

## البحث (١٤)

### *Perfectionism, Burnout, and Perceived Self-Efficacy among Physicians in Kuwait*

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## ***Perfectionism, Burnout, and Perceived Self-Efficacy among Physicians in Kuwait<sup>1</sup>***

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### **Abstract**

*Objective: The study aimed to examine the relationships between perfectionism, burnout, and perceived self-efficacy among physicians in Kuwait. Method: A descriptive approach design was used. A convenience sample of physicians (N=364, age ranged 23-60, M=38.75, SD=7.28) responded to an online survey. Three measures were administered: Short Almost Perfect Scale (SAPS), Maslach Burnout Inventory (MBI-HSS (MP)), and General Self-Efficacy Scale (GSE). Results: Results indicated that most participants (60.4%) were maladaptive perfectionists, while 36.5% were adaptive perfectionists. Moreover, physicians displayed a moderate level of burnout and a moderate to high level of self-efficacy. Maladaptive perfectionism was positively associated with burnout while negatively associated with self-efficacy. However, burnout was negatively associated with self-efficacy. Furthermore, there was a significant relationship between age and self-efficacy ( $p < .01$ ) among older practitioners. The study revealed statistically significant differences in Personal Accomplishment (PA) between Kuwaitis and non-Kuwaitis for non-Kuwaitis and significant*

<sup>1</sup> The data showcased in this paper originates from the master's thesis of the lead author.

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*differences in Depersonalization (DP) between the marital status group, Single and Married participants were higher in DP than (Divorced/Widowed) people. Significant differences in self-efficacy were found between the monthly income group in favor of the higher income. Finally, no significant differences were found in the study variables due to gender and years of experience. Conclusions: Perfectionists can develop adaptive or maladaptive mechanisms to deal with stressors; therefore, understanding these mechanisms may help identify the groups most at risk of burnout by determining the contribution of perceived self-efficacy to manage stressful situations effectively.*

**Keywords:** *perfectionism, burnout, perceived self-efficacy, physicians.*

## الكفاءة والاحترق الوظيفي والكفاءة الذاتية المدركة بين الأطباء في الكويت

### • الملخص:

هدف الدراسة: هدفت الدراسة الحالية إلى التعرف على العلاقة بين الكفاءة، والاحترق الوظيفي، والفاعلية الذاتية المدركة بين الأطباء في الكويت خلال فترة كورونا. المنهج: اعتمدت الدراسة على المنهج الوصفي. وطُبقت استبانة إلكترونية على عينة ملائمة من الأطباء (ن = ٣٦٤، تراوحت أعمارهم بين ٢٣ - ٦٠ عامًا، م = ٣٨.٧٥، ع = ٧.٢٨). شملت الاستبانة ثلاثة مقياس: مقياس السعي نحو الكمال المختصر (SAPS)، مقياس الاحترق النفسي (MBI-HSS (MP))، ومقياس الفاعلية الذاتية العام (GSE). النتائج: أشارت النتائج إلى أن الغالبية العظمى من المشاركين (٦٠.٤٪) اتصفوا بالكفاءة غير التكيفية، بينما اتصف ٣٦.٠٪ من أفراد العينة بالكفاءة التكيفية. علاوة على ذلك، أظهر الأطباء مستوى معتدلاً من الاحترق الوظيفي ومستوى متوسط إلى مرتفع من الفاعلية الذاتية. ارتبطت الكفاءة غير التكيفية إيجابياً مع الاحترق الوظيفي، بينما ارتبطت سلباً بالفاعلية الذاتية. كما ارتبط الاحترق الوظيفي سلباً بالفاعلية الذاتية، واتضح وجود علاقة ذات دلالة إحصائية بين العمر والفاعلية الذاتية للممارسين الأكبر سناً ( $p < .01$ ). كشفت الدراسة عن وجود فروق جوهرية في تدني الإنجاز الشخصي بين الكويتيين وغير الكويتيين باتجاه غير الكويتيين، وفروق في تبدل العلاقات للحالة الاجتماعية، حيث كان الأعزب والمتزوج أعلى في ابلد العلاقات من (المطلق/الأرمل). بالإضافة إلى وجود فروق دالة إحصائية في الفاعلية الذاتية للدخل الشهري لأصحاب الدخل الأعلى. وأخيراً، لم تظهر فروق دالة إحصائية في متغيرات الدراسة تعزى للجنس وسنوات الخبرة. الخلاصة: يمكن للأشخاص الذين يسعون إلى الكفاءة أن يطوروا آليات تكيفية أو غير تكيفية للتعامل مع الضغوطات؛ وبالتالي، فإن فهم هذه الآليات قد يساعد في تحديد المجموعات الأكثر عرضة للاحتراق الوظيفي من خلال تحديد مدى مساهمة الكفاءة الذاتية المدركة في إدارة المواقف الضاغطة بفعالية.

**الكلمات المفتاحية:** الكفاءة، الاحترق الوظيفي، الفاعلية الذاتية المدركة، الأطباء.

## Introduction

According to the historical overview, perfectionism was viewed as a unidimensional concept and considered a personality defect, linked to undesirable traits such as neuroticism and overgeneralization. It linked to positive factors (Darrag et al., 2022). In the early 1990s, researchers confirmed that perfectionism is a multidimensional concept (Hewitt & Flett, 1991; Slaney et al., 2001) and that the environment plays a massive role in developing personality traits (Matlon, 2014). Perfectionism is a complex

structure that reflects the interaction between behavioral, motivational, emotional, and cognitive factors (Chang, 2012), the high levels of perfectionism, the likelihood of fear of failure increases (Chang et al., 2016).

On the other hand, burnout syndrome is associated with individual factors such as personality traits, cognitive appraisal, personal goals, and coping style (Abdulghafour et al., 2011; Chang, 2012). It is also associated with organizational factors including job role, leadership style, environmental conditions, and organizational culture (Al-Sareai et al., 2013; Koonce, 2014). Therefore, researchers consider burnout one of the most notable problems associated with occupational stress due to continuous exposure to stressors. It is characterized by alienation, carelessness, and inability to fulfill daily duties (Craiovan, 2014). However, the professional requirements may exceed the capabilities of the individual and result in a negative emotional state and a feeling of ineffectiveness, thus a negative evaluation of performance and achievement (Rice & Liu, 2020). Martin et al. (2022) found that personality traits such as self-critical perfectionism, agreeableness, and neuroticism were significantly correlated with burnout. Eventually, previous studies have found that maladaptive perfectionism increases the likelihood of burnout, while adaptive perfectionism reduces it. Thus, perfectionism could predict and contribute to increased burnout symptoms (Robakowska et al., 2018).

Stressful and catastrophic events - such as the COVID-19 pandemic - are characterized by difficulty in predicting what is coming, rapid and exacerbating actions, and unpreparedness, which puts severe pressure on individuals and governments. Such events threaten physical and mental health directly or indirectly. Undoubtedly physicians working on the front lines suffer from physical and psychological workloads in addition to stress, anxiety, and the risks of infection, which negatively affect their health and performance (Zheng et al., 2020); as working in the medical field is primarily known as a stressful job. Throughout 2020 COVID-19 has strained the Kuwaiti health care systems due to the increase in the cases accompanied by severe symptoms that require health facilities to receive treatment and care. Along with this, Al-Tayyar (2020) revealed a positive relationship between burnout dimensions and an increased risk of infection among medical workers during the COVID-19 pandemic in Kuwait. Likewise, Liu et al. (2024) indicated that fear of COVID-19 was a negative predictor of mental health. Conversely, burnout rates were significantly lower when

workers believed their employer was taking proper precautions to protect employees from COVID-19 (Herken et al., 2022).

Moreover, self-efficacy is the individual's belief to carry out behavior to achieve desired results in difficult situations (Al-Gharib, 2014; Wang et al., 2020). According to Bandura (1994), perceived self-efficacy is developed by mastery experiences, vicarious experiences, social persuasion, and emotional states as sources of influence. Furthermore, individuals must acquire and enhance their skills to produce work and strive for achievement and success, which helps create an accomplished personality (Badawy & Mohamad, 2015; Koonce, 2014). Generally, stressful work environments and weak personal factors such as self-esteem, self-orientation, and self-efficacy, exacerbate stress. Accordingly, the interaction of working conditions with positive personal factors, and high self-efficacy, improves the individual's ability to deal with burnout (Deuling & Burns, 2017). Moreover, accumulated evidence shows that low self-efficacy increases the likelihood of burnout, while high self-efficacy reduces it. Thus, perceived self-efficacy could predict and contribute to increased burnout symptoms (Al-Gharib, 2014).

### 1. *Perfectionism as an Indicator of Burnout*

Hewitt and Flett (1991) characterized perfectionism as "setting high and unrealistic standards, selective attention, overgeneralization errors, strict self-evaluation, and belief in the law of all or nothing -either complete success or complete failure" (p.456). Generally, perfectionism is a multidimensional concept that is considered one of the personality traits positively related to the burnout phenomenon (Hewitt & Flett, 1991; Rice & Liu, 2020). In 1975, Freudenberger mentioned that the essential symptoms of exhaustion occur in perfectionists, accompanied by the inability to reach high personal standards, which contributes to exacerbating distress, thus leading to fatigue. Personality traits such as adopting high standards are beneficial at work, but excessive self-criticism increases the chance of stress and burnout (Freudenberger, 1975). People with high levels of perfectionism (adaptive) are more able to cope with stress than people with low levels of perfectionism (maladaptive) (Collin et al., 2020). Maslach and Jackson (1997) defined burnout as "a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with other people in some capacity" (p.192). From this point, burnout and stress are

two terms that express a state of psychological and physical fatigue. Whereas burnout differs from stress in terms of that stress is impermanent and disappears with the disappearance of the source (Abdulla et al., 2011). Moreover, burnout is a long-term symptom associated with stress and other factors such as personality traits and environmental conditions. Thus, the failure of an individual to properly deal with the source of stressors may lead to burnout (Alshehri et al., 2020).

Therefore, a large and growing body of literature has investigated the relationship between perfectionism and burnout in the healthcare-related field (Aboalshamat et al., 2017; Badawy & Mohamad, 2015; Cabaços et al., 2023; Collin et al., 2020; Gnilka et al., 2017; Holden & Jeanfreau, 2021; Jarrett, 2018; Martin et al., 2022; Pereira et al., 2022; Robakowska et al., 2018). Accordingly, Badawy and Mohamad (2015) indicated a significant negative relationship between perfectionistic strivings and the dimensions of burnout, while there was a significant positive relationship between perfectionistic concerns and emotional exhaustion among (210) physicians in Cairo. Conversely, Aboalshamat et al. (2017) found no relationship between burnout and the three dimensions of perfectionism among (645) medical students in Saudi Arabia, and perfectionism dimensions were not associated with gender or marital status. Gnilka et al. (2017) found that perfectionistic strivings were negatively correlated with burnout, while perfectionistic concerns were positively correlated with burnout among (235) consultants in the Netherlands.

Jarrett (2018) indicated that burnout was positively associated with maladaptive perfectionism among (218) medical students in the United States. Robakowska et al. (2018) showed that adaptive perfectionism was positively correlated with aspects of burnout, while non-adaptive perfectionism was negatively correlated with burnout. Furthermore, maladaptive perfectionism was negatively linked with age and experience among (166) medical scientists in Poland. Collin et al. (2020) indicated that 35% of dental students were non-adaptive perfectionists and showed increased levels of burnout in the United Kingdom. Holden and Jeanfreau (2021) showed that high levels of self-oriented and socially-oriented perfectionism were correlated with high levels of burnout among (247) marriage and family therapists. Also, the level of burnout decreased with the increase in years of experience and women were higher than men in perfectionism.

Comparably, Martin et al. (2022) indicated that 42% of physicians reported high emotional exhaustion and depersonalization levels. It also showed that high levels of burnout could be predicted by an elevated level of self-critical perfectionism among (69) physicians during the COVID-19 pandemic in the United States. Pereira et al. (2022) revealed that perfectionism was positively associated with burnout and showed that women had higher levels of self-critical perfectionism among (528) medicine students in Portugal. Cabaços et al. (2023) demonstrated that perfectionism was positively associated with burnout, besides, no significant differences in perfectionism and burnout were found between genders among (202) Portuguese health field students.

## 2. *Stress-Related to COVID-19 and Burnout among Physicians*

The terms stress and burnout are often used interchangeably, but they are two different concepts as stress may not necessarily lead to burnout directly; it is an accumulation process of daily work stressors (Abu Taha, 2010). Commonly, working in the healthcare field is a stressful job due to direct dealing with patients, long working hours, work shifts, and burdens related to the nature of diseases in general (Craiovan, 2014). Physicians who deal with COVID-19 patients, along with the possibility of infection transmission and the strict regulations, which are conceded to be a stressful event, threaten physical and mental health directly or indirectly (Liu et al., 2024; Zheng et al., 2020). These factors increase the possibility of physicians being at risk for mental and physical health, consequently, in a decrease in performance and efficiency. At last, healthcare providers working with COVID-19 had higher stress, anxiety, and burnout levels (Herken et al., 2022; Vagni et al., 2020), especially with the beginning spread of the COVID-19 pandemic.

The Kuwaiti government has placed protocols to enhance safety precautions in the community to limit the spread of the pandemic while providing all supplies and equipment for this purpose. Health centers and a hotline team have also been established to help and communicate with those infected. Therefore, in March 2020, the Kuwaiti government announced the temporary closure of schools and universities, places of worship, recreational facilities, and airports -except cargo flights-; respectively, curfews and lockdowns were also imposed, after the excessive increase in cases of COVID-19 infection (KUNA, 2020a). In April 2020, the Ministry of Health in Kuwait announced that at least 105 medical personnel were infected with Covid-19 (KUNA, 2020b). Eventually, in October 2021,

Kuwait announced the return to normal life by reducing all COVID-19 restrictions -as the cases had steadily decreased- for vaccinated people (KUNA, 2021).

Studies that examined the level of burnout among medical staff in counter to the COVID-19 pandemic in Kuwait and Arab countries found that burnout levels were high and associated with high infected expectations of COVID-19 (Al-Haqan et al., 2021; Al-Shammari, 2023; Al-Tayyar, 2020; Kamel et al., 2022). From this point, Al-Tayyar (2020) found that the level of burnout was statistically significant among Kuwaiti workers compared to non-Kuwaitis, however, no differences were found according to the gender and service duration. Al-Haqan et al. (2021) revealed that personal, work-related, and client-related burnout scores were higher among female, Kuwaitis, younger age, and less work experience (277) pharmacists during the COVID-19 pandemic in Kuwait. Kamel et al. (2022) indicated that participants reported moderate to severe levels of burnout among (431) healthcare providers in Bahrain during the pandemic. The study also showed that women had higher levels of burnout than men, young participants with lower work experience had higher levels of burnout than older and more experienced, as well as citizens and single healthcare workers. Al-Shammari (2023) showed a significant impact of the COVID-19 pandemic on burnout among (130) healthcare providers in Saudi Arabia.

On the other hand, literature investigating the relationship between stress and burnout among physicians has been widely studied (Algunmeeyn et al., 2020; Collin et al., 2020; Hafiz, 2020; Vagni et al., 2020). For instance, Algunmeeyn et al. (2020) showed that most caregivers working in the COVID-19 section suffered from job stress, fear, and anxiety, because of the lack of information about the disease and treatment, besides the fear of spreading and transmitting the disease to their families. Furthermore, most of the participants emphasized the importance of staff adequacy in the section, availability of primary resources, and job rotation on performance during the pandemic among (30) healthcare workers during the outbreak of COVID-19 in Jordan. Hafiz (2020) found a significant positive correlation between work stressors and burnout among male and female (50) human doctors in Egypt, therefore, there were differences between male and female in

work stressors for males, and no differences between males and females in burnout were found.

### 3. *The Impact of Perceived Self-Efficacy on Burnout*

Schwarzer and Jerusalem (1995) defined general self-efficacy as "the belief in one's competence to cope with a broad range of stressful or challenging demands, whereas specific self-efficacy is constrained to a particular task at hand" (p.35). Therefore, lack of personal achievement is a dimension of burnout, represented in low effectiveness; hence, individuals evaluate themselves negatively, are dissatisfied, inefficient, low performance, and low productivity at work (Badawy & Mohamad, 2015; Koonce, 2014). Therefore, burnout can lead to decreased motivation, frequent absences, physical complaints, and decreased self-efficacy at work (Newman, 2012). Self-efficacy affects organizational and individual variables, including service quality provided, motivation, job performance, completion of assigned work, job satisfaction, concern about making mistakes, and fatigue (Bandura, 1994, 2012). self-efficacy contributes to mitigating symptoms of fatigue, which in turn works as a protector against the harmful effects of work stress (Hou et al., 2020).

From this point, several studies have focused on studying the relationship between burnout and self-efficacy in the healthcare field (Aliyev & Tunc, 2015; Du et al., 2024; Gad, 2022; Koonce, 2014; Messerotti et al., 2020; Newman, 2012; Wolf, 2023). Thus, Koonce (2014) indicated a moderate to high level of burnout and a high level of self-efficacy among (90) mental health professionals in the United States. Years of experience were not associated with self-efficacy or burnout, while age was negatively associated with burnout, but not with self-efficacy. Aliyev and Tunc (2015) found significant differences in self-efficacy in favor of males and burnout toward females. There were significant differences in burnout among the older age groups and no differences in self-efficacy based on age. Finally, there was a negative relationship between self-efficacy and burnout among (312) counselors in Turkey.

Similarly, Messerotti et al. (2020) indicated that junior physicians' burnout levels were higher than those of more experienced physicians' "consultants" by 65% among (226) physicians in Italy. Gad (2022) indicated a negative association between burnout and occupational performance, while no significant differences in the burnout dimensions due to gender were found among (70) doctors in Egypt. Wolf (2023) showed a significant

negative relationship between self-efficacy and burnout. Also, there was no significant difference in self-efficacy between (163) males and females, and no difference in burnout and self-efficacy for years of experience in the United States. Du et al. (2024) indicated a significant negative association between self-efficacy and burnout, moreover, females displayed lower levels of self-efficacy and higher levels of burnout than males among (190) pediatrics in China.

### Current Study

As physicians become strained and burnout, their levels of performance and self-efficacy diminish, as well as physical and psychological health, thus negatively affecting the quality of services provided. It is also associated with high levels of frequent absenteeism, job quitting, lack of motivation, and low job stability. Therefore, there is an urgent need for more research to identify the personal trait factors such as perfectionism that cause stress and fatigue in the medical field, which in the long run may contribute to the development of burnout syndrome. That may help identify the groups most at risk of burnout to intervene and take preventive measures.

Therefore, the importance of the current study is represented in determining the level of burnout among healthcare providers, particularly physicians, during the spread of the COVID-19 pandemic, as it is considered one of the professions most exposed to burnout. Additionally, the findings could help to understand the relationships between the study variables and whether there are significant differences according to demographic variables. This information would allow specialists and leaders to develop programs that are useful in raising the performance of healthcare providers and improving the quality of work, and the quality of medical services provided in Kuwait. Furthermore, the significance of the study lies in the lack of local and Arabic studies that investigated the relationship between perfectionism, burnout, and self-efficacy among physicians.

Consequently, the purposes of the current study were (a) To obtain a better understanding of the relationships between perfectionism, burnout, and perceived self-efficacy among physicians in Kuwait during the COVID-19 pandemic. (b) To examine differences between adaptive and maladaptive perfectionism in burnout dimensions and perceived self-efficacy among certain demographic variables such as gender, nationality, marital status, years of experience, and monthly income.

## Methods

### Participants

This study employed a descriptive approach design. Based on the annual bulletin of health statistics (2018/2019), the study population consists of approximately 13,150 Kuwaiti and non-Kuwaiti physicians working in the Ministry of Health, where 42% of the population were Kuwaitis (Central Statistical Bureau, 2018). Furthermore, due to the lockdowns, a convenience sample of physicians in Kuwait responded to the online survey -in its original version- using QuestionPro software with a 47.71% completion rate, during the COVID-19 pandemic from September 2020 to May 2021. Incomplete and inconvenient data were excluded from the final study sample  $N = 364$  (i.e., not living in Kuwait, non-physicians, technicians, and pharmacists). Accordingly, data were coded, cleaned, and analyzed using SPSS. The data was analyzed using proper statistical methods.

**Table 1** displays the participants' demographic characteristics.

**Table (1)**  
**Participants Demographic Characteristics**

| Variable                | N   | %    | Variable              | N   | %    |
|-------------------------|-----|------|-----------------------|-----|------|
| <u>Gender</u>           |     |      | <u>Nationality</u>    |     |      |
| Male                    | 224 | 61.5 | Kuwaiti               | 297 | 81.6 |
| Female                  | 140 | 38.5 | Other                 | 67  | 18.4 |
| <u>Years Practicing</u> |     |      | <u>Monthly Income</u> |     |      |
| Less than 5 years       | 41  | 11.3 | Less than 2000 KWD    | 48  | 13.2 |
| 5 - 10 years            | 88  | 24.2 | 2000 - 3000 KWD       | 80  | 22.0 |
| 11 - 15 years           | 107 | 29.4 | 3001 - 4000 KWD       | 71  | 19.5 |
| More than 15 years      | 128 | 35.2 | More than 4000 KWD    | 165 | 45.3 |
| <u>Marital Status</u>   |     |      |                       |     |      |
| Single                  | 63  | 17.3 |                       |     |      |
| Married                 | 274 | 75.3 |                       |     |      |
| Divorced/Widowed        | 27  | 7.4  |                       |     |      |

Note.  $N = 364$ .

As shown in Table 1, the participant age ranged between 23-60 years ( $M_{age}=38.75$ ,  $SD = 7.28$ ). Most of the participants were Kuwaitis (81.6%), males (61.5%), and married (75.3%).

## Measures

The demographic questionnaire was designed to determine the demographic data namely, age, gender, nationality, marital status, years of experience, and monthly income.

**Short Almost Perfect Scale (SAPS):** Maladaptive perfectionism was measured using the SAPS scale. It consists of two subscales, *Standards* (4 items) and *Discrepancy* (4 items) with a seven-point Likert scale response. Therefore, total scores of both subscales could range from (4 to 28). A high level of both dimensions (Standards and Discrepancy) scores determines maladaptive perfectionism. In contrast, high Standards, and low Discrepancy scores refer to adaptive perfectionism (Rice et al., 2014). Reliability coefficients of SAPS were computed using Cronbach's alpha, and results showed acceptable levels for both subscales *Standards* and *Discrepancy* ( $\alpha = .79, .75$ , respectively) [See Table 2].

Cut scores were developed to classify physicians as one of two types of perfectionists: maladaptive or adaptive. Maladaptive perfectionism is characterized by responses at a high end of 14 – 28 in the Standards and Discrepancy. On the other hand, adaptive perfectionism is characterized by responses at a high end of 14 – 28 in the Standards subscale and lower than 14 (represents the average of responses) in the Discrepancy subscale (Slaney et al., 2001). Furthermore, since only 3.1% of the participants were non-perfectionists, those who had scores below average in the Standards were excluded (N=11) from the t-test analysis.

**The Maslach Burnout Inventory MBI-HSS (MP):** Burnout was measured using the MBI-HSS scale. It includes 22 items developed by Maslach and Jackson in 1997 with a seven-point Likert scale response. MBI-HSS (MP) is comprised of three sub-dimensions: (a) *Emotional Exhaustion (EE)* (9 items), (b) *Depersonalization (DP)* (5 items), (c) *Personal Accomplishment (PA)* (8 items). The average subscale scores ranged from 17-26 for EE, 7-12 for DP, and 32-38 for

PA. Responses to MBI-HSS (MP) items should not be combined to form a single "burnout" score (Maslach et al., 1996-2018, p.16). A high level of both dimensions of EE and DP scores, with a low level of PA score, determines a high level of burnout. The Cronbach's alpha coefficients of MBI-HSS (MP) showed acceptable levels for all subscales EE, DP, and PA ( $\alpha = .89, .70$ , and  $.73$ , respectively) [See Table 2].

**The General Self-Efficacy Scale (GSE):** Self-efficacy was measured using the GSE scale. It includes ten items developed by Jerusalem and Schwarzer in 1979 with a four-point Likert scale response and a score of 40 indicated a high level of self-efficacy. The scale is unidimensional and the score ranges from 10 to 40; the higher score refers to greater self-efficacy (Schwarzer & Jerusalem, 1995). The Cronbach's alpha coefficient of GSE was ( $\alpha = .84$ ) [See Table 2].

### *Statistical Analysis*

Data was analyzed using SPSS (version 23). Descriptive statistical analysis was used to determine the demographic characteristics of the study sample. The study measure's reliability was measured using Cronbach's alpha. Correlation coefficients were conducted to indicate the relationships between the study variables. Additionally, *t*-test and one-way ANOVA analysis were used to determine the differences between study groups according to demographic variables.

### *Ethics and Informed Consent*

To conduct the study, official approval was obtained from the Ministry of Health in Kuwait. The Maslach Burnout Inventory (MBI-HSS (MP)) permission for remote online was obtained from The Mind Garden. The participants' online informed consent was read and signed. In addition, confidential information, the right to withdraw from the study at any time, and voluntary participation have been verified. Data-saving options for later completion have been provided due to pandemic conditions.

## **Results**

**H1: There are significant correlations among perfectionism dimensions (Standards and Discrepancy), burnout dimensions (Emotional Exhaustion, Depersonalization, and Personal Accomplishment), and perceived self-efficacy.**

Table 2 displays the correlation coefficients among the study variables.

**Table (2)**  
**Cronbach Alpha and Pearson Correlations Among the Study Scales**

| Measure        | Items | $\alpha$ | 1      | 2       | 3       | 4       | 5      | 6      |
|----------------|-------|----------|--------|---------|---------|---------|--------|--------|
| SAPS           |       |          |        |         |         |         |        |        |
| 1. Standards   | 4     | .79      | --     |         |         |         |        |        |
| 2. Discrepancy | 4     | .75      | .221** | --      |         |         |        |        |
| MBI-HSS (MP)   |       |          |        |         |         |         |        |        |
| 3. EE          | 9     | .89      | .140** | .312**  | --      |         |        |        |
| 4. DP          | 5     | .70      | .033   | .367**  | .613**  | --      |        |        |
| 5. PA          | 8     | .73      | .165** | -.208** | -.151** | -.249** | --     |        |
| 6. GSE         | 10    | .84      | .229** | .174**  | .233**  | .191**  | .379** | --     |
| 7. Age         | -     | -        | -.012  | -.095   | -.100   | -.077   | .092   | .143** |

Note. N= 364. SAPS: Short Almost Perfect Scale, MBI: Maslach Burnout Inventory, EE: Emotional exhaustion, DP: Depersonalization, PA: Personal Accomplishment, GSE: General Self-Efficacy.

\*\*  $p < .01$ .  $\alpha$ : Cronbach's alpha.

As shown in Table 2, the analysis reveals a significant positive weak correlation between Standards and Discrepancy among the dimensions of the SAPS scale. Thus, most of the participants were characterized as maladaptive perfectionists. Moreover, among the dimensions of the MBI scale, Emotional Exhaustion (EE) correlated moderately positively with Depersonalization (DP) and negatively (weak) with Personal Accomplishment (PA). Hence, physicians were characterized as being exhausted and burned out. In comparison, the GSE scale correlated positively weakly with Standards and PA, while correlated negatively weakly with EE, DP, and Discrepancy. Consequently, physicians were highly self-efficient ( $p < .01$ ).

The results also indicated significant positive weak correlations between Standards with EE, and PA. In contrast, there was no significant correlation between Standards and DP. Moreover, there were significant positive weak correlations between Discrepancy with EE, and DP, and a significant negative weak correlation between Discrepancy and PA. Therefore, maladaptive perfectionism was positively associated with job burnout dimensions, while adaptive perfectionism was associated negatively with job burnout dimensions ( $p < .01$ ).

Likewise, the results showed significant negative weak correlations between GSE, EE, and DP, while a significant positive weak correlation between GSE and PA. Thus, job burnout dimensions were negatively

associated with perceived self-efficacy ( $p < .01$ ). The results also revealed significant positive weak correlations between Standards and GSE, while a significant negative weak correlation between Discrepancy and GSE. As a result, perfectionism dimensions were associated with perceived self-efficacy ( $p < .01$ ). Although the strength of all associations was weak, however, they were statistically significant.

Moreover, Pearson's correlations were computed to examine the association of age with perfectionism dimensions, burnout dimensions, and perceived self-efficacy. The results revealed a significant weak positive correlation of age with self-efficacy ( $r = 0.143$ ,  $p < 0.01$ ); which indicated that the older practitioners were more self-effective than younger practitioners. No significant correlations between age with perfectionism and burnout dimensions were obtained.

**H2: There are significant differences between adaptive and maladaptive perfectionism groups in burnout and perceived self-efficacy.**

**Table 3** presents the differences between maladaptive and adaptive perfectionists in the study variables.

**Table (3)**  
**The Differences Between Maladaptive and Adaptive Perfectionists in Study Variables**

| Measures    | Maladaptive Perfectionists<br>(n=220) |           | Adaptive Perfectionists<br>(n=133) |           | <i>t</i> (351) | <i>P</i> |
|-------------|---------------------------------------|-----------|------------------------------------|-----------|----------------|----------|
|             | <i>M</i>                              | <i>SD</i> | <i>M</i>                           | <i>SD</i> |                |          |
| SAPS        |                                       |           |                                    |           |                |          |
| Standards   | 24.24                                 | 3.30      | 24.35                              | 3.19      | -.31           | .76      |
| Discrepancy | 18.87                                 | 3.74      | 9.98                               | 2.45      | 24.41          | .001***  |
| MBI         |                                       |           |                                    |           |                |          |
| EE          | 22.63                                 | 10.62     | 17.84                              | 9.88      | 4.21           | .001***  |
| DP          | 12.55                                 | 7.52      | 7.62                               | 5.86      | 6.47           | .001***  |
| PA          | 35.70                                 | 7.52      | 39.47                              | 5.84      | -4.96          | .001***  |
| GSE         | 31.46                                 | 4.34      | 33.32                              | 3.44      | -4.22          | .001***  |

Note: N=353

\*\*\*  $p < .001$ .

As shown in Table 3, there were significant differences between maladaptive and adaptive perfectionist groups in all measures except for the subscale of SAPS (i.e., Standards)<sup>2</sup>. Thus, Discrepancy, EE, and DP were higher among the maladaptive perfectionist group ( $p < .001$ ). While PA and GSE were higher among the adaptive perfectionist group ( $p < .001$ ). Lastly,

<sup>2</sup> The non-perfectionists with scores below average (lower than 14) on both subscales (Standards and Discrepancy) were excluded ( $N=11$ ) from the *t*-test analysis.

there were no significant differences between maladaptive and adaptive perfectionist groups in Standards.

Moreover, the descriptive statistics indicated that the participants (physicians) displayed a high level of Standards ( $M= 24.24$ ,  $SD= 3.30$ ) and a moderate level of Discrepancy ( $M= 18.87$ ,  $SD= 3.74$ ). Furthermore, 96.9% of the participants were perfectionists; however, the majority (60.4%) were maladaptive perfectionists, while 36.5% were adaptive perfectionists, and only 3.1% were non-perfectionists. On the other side, the participant displayed a moderate level of EE ( $M= 22.63$ ,  $SD= 10.62$ ), DP ( $M= 12.55$ ,  $SD= 7.52$ ), and PA ( $M= 35.70$ ,  $SD= 7.52$ ), which indicated a moderate level of burnout among physicians. Where the burnout dimensions were higher among maladaptive compared to adaptive perfectionist groups. The GSE levels ranged from 16-40 ( $M= 31.46$ ,  $SD= 4.34$ ), indicating that physicians generally had a moderate to a high level of perceived self-efficacy, where the GSE was higher among adaptive compared to maladaptive perfectionist groups.

**H3: There are significant differences in perfectionism dimensions, burnout dimensions, and perceived self-efficacy attributed to demographic variables.**

An independent sample *t*-test was performed to examine the differences among some demographic variables. **Table 4** presents the differences among gender and nationality groups in the study variables.

**Table (4)**  
**The Differences Among Gender and Nationality Study Variables**

| Measures |                    | Males (n=224)    |           | Females (n=140)      |           | <i>t</i> (362) | <i>P</i> |
|----------|--------------------|------------------|-----------|----------------------|-----------|----------------|----------|
|          |                    | <i>M</i>         | <i>SD</i> | <i>M</i>             | <i>SD</i> |                |          |
| SAPS     | <i>Standards</i>   | 23.92            | 4.42      | 23.49                | 4.45      | .89            | .369     |
|          | <i>Discrepancy</i> | 15.25            | 5.32      | 15.48                | 5.80      | -.39           | .695     |
| MBI      | <i>EE</i>          | 20.36            | 10.48     | 21.10                | 10.83     | -.65           | .519     |
|          | <i>DP</i>          | 11.23            | 7.23      | 9.73                 | 7.52      | 1.89           | .059     |
|          | <i>PA</i>          | 36.87            | 7.70      | 37.30                | 6.62      | -.55           | .586     |
|          | <i>GSE</i>         | 32.29            | 4.07      | 31.84                | 4.58      | .99            | .319     |
| Measures |                    | Kuwaitis (n=297) |           | Non- Kuwaitis (n=67) |           | <i>t</i> (362) | <i>P</i> |
|          |                    | <i>M</i>         | <i>SD</i> | <i>M</i>             | <i>SD</i> |                |          |
| SAPS     | <i>Standards</i>   | 23.84            | 4.37      | 23.36                | 4.73      | .80            | .424     |
|          | <i>Discrepancy</i> | 15.33            | 5.63      | 15.36                | 4.95      | -.04           | .970     |
| MBI      | <i>EE</i>          | 20.87            | 10.69     | 19.67                | 10.27     | .83            | .406     |
|          | <i>DP</i>          | 10.72            | 7.29      | 10.33                | 7.78      | .39            | .692     |
|          | <i>PA</i>          | 36.66            | 7.42      | 38.70                | 6.54      | -2.08          | .038*    |
|          | <i>GSE</i>         | 32.05            | 4.26      | 32.43                | 4.36      | -.67           | .505     |

Note: N=364

\* $p < .05$  (2- tailed). Effect Size ( $\eta = .012$ ).

As shown in Table 4 no significant differences were found between males and females in perfectionism, burnout, and perceived self-efficacy ( $p > .05$ ). On the other side, the results revealed that non-Kuwaitis had a significantly higher mean score ( $M = 38.70$ ,  $SD = 6.54$ ) than Kuwaitis ( $M = 36.66$ ,  $SD = 7.42$ ) in PA [ $t(362) = -2.078$ ,  $p < .038$ ]. No significant differences in the rest of the study variables due to nationality were obtained.

A one-way ANOVA was conducted to compare the mean differences in the study variables with respect to marital status, years of practice, and monthly income.

**Table (5)**

**Means, Standard Deviations, and One-Way Analyses of Variance in Marital Status Group**

| Measures           | Single   |           | Married  |           | Divorced/Separated |           | <i>F</i> (2, 361) | Sig.  |
|--------------------|----------|-----------|----------|-----------|--------------------|-----------|-------------------|-------|
|                    | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i>           | <i>SD</i> |                   |       |
| SAPS               |          |           |          |           |                    |           |                   |       |
| <i>Standards</i>   | 23.62    | 4.76      | 23.74    | 4.47      | 24.15              | 3.24      | .14               | .873  |
| <i>Discrepancy</i> | 15.81    | 5.54      | 15.31    | 5.52      | 14.44              | 5.34      | .59               | .556  |
| MBI                |          |           |          |           |                    |           |                   |       |
| <i>EE</i>          | 20.90    | 11.32     | 20.64    | 10.58     | 20.11              | 9.46      | .05               | .949  |
| <i>DP</i>          | 11.43    | 7.98      | 10.83    | 7.30      | 7.00               | 5.54      | 3.80              | .023* |
| <i>PA</i>          | 37.03    | 7.28      | 36.91    | 7.31      | 38.37              | 7.37      | .49               | .611  |
| GSE                | 31.32    | 4.51      | 32.16    | 4.23      | 33.52              | 3.89      | 2.59              | .076  |

Note: Single ( $n=63$ ), Married ( $n=274$ ), Divorced/Separated ( $n=27$ ).

\* $p < .05$  (2- tailed). Effect Size ( $\eta = .021$ ).

As shown in **Table 5** there were significant differences in DP due to marital status ( $F(2, 361) = 3.81$ ,  $p = 0.02$ ). Scheffé post hoc multiple comparison test indicated a significant mean difference in DP between Single and (Divorced/Separated) groups ( $M = -4.43^*$ ,  $S.E. = 1.68$ ,  $p = 0.03$ , 95% C.I.[-8.56, 0.29] for Single group. As well as between Married and (Divorced/Separated) groups ( $M = -3.83^*$ ,  $S.E. = 1.47$ ,  $p = .035$ , 95% C.I.[-7.46, -0.21]) for the Married group. On the other hand, no significant differences were observed between the Single and Married groups, also no differences were found in the rest of the study variables ( $p > .05$ ) with respect to the marital status category.

**Table (6)**  
**Means, Standard Deviations, and One-Way Analyses of Variance in Years of Experience and Monthly Income Groups**

| Years of Experience |     |       |       |           |      | Monthly Income     |     |       |       |           |        |
|---------------------|-----|-------|-------|-----------|------|--------------------|-----|-------|-------|-----------|--------|
| Variables           | N   | M     | SD    | F(3, 360) | Sig. | Variables          | N   | M     | SD    | F(3, 360) | Sig.   |
| <b>SAPS</b>         |     |       |       |           |      | <b>SAPS</b>        |     |       |       |           |        |
| <u>Standards</u>    |     |       |       | 1.52      | .209 | <u>Standards</u>   |     |       |       | 1.69      | .169   |
| Less than 5         | 41  | 24.54 | 3.32  |           |      | Less than 2000     | 48  | 23.88 | 3.44  |           |        |
| 5 - 10              | 88  | 22.98 | 5.75  |           |      | 2000 – 3000        | 80  | 22.80 | 5.56  |           |        |
| 11 - 15             | 107 | 23.73 | 4.72  |           |      | 3001 – 4000        | 71  | 23.82 | 4.37  |           |        |
| More than 15        | 128 | 24.05 | 3.29  |           |      | More than 4000     | 165 | 24.15 | 4.06  |           |        |
| <u>Discrepancy</u>  |     |       |       | 1.48      | .221 | <u>Discrepancy</u> |     |       |       | 1.82      | .142   |
| Less than 5         | 41  | 16.66 | 5.26  |           |      | Less than 2000     | 48  | 16.42 | 4.78  |           |        |
| 5 - 10              | 88  | 15.42 | 5.77  |           |      | 2000 – 3000        | 80  | 16.14 | 5.60  |           |        |
| 11 - 15             | 107 | 15.55 | 5.19  |           |      | 3001 – 4000        | 71  | 14.86 | 5.13  |           |        |
| More than 15        | 128 | 14.67 | 5.62  |           |      | More than 4000     | 165 | 14.84 | 5.76  |           |        |
| <b>MBI</b>          |     |       |       |           |      | <b>MBI</b>         |     |       |       |           |        |
| <u>EE</u>           |     |       |       | .32       | .809 | <u>EE</u>          |     |       |       | .20       | .896   |
| Less than 5         | 41  | 22.10 | 9.60  |           |      | Less than 2000     | 48  | 20.75 | 9.26  |           |        |
| 5 - 10              | 88  | 20.70 | 9.81  |           |      | 2000 – 3000        | 80  | 21.43 | 10.54 |           |        |
| 11 - 15             | 107 | 20.53 | 10.81 |           |      | 3001 – 4000        | 71  | 20.37 | 10.70 |           |        |
| More than 15        | 128 | 20.23 | 11.32 |           |      | More than 4000     | 165 | 20.36 | 11.03 |           |        |
| <u>DP</u>           |     |       |       | 1.43      | .233 | <u>DP</u>          |     |       |       | .66       | .576   |
| Less than 5         | 41  | 10.83 | 8.12  |           |      | Less than 2000     | 48  | 11.56 | 7.81  |           |        |
| 5 - 10              | 88  | 11.24 | 7.23  |           |      | 2000 – 3000        | 80  | 10.80 | 7.62  |           |        |
| 11 - 15             | 107 | 11.37 | 7.25  |           |      | 3001 – 4000        | 71  | 11.14 | 7.31  |           |        |
| More than 15        | 128 | 9.59  | 7.28  |           |      | More than 4000     | 165 | 10.10 | 7.16  |           |        |
| <u>PA</u>           |     |       |       | 1.44      | .230 | <u>PA</u>          |     |       |       | .43       | .734   |
| Less than 5         | 41  | 37.61 | 6.74  |           |      | Less than 2000     | 48  | 37.67 | 6.90  |           |        |
| 5 - 10              | 88  | 36.33 | 7.80  |           |      | 2000 – 3000        | 80  | 36.31 | 7.97  |           |        |
| 11 - 15             | 107 | 36.28 | 7.33  |           |      | 3001 – 4000        | 71  | 36.94 | 7.10  |           |        |
| More than 15        | 128 | 37.97 | 7.04  |           |      | More than 4000     | 165 | 37.24 | 7.19  |           |        |
| <u>GSE</u>          |     |       |       | 3.93      | .009 | <u>GSE</u>         |     |       |       | 5.08      | .002** |
| Less than 5         | 41  | 31.10 | 4.26  |           |      | Less than 2000     | 48  | 31.08 | 4.71  |           |        |
| 5 - 10              | 88  | 31.09 | 4.85  |           |      | 2000 – 3000        | 80  | 31.13 | 4.59  |           |        |
| 11 - 15             | 107 | 32.69 | 3.74  |           |      | 3001 – 4000        | 71  | 31.85 | 3.98  |           |        |
| More than 15        | 128 | 32.67 | 4.13  |           |      | More than 4000     | 165 | 33.02 | 3.93  |           |        |

Note: N=364

\*\* $p < .01$ . Effect Size ( $\eta = .041$ ).

As shown in **Table 6**, the results revealed that there was a statistically significant difference in GSE between the years of experience group ( $F(3, 360) = 3.926$ ,  $p = 0.009$ ). However, Scheffé post hoc multiple comparisons indicated that the mean value of the GSE was not significantly different due to the years of experience.

Furthermore, the results revealed significant differences in GSE between the monthly income groups ( $F(3, 360) = [5.081]$ ,  $p = 0.002$ ). Moreover, Scheffé post hoc multiple comparisons indicated that the group with higher income (more than 4000 KWD) had a higher score in GSE compared with the group of the monthly income of (2000-3000 KWD) group ( $M = -4.43^*$ ,  $S.E. = 1.68$ ,  $p = 0.013$ , 95% C.I. [-3.50, -0.28]). In contrast, there were no significant mean differences in GSE between other income group categories. Likewise, no statistically significant differences were observed for the rest of the study variables ( $p > .05$ ) with respect to the income group category.

## Discussion

The present study aimed to examine the relationships between perfectionism, burnout, and perceived self-efficacy and investigated if there were significant differences between adaptive and maladaptive perfectionist groups in burnout and perceived self-efficacy among physicians in Kuwait during the COVID-19 pandemic. Therefore, the study indicated a statistically significant positive association between maladaptive perfectionism and burnout dimensions, while adaptive perfectionism was associated negatively with job burnout dimensions ( $p < .01$ ). Accordingly, the trait of perfectionism, being associated with high personal standards, leads to increased anxiety and stress (Chang et al., 2016). Thus, the long-term persistence of these stresses leads to burnout. These findings were consistent with previous literature (Badawy & Mohamad, 2015; Cabell, 2021; Chang et al., 2016; Craiovan, 2014; Holden & Jeanfreau, 2021; Jarrett, 2018; Rice & Liu, 2020). Furthermore, Gnilka et al. (2017) found that perfectionistic strivings (Maladaptive) were negatively associated with burnout, while perfectionistic concerns (adaptive) were positively associated with burnout among consultants. Likewise, Robakowska et al. (2018) showed that adaptive perfectionism was positively correlated with burnout, while non-adaptive perfectionism was negatively correlated with burnout among medical scientists. Conversely, some literature revealed that perfectionism was not significantly associated with burnout (Aboalshamat et al., 2017; Derbi, 2012; Matlon, 2014).

Furthermore, the results showed statistically significant negative correlations between burnout dimensions and perceived self-efficacy ( $p < .01$ ). Undoubtedly, burnout negatively affects the psychological and physical state; thus, the individual's performance is negatively impacted

and weakened, therefore, lowers self-esteem and self-efficacy (Deuling & Burns, 2017). These findings were consistent with previous literature, where the results of the previous studies indicated a negative correlation between self-efficacy and burnout (Aliyev & Tunc, 2015; Du et al., 2024; Hou et al., 2020; Newman, 2012; Wolf, 2023). Unlike, Al-Gharib (2014) showed a significant positive correlation between burnout and self-efficacy among teachers.

Additionally, the results revealed that perfectionism dimensions were associated with perceived self-efficacy ( $p < .01$ ). Generally, maladaptive perfectionism impedes performance and achievement due to adopting irrational thoughts and high personal standards that are difficult to achieve, therefore lowering self-efficacy (Chang, 2012). However, these findings were compatible with previous literature, where Kruger et al. (2023) indicated that maladaptive perfectionism was negatively correlated with self-efficacy, while adaptive perfectionism was positively associated with self-efficacy among university students during the COVID-19 lockdowns in Australia. Darrag et al. (2022) showed a negative correlation between neurotic perfectionism and self-efficacy among health college students in Saudi Arabia. Nevertheless, these findings were incompatible with Matlon (2014) where the results showed that there was no significant correlation between maladaptive perfectionism and self-efficacy among clinical psychologists.

Moreover, the results emphasized that age was not significantly correlated with perfectionism. This can be attributed to the fact that perfectionists of all ages do their best in facing stressful situations, striving for excellence, and avoiding making medical errors, to overcome and confront difficulties (Spagnoli et al., 2021). These findings were incompatible with Robakowska et al. (2018) that maladaptive perfectionism was negatively correlated with age among healthcare providers. In contrast, the results emphasized that age was not significantly correlated with burnout, this result can be attributed to the adverse effects of high stressors in the medical professions affecting all individuals of all ages, without exception. These findings were compatible with (Derbi, 2012), whereas some studies have reported that burnout was negatively correlated with age (Abdulla et al., 2011; Aliyev & Tunc, 2015; Koonce, 2014; Robakowska et al., 2018). Particularly, Al-Haqan et al. (2021) revealed that burnout subscale scores were higher among young Kuwaiti healthcare providers during the pandemic. Kamel et al. (2022) showed that young

participants had higher levels of burnout than older healthcare workers in Bahrain during the pandemic. Conversely, Aliyev and Tunc (2015) found significant differences in burnout among the older age groups. Correspondingly, the results indicated a positive, statistically significant relationship between age and self-efficacy ( $p < .01$ ), where older practitioners were more effective than younger practitioners by 14%. This result can be attributed to increased work experience with age, becoming more responsible, hard-working, and striving for achievement (Wang et al., 2020). This finding differs from other studies that showed no relationship between age and self-efficacy (Aliyev & Tunc, 2015; Koonce, 2014).

The findings indicated that most physicians were classified as perfectionists (96.9%). This result can be attributed to the emphasis on high grades in medical schools, the competitive nature of the medical profession, organizational skills, conscientiousness, and the desire for excellence by embracing high personal standards compatible with providing services in the humanitarian professions (Collin et al., 2020; Rice & Liu, 2020). Discrepancy, Emotional Exhaustion, and Depersonalization were higher among the Maladaptive Perfectionist group, while Personal Accomplishment and General Self-Efficacy were higher among the Adaptive Perfectionist group ( $p < .001$ ). Moreover, the descriptive statistics indicated that the physicians displayed a high level of Standards and a moderate level of Discrepancy where most participants (60.4%) were maladaptive perfectionists. This finding can be attributed to the exceptionally stressful conditions, fears of making mistakes, intense anxiety, and excessive preoccupation with controlling to neutralize the pandemic (Gnilka et al., 2017; Rice & Liu, 2020).

The findings showed that physicians demonstrated a moderate burnout level, which was higher among maladaptive than adaptive perfectionists. This result can be attributed to various factors e.g., the excessive increase in the number of people infected with the Coronavirus, constantly changing health procedures, the stress of direct patient contact, long working hours, and fear of infection, which increased distress and burnout (Craiovan, 2014; Xiong et al., 2020; Zheng et al., 2020). Besides, the virus threatens medical providers and their contacts, including family, friends, and colleagues. Confirming, some studies have reported a moderate to high level of burnout (Derbi, 2012; Kamel et al., 2022; Koonce, 2014). Collin et al. (2020) indicated that 35% of dental students were non-adaptive perfectionists and showed increased levels of burnout in the United Kingdom. Other studies

revealed a high rate of burnout among healthcare providers (Al-Sareai et al., 2013; Collin et al., 2020; Elbarazi et al., 2017; Herken et al., 2022; Martin et al., 2022). Al-Shoraian (2011) investigated the prevalence of burnout among physicians in Kuwait and reported that more than one-third (36.8%) of the general practitioners suffered from high burnout. Elbarazi et al. (2017) presented a systematic review to study the prevalence of work-related factors linked with burnout among healthcare workers in Arab countries and found a high occurrence rate. Likewise, Martin et al. (2022) indicated that 42% of physicians reported high emotional exhaustion and depersonalization levels during the pandemic. Therefore, frontline workers and those involved in COVID-19 care reported significantly higher burnout rates than others (Herken et al., 2022).

Additionally, findings showed that physicians displayed a moderate to a high level of perceived self-efficacy, and the self-efficacy was higher among adaptive than maladaptive perfectionists. This result can be attributed to the heightened sense of social responsibility towards society to limit the spread of the pandemic and improve medical services by raising performance, and flexibility in dealing with difficult situations (Bidzan et al., 2020). Moreover, perseverance, coping strategy, problem-solving skills, and dedication in treating COVID-19 patients (Alshehri et al., 2020; Hafiz, 2020). These findings were compatible with some studies that reported a high level of self-efficacy among healthcare providers (Bidzan et al., 2020; Koonce, 2014). Koonce (2014) indicated a moderate to high level of burnout and a high level of self-efficacy among mental health professionals in the United States.

The results revealed no significant differences between males and females in perfectionism. This result can be attributed to the effect of perfectionism on males and females alike, which is represented in the cognitive evaluation of stressful situations, the pursuit of high standards, and self-criticism to raise the level of performance and self-esteem (Deuling & Burns, 2017; Rice & Liu, 2020). These findings were compatible with some studies no significant differences between males and females in perfectionism were found among physicians (Aboalshamat et al., 2017; Cabaços et al., 2023; Darrag et al., 2022). In contrast, Spagnoli et al. (2021) indicated that gender was positively associated with perfectionistic concerns, as females scored higher than males. Holden and Jeanfreau (2021) revealed that female marriage and family therapists' scores were higher in perfectionistic strivings than in males. Pereira et al. (2022)

indicated that women had higher levels of self-critical perfectionism than men among medicine and dentistry students in Portugal. Finally, no significant differences in perfectionism due to nationality, marital status, years of experience, and monthly income were obtained. These findings were consistent with Aboalshamat et al. (2017) that perfectionism was not associated with marital status among medical students. Unlike, Robakowska et al. (2018) showed that maladaptive perfectionism was negatively associated with work experience among medical laboratory scientists.

The results also revealed no significant differences between males and females in burnout. This result can be attributed to the adverse effects of the pandemic and does not differentiate between males and females. Where the burdens of the medical profession are linked to the responsibility towards the health and life of the patient in all circumstances, to reach the correct diagnosis as accurately as possible (Liu et al., 2024; Robakowska et al., 2018). The results of the previous studies, in these findings, were controversial. However, these findings were consistent with some of the previous literature, that there were no significant differences between males and females in burnout among healthcare providers (Al-Tayyar, 2020; Cabaços et al., 2023; Gad, 2022; Hafiz, 2020) or other professions (Cabell, 2021; Derbi, 2012). In comparison, Elbarazi et al. (2017) reviewed nineteen studies on burnout among healthcare professionals in Arab countries and reported that gender was significantly correlated with burnout. Several studies have indicated that females were significantly more burned out than males (Abdulla et al., 2011; Al-Gharib, 2014; Al-Haqan et al., 2021; Aliyev & Tunc, 2015; Du et al., 2024; Kamel et al., 2022).

The present study revealed statistically significant differences in the PA between Kuwaitis and non-Kuwaitis for non-Kuwaitis. These findings were not compatible with the literature. Research on the nationality differences in the Arabian Gulf region demonstrated that the healthcare providers' nationality is associated with burnout for citizens (Abdulghafour et al., 2011; Abdulla et al., 2011; Al-Haqan et al., 2021; Al-Sareai et al., 2013; Al-Tayyar, 2020; Elbarazi et al., 2017; Kamel et al., 2022). Additionally, the results indicated statistically significant differences in DP between the marital status groups. Where Single and Married were higher than (Divorced/Widowed) people. This result can be attributed to the rapid spread of a new infectious disease (COVID-19), which increased the number of patients hospitalized, thus increasing the burdens on the medical staff

and exposing them and their families to infection (Algunmeeyn et al., 2020). These findings were consistent with Kamel et al. (2022) that Bahraini citizens and single healthcare workers had higher levels of burnout during the pandemic. However, Derbi (2012) found no significant relationship between marital status and burnout dimensions.

The results revealed no significant differences in burnout due to years of experience. This result can be attributed to the unprecedented pressures on the health system and healthcare providers, in addition to the extension of daily working hours and the diversion of most medical staff to work in COVID-19 sections to fill the gaps because of the pandemic (Al-Haqan 2021). These findings were compatible with (Al-Tayyar, 2020; Koonce, 2014; Wolf, 2023). In contrast, Al-Sareai et al. (2013) found that physicians with more years of practice were more burned out in Saudi Arabia. Unlike, Kamel et al. (2022) showed that young participants with lower work experience (five years or less) had higher levels of burnout than more experienced doctors and nurses in Bahrain. Messerotti et al. (2020) indicated that junior physicians' burnout levels were higher than those of more experienced physicians' "consultants" by 65% among Italian physicians. The results also revealed no significant differences in burnout due to the monthly income. These findings were not consistent with the results of previous literature. Several studies indicated a positive correlation between income level and burnout for high-income earners, thus, those who earned a higher salary were highly burned out (Abdulghafour et al., 2011; Al-Sareai et al., 2013; Derbi, 2012).

The results revealed no significant differences between males and females in self-efficacy. This result can be attributed to the problematic nature of the medical profession, which requires high and diverse skills (Bidzan et al., 2020). These findings were consistent with Wolf (2023), the results displayed no significant difference in general self-efficacy between males and females, unlike, some other studies that found significant differences between males and females in self-efficacy for males (Aliyev & Tunc, 2015; Bidzan et al., 2020; Darrag et al., 2022; Du et al., 2024). Darrag et al. (2022) indicated that females displayed lower levels of self-efficacy than males in Saudi Arabia. No significant differences in self-efficacy due to nationality, marital status, and years of experience were obtained. This can be explained by the difficulty of stressful situations experienced by healthcare providers of all ages, nationalities, and groups, which affect their ability to deal efficiently with these stress-causing factors (Wang et al., 2020). These findings were compatible with (Koonce, 2014; Wolf, 2023)

that years of experience were not associated with self-efficacy among healthcare professionals. At last, the present study revealed statistically significant differences in self-efficacy between the monthly income group for the higher income. Hence the more income the practitioners receive, the more efficient they become. This result can be attributed to the fact that income increases motivation and thus increases self-efficacy and productivity (Koonce, 2014).

### ***Limitations and Implications for Future Research***

The Data was collected via the Internet, however, the responses obtained from outside Kuwait were excluded. Self-report has been implemented, whereby the respondents may be affected by social desirability. A convenience sample has been selected; however, many participants were likely to be excluded. The findings are limited to the medical population for the duration of the spread of the pandemic and may not be generalizable in different circumstances.

Despite these limitations, the findings of the current study contribute to (a) Exploring the relationships between perfectionism, burnout, and self-efficacy. (b) Identifying the differences between adaptive and maladaptive perfectionism in burnout and self-efficacy among physicians during the pandemic outbreak. (c) Revealing the differences in the current study variables among the different demographic variables groups. Therefore, it is considered valuable information in providing a basis for revealing physicians' personality traits, reducing levels of burnout, and raising the level of self-efficacy during crises since it reduces the adverse effects of burnout among perfectionist physicians.

Suggested for future research studying relationships between untested variables, such as social support, self-confidence, psychological resilience, or justice, with perfectionism and burnout. Likewise, the possibility of studying the relationship between extraversion or coping styles with burnout and self-efficacy. A proposal to repeat the study on a bigger sample size and compare the findings during the pandemic and thereafter among healthcare providers in Kuwait. On the other hand, comparing physicians in public and private health sectors.

### **Conclusion**

In conclusion, medical healthcare providers face many stressors and challenges that increase burnout levels. Additionally, perfectionists can develop adaptative or maladaptive mechanisms to deal with tasks and stressors; studying and understanding these mechanisms may help identify

the groups most at risk of burnout by determining the contribution of predicting self-efficacy. However, self-efficacy determines whether the behavior is adaptive or maladaptive to encounter difficult obstacles and challenges. It reflects the ability to control a challenging environment by implementing coping strategies, which increase optimism and self-confidence to deal with life's stressors. The present study explored the relationships between perfectionism, burnout, and self-efficacy and examined the differences between adaptive and maladaptive perfectionism groups among the study variables. It also investigated the level of perfectionism, burnout, and self-efficacy demonstrated by physicians working during the COVID-19 pandemic in Kuwait. The data analysis supported the hypothesized relationships, where maladaptive perfectionism correlated with greater burnout levels. Moreover, high levels of self-efficacy were negatively correlated with maladaptive perfectionism and burnout. Lastly, the findings provide a general overview of possible relationships to understand and reduce burnout among perfectionist healthcare providers through increasing self-efficacy. This information would allow specialists to develop effective coping strategies and programs for managing stress and avoiding burnout symptoms. These programs will be useful in raising the awareness and performance of healthcare providers and improving the quality of work, and the quality of medical services provided in Kuwait.

was also related to negative aspects of mental health such as anxiety, depression, obsessive-compulsive disorders, and other disorders related to mental health (Matlon, 2014). Later, perfectionism is classified into normal and neurotic behaviors, believing it may be healthy and lead to adaptation, thus

## References

- Abdulghafour, Y. A., Bo-hamra, A. M., Al-Randi, M. S., Kamel, M. I., & El-Shazly, M. K. (2011). Burnout syndrome among physicians working in primary health care centers in Kuwait. *Alexandria Journal of Medicine*, 47(4), 351–357. <https://doi.org/10.1016/j.ajme.2011.08.004>
- Abdulla, L., Al-Qahtani, D., & Al-Kuwari, M. (2011). Prevalence and determinants of burnout syndrome among primary healthcare physicians in Qatar. *South African Family Practice*, 53(4), 380–383. <https://doi.org/10.1080/20786204.2011.10874118>
- Abdullah, M., M. (2020) The effectiveness of a therapeutic cognitive behavioral program for reducing psychological burnout for the purpose of improving psychological and physical health of physicians and nurses working in hospitals and its impact on their occupational performance (in Arabic). *Journal of College of Education*, 44(2), 181-248.

- Aboalshamat, K., Alzahrani, M., Rabie, N., Alharbi, R., Joudah, R., Khulaysi, S., & Alansari, W. (2017). The relationship between burnout and perfectionism in medical and dental students in Saudi Arabia. *Journal of Dental Specialties*, 5(2), 122–127. <https://doi.org/10.18231/2393-9834.2017.0029>
- Abu Taha, S., S. (٢٠١٠). The impact of job burnout on performance effectiveness: By application to Palestinian governmental hospitals in Gaza governorates (in Arabic). *Scientific Journal for Economic & Commerce*, (3), 519-548.
- Al-Gharib, O. M. (2014). Burnout and its relationship to assertive behavior, self-efficacy, and some demographic variables in a sample of teachers in government schools (in Arabic). *Journal of the Faculty of Arts- Egypt*, 74(7), 11-69.
- Algunmeeyn, A., El-Dahiyat, F., Altakhineh, M. M., Azab, M., & Babar, Z.-U.-D. (2020). Understanding the factors influencing healthcare providers' burnout during the outbreak of COVID-19 in Jordanian hospitals. *Journal of Pharmaceutical Policy and Practice*, 13(53). <https://doi.org/10.1186/s40545-020-00262-y>
- Al-Haqan, A., Alenezi, F., Al-Mutairi, S., & Al-Taweel, D. (2021). Are pharmacists well equipped to deal with global health emergencies? Burnout during COVID-19. *Journal of Pharmaceutical Health Services Research*, rmab067, 1-8. <https://doi.org/10.1093/jphsr/rmab067>
- Aliyev, R., & Tunc, E. (2015). Self-efficacy in Counseling: The role of organizational psychological capital, job satisfaction, and burnout. *Procedia - Social and Behavioral Sciences*, 190, 97–105. <https://doi.org/10.1016/j.sbspro.2015.04.922>
- Al-Sareai, N. S., Al-Khaldi, Y. M., Mostafa, O. A., & Abdel-Fattah, M. M. (2013). Magnitude and risk factors for burnout among primary health care physicians in Asir province, Saudi Arabia. *Eastern Mediterranean Health Journal*, 19(5), 426–434. <https://doi.org/10.26719/2013.19.5.426>
- Al-Shammari, A. G. (2023). The Relationship between the Corona Pandemic “COVID-19” and Burnout among Doctors and Nurses in the Saudi Ministry of Health: An Applied Study at King Khalid General Hospital in Hafar Al-Batin Governorate (in Arabic). *Journal of Social Work*, 1(78), 109–133.
- Alshehri, F. S., AlAtawi, Y., Alghamdi, B. S., Alhifany, A. A., & Alharbi, A. (2020). Prevalence of post-traumatic stress disorder during the COVID-19 pandemic in Saudi Arabia. *Saudi Pharmaceutical Journal*, 28, 1666-1673 <https://doi.org/10.1016/j.jsps.2020.10.013>
- Al-Shoraian, G. M. J., Hussain, N., Alajmi, M. F., Kamel, M. I., & El-Shazly, M. K. (2011). Burnout among family and general practitioners. *Alexandria Journal of Medicine*, 47(4), 359–364. <https://doi.org/10.1016/j.ajme.2011.10.005>
- Al-Tayyar, H. A. (2020). Burnout levels of Kuwaiti medical staff fighting against (COVID-19) in light of certain variables (in Arabic). *Journal of the Gulf and Arabian Peninsula Studies*, [Special issue], 46(18)165–207. <https://doi.org/10.34120/jgaps.v46i.2749>
- Badawy, S. M. & Mohamad, M. S., (2015). Perfectionism and job burnout: Does religious coping moderate the relationship? *International Journal of Business and Social Research*, 5(12), 01. <https://doi.org/10.18533/ijbsr.v5i12.896>
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. Academic Press, 1998).

- Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, 38(1), 9–44. <https://doi.org/10.1177/0149206311410606>
- Bidzan, M., Bidzan-Bluma, I., Szulman-Wardal, A., Stueck, M., & Bidzan, M. (2020). Does self-efficacy and emotional control protect hospital staff from COVID-19 anxiety and PTSD symptoms? Psychological functioning of hospital staff after the announcement of COVID-19 coronavirus pandemic. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.552583>
- Cabaços, C., Macedo, A., Carneiro, M., Brito, M. J., Amaral, A. P., Araújo, A., Correia, D. T., Novais, F., Vitória, P., & Pereira, A. T (2023). The mediating role of self-compassion and repetitive negative thinking in the relationship between perfectionism and burnout in health-field students: A prospective study. *Personality and Individual Differences*, 213, 112314–112314. <https://doi.org/10.1016/j.paid.2023.112314>
- Cabell, A. (2021). Factors associated with the work-related burnout of residential employees: An examination of perfectionism and coping. *Journal of Human Services: Training, Research, and Practice*, 7(1).
- Central Statistical Bureau (2018). *Annual bulletin of health statistics (2018/2019)*. [https://www.csb.gov.kw/Pages/Statistics\\_en?ID=59&ParentCatID=70](https://www.csb.gov.kw/Pages/Statistics_en?ID=59&ParentCatID=70)
- Chang, H.-T., Chou, Y.-J., Liou, J.-W., & Tu, Y.-T. (2016). The effects of perfectionism on innovative behavior and job burnout: Team workplace friendship as a moderator. *Personality and Individual Differences*, 96, 260–265. <https://doi.org/10.1016/j.paid.2016.02.088>
- Chang, Y. (2012). The relationship between maladaptive perfectionism with burnout: Testing mediating effect of emotion-focused coping. *Personality and Individual Differences*, 53(5), 635–639. <https://doi.org/10.1016/j.paid.2012.05.002>
- Collin, V., O'Selmo, E., & Whitehead, P. (2020). Stress, psychological distress, burnout, and perfectionism in UK dental students. *British Dental Journal*, 229(9), 605–614. <https://doi.org/10.1038/s41415-020-2281-4>
- Craiovan, P. (2014). Correlations between perfectionism, stress, psychopathological symptoms and burnout in the medical field. *Procedia - Social and Behavioral Sciences*, 127, 529–533. <https://doi.org/10.1016/j.sbspro.2014.03.304>
- Darrag, S. I., Al-Khudair, R. M., & Almohamady, I. (2022). The relationship between perfectionism with self-disability and self-efficacy among students of health colleges at King Abdulaziz University in Jeddah (in Arabic). *Journal of Arab Research in the Fields of Specific Education*, 27, 111–140.
- Derbi, S. A. (2012). *Levels and sources of burnout among humanitarian aid workers in Amman and their relationship to perfectionism and other demographic variables* [Unpublished Master's thesis] (in Arabic). The University of Jordan.
- Deuling, J. K., & Burns, L. (2017). Perfectionism and work-family conflict: Self-esteem and self-efficacy as mediator. *Personality and Individual Differences*, 116, 326–330. <https://doi.org/10.1016/j.paid.2017.05.013>
- Du, Y., Qiao, L., Dong, L., Wan, C., Yang, X., & Liu, H. (2024). The relationship between self-efficacy, resilience, and job burnout in pediatric residents: a cross-sectional study in Western China. *BMC Medical Education*, 24(1). <https://doi.org/10.1186/s12909-024-05700-y>

- Elbarazi, I., Loney, T., Yousef, S., & Elias, A. (2017). Prevalence of and factors associated with burnout among health care professionals in Arab countries: a systematic review. *BMC Health Services Research*, 17(1). <https://doi.org/10.1186/s12913-017-2319-8>
- Freudenberger, H. J. (1975). The staff burn-out syndrome in alternative institutions. *Psychotherapy: Theory, Research & Practice*, 12(1), 73–82. <https://doi.org/10.1037/h0086411>
- Gad, Al-S. B. (2022). The relationship between occupational burnout and psychological capital among doctors in the light of some environmental variables “A proposed perception of some results of psychological capital in light of the challenges of the Corona crisis” (in Arabic). *Egyptian Journal of Psychological Studies*, 32(114), 1–62.
- Gnlika, P. B., McLaulin, S. E., Ashby, J. S., & Allen, M. C. (2017). Coping resources as mediators of multidimensional perfectionism and burnout. *Consulting Psychology Journal: Practice and Research*, 69(3), 209–222. <https://doi.org/10.1037/cpb0000078>
- Hafiz, D. N. (2020). The role of problem-solving skills as moderator variable for the relationship between work stressors and psychological burnout among human doctors [Abstract] (in Arabic). *The Journal of Psychological Service*, ١٣(13), 263–316. <https://doi.org/10.21608/JPS.2020.98777>
- Herken, M., Tegin, C., & El-Mallakh, R. S. (2022). Burnout in Healthcare Workers During the COVID-19 Pandemic. *Arab Journal of Psychiatry*, 33(2), 129–137. <https://doi.org/10.12816/0061321>
- Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, 60(3), 456–470. <https://doi.org/10.1037/0022-3514.60.3.456>
- Holden, C. L., & Jeanfreau, M. M. (2021). Are perfectionistic standards associated with burnout? Multidimensional perfectionism and compassion experiences among professional MFTs. *Contemporary Family Therapy*. <https://doi.org/10.1007/s10591-021-09605-6>
- Hou, T., Zhang, R., Song, X., Zhang, F., Cai, W., Liu, Y., Dong, W., & Deng, G. (2020). Self-efficacy and fatigue among non-frontline health care workers during COVID-19 outbreak: A moderated mediation model of posttraumatic stress disorder symptoms and negative coping. *PLOS ONE*, 15(12), e0243884. <https://doi.org/10.1371/journal.pone.0243884>
- Jarrett, T. A. (2018). *Risk factors, self-compassion, and burnout in medical students: Examining relationships through path analysis* (Publication No.10842490) [Doctoral dissertation, The University of Nebraska]. ProQuest Dissertation and Theses Global.
- Kamel, C. A., Al Hammam, R. A., & Sarwani, S. A. (2022). Burnout, Depression and Associated Risk Factors Among Frontline Healthcare Workers in Bahrain During COVID-19. *The Arab Journal of Psychiatry*, 22(1), 64–73.
- Koonce, N. (2014). *The moderating role of equity sensitivity on the relationship between motivation, self-efficacy, and burnout among mental health professionals* (Publication No.3635400) [Doctoral dissertation, Capella University]. ProQuest Dissertation and Theses Global.

- Kruger, K., Jellie, J., Jarkowski, O., Keglevich, S., & Zhi Xiang On. (2023). Maladaptive and Adaptive Perfectionism Impact Psychological Wellbeing Through Mediator Self-Efficacy Versus Resilience. *International Journal of Psychological Studies*, 15(3), 46–46. <https://doi.org/10.5539/ijps.v15n3p46>
- Kuwait News Agency. (2020a, February 26). *Kuwait's schools, universities suspended for 2 weeks starting March 1*. <https://www.kuna.net.kw/ArticleDetails.aspx?id=2868841&language=en>
- Kuwait News Agency. (2020b, March 11). *Kuwait gov't suspends commercial flights as of midnight March 13*. <https://www.kuna.net.kw/ArticleDetails.aspx?id=2876451&language=en>
- Kuwait News Agency. (2021, October 20). *Kuwait Cabinet announces returning to normal life, eases health restrictions*. <https://www.kuna.net.kw/ArticleDetails.aspx?id=3005992&language=en>
- Liu, C., Li, S., Zhou, J., Zhang, M., & Chen, H. (2024). Relationship between fear of COVID-19 and mental health of Chinese nurses: The mediating effects of psychological capital and burnout. *Nursing Open*, 11(3). <https://doi.org/10.1002/nop2.2136>
- Martin, S. R., Fortier, M. A., Heyming, T. W., Ahn, K., Nichols, W., Golden, C., Saadat, H., & Kain, Z. N. (2022). Perfectionism as a predictor of physician burnout. *BMC Health Services Research*, 22(1). <https://doi.org/10.1186/s12913-022-08785-7>
- Maslach, C., & Jackson, S. E. (1997). Maslach Burnout Inventory-Human Services Survey (MBI-HSS). In C. Maslach, S. E. Jackson, & M. P. Leiter (Eds.), *MBI Manual*, (3rd ed., pp. 191-218). Consulting Psychologists Press.
- Maslach, C., Jackson, S., & Leiter, M. P. (1996-2018). *Maslach Burnout Inventory Manual: Fourth Edition*. Mind Garden.
- Matlon, R. (2014). *An examination of the relationships between maladaptive versus adaptive perfectionism, stress, self-efficacy, and burnout in licensed clinical psychologists* (Publication No.3581157) [Doctoral dissertation, The Wright Institute]. ProQuest Dissertation and Theses Global.
- Messerotti, A., Banchelli, F., Ferrari, S., Barbieri, E., Bettelli, F., Bandieri, E., Giusti, D., Catellani, H., Borelli, E., Colaci, E., Pioli, V., Morselli, M., Forghieri, F., Galeazzi, G. M., Marasca, R., Bigi, S., D'Amico, R., Martin, P., Efficace, F., ... Potenza, L. (2020). Investigating the association between physicians self-efficacy regarding communication skills and risk of "burnout." *Health and Quality of Life Outcomes*, 18(1) Article number: 271. <https://doi.org/10.1186/s12955-020-01504-y>
- Newman, T. (2012). *Relationships between coping self-efficacy and burnout in nurse practitioners and physician assistants* (Publication No.3547735) [Doctoral dissertation, Alliant International University]. ProQuest Dissertation and Theses Global.
- Pereira, A. T., Brito, M. J., Cabaços, C., Carneiro, M., Carvalho, F., Manão, A., Araújo, A., Pereira, D., & Macedo, A. (2022). The Protective Role of Self-Compassion in the Relationship between Perfectionism and Burnout in Portuguese Medicine and Dentistry Students. *International Journal of Environmental Research and Public Health*, 19(5), 2740. <https://doi.org/10.3390/ijerph19052740>
- Rice, K. G., & Liu, Y. (2020). Perfectionism and burnout in R&D teams. *Journal of Counseling Psychology*, 67(3), 303–314. <https://doi.org/10.1037/cou0000402>

- Rice, K. G., Richardson, C. M., & Tueller, S. (2014). The Short Form of the Revised Almost Perfect Scale. *Journal of Personality Assessment*, 96, 368-379. <https://doi.org/10.1080/00223891.2013.838172>
- Robakowska, M., Tyrańska-Fobke, A., Walkiewicz, M., & Tartas, M. (2018). Adaptive and maladaptive perfectionism, and professional burnout among medical laboratory scientists. *Medycyna Pracy*, 69(3), 253–260. <https://doi.org/10.13075/mp.5893.00644>
- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy Scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). NFER-NELSON.
- Slaney, R. B., Rice, K. G., Mobley, M., Trippi, J., & Ashby, J. S. (2001). The Revised Almost Perfect Scale. *Measurement and Evaluation in Counseling and Development*, 34(3), 130-145.
- Spagnoli, P., Buono, C., Kovalchuk, L. S., Cordasco, G., & Esposito, A. (2021). Perfectionism and burnout during the COVID-19 crisis: A Two-wave cross-lagged study. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.631994>
- Vagni, M., Maiorano, T., Giostra, V., & Pajardi, D. (2020). Coping with Covid-19: Emergency stress, secondary trauma and self-efficacy in healthcare and emergency workers in Italy. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.566912>
- Wang, S., Feng, K., Zhang, Y., Liu, J., Wang, W., & Li, Y. (2020). Antecedents of public mental health during the COVID-19 pandemic: Mediation of pandemic-related knowledge and self-efficacy and moderation of risk Level. *Frontiers in Psychiatry*, 11. <https://doi.org/10.3389/fpsyg.2020.567119>
- Wolf, C. (2023). Fired Up or Burned Out: The Relationship Between Self-Efficacy and Burnout Among Physician Assistant Program Directors and Principal Faculty. *Journal of Allied Health*, 52(4), e163–e170. <https://pubmed.ncbi.nlm.nih.gov/38036479/>
- Xiong, H., Yi, S., & Lin, Y. (2020). The psychological status and self-efficacy of nurses during COVID-19 outbreak: A cross-sectional survey. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 57, PMID: 32900271. <https://doi.org/10.1177/0046958020957114>
- Zheng, Z., Luo, Z., Zhang, Y., Chan, W. C. H., Li, J., Pang, J., Jia, Y., & Tang, J. (2020). Hospice care self-efficacy among clinical medical staff working in the coronavirus disease 2019 (COVID-19) isolation wards of designated hospitals: A cross-sectional study. *BMC Palliative Care*, 19(1). <https://doi.org/10.1186/s12904-020-00692-0>

