

# Exploring QU Health Students' Experiences of Burnout, Anxiety and Empathy during the COVID-19 Pandemic: A Mixed Method Study

Ruba Sulaiman<sup>1</sup>, Sara Ismail<sup>1</sup>, Maguy ElHajj<sup>1</sup>, Mujahed Shraim<sup>2</sup>, Tanya Kane<sup>3</sup>, Alla El-Awaisi<sup>1\*</sup>

<sup>1</sup>College of Pharmacy (CPH), Qatar University, Doha, Qatar; \*Principal Investigator

<sup>2</sup>College of Health Sciences (CHS), Qatar University, Doha, Qatar, <sup>3</sup>College of Medicine (CMED), Qatar University, Doha, Qatar

## Background

- Student burnout is defined as "feeling exhausted because of study demands, having a cynical and detached attitude toward one's study, and feeling incompetent as a student"
- Burnout is a growing concern amongst healthcare students, and it has many impacts on their mental health due to the high demands of the medical and health education
- Multiple studies reported positive association between anxiety symptoms and emotional exhaustion and cynicism subscales
- The use of coping strategies decreases the burnout and promotes resilience
- Due to the COVID-19 outbreak, Qatar University halted all classes and shifted to online delivery which may have contributed to increasing the risk of burnout and declining of academic performance

## Objectives

- To assess and describe burnout amongst QU Health students during the COVID-19 pandemic
- To assess the relationship between burnout and anxiety with empathy amongst QU Health students
- To determine the coping strategies of QU Health students during COVID-19 pandemic

## Methods

<b>Design</b>	<ul style="list-style-type: none"> <li>Convergent mixed-methods study</li> </ul>
<b>Participants &amp; Sampling</b>	<ul style="list-style-type: none"> <li>Inclusion: QU Health students (n=1268)</li> <li>Exclusion: Students enrolled in fall 2020</li> <li>Sampling: Population sampling</li> </ul>
<b>Setting and Data Collection</b>	<ul style="list-style-type: none"> <li>Settings: Qatar University</li> <li>Self-administered online survey that included 6 sections, including: Maslach Burnout Inventory-General Students Survey (MBI-GS(S)), Interpersonal Reactivity Index (IRI), Generalized Anxiety Disorders 7-item scale (GAD-7)</li> <li>Focus groups were conducted virtually, audio-recorded and transcribed and used the coping reserve model as a framework for data collection and analysis</li> </ul>
<b>Data Analysis</b>	<ul style="list-style-type: none"> <li>Quantitative Data: Descriptive statistics and multivariate regression analysis</li> <li>Qualitative Data: Deductive thematic analysis</li> </ul>
<b>Ethics Approval</b>	<ul style="list-style-type: none"> <li>Qatar University Institutional Review Board (QU-IRB)</li> </ul>

## Results

- 272 recorded responses for the survey which accounts for 21.45% response rate and participants characteristics are shown in **table 1**
- MBI subscales were assessed individually against GAD-7 statuses (as shown in **table 2**) and against IRI for association with each
- Figures 1 and 2** represent responses from the students in regards their courses/semester status and their concern about COVID-19 infection, respectively
- 8 focus groups were conducted with 3-10 students each, thematic analysis was mapped out based on the coping reserve model as shown in **Figure 3**

## Results...continued

**Table 1. Participant characteristics**

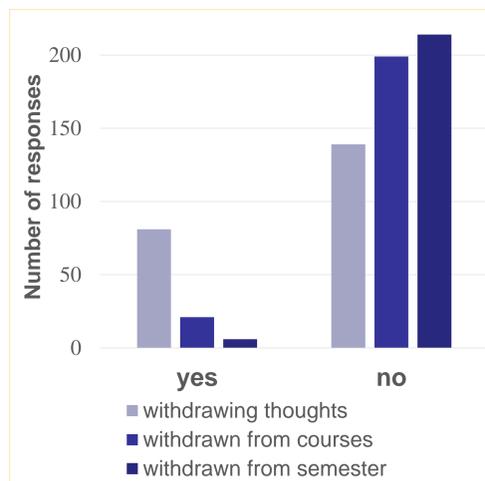
Variable	Mean (SD)	Frequency (%)
<b>Age</b>	21.4 (3.1)	
<b>Gender</b>		
Male		20 (7.4)
Female		252 (92.6)
<b>Nationality</b>		
Qatari		78 (28.7)
Non-Qatari		194 (71.3)
<b>Program</b>		
Biomedical		27 (9.9)
Dental medicine		12 (4.4)
General health sciences		16 (5.9)
Medicine		67 (24.6)
Nutrition		23 (8.5)
Pharmacy		99 (36.4)
Physical therapy		8 (2.9)
Public health		20 (7.4)
<b>Level</b>		
Undergraduate		241 (88.6)
Graduate		31 (11.4)
<b>Year of study</b>		
Year 1		95 (34.9)
Year 2		63 (23.2)
Year 3		48 (17.6)
Year 4		33 (12.1)
Year 5		22 (8.1)
Year 6		11 (4.0)

**Table 2. The association between GAD-7 status and each MBI-GS (S) subscales**

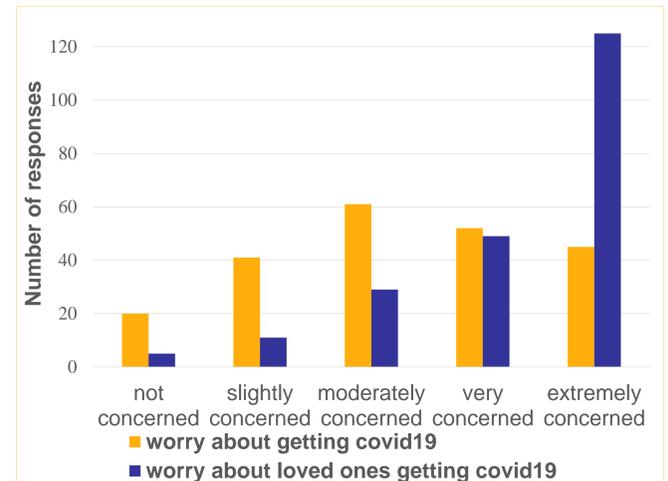
Variable	B	SE	Odds ratio (95%CI)	P-value
<b>GAD-7 Status and MBI-exhaustion</b>				
GAD severity	Ref			
Minimal	0.813	0.25	2.26 (1.38, 3.68)	0.001*
Mild	1.12	0.27	3.08 (1.81, 5.23)	<0.001*
Moderate	1.66	0.28	5.25 (3.04, 9.07)	<0.001*
Severe				
<b>GAD-7 Status and MBI-cynicism</b>				
GAD severity	Ref			
Minimal	0.43	0.26	1.54 (0.93, 2.55)	0.092
Mild	0.56	0.28	1.76 (1.01, 3.04)	0.045*
Moderate	1.10	0.29	3.01 (1.71, 5.31)	<0.001*
Severe				
<b>GAD-7 Status and MBI-professional efficacy</b>				
GAD severity	Ref			
Minimal	-0.24	0.24	0.79 (0.52, 1.21)	0.279
Mild	-0.72	0.23	0.49 (0.31, 0.77)	0.002*
Moderate	-0.36	0.22	0.70 (0.43, 1.12)	0.134
Severe				

B = regression coefficient, SE = standard error, CI = confidence interval, GAD = generalized anxiety disorder

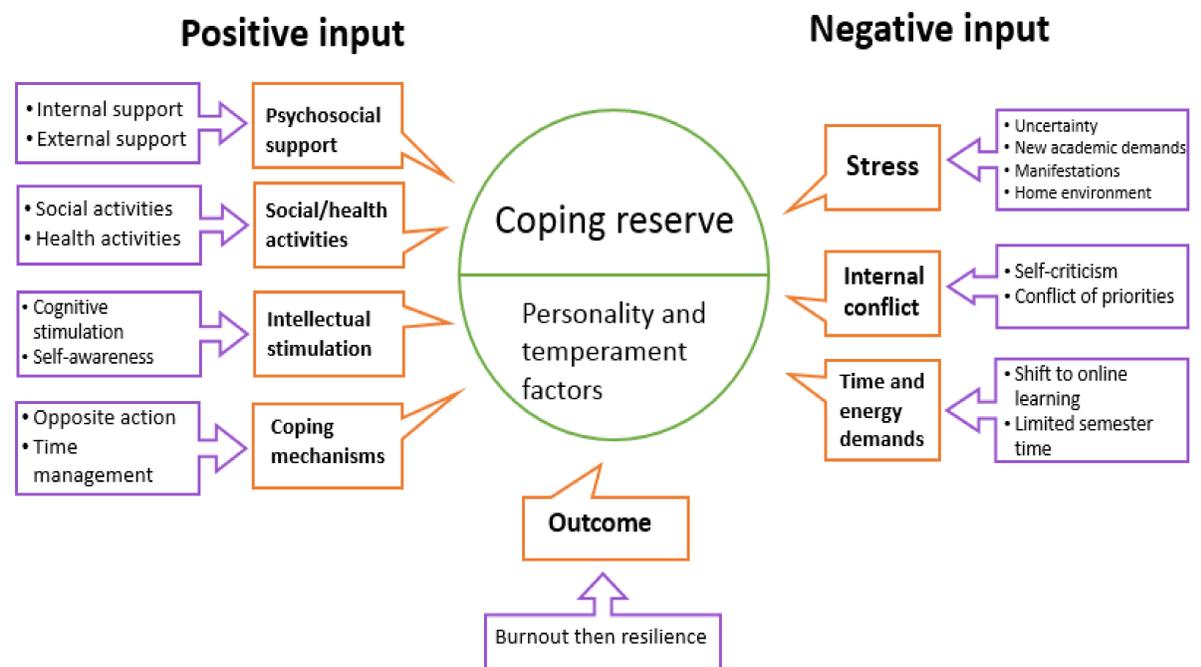
MBI=Maslach Burnout Inventory



**Figure 1. Students withdrawal status in spring 2020**



**Figure 2. Concerns of COVID-19 infection**



**Figure 3. Thematic analysis using the coping reserve model**

## Conclusion

- Anxiety is a strong predictor of burnout as higher anxiety levels was associated with higher burnout levels. Additionally, Burnout was associated with some of the IRI subscales
- Most prominent themes extracted from focus group discussions were uncertainty, manifestations of stress, and the shift to online learning
- Students used different coping strategies to adapt with the pandemic and build resilience
- Recommended actions: mentorship program, provision of training on online learning delivery
- Limitations: Small response rate and the survey length
- Recommendation for future research: future research investigating burnout on non-healthcare students, university faculty members, and investigating the effect of students' burnout on professionalism

## Acknowledgment

We would like to thank all students who have participated in this study and all the faculty who provided their constructive feedback on the survey: Ms. Myriam Eljaam, Ms. Layan Sukik, Dr. Monica Zolezzi, Ms. Reem EL Hage, Dr. Lily O'Hara, and Ms. Sawsan AlMukdad