therapy qualification, worked in critical care (ICU and ER), and worked 12 hours per day. More than half of the respondents worked their shift as an alternative between day and night during their monthly rotation. The sociodemographic characteristics of the participating RTs are summarized in Table 2.

Table 2: Sociodemographic characteristics of the study sample of RTs (n=236)

Sociodemographic Characteristics	n (%)	
Age (years)	Mean (\pm SD)	28.5 (\pm 5.08)
	Min/ Max	20/58
Gender	Male	130 (55.1%)
	Female	106 (44.9%)
Marital Status	Single	140 (59.3%)
	Married	96 (40.7%)
Region	Central Region	136 (57.6%)
	Eastern Region	40 (16.9%)
	Northern Region	7 (3.0%)
	Southern Region	20 (8.5%)
	Western Region	33 (14.0%)
Type of Hospital	Ministry of Health Hospital	116 (49.2%)
	Non-ministry	92 (39.0%)
	Private Hospital	28 (11.9%)
Educational Level	Diploma	13 (5.5%)
	Bachelor	188 (79.7%)
	Master	33 (14.0%)
	Doctoral	2 (0.8%)
Years of Experience (years)	Mean SD	4.22 (\pm 4.17)
	Min/ Max	1/26
	Administration	10 (4.2%)

Sociodemographic Characteristics		n (%)
Role	Education	18 (7.6%)
	Critical Care (ICU and ER)	187 (79.2%)
	Non-critical Care	10 (4.2%)
	Outpatient	4 (1.7%)
	Others	7 (3.0%)
Hours Per Day (hrs)	12 hrs	190 (80.5%)
	8 hrs	46 (19.5%)
Shift	Day	79 (33.6%)
	Night	21 (8.9%)
	Alternative	136 (57.6%)

The participants had a high level of emotional exhaustion with a mean of 31.97. Regarding depersonalization and lack of personal accomplishment, RTs had a moderate level with a mean of 11.39 and 33.58 respectively. More than half (68.2%) of the RTs scored higher than 27 for emotional exhaustion, and 42% scored higher than 13 for depersonalization. However, 36.9% of the RTs had low scores on lack of personal accomplishment less than 31. Additionally, the reliability coefficients (Cronbach's alpha) for the three subscales ranged from 0.64 to 0.87 in this study. Burnout among RTs in Saudi Arabia is demonstrated in Table 3.

Table 3: Burnout among RTs in Saudi Arabia (N=236)

Categorization	Mean	Cronbach's alpha	n (%)		
			High	Moderate	Low
Emotional Exhaustion	31.97	.87	161 (68.2%)	43 (18.2%)	32 (13.6%)
Depersonalization	11.39	.64	100 (42.4%)	74 (31.4%)	62 (26.3%)
Personal Accomplishment	33.58	.73	79 (33.5%)	70 (29.7%)	87 (36.9%)

The results of this study showed that age, gender, RTs' role, hours of work, and shift schedule had a significant association with burnout dimensions. Around 78.9% of the young RTs had a high depersonalization with a mean of 11.91 compared to older RTs with a mean of 9.46. Males had a higher depersonalization compared to females (12.15 vs. 10.47, respectively) ($p=0.017$). RTs who worked for 12 hrs. per day had a high depersonalization with a mean of 12.02 compared to those who worked 8-hour shifts (8.80, $p=0.008$).

Regarding emotional exhaustion, females had a higher emotional exhaustion (33.70) compared to males (30.56) ($p=0.050$). Similar to depersonalization, those who worked 12-hour shifts had a much higher emotional exhaustion (33.45) compared to those who worked 8-hour shifts (25.86). None of the personal accomplishment comparisons were statistically significant.

Table 4. The association of sociodemographic data with BO (n=236)

Sociodemographic Characteristic		N= 236 (%)	Emotional Exhaustion Mean (\pm SD)	Depersonalization Mean (\pm SD)	Personal Accomplishment Mean (\pm SD)
Age (years)	20-30	186 (78.9%)	32.67 (\pm 12.07)	11.91 (\pm 6.41)	33.52 (\pm 8.18)
	>31	50 (21.1%)	29.38 (\pm 12.63)	9.46 (\pm 6.48)	33.84 (\pm 8.09)
	T-test		$T= 1.69, p= 0.091$	$T= 2.40, p= 0.017^*$	$T= -0.24, p= 0.80$
Gender	Male	130 (55.1%)	30.56 (\pm 12.66)	12.15 (\pm 7.07)	32.69 (\pm 7.99)
	Female	106 (44.9%)	33.70 (\pm 11.53)	10.47 (\pm 5.58)	34.68 (\pm 8.23)
	T-test		$T=-1.97, p=0.050$	$T= 2.04, p= 0.042^*$	$T= -1.88, p= 0.061$
Marital Status	Single	140 (59.3%)	32.39 (\pm 12.36)	11.55 (\pm 6.50)	33.14 (\pm 8.59)
	Married	96 (40.7%)	31.37 (\pm 12.11)	11.17 (\pm 6.49)	34.23 (\pm 7.45)
	T-test		$T= 0.62, p= 0.53$	$T= 0.43, p= 0.66$	$T= -1.01, p= 0.31$
Years of Experience (years)	1-5	177 (75%)	31.39 (\pm 11.96)	11.38 (\pm 6.44)	33.58 (\pm 7.96)
	>6	59 (25%)	32.11 (\pm 13.17)	11.44 (\pm 6.68)	33.59 (\pm 8.75)
	T-test		$T= -0.10, p= 0.92$	$T= -0.05, p= 0.95$	$T= -0.00, p= 0.99$
Hours Per Day (hrs)	12 hrs	190 (80.5%)	33.45 (\pm 11.87)	12.02 (\pm 6.47)	33.51 (\pm 8.01)
	8 hrs	46 (19.5%)	25.86 (\pm 11.97)	8.80 (\pm 5.94)	33.91 (\pm 8.76)
	T-test		$T= 3.88, p=0.000^*$	$T= 3.07, p= 0.002^*$	$T= -0.30, p=0.76$

*Significant

Table 5. The association of sociodemographic data with BO (n=236)

Sociodemographic Characteristic		N= 236 (%)	Emotional Exhaustion Mean (\pm SD)	Depersonalization Mean (\pm SD)	Personal Accomplishment Mean (\pm SD)
Region	Central	136 (57.6%)	33.52 (\pm 11.59)	11.82 (\pm 6.56)	33.79 (\pm 8.20)
	Eastern	40 (16.9%)	30.57 (\pm 12.10)	11.27 (\pm 7.41)	33.42 (\pm 8.23)
	Northern	7 (3.0%)	33.00 (\pm 11.95)	13.42 (\pm 5.28)	36.14 (\pm 4.41)
	Southern	20 (8.5%)	29.10 (\pm 10.15)	10.95 (\pm 5.93)	35.95 (\pm 8.84)
	Western	33 (14.0%)	28.84 (\pm 14.25)	9.63 (\pm 5.41)	30.96 (\pm 7.67)
	ANOVA		$F= 1.51, p= 0.19$	$F= 0.95, p= 0.43$	$F= 1.48, p= 0.20$
Type of Hospital	MOH	116 (49.2%)	31.79 (\pm 12.22)	11.42 (\pm 6.17)	34.45 (\pm 8.17)
	Non-MOH	92 (39.0%)	32.60 (\pm 12.97)	11.46 (\pm 7.13)	32.60 (\pm 8.28)
	Private	28 (11.9%)	30.67 (\pm 9.93)	11.07 (\pm 5.72)	33.21 (\pm 7.41)
	ANOVA		$F= 0.29, p= 0.74$	$F= 0.04, p= 0.96$	$F= 1.35, p= 0.25$
Education Level	Diploma	13 (5.5%)	35.76 (\pm 14.60)	13.61 (\pm 7.79)	33.69 (\pm 12.15)
	Bachelor	188 (79.7%)	32.38 (\pm 11.86)	11.65 (\pm 6.32)	33.67 (\pm 7.78)
	Master	33 (14.0%)	29.12 (\pm 12.97)	9.48 (\pm 6.55)	32.66 (\pm 8.63)
	Doctoral	2 (0.8%)	16.50 (\pm 0.70)	4.00 (\pm 1.41)	40.50 (\pm 0.70)
	ANOVA		$F= 2.18, p= 0.09$	$F= 2.47, p= 0.06$	$F= 0.62, p= 0.60$
Role	Administration	10 (4.2%)	20.20 (\pm 13.75)	8.50 (\pm 6.39)	32.80 (\pm 14.05)
	Education	18 (7.6%)	27.27 (\pm 13.51)	11.55 (\pm 8.10)	29.38 (\pm 9.23)
	Critical Care	187 (79.2%)	36.00 (\pm 13.34)	13.25 (\pm 8.61)	32.00 (\pm 8.04)
	Non-critical	10 (4.2%)	28.40 (\pm 13.45)	13.40 (\pm 6.86)	33.60 (\pm 6.56)
	Outpatient	4 (1.7%)	33.33 (\pm 11.34)	11.42 (\pm 6.11)	34.09 (\pm 7.62)
	Others	7 (3.0%)	27.57 (\pm 17.58)	10.57 (\pm 10.48)	32.85 (\pm 9.87)
	ANOVA		$F= 3.44, p= 0.005^*$	$F= 0.67, p= 0.64$	$F= 1.16, p= 0.32$
Shift	Day	79 (33.6%)	29.45 (\pm 12.34)	10.34 (\pm 5.90)	31.96 (\pm 9.23)
	Night	21 (8.9%)	34.61 (\pm 10.65)	11.57 (\pm 5.26)	38.80 (\pm 5.66)
	Alternative	136 (57.6%)	33.03 (\pm 12.25)	11.98 (\pm 6.93)	33.72 (\pm 7.46)
	ANOVA		$F= 2.71, p= 0.06$	$F= 1.61, p= 0.20$	$F= 6.16, p= 0.002^*$

*: Significant, MOH: Ministry of Health

Sociodemographic data by BO domain is presented in Table 5. RTs who worked nightshift had a significantly higher personal accomplishment (38.80) compared to those who worked day shifts (31.96) and those who worked alternate shifts (33.72) ($p=0.002$). Additionally, those in critical care had a much higher depersonalization (36.00) compared to RTs working in other departments ($p=0.005$).

Almost half of RTs (45.8%) believed that "excessive workload and demands" was the greatest work characteristic factor associated with BO. Table 6 illustrates the work characteristic factors associated with BO among RTs.

Table 6: Work characteristic factors associated with BO among RTs. (n=236)

Work Characteristic	n (%)
Excessive workload and demands	108 (45.8%)
Conflict in values	16 (6.8%)
Lack of adequate reward	48 (20.3%)
Absence of positive communication	28 (11.9%)
Absence of fairness	25 (10.6%)
Insufficient control over the resources needed to complete tasks	11 (4.7%)

Professional satisfaction of work-life balance was statistically significantly associated with emotional exhaustion ($T=10.97$, $p<0.001$) and depersonalization ($T=5.67$, $p<0.001$). Those who reported work-life balance had a much lower emotional exhaustion and depersonalization mean compared to those who reported no work-life balance. Current job satisfaction was associated with all three dimensions of BO, such that current job satisfaction resulted in lower emotional exhaustion, depersonalization, and higher personal accomplishment compared to those reporting job dissatisfaction. Professional satisfaction of monthly income was related to emotional exhaustion, where those who were satisfied with monthly income reported lower emotional exhaustion (28.57) compared to those not satisfied with their monthly income (33.11) ($p=0.013$).

Approximately (63.6%) of the RTs were not satisfied with their work-life balance and had a high emotional exhaustion and depersonalization with a mean of 37.38 and 13.12 sequentially. More than half (53.8%) of the RTs were not satisfied with their current job and had a high emotional exhaustion with a mean of 37.22, a high of depersonalization with a mean of 13.29, and a low mean in lack of personal accomplishment with a mean of 31.97. There was a high prevalence percentage (75%) of the RTs unsatisfied with their monthly income and had high emotional exhaustion with a mean of 33.11. The association of professional satisfaction with BO among RTs is summarized in Table 7.

Table 7: The association of professional satisfaction with BO among RTs (N=236)

Professional Satisfaction		n= 236 (100%)	Emotional Exhaustion Mean (\pm SD)	Depersonalization Mean (\pm SD)	Personal Accomplishment Mean (\pm SD)
Work-life Balance	Yes	86 (36.4%)	22.55 (\pm 10.03)	8.38 (\pm 5.83)	33.95 (\pm 8.91)
	No	150 (63.6%)	37.38 (\pm 9.92)	13.12 (\pm 6.22)	33.38 (\pm 7.69)
	T-test		$T=10.97$, $P=0.000^*$	$T=5.67$, $P=0.000^*$	$T=-0.51$, $P=0.60$
Current Job	Yes	109 (46.2%)	25.87 (\pm 11.12)	9.19 (\pm 6.10)	35.46 (\pm 8.43)
	No	127 (53.8%)	37.22 (\pm 10.65)	13.29 (\pm 6.22)	31.97 (\pm 7.55)
	T-test		$T=7.99$, $P=0.000^*$	$T=5.08$, $P=0.000^*$	$T=-3.35$, $P=0.001^*$
Monthly Income	Yes	59 (25%)	28.57 (\pm 13.23)	11.23 (\pm 6.56)	34.66 (\pm 8.29)
	No	177 (75%)	33.11 (\pm 11.72)	11.45 (\pm 6.48)	33.66 (\pm 8.09)
	T-test		$T=2.49$, $P=0.013^*$	$T=0.22$, $P=0.82$	$T=-1.16$, $P=0.24$

*Significant

DISCUSSION:

The findings of this study revealed RTs in Saudi Arabia had a high emotional exhaustion level, a moderate level of depersonalization, and moderate levels of lack of personal accomplishment. This was consistent with a survey conducted in the United States among RTs that confirmed 79% of RTs reported BO, 10% with severe, 32% with moderate, and 37% with mild BO.⁸ The results of this study were consistent with multiple studies in different countries that confirmed BO was prevalent among critical care healthcare professionals at a rate of more than 50%, the highest incidence compared to other departments.⁷ Furthermore, very few research studies on BO among healthcare professionals exist among individuals living in Saudi Arabia.¹²

Around 68.2% of the RTs scored high for emotional exhaustion, and 42% for depersonalization. These findings were compatible with a study of critical care nurses that found emotional exhaustion was 73%, and depersonalization 48%. Respiratory therapists had low scores on lack of personal accomplishment, about 36.9%. In contrast, critical care nurses had a high percentage of lack of personal accomplishment, approximately 60%.⁷

Units with a negative work environment may cause a "contagion impact" among their staff.⁷ The demand for nighttime ICU staffing and the relative lack of critical care physicians have raised awareness and acknowledgment of burnout among doctors.⁷ For these causes of work environment and overnight ICU coverage, RTs in this study felt burned out.

The reliability coefficients (Cronbach's alpha) for the three subscales ranged from 0.64 to 0.87 in this study. The reliability coefficients in the current study were similar to those in previous work. Previous research reported MBI Cronbach's alpha values that ranged from .71 to .90 in a study of 1316 respondents.¹⁰ This slight discrepancy is likely due to the difference in the number of survey respondents.

The results of this study showed that age, gender, RTs' role, hours of work, and shift schedule had a significant association with burnout dimensions. This research confirmed that younger RTs had a high mean of depersonalization compared with older RTs. Six studies of healthcare providers in critical care indicated that young age was a risk factor for burnout.¹³

Pooled analyses conducted in multiple types of research have shown that age was inversely related to burnout, which is consistent with the results discovered in the current study.¹³ It is believed that younger people may be more susceptible to job burnout.¹² Healthcare providers with less seniority may still be known to cope with high workload needs when faced with stressors, leading to burnout in younger healthcare providers.¹³

The study showed that male RTs had a high mean of depersonalization compared to female RTs. A study found that male physicians had a high mean of depersonalization.¹⁴ These results reflect that gender was a risk for burnout among ICU staff in four cross-sectional studies.¹³ Gender may be expected to be associated with burnout. Stressors at work and away from it are exposed to men and women differently. Work-related stresses such as family conflicts and non-work-related stressors also cause working men and women to behave differently. Depending on how different people are exposed to resources and restrictions, the link between gender and burnout may be varied.¹⁵

Respiratory therapists who worked for 12 hours per day had a high mean of emotional exhaustion and depersonalization compared to the RTs who worked for 8 hrs. per day. Many working hours were linked to burnout in two studies.¹³ The findings emphasized that RTs had a significant association of work schedule with BO. A work schedule was the most frequently linked BO cause.¹⁶

Respiratory therapists who worked in critical care areas had a high mean of emotional exhaustion contrasted to the RTs who worked in administration. These results explain that healthcare workers who work in ICUs and ER express high levels of BO.¹⁷

In the context of this study, almost half of the RTs believed that "excessive workload and demands" was the strongest factor associated with BO. The excessive workload for the RTs in Saudi Arabia was due to shortages in the market.¹⁸ These results agreed with a study on nursing in China experiencing BO due to a severe nursing shortage and a rise in stressful workload.¹⁹

According to the data obtained from the results, the RTs were not satisfied with their work-life balance which was linked to high emotional exhaustion and depersonalization. The RTs were not satisfied with their current job which was highly associated with all three dimensions of burnout. The RTs unsatisfied with their monthly income was related to high emotional exhaustion.

Sixty-four percent of RTs were not satisfied with their work-life balance, and there was a significant association with a high mean of emotional exhaustion and depersonalization. These results are similar to Shanafelt et al, who found that physicians were more likely than the general population to be unsatisfied with their work-life balance.²⁰ More than half of the RTs were not satisfied with their current job and considerably associated with all three dimensions of burnout. This association was comparable with a study that confirmed the relationship of job satisfaction with emotional exhaustion, depersonalization, and lack of personal accomplishment.²¹ The results showed a high rate of 75% of the RTs unsatisfied with their monthly income and associated considerably with a high mean of emotional exhaustion. These results matched a study that found less satisfied workers with their pay report a higher degree of emotional exhaustion.²²

Limitations

While this study has important strengths, several limitations exist. A convenience sample consisting of social media responses is a limitation of this study. While social media can be used to recruit, social media respondents may not be representative of the larger RT population in Saudi Arabia. Future studies should replicate this study using a more reliable sampling frame. Future qualitative studies may also be warranted to understand better how organizations and the profession may address the high levels of burnout. The questionnaire also consisted of self-report data, which is subject to recall bias. Finally, this study did not assess COVID-19 factors associated explicitly with BO, which may be a significant driver of BO among Saudi Arabian RTs in the current healthcare climate.

CONCLUSION:

To our knowledge, this is the first study to investigate the BO, identify the work factors associated with BO, and examine the association between BO with sociodemographic data and professional satisfaction among RTs in Saudi Arabia utilizing the Maslach Burnout Inventory survey. Overall, the study findings revealed that RTs had a high mean level of emotional exhaustion with a moderate mean level of depersonalization and a lack of personal accomplishment. "Excessive workload and demands" was the most frequently chosen work distinguishing factor among RTs associated with BO. Additionally, the association of BO with sociodemographic data and professional satisfaction was addressed. Future researchers will better understand the incidence of BO among Saudi Arabian RTs, which will aid in the development of BO prevention measures and wellness programs for RTs. This study adds to the limited body of knowledge about the prevalence of BO among RTs. Finally, this study may raise awareness of the necessity for organizations to offer education and policy to assist RTs in avoiding BO.

REFERENCES:

- Balch, C. M., Freischlag, J. A., & Shanafelt, T. D. (2009). Stress and burnout among surgeons: understanding and managing the syndrome and avoiding the adverse consequences. *Archives of Surgery (Chicago, Ill. : 1960)*, 144(4), 371–376. <https://doi.org/10.1001/archsurg.2008.575>
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Mudallal, R. H., Othman, W. M., & Al Hassan, N. F. (2017). Nurses' Burnout: The Influence of Leader Empowering Behaviors, Work Conditions, and Demographic Traits. *Inquiry : A Journal of Medical Care Organization, Provision and Financing*, 54, 46958017724944. <https://doi.org/10.1177/0046958017724944>
- Aldrees, T. M., Aleissa, S., Zamakhshary, M., Badri, M., & Sadat-Ali, M. (2013). Physician well-being: prevalence of burnout and associated risk factors in a tertiary hospital, Riyadh, Saudi Arabia. *Annals of Saudi Medicine*, 33(5), 451–456. <https://doi.org/10.5144/0256-4947.2013.451>
- American Association for Respiratory Care. (n.d.-a). *What Is An RT?* <https://www.aarc.org/careers/what-is-an-rt/>
- American Association for Respiratory Care. (n.d.). *WHERE RTs WORK.* <https://be-an-rt.org/what-is-respiratory-therapy/where-rt-work/>
- Moss, M., Good, V. S., Gozal, D., Kleinpell, R., & Sessler, C. N. (2016). An Official Critical Care Societies Collaborative Statement-Burnout Syndrome in Critical Care Health-care Professionals: A Call for Action. *Chest*, 150(1), 17–26. <https://doi.org/10.1016/j.chest.2016.02.649>
- Miller, A. G., Roberts, K. J., Hinkson, C. R., Davis, G., Strickland, S. L., & Rehder, K. J. (2021). Resilience and Burnout Resources in Respiratory Care Departments. *Respiratory Care*, 66(5), 715–723. <https://doi.org/10.4187/respcare.08440>
- Practitioner: Saudi Commission for health specialties.* Practitioner | Saudi Commission for Health Specialties. (n.d.). Retrieved August 31, 2022, from <https://scfhs.org.sa/en/practitioner>
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach Burnout Inventory Manual* (3rd ed.). Mountain View, CA: CPP, Inc.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Al-Omari, A., Alhuqbani, W. N., Zaidi, A., Al-Subaie, M. F., AlHindi, A. M., Abogosh, A. K., Alrasheed, A. K., Alsharafi, A. A., Alhuqbani, M. N., Salih, S., Alhedaithy, M. A., Abdulqawi, R., Ismail, A. F., Alhumaid, S., Hamdan, N., Saad, F., Olhaye, F. A., Eltahir, T. A., Alomari, M., Alshehery, M., ... Al Mutair, A. (2020). Clinical characteristics of non-intensive care unit COVID-19 patients in Saudi Arabia: A descriptive cross-sectional study. *Journal of Infection and Public Health*, 13(11), 1639–1644. <https://doi.org/10.1016/j.jiph.2020.09.003>
- Chuang, C. H., Tseng, P. C., Lin, C. Y., Lin, K. H., & Chen, Y. Y. (2016). Burnout in the intensive care unit professionals: A systematic review. *Medicine*, 95(50), e5629. <https://doi.org/10.1097/MD.0000000000005629>
- Raggio, B., & Malacarne, P. (2007). Burnout in intensive care unit. *Minerva anestesologica*, 73(4), 195–200.
- Marchand, A., Blanc, M. E., & Beaugard, N. (2018). Do age and gender contribute to workers' burnout symptoms?. *Occupational Medicine (Oxford, England)*, 68(6), 405–411. <https://doi.org/10.1093/occmed/kqy088>
- Sanfilippo, F., Noto, A., Foresta, G., Santonocito, C., Palumbo, G. J., Arcadipane, A., Maybauer, D. M., & Maybauer, M. O. (2017). Incidence and Factors Associated with Burnout in Anesthesiology: A Systematic Review. *BioMed Research International*, 2017, 8648925. <https://doi.org/10.1155/2017/8648925>
- Poncet, M. C., Toullic, P., Papazian, L., Kentish-Barnes, N., Timsit, J. F., Pochard, F., Chevret, S., Schlemmer, B., & Azoulay, E. (2007). Burnout syndrome in critical care nursing staff. *American Journal of Respiratory and Critical Care Medicine*, 175(7), 698–704. <https://doi.org/10.1164/rccm.200606-806OC>
- Alotaibi G. (2015). Status of respiratory care profession in Saudi Arabia: A national survey. *Annals of Thoracic Medicine*, 10(1), 55–60. <https://doi.org/10.4103/1817-1737.146878>
- Li, X., Guan, L., Chang, H., & Zhang, B. (2014). Core self-evaluation and burnout among Nurses: the mediating role of coping styles. *PLoS One*, 9(12), e115799. <https://doi.org/10.1371/journal.pone.0115799>

-
20. Shanafelt, T. D., Boone, S., Tan, L., Dyrbye, L. N., Sotile, W., Satele, D., West, C. P., Sloan, J., & Oreskovich, M. R. (2012). Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Archives of Internal Medicine*, 172(18), 1377–1385. <https://doi.org/10.1001/archinternmed.2012.3199>
 21. Piko B. F. (2006). Burnout, role conflict, job satisfaction and psychosocial health among Hungarian health care staff: a questionnaire survey. *International Journal of Nursing Studies*, 43(3), 311–318. <https://doi.org/10.1016/j.ijnurstu.2005.05.003>
 22. Ogrستا, J., Rusac, S., & Zorec, L. (2008). Relation between burnout syndrome and job satisfaction among mental health workers. *Croatian Medical Journal*, 49(3), 364–374. <https://doi.org/10.3325/cmj.2008.3.364>
-