



Addiction to Work: Analyzing the Impact of Workaholism on Entrepreneurs' Well-Being and Performance during COVID-19

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Abstract. Workaholism is widely discussed in the mainstream literature. However, to date, few researchers have examined the effect of workaholism on entrepreneurs' well-being and performance during times of global crisis. This research draws on data from the Global University Entrepreneurial Spirit Students' Survey (GUESSS) 2021 and uses a sample of active student entrepreneurs ($N = 257$). It uses role theory as the conceptual framework to examine the impact of workaholism on active entrepreneurs' well-being and performance during COVID-19. The study utilized structural equation modelling to test the effect of the two subdimensions of workaholism — (1) working compulsively and (2) working excessively — on well-being and performance. We test our hypotheses in the Saudi Arabian startup community as an examination of how these constructs operate within a Middle Eastern cultural context during the pandemic. Our results strongly challenge the idea that workaholism may have only harmful consequences and emphasize that workaholics are energized by their work and work accomplishments, reinforcing a sense of well-being and better perceived performance, especially during COVID-19.

Keywords: workaholism; DUWAS; entrepreneurs' well-being; job performance; Saudi Arabia; structural equation modelling; role theory.

1. Introduction

The dynamics of today's work, the global pandemic, competition intensification, sophisticated modern technology, and current profound economic and organizational changes have blurred the boundaries between work and personal life (Adisa et al., 2019). Consequently, companies may push many people to work longer hours. Some workers may do so compulsively. The uncontrollable tendency to work excessively may negatively affect an employee's health and well-being (Schaufeli et al., 2009). Many scholars have studied this tendency to empirically determine the effect of workaholism on employees (Andreassen et al., 2012; Clark et al., 2016; Schaufeli et al., 2009). Workaholism has become a widespread phenomenon, which may be especially acute among entrepreneurs,

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who are often very autonomous, emotionally and physically connected to their businesses, heavily invested in the progress of their new venture creations, and pressured by uncertainty and time constraints to execute innovative products and services into the market (Alshibani & Volery, 2021; Dijkhuizen et al., 2016).

Although workaholism is widely discussed in the mainstream literature (Andreassen et al., 2014; Clark et al., 2016; Spence & Robbins, 1992; Sussman, 2012), it has not yet been fully empirically substantiated in the entrepreneurship literature (Dijkhuizen et al., 2016; Gorgievski et al., 2014; Spivack et al., 2014). Furthermore, much discrepancy exists regarding the impact of workaholism on well-being and job performance. Some argue that workaholism is primarily a positive attribute or behavior tendency, encompassing such things as high work motivation (Schaufeli et al., 2009). Conversely, others define and regard workaholism first and foremost as a negative tendency characterized by compulsiveness, rigidity, and stress (Baruch, 2011; Kosevic & Loh, 2015).

Role theory argues that an individual's life comprises several roles and that each role comes with certain expectations, responsibilities, and norms (Katz & Kahn, 1978). The theory highlights the issue of role conflict, which refers to the tension of balancing multiple roles simultaneously (e.g., a role at work being an entrepreneur or small business owner and a role outside of work being a spouse, friend, or student). According to the theory, pressures and stress are the main outcomes of such a process.

Role theory provides a framework for understanding how individuals perform roles based on expectations. The theory has been used extensively and has witnessed many advancements in the occupational health and work–life balance literature (Greenhaus & Ten Brummelhuis, 2013). Not only does the theory provide insights into the relationships between work and family domains; it is also very relevant for guiding the present research because workaholics, who expend excessive engagement efforts in their work role, experience diminished engagement efforts available for their family role (Gomes et al., 2023). Furthermore, role theory is particularly relevant given that the COVID-19 pandemic can be seen as a career shock that will have a lasting influence on how people balance the two worlds of work and family (Gordon & Shi, 2021).

Entrepreneurs are particularly prone to workaholism for the following reasons: (a) they have a great degree of autonomy in organizing their work; (b) almost every role and responsibility of a nascent entrepreneur is infinitely expandable in size and scope, especially in the early phase of the start-up; and (c) there is an element of responsibility attached to the title “small business owner” that can encourage the owners to pour themselves into the job to the exclusion of other important activities, such as recreation and leisure (Shepherd and Patzelt, 2015). These factors come with an increased risk of working too much — perhaps far too much for entrepreneurs (Gorgievski & Stephan, 2016).

Our study further advances our understanding of workaholism (Mazzetti et al., 2020). It examines how workaholism affects entrepreneurs' performance and

well-being, based on a sample of active student entrepreneurs who have been part of the GUESSS (Global University Entrepreneurial Spirit Students' Survey) 2021 wave, which is one of the largest global research projects exploring students' entrepreneurial intentions and activities. The study uses a well-established scale to measure workaholism—the 10-item Dutch Work Addiction Scale (DUWAS), described frequently in the literature (Allam et al., 2021; Krumov et al., 2022; Morkeviit and Endriulaitien, 2021; Schaufeli et al., 2009)—to capture both the externalizing symptoms (i.e., the behavioral dimension) and the internalizing symptoms (i.e., the cognitive dimension). The first component refers to putting much time and effort into work, far beyond what is expected to meet job requirements. The latter refers to being obsessed with work in the sense that the worker is motivated to work by an obsessive inner drive the worker cannot resist (Schaufeli et al., 2009).

The impact of workaholism on entrepreneurship became significant during the COVID-19 epidemiological crisis. Like many workers, entrepreneurs experienced heightened psychological stress stemming from prolonged isolation during lockdowns, sudden and unplanned transitions to remote work, increased work–life imbalance, and anxiety triggered by economic and social uncertainty. These challenges were compounded by a significant loss of job autonomy due to centralized governmental policies aimed at curbing the spread of the virus (Alshibani et al., 2025a; Gordon & Shi, 2021; Spagnoli et al., 2020; Spagnoli & Molinaro, 2020). Individuals with a predisposition to workaholism—particularly entrepreneurs—were especially vulnerable to emotional exhaustion during this period, experiencing even greater strain than their salaried counterparts (Spagnoli et al., 2020). Managers and freelancers, for example, reported higher tendencies to work excessively or compulsively as a response to their diminished autonomy, resulting in elevated levels of burnout (Spagnoli & Molinaro, 2020).

In the Saudi Arabian context, these pressures were further exacerbated by some of the most stringent COVID-19 restrictions in the region, including strict curfews, business shutdowns, and limitations on mobility. Such measures severely disrupted entrepreneurial operations and amplified both psychological stress and operational burdens on early-stage business owners. While the experiences of managers and freelancers offer valuable parallels, there remains a lack of empirical research focusing specifically on how these dynamics affected entrepreneurs—a gap this study seeks to address.

Our study makes several contributions to the entrepreneurship literature. First, we contribute to role theory (Katz & Kahn, 1978) by providing novel insights into the dynamics of COVID-19 (as an external factor) on active student entrepreneurs (who navigate different roles and expectations) and workaholism behaviour (as an outcome). Second, we studied the link between workaholism, well-being, and performance among (student) entrepreneurs rather than employees. Third, our focus on student entrepreneurs in Saudi Arabia is relevant because this context is still underrepresented in the literature about

entrepreneurship (Alshibani et al., 2025a; 2025b). Saudi Arabia's context is witnessing rapid and dynamic changes related to the "Vision 2030" national plan to diversify the economy. This plan would be enabled by healthy, happy, and high-performing entrepreneurs (Al-Mamary et al., 2020). In this regard, the present study investigates the role of workaholism in influencing entrepreneurs' health, happiness, and performance.

2. Literature Review and Hypothesis Development

2.1. *Student Entrepreneurship in Saudi Arabia*

Student entrepreneurs, who balance academic responsibilities with entrepreneurial ventures, are emerging as key drivers of innovation and economic growth. These individuals leverage fresh perspectives, creativity, and access to academic resources, peer networks, and institutional support to develop innovative solutions and launch businesses (Ghafoor & Haar, 2025; Alshibani & Volery, 2021). The rise of student entrepreneurship is fueled by technological advancements, a culture of innovation, and the availability of resources such as incubators, accelerators, and mentorship programs (Bockorny & Youssef-Morgan, 2019; Alshibani et al., 2025a). This dual pursuit equips them with critical skills like time management, problem-solving, and leadership, which are invaluable for their future careers (Schaufeli et al., 2009).

In Saudi Arabia, student entrepreneurship has gained significant momentum, driven by the government's Vision 2030 initiative, which seeks to diversify the economy and reduce reliance on oil. Key factors contributing to this growth include national transformation programs like MiSK Innovation and Monsha'at, which provide funding, mentorship, and training (Al-Mamary et al., 2020). Educational reforms have also played a pivotal role, with many local universities establishing entrepreneurship courses, incubators, and innovation hubs (Alshibani et al., 2021). Additionally, increased access to venture capital, cultural shifts embracing entrepreneurship, and rapid digital transformation have created opportunities in sectors like e-commerce, fintech, and edtech (Gorgievski & Stephan, 2016; Belitski et al., 2022).

However, student entrepreneurs in Saudi Arabia face challenges, including balancing academics and business, limited industry experience, regulatory hurdles, and access to professional networks (Dijkhuizen et al., 2016; Hynes and Cullinane, 2024). Despite these obstacles, success stories like Nana, an online grocery delivery platform, and Noon Academy, an edtech startup, demonstrate the potential of student-led ventures to achieve significant impact (Freeman et al., 2019; Sieger et al., 2021).

Studying the well-being of student entrepreneurs is crucial, as they navigate unique pressures that can affect their mental and physical health, academic performance, and business success. Chronic stress and burnout are prevalent

risks, potentially impairing productivity, decision-making, and innovation (Hynes and Cullinane, 2024; Menghini & Balducci, 2024; Spagnoli & Molinaro, 2020). Addressing well-being is also vital for long-term career development, as it fosters resilience and skill acquisition (Schaufeli et al., 2009; Ghafoor & Haar, 2025). Furthermore, student entrepreneurs are central to Saudi Arabia's socio-economic goals under Vision 2030, as their ventures contribute to job creation, innovation, and economic diversification (Wiklund et al., 2019). Cultural expectations and the need for robust social support networks further underscore the importance of well-being in this context (Alshibani et al., 2021).

2.2. *Workaholism: Definition and Conceptualization*

The term *workaholism* was first coined by Oates (1971) to describe a person's deleterious compulsion to work. Since then, several definitions have emerged describing workaholism as a heavy investment in work, working long hours regardless of productivity, and working more than is demanded (Taris and De Jonge, 2024; Mazzetti et al., 2020; Patel et al., 2012). Moreover, the term *workaholism* has been used interchangeably with other terms, such as *work addiction* and *excessive work* (Andreassen et al., 2012; Biçer, 2025).

As a result, considerable debate exists among scholars regarding the conceptual boundaries of workaholism. This ambiguity has led to inconsistencies in its definition and operationalization (Patel et al., 2012; Spence & Robbins, 1992; Spivack & McKelvie, 2018). In particular, researchers in industrial-organizational psychology and occupational health have attempted to differentiate *work engagement*—a healthy form of heavy work investment—from *workaholism*, which is often associated with negative outcomes (Clark et al., 2016). Despite these efforts, no consensus has been reached, and the conceptual overlap remains unresolved (Clark et al., 2016; Shimazu et al., 2018).

For the purpose of this study, we adopt the definition of workaholism proposed by Schaufeli et al. (2009), which conceptualizes the construct as comprising two core dimensions: working excessively and working compulsively. This widely accepted operationalization allows for a clearer distinction between harmful workaholic behavior and more adaptive forms of work involvement.

2.3. *Merits and Demerits of Workaholism*

Researchers also found workaholism to possibly be one of the addictive behaviors on par with gambling, drug use, and alcohol (Sussman, 2012). Physical health may also be poor in workaholic individuals. For example, workaholics often find it difficult to sleep (i.e., insomnia), experience fatigue while at work, and struggle with waking up in the morning (Andreassen et al., 2012). Researchers also found that workaholics experience higher work–family conflict and lower relationship satisfaction (Bakker et al., 2014; Biçer, 2025).

While most researchers view workaholism negatively (Oates, 1971; Schaufeli et al., 2009; Spagnoli & Molinaro, 2020), others associate workaholism with positive outcomes, such as high work motivation and career satisfaction (Baruch, 2011), positive work–family spillover, positive affects, and a high level of eustress (i.e., pleasant stress; Andreassen et al., 2012). In the entrepreneurial context, research on the impact of workaholism on well-being and performance is very limited and to some extent, contradictory (Dijkhuizen et al., 2016; Gorgievski et al., 2014; Rauch, 2020; Taris et al., 2008). We will discuss these contradictions in detail in the following sections.

2.4. Workaholism and Well-Being

Workaholism may have a profound effect on one's sense of well-being. In the psychology and occupational health literature, we found that employees obsessed with work, as opposed to those who simply worked long hours but did not have workaholic tendencies, reported more health complaints, had a higher need for recovery, and experienced depressive feelings (Sussman, 2012). As a result, it is critical to examine the impact of workaholism on entrepreneurs' well-being (Delladio & Caputo, 2025; Gorgievski & Stephan, 2016).

Entrepreneurship is a lonely career that is replete with stress (Shepherd & Patzelt, 2015). Entrepreneurs face many stressors as a result of the rapid and radical changes taking place during an entrepreneurial endeavour, all of which can take a toll on their physical and mental health (Delladio & Caputo, 2025; Shepherd & Patzelt, 2015; Wiklund et al., 2019). Compared to the general public, entrepreneurs are 50% more likely to suffer from a mental health condition, such as depression, suicidal thoughts, or bipolar disorder (Freeman et al., 2019). Entrepreneurs are twice as likely as non-self-employed persons to require psychiatric hospitalization (Cocker et al., 2012; Freeman et al., 2019). These alarming statistics draw researchers' attention to examine the antecedents and consequences of self-employment and to take a closer look at entrepreneurial health and well-being (Cocker et al., 2012).

In the context of role theory and workaholism, we theorize that given these career characteristics and because of their compulsive nature, workaholic entrepreneurs are more likely to experience role conflict than their nonworkaholic counterparts. We theorize that the work stressors in self-employment career are conceptually and empirically different from paid employment. Therefore, we expect that well-being would be adversely affected by working excessively and compulsively, which involves spending an excessive amount of time at work motivated by an obsessive urge to accomplish remarkable goals, thus, leaving insufficient opportunity to recover and feel good, which is important to well-being.

In fact, research suggests that the cognitive component of workaholism has more adverse effects than simply working long hours, other research however reported that both dimensions can affect well-being separately (Mazzetti et al.,

2020). Rauch (2020) found that self-employed people who spend long, heavy hours feel burned out and stressed — they have difficulty relaxing because of insufficient opportunity to recover and complete the slow process of unwinding. Giving up important social, family, or recreational activities because of actually working or simply thinking about work can have a deleterious effect on well-being and quality of life (Rauch, 2020; Taris et al., 2008). Entrepreneurs often report greater autonomy, flexibility and job satisfaction (Alshibani & Volery, 2021). While these are clearly important motivators, an entrepreneurial career is costly and places substantial demands on both practical and psychological resources (Gorgievski & Stephan, 2016). Role conflict, role overload, guilt, worry, and other hazards are anticipated to follow, resulting in impaired well-being. Accordingly, it is reasonable to postulate a negative relationship between working excessively and compulsively and subjective well-being:

H1a: Working excessively (WE) has a negative effect on entrepreneurs' subjective well-being.

H1b: Working compulsively (WC) has a negative effect on entrepreneurs' subjective well-being.

2.5. *Workaholism and Performance*

A review of recent research on workaholism and job performance found that the majority of studies have focused on salaried workers across occupational groups such as academic staff, managers, nurses, and doctors (Baruch, 2011; Delladio & Caputo, 2025; Kosevic & Loh, 2015; Schaufeli et al., 2009). As a result, the specific implications of workaholism for entrepreneurs remain underexplored and warrant further empirical investigation.

However, the findings in the existing literature do inspire some hypotheses. For example, Van Beek et al. (2013) found that workaholism is negatively related to job performance. In other words, the great volume of work done by workaholics may be associated with low-quality work, implying that workaholics are poor performers in general. For workaholics, spending an excessive amount of time on work leads to inadequate recovery, leaving them psychologically and physically exhausted. Emotional or cognitive fatigue will directly impact innovation and performance (Clark et al., 2016; Dijkhuizen et al., 2016; Patel et al., 2012).

Interestingly, Dijkhuizen et al. (2016) found that self-employed persons scored higher on work engagement and working excessively compared to employees. Additionally, working excessively related positively to innovativeness and contextual performance for entrepreneurs. The authors suggest that this relationship may be explained by the intrinsic satisfaction derived from entrepreneurial autonomy. Specifically, they note that for entrepreneurs who work excessively, “working independently gives a pleasant feeling and excitement of running your own business” (Dijkhuizen et al., 2016, p. 201).

Entrepreneurs are referred to as “jacks-of-all-trades” at the startup phase of a firm because they play several roles and interact with a range of stakeholders (clients, suppliers, banks, staff, etc.) who are essential to their success. Furthermore, entrepreneurs are burdened with a variety of duties and greater workloads as a result of the dynamic, changing and strenuous competitive business environments. High emotional demands and psychological exhaustion are frequently caused by this combination of tasks and duties and contextual factors of the marketplace (Kurczewska & Mackiewicz, 2020). Gorgievski et al. (2014) contradicted these findings. They found negative correlations between workaholism and aspects of performance, including turnover, profit, and the employee growth numbers, through negative affect. They also implied that workaholic entrepreneurs are less successful than their nonworkaholic colleagues because they experience more negative emotions, such as distress, irritability, and nervousness. Recent research found that workaholic entrepreneurs have a higher likelihood of quitting their business (Sánchez-Medina et al., 2020; Sardeshmukh et al., 2021).

Following this line of thought and guided by role theory, we assume that role overload and role conflict arise when entrepreneurs feel that the cumulative role demands exceed their abilities and motivation to perform these multiple tasks at the startup stage (Mäkinen et al., 2021). Thus, we hypothesize that overworked, anxious, exhausted entrepreneurs do not create the optimum environment for innovation and high performance. Further, entrepreneurs reluctant to disengage from work experience a deep sense of pressure, distress, and guilt when not working. Thus, we hypothesize the following:

H2a: Working excessively (WE) has a negative effect on entrepreneurs’ job performance.

H2b: Working compulsively (WC) has a negative effect on entrepreneurs’ job performance.

2.6. *Workaholism and COVID-19*

The COVID-19 pandemic dramatically affected many workers’ jobs, livelihoods, and well-being (Krumov et al., 2022), and entrepreneurs were no exception. COVID-19’s transmission mode required measures, such as lockdowns and social distancing (WHO, 2021), which significantly disrupted small and medium-sized enterprises (Belitski et al., 2022) by forcing them to adopt remote working environments and methods. This change affected the well-being of workers because it generated psychological stress and social isolation, as well as time management and work–family conflicts (Loscalzo, 2021; Spagnoli & Molinaro, 2020; Tecau et al., 2020). The changes the pandemic brought were so abrupt that companies and individuals were not prepared for remote work (Spagnoli & Molinaro, 2020). Therefore, many entrepreneurs were not materially and cognitively equipped to share time, space, and equipment with their families. Thus, remote work caused disruption of work routines and difficulty completing

work goals. At the same time, the biosecurity policies adopted by governments, such as extended lockdowns during which most socialization spaces outside the immediate family were closed and workers could leave home only for essential activities, generated emotions related to isolation. Additionally, these measures led to an economic crisis where many firms closed or laid off many workers, which created a sense of uncertainty about the future (Magnavita et al., 2021; Spagnoli et al., 2020).

These factors decreased job autonomy and increased negative emotions related to psychological stress (Spagnoli and Molinaro, 2020). These experiences of negative emotions were intensified in workers who have attitudes and behaviours related to workaholism, especially among those who have positions that in pre-pandemic conditions had considerable job autonomy and responsibility, such as managers, freelancers, and entrepreneurs. Thus, managers and freelancers who tend to work excessively and obsessively experienced higher levels of emotional exhaustion during the pandemic than other workers.

Evidence is emerging about the effects of COVID-19 on workaholism. For example, Gordon and Shi (2021), who suggested that there is a positive relationship between workaholism and perceived career success, attributed this to the workplace changes caused by COVID-19. These changes may possibly have shifted some of the historical dynamics because more individuals live and work from home, thereby making it more difficult to differentiate leisure from work. In contrast, Gomes et al. (2023) could not establish significant influences between heavy work involvement and perception of career success in both the objective and subjective sense during COVID-19. They concluded that for their sample, it might be the case that burnout and stress are what led entrepreneurs to feel mentally, physically, and emotionally drained and therefore, having difficulty achieving the high performance necessary for a successful career. These contradictory results were our main motive to consider COVID-19 as a moderator.

Spagnoli et al. (2020) highlighted the function of technostress—commonly defined as an individual's inability to cope with new technologies—as one of the main detriments to well-being during the pandemic, especially for remote workers with a tendency toward workaholism. And this is also true for entrepreneurs, who would deal with many new technologies to adapt their businesses to pandemic settings in accordance with the expectations of their consumers and their need to survive in the market. Therefore, we assume that Covid-19 may have had different effects on self-employed people at the time of Covid. Considering these factors, we propose the following hypotheses:

H3: COVID-19 will moderate the influence of (a) WE and (b) WC on entrepreneurs' subjective well-being, thereby suggesting that the relationships proposed for those entrepreneurs who created their business as a consequence of COVID-19 will be different than those of entrepreneurs who did not create their business as an implication of COVID-19.

H4: COVID-19 will moderate the influence of (a) WE and (b) WC on entrepreneurs' job performances, thereby suggesting that the relationships proposed for those entrepreneurs who created their businesses as a result of COVID-19 will be different than those of entrepreneurs who did not create their businesses as an implication of COVID-19.

3. Methodology

3.1. Data and Sample

The data for our research came from the Global University Entrepreneurial Spirit Students' Survey (GUESSS) project (for full information about the GUESSS project and data collection, refer to Sieger et al., 2021 and Zellweger et al., 2011; and for full information about the Saudi national data, refer to Alshibani et al., 2021). The Swiss Research Institute of Small Business and Entrepreneurship (KMU-HSG) and the Center for Family Business (CFB-HSG), both at the University of St. Gallen, conducted GUESSS. Students at higher education institutions from about 58 different countries provided data anonymously to GUESSS online.

The high quality of this data (i.e., GUESSS), as well as the fact that it is one of the largest students' entrepreneurship research projects in the world, make it a perfect fit for this research study (GUESSS, 2021). Moreover, GUESSS 2021 current and relevant data (i.e., coming after COVID-19) allowed us the chance to research how the aforementioned factors affect students' wellbeing. To identify active entrepreneurs, we relied on the survey item: "*Are you already running your own business / are you already self-employed?*" We restricted the sample to Saudi student respondents who answered "Yes." In total, 266 respondents were identified as active entrepreneurs. To ensure comparability between groups, we excluded those who did not answer the COVID-19 question (i.e., whether they created their business as a consequence of the pandemic). Specifically, nine observations were removed, resulting in a final analytical sample of 257 active entrepreneurs. We then assessed the pattern of missingness across the main study variables using missing-at-random diagnostics. The results indicated no systematic bias, confirming that the missing data were consistent with the Missing at Random (MAR) assumption and that the dataset was suitable for subsequent SEM and ANOVA analyses.

In the Saudi context, lockdown measures were among the most stringent in the region. Government-imposed restrictions on movement, social gatherings, and commercial activity led to widespread business closures, curfews, and limitations on face-to-face transactions. These measures created significant disruptions for small business owners, particularly those in their early stages of venture creation who lacked the financial buffers and operational flexibility of larger firms. For student entrepreneurs, the sudden halt in traditional business

operations not only amplified stress levels and uncertainty about the viability of their ventures but also required rapid adjustments in strategy. Many were compelled to accelerate the adoption of digital platforms for sales, marketing, and customer engagement, often without prior preparation or adequate resources. While this digital shift opened new opportunities in e-commerce, fintech, and online services, it simultaneously exposed gaps in technical knowledge and increased financial and emotional strain. The intersection of strict lockdowns, heightened market volatility, and the need for rapid digital transformation thus placed student entrepreneurs in Saudi Arabia under exceptional pressure during the pandemic.

3.2. Variable Measurement

Subjective well-being was measured using the 5-item scale from Diener et al. (1985). The scale captures the respondents' cognitive evaluations of their quality of life. An example item could be "*I am satisfied with my life*". The scale ranges from 1 = strongly disagree to 7 = strongly agree (Cronbach's alpha = 0.836; CFI = 0.975, TLI = 0.950, RMSEA = 0.096; loading range: 0.612 to 0.833), and a higher score indicates a higher level of subjective well-being. This scale has strong psychometric properties, and scholars have utilized it in many research projects (Bockorny and Youssef-Morgan, 2019; Dijkhuizen et al., 2016).

We measured perceived job performance in GUESSS based on participants' responses to the question "How do you rate the performance of your business compared to its competitors' over the last three years in the following dimensions: (1) sales growth, (2) market share growth, (3) profit growth, and (4) job creation." The data ranged from 1 = much worse to 7 = much better. The scale has been adopted from Eddleston et al. (2008) and Dess and Robinson (1984). It captures different aspects of job performance and has been frequently used in empirical research (Laskovaia et al., 2017; Smolka et al., 2018). We calculated the factor scores by weighting items based on the factor loadings from the confirmatory factor analysis (CFA), with a higher score indicating that people perceive themselves to have superior performance (Cronbach's alpha = 0.885; CFI = 0.966, TLI = 0.932, RMSEA = 0.015; loading range: 0.489 to 0.947).

Workaholism was measured using the DUWAS scale (Krumov et al., 2022; Schaufeli et al., 2009; Shirokova et al., 2024; Sieger et al., 2021). The DUWAS scale reveals the respondents' feelings about work, reflecting the two core components of workaholism: Working Compulsively (WC) (e.g., "I feel that there's something inside me that drives me to work hard") and Working Excessively (WE) (e.g., "I seem to be in a hurry and racing against the clock"). The scale format ranged from 1 (totally disagree) to 4 (totally agree).

We conducted a series of CFAs to examine the psychometric adequacy and dimensionality of the scales. This was deemed necessary because we could find no validation of the DUWAS scale in the Saudi context. The CFA results indicated that a two-factor model, WE and WC, is appropriate and significantly

superior in goodness-of-fit measures than a single-factor model (Table 1). Both the average variance extracted (AVE) and the composite reliability (CR) of the constructs were above the recommended thresholds. The literature has extensively validated these factors' convergent and discriminant validity (Clark et al., 2016). We calculated the factor scores by weighting items based on the factor loadings from the CFA. A higher factor score represents either a more intense WE or a higher perception of WC.

Table 1. CFA results for the DUWAS items (N = 257)

Model	χ^2	df	CFI	TLI	AIC	RMSEA	Loading range
Single-factor model	105.804	9	0.76	0.205	6057.846	0.205	0.528 to 0.744
Correlated two-factor model	18.652	8	0.974	0.95	5972.694	0.072	0.550 to 0.795
Second-order two-factor model	18.652	8	0.974	0.95	5972.694	0.072	0.550 to 0.795

To measure the effect of COVID-19, we asked respondents the following question: *Have you created your business largely because of the implications of the COVID-19 pandemic?* This dichotomized (yes or no) single item is adequate and sufficient for classifying the groups: those who have been affected by the pandemic versus those who were not.

4. Analysis Strategy

Our analysis proceeded in two steps. First, we specified a Structural Equation Model (SEM). A SEM has an advantage in terms of statistical power when estimating the multiple and interrelated dependences in a single analysis compared to running a series of regressions; further, it potentially accommodates a small sample size (Richter et al., 2016). We used the RMSEA, CFI, and TLI as fit indexes. As the literature suggests, for a model with an acceptable fit to the data, these indexes should be 0.08, 0.90, and .0.90, respectively. In contrast, the corresponding values for a good fit would be higher than these thresholds (Hu & Bentler, 1999). To analyze the moderating effect of COVID-19 on the relationships among workaholism, well-being, and job performance, a multigroup analysis procedure seemed appropriate given the categorical nature of the COVID-19 variable. We conducted all analyses using the maximum likelihood estimation method in Stata.

Next, we followed the taxonomy of Schaufeli et al. (2009) and classified the groups (Table 2) based on the medians of WE and WC to (1) relaxed workers (low on both WE and WC), (2) compulsive workers (low on WE and high on WC), (3) hard workers (high on WE and low on WC), and (4) workaholics (high on both WE and WC). We used one-way ANOVA to test the differences in well-being and job performance between the groups. These results are reported in Section 4.3.

Table 2. Working groups classification

		Work excessively (WE)	
		Low	High
	Low	Relaxed worker	Hard worker
Work compulsively (WC)	High	Compulsive worker	Workaholics

Source: Schaufeli et al. (2009)

4.1. Descriptive Statistics

Table 3 displays the Pearson’s correlation matrix. The results indicate a positive and significant correlation between well-being and working excessively, $r(256) = 0.156$, $p \leq 0.05$. Perceived job performance was positively correlated with both working compulsively, $r(256) = 0.213$, $p \leq 0.05$, and working excessively, $r(256) = 0.309$, $p \leq 0.1$. In addition, the two dimensions of workaholism—working compulsively and working excessively—were strongly correlated, $r(256) = 0.609$, $p \leq 0.1$. In contrast, the correlations between Covid-19 and the other variables were negative, but none reached statistical significance.

Table 3. Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)
(1) Well-being	1.000				
(2) Perceived job performance	0.246	1.000			
(3) Working compulsively	0.064	0.213**	1.000		
(4) Working excessively	0.156**	0.309*	0.609*	1.000	
(5) Covid-19	-0.110	-0.087	-0.024	-0.114	1.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4 shows descriptive characteristics of the sample based on the two groups (entrepreneurs who started their business as a consequence of COVID-19 and those who did not). On the demographic level, the sample consisted of 75.1% females and 24.9% males. Most of the respondents were young (20–24 years of age, 50.2%), undergraduate students (86.8%), Saudi nationals (56.4%), and single (87.6%). Around two-thirds of the sample (67.3%) reported not taking any entrepreneurship education, and more than half (55.6%) did not have an entrepreneurial family background, meaning neither parent was self-employed. On the business level, the majority of ventures were relatively young, with nearly four out of five (79.8%) established within the last two years. Most firms were small in scale, with 83.0% operated either by solo entrepreneurs or with no more than three employees. Business ownership was primarily concentrated in majority-owned ventures (51–100%), which represented 60.3% of the sample. In terms of industry distribution, the largest shares of businesses were in the “Other” category (30.4%), followed by Creative and Professional Services (29.6%) and Trade and Transport (19.5%). By contrast, fewer entrepreneurs reported activity

in sectors such as Finance and Business Services (8.2%), Industry and Construction (6.2%), and Health, Social, and Tourism (6.2%).

Table 4. Descriptive statistics

		Total (N=257)		No (N=148)		Yes (N=109)	
		Freq.	%	Freq.	%	Freq.	%
Gender	Female	193	75.10	106	71.62	22	20.18
	Male	64	24.90	42	28.38	87	79.82
Age	<20	38	14.79	19	12.84	19	17.43
	20-24	129	50.19	76	51.35	53	48.62
	25+	90	35.02	53	35.81	37	33.94
Education Level	Undergraduate	223	86.77	133	89.86	90	82.57
	Graduate	34	13.23	15	10.14	19	17.43
Marital Status	Single	225	87.55	125	84.46	100	91.74
	Married	32	12.45	23	15.54	9	8.26
Entrepreneurship education	Yes	84	32.68	50	33.78	75	68.81
	No	173	67.32	98	66.22	34	31.19
Nationality	Saudi	145	56.42	90	60.81	54	49.54
	International	112	43.58	58	39.19	55	50.46
Family Background	No	143	55.64	77	52.03	66	60.55
	Yes, father	65	25.29	39	26.35	26	23.85
	Yes, mother	12	4.67	8	5.41	6	5.50
	Yes, both	35	13.62	24	16.22	11	10.09
Business establishment	Less than a year	109	42.41	49	33.11	60	55.05
	1 to 2 years ago	96	37.35	52	35.14	44	40.37
	3 to 4 years ago	28	10.89	26	17.57	2	1.83
	> 5 years ago	24	9.34	21	14.19	3	2.75
Number of Employees	Solo	113	43.97	58	39.19	55	50.46
	1-3 employees	100	38.91	57	38.51	43	39.45
	4-10 employees	25	9.73	24	16.22	11	10.09
	more than 10 employees	9	3.50	9	6.08	0	0.00
Business ownership	0-49% (minority owner)	56	21.79	34	22.97	22	20.18
	50%	46	17.90	28	18.92	18	16.51
	51-100% (majority owner)	155	60.31	86	58.11	69	63.30

Economic sector	Creative & Professional Services	76	29.60	45	30.40	31	28.40
	Manufacturing & Construction	16	6.20	8	5.40	8	7.30
	Finance & Business Services	21	8.20	12	8.10	9	8.30
	Health, Social & Tourism	16	6.20	8	5.40	8	7.30
	Trade & Transport	50	19.50	29	19.60	21	19.30
	Other	78	30.40	46	31.10	32	29.40

Note: “No” = Entrepreneurs who did not start their business due to COVID-19; “Yes” = Entrepreneurs who started their business as a result of COVID-19.

4.2. Results

The initial SEM specified paths from working excessively (WE) and working compulsively (WC) to well-being and job performance. In the pooled sample (N = 257), WE was marginally and positively related to well-being ($\beta = .19, p = .050$) and strongly and positively related to job performance ($\beta = .58, p < .001$). By contrast, WC did not significantly predict either outcome (well-being: $\beta = .02, p = .803$; performance: $\beta = .11, p = .246$). These results stand in contrast to H1a–H2b, which predicted negative effects of both WE and WC on well-being and performance. The results of the structural equation model further indicate that the measurement model demonstrated an acceptable fit to the data, with CFI = 0.944, TLI = 0.920, AIC = 15,867.432, and RMSEA = 0.064. Both the CFI and TLI values exceed the commonly recommended threshold of 0.90, suggesting that the model adequately captures the relationships among the latent constructs. In addition, the RMSEA value is below the 0.08 cutoff, indicating a reasonable approximation error, while the AIC provides a comparative index for evaluating alternative models. Together, these indices support the conclusion that Model 1 fits the data at an acceptable level.

To test moderation by COVID-start (whether the business had been established as a consequence of the pandemic), a multi-group SEM was estimated (Yes vs. No). Model fit was excellent (CFI = 0.921; TLI: 0.920; AIC: 15,620.740; RMSEA = 0.060). Results showed distinct patterns across groups. For entrepreneurs who did **not** start their businesses due to COVID-19 (N = 148), working compulsively (WC) significantly predicted job performance ($\beta = .26, p = .031$), while working excessively (WE) had only a marginal effect ($\beta = .36, p = .057$). Neither WE nor WC predicted well-being. By contrast, for entrepreneurs who did start their businesses as a result of COVID-19 (N = 109), WE strongly predicted job performance ($\beta = .82, p < .001$) and showed a weak positive association with well-being ($\beta = .26, p = .059$), whereas WC was non-significant.

Formal invariance tests were conducted to assess whether these differences were statistically significant. Equality constraints on the WE Performance path

did not significantly worsen model fit (LR $\chi^2(1) = 2.49, p = .115$). Similarly, constraining all four structural paths (WE Well-being, WE Performance, WC Well-being, WC Performance) to equality across groups did not degrade fit (LR $\chi^2(4) = 4.01, p = .404$). Thus, the structural relations between workaholism dimensions and outcomes did not differ significantly by COVID-start status, indicating no statistical evidence of moderation in the multi-group tests.

To check robustness, we re-estimated the model using an interaction approach in gsem, specifying product terms between workaholism dimensions and COVID-start. The results were broadly consistent with the multi-group SEM. Joint Wald tests of the interaction terms were not statistically significant (WE $\times$ COVID-start: $\chi^2(2) = 3.29, p = .193$; WC $\times$ COVID-start: $\chi^2(2) = 4.29, p = .117$), but coefficients followed the expected pattern. Specifically, the interaction between WE and COVID-start was positive for performance ($\beta = 0.46, p = .110$), whereas the interaction between WC and COVID-start was negative for performance ($\beta = -0.34, p = .073$). Both effects were marginal and did not reach conventional thresholds. These checks suggest that, although interaction effects are weaker when modelled directly, the directional trends align with the multi-group analysis, lending additional support to the interpretation that the influence of workaholism on performance may differ between COVID-founded and pre-existing businesses.

Taken together, these findings indicate that the hypothesized negative relationships (H3–H4) were not supported. Instead, working excessively enhanced performance across groups—particularly among COVID-founded businesses—while compulsive working style was positively associated with performance only among those with pre-existing businesses. Moderation by COVID-start thus emerged in directions opposite to those originally predicted.

Table 5. Results of the SEM Models^a

H		Coef.	Std. err.	z	P> z	[95% conf. interval]	
Model 1							
H1a	WE -> Wellbeing	0.186	0.095	1.960	0.050	0.000	0.373
H1b	WC -> Wellbeing	0.015	0.062	0.250	0.803	-0.106	0.136
H2a	WE -> Performance	0.581	0.145	4.000	0.000	0.296	0.866
H2b	WC -> Performance	0.109	0.094	1.160	0.246	-0.075	0.294
Model (2)							
Group 1 (Yes COVID-19)							
H3a	WE -> Wellbeing	0.264	0.139	1.890	0.059	-0.010	0.537
H3b	WC -> Wellbeing	-0.056	0.090	-0.620	0.536	-0.232	0.121
H4a	WE -> Performance	0.823	0.225	3.650	0.000	0.381	1.264
H4b	WC -> Performance	-0.074	0.145	-0.510	0.609	-0.359	0.211
Group 2 (No COVID-19)							
H3a	WE -> Wellbeing	0.101	0.129	0.780	0.436	-0.153	0.354
H3b	WC -> Wellbeing	0.072	0.084	0.860	0.390	-0.092	0.236

H4a	WE -> Performance	0.358	0.188	1.900	0.057	-0.011	0.727
H4b	WC -> Performance	0.262	0.122	2.150	0.031	0.024	0.501

^a WE = Working excessively; WC = Working compulsively

4.3. Working Groups

Table 6 presents the one-way ANOVA results comparing outcomes across work condition groups (as defined in Table 2). Significant differences were found for sales growth ($F(3,253) = 6.40, p < .001$), profit growth ($F(3,245) = 5.07, p = .002$), job creation ($F(3,240) = 5.72, p < .001$), and well-being ($F(3,241) = 4.62, p = .004$). In contrast, market share growth did not differ significantly between groups ($F(3,253) = 1.01, p = .390$). These findings suggest that work condition is associated with important differences in entrepreneurs' performance and well-being.

Table 6. One-way ANOVA results

	Source	SS	DF	MS	F	Prob > F
Sales growth	Between groups	44.3	3	14.7	6.4	0.0003
	Within groups	584.4	253	2.3		
Market share growth	Between groups	2.8	3	0.9	1.01	0.3895
	Within groups	238.9	253	0.9		
Profit growth	Between groups	46.3	3	15.4	5.07	0.002
	Within groups	746.8	245	3.0		
Job creation	Between groups	54.0	3	18.0	5.72	0.0008
	Within groups	755.3	240	3.1		
Wellbeing	Between groups	48.2	3	16.0	4.62	0.0037
	Within groups	838.9	241	3.4		

Post-hoc comparisons using the Tukey HSD test (shown in Table 7) revealed that both Compulsive and Workaholic entrepreneurs consistently outperformed Relaxed entrepreneurs across several business outcomes. Specifically, Compulsive entrepreneurs reported significantly higher sales growth ($\Delta M = 1.07, p = .014$) and market share growth ($\Delta M = 1.23, p = .004$), compared to Relaxed entrepreneurs. Workaholic entrepreneurs also scored significantly higher than Relaxed entrepreneurs on sales growth ($\Delta M = 0.93, p = .003$), market share growth ($\Delta M = 0.99, p = .002$), profit growth ($\Delta M = 0.87, p = .016$), and job creation ($\Delta M = 0.99, p = .014$). No significant differences emerged between Compulsive, Workaholic, and Hard-working groups, nor did group membership significantly affect well-being. These results highlight that while well-being is not influenced by work condition, business performance indicators are systematically higher among Compulsive and Workaholic entrepreneurs relative to their Relaxed counterparts.

Table 7. Pairwise Comparisons of Work Conditions on Key Outcomes (Tukey HSD)

		Contrast	Std. Err.	t	P> t	[95% Conf. Interval]	
Sales growth	Compulsive vs Relaxed	1.068	0.352	3.040	0.014	0.158	1.977
	Hard vs Relaxed	0.459	0.348	1.320	0.552	-0.442	1.361
	Workaholics vs Relaxed	0.929	0.268	3.470	0.003	0.237	1.622
	Hard vs Compulsive	-0.608	0.403	-1.510	0.434	-1.651	0.435
	Workaholics vs Compulsive	-0.138	0.336	-0.410	0.977	-1.007	0.731
	Workaholics vs Hard	0.470	0.333	1.410	0.493	-0.391	1.331
Market share growth	Compulsive vs Relaxed	1.230	0.361	3.410	0.004	0.297	2.163
	Hard vs Relaxed	0.547	0.357	1.530	0.422	-0.378	1.471
	Workaholics vs Relaxed	0.995	0.277	3.590	0.002	0.278	1.711
	Hard vs Compulsive	-0.683	0.410	-1.670	0.343	-1.744	0.377
	Workaholics vs Compulsive	-0.236	0.342	-0.690	0.901	-1.120	0.649
	Workaholics vs Hard	0.448	0.339	1.320	0.549	-0.428	1.324
Profit growth	Compulsive vs Relaxed	0.927	0.379	2.440	0.072	-0.054	1.908
	Hard vs Relaxed	-0.021	0.376	-0.060	1.000	-0.994	0.952
	Workaholics vs Relaxed	0.870	0.291	2.990	0.016	0.118	1.622
	Hard vs Compulsive	-0.948	0.431	-2.200	0.126	-2.063	0.167
	Workaholics vs Compulsive	-0.057	0.359	-0.160	0.999	-0.986	0.872
	Workaholics vs Hard	0.891	0.356	2.510	0.061	-0.029	1.811
Job creation	Compulsive vs Relaxed	0.649	0.426	1.520	0.424	-0.452	1.751
	Hard vs Relaxed	0.378	0.422	0.900	0.807	-0.714	1.471
	Workaholics vs Relaxed	0.992	0.326	3.040	0.014	0.149	1.835
	Hard vs Compulsive	-0.271	0.485	-0.560	0.944	-1.526	0.984
	Workaholics vs Compulsive	0.343	0.404	0.850	0.831	-0.703	1.388
	Workaholics vs Hard	0.614	0.400	1.530	0.419	-0.422	1.649
Well-being	Compulsive vs Relaxed	0.143	0.192	0.740	0.880	-0.354	0.640
	Hard vs Relaxed	-0.139	0.189	-0.730	0.884	-0.627	0.350
	Workaholics vs Relaxed	0.146	0.147	1.000	0.752	-0.233	0.525
	Hard vs Compulsive	-0.281	0.220	-1.280	0.578	-0.851	0.288
	Workaholics vs Compulsive	0.003	0.185	0.020	1.000	-0.475	0.481
	Workaholics vs Hard	0.284	0.182	1.570	0.400	-0.185	0.754

5. Discussion

Our study set out to test whether workaholism—working excessively (WE) and working compulsively (WC)—would negatively affect entrepreneurs’ well-being and job performance. Contrary to our hypotheses (H1a–H2b), we did not find support for these predicted negative effects. Instead, WE emerged as positively related to performance and marginally associated with well-being, while WC showed no significant associations with either outcome. This indicates that the hypothesized detrimental consequences of workaholism were not substantiated in our sample of student entrepreneurs, which aligns with earlier propositions that

workaholics may also derive energy and motivation from their work (Baruch, 2011; Kosevic & Loh, 2015).

With respect to COVID-19 as a moderator, our subgroup analyses revealed some descriptive differences across groups. Entrepreneurs who created a business because of COVID-19 showed a stronger positive association between WE and both performance and well-being, while in pre-existing businesses WE and WC were positively associated only with performance. However, these subgroup differences were not statistically significant in either multi-group tests or interaction models. In other words, the moderation hypotheses (H3–H4) were not supported. Although the coefficients suggested possible trends, these cannot be interpreted as evidence of moderation. This finding is consistent with prior research showing mixed and inconclusive results on the role of COVID-related disruptions in shaping the workaholism–outcome relationship (Gordon & Shi, 2021; Gomes et al., 2023).

Interestingly, the ANOVA results (Table 6) painted a slightly different picture: work condition groups (Relaxed, Hard-working, Compulsive, Workaholic) showed significant differences in sales growth, profit growth, job creation, and well-being, but not in market share growth. This suggests that work condition is associated with meaningful differences in performance and well-being at the group level. Yet these differences were less evident in the SEM results, where most individual paths from WC to outcomes were non-significant. This raises an important methodological question: are these discrepancies due to measurement and modelling differences between SEM and ANOVA, or does the aggregation into work condition groups reveal patterns that are masked at the individual path level? Addressing this issue in future research would help clarify whether group-level comparisons capture unique dynamics not observable in latent variable modelling.

The lack of support for our hypotheses suggests several possible explanations. First, the pandemic context may have altered how entrepreneurs experienced heavy work investment. With lockdowns and social restrictions, work could have served as a coping mechanism—an escape from stress and uncertainty—that generated feelings of vitality and purpose rather than exhaustion (Spagnoli & Molinaro, 2020; Magnavita et al., 2021). Second, the sample consisted of very young entrepreneurs, many in the early founding stage of their ventures. At this stage, the novelty, autonomy, and personal control associated with entrepreneurship may lead to positive evaluations of performance and well-being, even under conditions of intense effort (Dijkhuizen et al., 2016; Shepherd & Patzelt, 2015). Third, the conceptual overlap between work engagement and workaholism complicates interpretation. The positive effects of WE on performance may reflect engaged, motivated effort rather than pathological compulsion, a distinction emphasized in prior studies (Clark et al., 2016; Rauch, 2020). As Podsakoff et al. (2016) caution, construct ambiguity can blur theoretical distinctions, making it difficult to isolate workaholism from

related but more adaptive constructs like engagement. Future research should pay close attention to this boundary, both conceptually and empirically, to disentangle the conditions under which heavy work investment becomes harmful.

5.1. Theoretical and Practical Contributions

In our study, we answered the call for more research on workaholism and the lack of research on the theoretical underpinnings of workaholism (Dijkhuizen et al., 2016; Gorgievski et al., 2014; Rauch, 2020; Taris et al., 2008). On a theoretical level, our research adds to the conceptualization of workaholism through role theory. The complexity of roles faced by entrepreneurs and the taking on of multiple roles during the pandemic have challenged the predefined, agreed upon, and static expected roles. Entrepreneurs, workaholics or not, constantly thought about work when they were not working and experienced persistent thoughts that drew them back into thinking about work regardless of their own health, family, and entertainment. (Gomes et al., 2023; Gordon & Shi, 2021). Juggling multiple roles, including that of active entrepreneurs, and any of several possible nonwork roles, such as student, spouse or significant other, parent, or friend had a positive impact on their well-being and performance, as if these were coping mechanisms for the uncertain situation caused by the pandemic. Therefore, when determining the well-being and performance outcome associated with workaholism, it is important to highlight the context (e.g., during a crisis). The contextualization of external factors could explain the mechanism of how workaholism is affecting well-being and performance.

Additionally, this study examines the applicability of Western constructs, such as workaholism and role theory, in the Arab context. While these theories have been predominantly studied in Western, individualistic cultures, their operationalization in collectivist societies like Saudi Arabia reveals significant differences in work values, economic pressures, and social expectations. These cultural and structural distinctions shape how entrepreneurs experience workaholism and its consequences, offering valuable insights for cross-cultural research.

Our study also contributes to a deeper understanding of the entrepreneurial ecosystem in Saudi Arabia, where the dynamics of student entrepreneurship are influenced by both cultural and economic factors. Saudi Arabia's Vision 2030 has led to an increased focus on entrepreneurship, with young student entrepreneurs facing unique challenges in balancing their academic and professional roles. Understanding the intersection of workaholism and the entrepreneurial culture in Saudi Arabia is crucial to supporting their long-term success and well-being in this rapidly changing economic landscape.

Our study makes the following practical contributions: (1) Notwithstanding the positive effects on wellbeing and performance of workaholism tendencies among entrepreneurs found in this study, policymakers, educators, and mentors must monitor the health-related risks of workaholism among young

entrepreneurs, particularly during times of crisis, and (2) we recommend implementing training programs that focus on promoting work–life balance. This includes introducing practices that encourage entrepreneurs to disconnect during nonwork times, such as setting boundaries between work and personal life, prioritizing self-care, and creating time for relaxation and family. Additionally, it is crucial to develop support systems within organizations and entrepreneurial networks that provide resources for stress management and mental health. Such interventions can help entrepreneurs prevent burnout and enhance their long-term health and performance. By focusing on these strategies, we can foster a more sustainable and balanced approach to entrepreneurship that promotes both professional success and personal well-being (Alshibani et al., 2025a).

5.2. Limitations and Future Research

Our research relied exclusively on subjective self-reported measures of well-being and performance, which may be subject to common method bias. This limitation could have influenced the results, and future research should explore the connection between workaholism and objective measures, such as biomarkers (e.g., systolic blood pressure and metabolic syndrome; Andreassen et al., 2012).

Additionally, while we focused on the direct effect of workaholism on well-being and performance, other variables, such as psychological capital and locus of control, could act as mediators in the workaholism–health relationship. Future research could investigate potential mediators or moderators of this relationship, including the type of venture. Workaholism can sometimes bring intrinsic rewards, particularly when the work is tied to a meaningful cause. Thus, exploring workaholism in the context of social entrepreneurship would provide valuable insights into its impact on entrepreneurs who engage in purpose-driven work.

Another limitation of our study is that it addressed the relationship between workaholism, well-being, and performance using a cross-sectional design. This approach makes it difficult to establish causal relationships or disentangle the directionality of the effects. Therefore, future studies should use longitudinal designs to explore the complex interactions between workaholism, well-being, and performance over time, offering a clearer understanding of these relationships in the entrepreneurial context.

6. Conclusion

Workaholism has increasingly become a focus of empirical research (Dijkhuizen et al., 2016; Gorgievski et al., 2014; Rauch, 2020; Spivack & McKelvie, 2018; Taris et al., 2008). This study explored the relationship between workaholism and the well-being and performance of entrepreneurs, particularly in the context of the COVID-19 pandemic. Our findings show that excessive work (WE) has a significantly positive effect on job performance, especially for entrepreneurs who

started their businesses as a result of the pandemic. This supports the idea that workaholism can sometimes lead to positive outcomes, such as increased productivity, when it is associated with entrepreneurial goals and outcomes.

However, we also found that compulsive work (WC) does not have a significant impact on well-being or job performance in the broader sample. Importantly, we did not find any evidence of a significant negative relationship between either WE or WC and well-being (see Table 5). This suggests that, at least in the short-term and within the entrepreneurial context, workaholism tendencies were not associated with the expected detrimental effects on well-being. The moderating effect of COVID-19 further revealed that entrepreneurs who created their businesses in response to the pandemic experienced more positive relationships between WE and well-being, and between WE and performance, although formal tests of moderation did not show statistically significant group differences.

Given the rapid changes occurring in Saudi Arabia, particularly with the Vision 2030 national plan, understanding the workaholism dynamics among Saudi student entrepreneurs is critical. Promoting well-being and performance in this context could contribute significantly to the country's entrepreneurial ecosystem and its economic diversification efforts.

Our study contributes to the growing body of research on workaholism by demonstrating that the effects of workaholism are context-dependent and can vary based on external factors such as global crises. The findings suggest that while workaholism can have positive effects on performance, particularly in high-pressure environments like those created by the pandemic, its relationship with well-being is more complex and not necessarily harmful in the way prior literature has often suggested. Future research should further investigate the complex dynamics of workaholism, considering factors such as the type of entrepreneurial venture, the cultural context, and the long-term effects on entrepreneurs' health and success.

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