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The Impact of Self-Management Practices on Entrepreneurial Psychological States

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ABSTRACT

It is well-known that entrepreneurs lead extremely busy lives. While research literature reports the stressors of entrepreneurial careers few empirical studies have examined the actual management of the demands that entrepreneurs face in their daily lives. In this paper we conducted a study of 472 small business owners and tested hypotheses on the roles of three self-management practices exercise work overload and attention to detail on stress security and job satisfaction. Exercise work overload and attention to detail serve as three important self-management practices that are largely under the decision-making of the individual entrepreneur.

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1. INTRODUCTION

Entrepreneurs carry many responsibilities and stressors in the daily operation of their businesses. The success of a venture rests firmly on their shoulders. Research that examines practices that influence the psychological states of entrepreneurs in running their businesses may shed light on how to better cope with this situation. In this paper we propose the study of self-management practices as they impact entrepreneurial stress security and job satisfaction. To address this issue we conducted a study of 472 small business owners and tested hypotheses on the roles of exercise work overload and attention to detail on stress security and job satisfaction. Advertisements magazine articles and television shows trumpet the benefits of exercise and encourage people to undertake a fitness regimen. Indeed it would make sense that an exercise program may lead to a less stressful and more productive life for the entrepreneur. However busy schedules and the challenge of maintaining a fitness regimen lead many people to quit these programs soon after starting them and to return to their more sedentary lifestyles. This paper empirically examines whether spending time away from the business exercising is time well spent. Another decision that entrepreneurs face is the amount of workload they choose to accept in their daily schedule. Many entrepreneurs experience work overload as they decide to place increasing priority on their businesses in their lives. This paper empirically examines whether work overload increases stress reduces security and decreases job satisfaction. Finally the paper examines the effect attention to detail has on stress security and job satisfaction. We expect that entrepreneurs who have higher attention to detail will better manage an operation in a way that reduces her/his stress increases her/his perception of venture security and increases her/his job satisfaction.

Boyd and Gumpert (1983) identified four causes of entrepreneurial stress: (1) loneliness (2) immersion in business (3) people problems and (4) the need to achieve. They note that not all stress is bad but if it becomes overbearing and unrelenting in a person's life it wears down the body's physical abilities. However if stress can be kept within constructive bounds it can increase a person's efficiency and improve performance. Locke defines job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke1976 p. 1300). This study adds to the previous literature by examining the role levels of stress can have on the job satisfaction of entrepreneurs. In general stress can be viewed as a function of discrepancies between a person's expectations and ability to meet demands. If a person is unable to fulfill role demands stress occurs. When entrepreneurs' work demands and expectations exceed their abilities to perform they are more likely to experience stress. Additionally initiating and managing a business requires taking significant risk. These risks may be financial career family social or psychological. Whether an event or circumstance is considered to be stressful is largely dependent on the perception of each person. Fortunately coping processes can help the entrepreneur to better handle potentially stressful situations (Bolger1990 ; Neck and Cooper2000;Lupinacci et al.1993;Cooper1995;Brandon and Loftin1991).

Self-management constitutes a broad range of coping mechanisms and practices hence why we utilized three independent variables that we believe entrepreneurs can manage for decreasing stress increasing a sense of security and increasing job satisfaction.

Self-management practices are consistent with the underlying foundation of self-leadership in which it is based. Specifically self-leadership consists of specific behavioral and cognitive strategies designed to positively influence personal effectiveness. Self-leadership strategies are typically partitioned into three primary categories including behavior-focused strategies natural reward strategies and constructive thought pattern strategies (Neck et al.2019;Neck and Houghton2006). Behavior-focused strategies attempt to increase an individual's self-awareness in order to facilitate behavioral management especially the management of behaviors related to necessary but unpleasant tasks (Neck and Houghton2006). Natural reward strategies are designed to foster situations in which a person is motivated or rewarded by inherently enjoyable aspects of the task or activity (Neck and Houghton2006. Constructive thought pattern strategies are designed to facilitate the formation of constructive thought patterns (habitual ways of thinking) that can impact performance in a positive manner (Neck and Houghton2006). Constructive thought pattern strategies include identifying and replacing dysfunctional beliefs and assumptions mental imagery and positive self-talk (Neck et al.2019). In the following sections we explore three specific behaviors self-management practices that can improve the subjective experience of entrepreneurial work.

2. SELF-MANAGEMENT PRACTICES

Autonomy is an aspect of entrepreneurship that runs through its core (Shir et al.2019) given its nature of being a self-organized (Shir2015) and goal-directed pursuit (Bird 1988; Frese 2009;McMullen and Shepherd 2006;Shir et al.2019). As such self-management or the process of managing oneself has been suggested as a process helpful to entrepreneurial success (D'Intino et al.2007;Goldsby et al.2006;Neck et al.1999;Neck et al.2013). Self-management is a foundation of self-leadership and the distinction between these two concepts is expanded upon elsewhere (Manz1986).Manz and Sims(1980) established the self-management construct as based on the methods of self-observation self-goal setting incentive modification and rehearsal. Essentially people practicing effective self-management are aware and deliberate about how they utilize their personal resources of time energy and attention. For the purposes of this paper we concentrate on work overload attention to detail and exercise as three important self-management practices that are largely subject to the decision-making of the individual entrepreneur. We next examine the role of each of these practices in our proposed model.

2.1. Work Overload

Work overload is the degree to which the "job performance required in a job is excessive or overload due to performance required on a job" (Iverson and Maguire2000) and is a major contributor to work stress (DeFrank and Ivancevich 1998;Sparks and Cooper 1999;Taylor et al.1997). As stated earlier the amount of work an entrepreneur decides to pursue is an important aspect of an entrepreneurial career (Sardeshmukh et al.2020). Given the expectations of meeting the business and personal demands of owning and operating a business entrepreneurs may believe they have too much to do or experience a lack of control in managing all the responsibilities Kuratko(2018) refers to this situation as the "one man band syndrome" recalling the traveling performers who played multiple instruments at once in putting on a show. We posit that entrepreneurs who endure work overload will experience greater stress in their work and thus offer the following hypothesis:

Hypothesis 1 (1a). Work overload will be positively related to stress for entrepreneurs.

Additionally entrepreneurs who work in excess of what seems reasonable to them may question how long they can continue operating the business. For the entrepreneur the business is their job so ending the venture essentially brings unemployment to them. In the organizational behavior literature security addresses “the fear that employees may lose their job and become unemployed” (De Witte1999 p. 156). It would seem reasonable that entrepreneurs who experience work overload would also endure a lack of security in relying on the future of their venture. Entrepreneurs perceiving their work situations as this leads us to offer the following hypothesis:

Hypothesis 1 (1b). Work overload will be negatively related to feelings of security for entrepreneurs.

2.2. Attention to Detail

Given that entrepreneurs are ultimately responsible for the success of the business we would expect many to immerse themselves in the small details of the daily operations as well as the strategic decisions that must be made in the long run. However psychology research has found that sustained periods of concentration and perseverance can lead to higher stress anxiety depression and hostility (Zuckerman and Lubin1985; Motowidlo et al.1986). Yet we contend that given the nature of entrepreneurial work attention to detail is important to reduce stress.

Consider small businesses you may have visited that seem orderly and well-run versus ones that have disorganization and inconsistent and haphazard customer service. Now think of the entrepreneurs running the operations. Were there differences in their countenance and the way the business operated? Our study contends that there is a relationship between the way an entrepreneur routinizes manageable details and takes more control of their perceived work. Ambiguity and uncertainty are very challenging aspects of entrepreneurship (Rigotti et al.2011;Koudstaal et al.2016). Reducing ambiguity and uncertainty requires attention to detail enabling the entrepreneur to attend to and prevent negative circumstances that could damage the business. Although not all aspects of a venture can be systematized organizing and controlling what can be affords an entrepreneur better ability to address unique situations as they occur. Stabilization strategies have been found in psychological research studies to reduce stress improve circadian rhythms and sleep and better handle conflicts and crises as they occur (Frank et al.2000). We posit that entrepreneurs who examine understand and manage the working components of their businesses in great detail will have better psychological states. Therefore we offer the following hypotheses:

Hypothesis 2 (2a). Attention to detail will be negatively related to stress for entrepreneurs.

Hypothesis 2 (2b). Attention to detail will be positively related to feelings of security for entrepreneurs.

2.3. Exercise

Well-being is increasingly appearing as a subject of study in entrepreneurship research (Hmielecki and Sheppard 2019;Stephan 2018;Wiklund et al.2019). The Gallup Organization has extensively studied well-being and defined it as “the combination of our love for what we do each day the quality of our relationships the security of our finances the vibrancy of our physical health and the pride we take in what we have contributed to our communities” (Rath et al.2010 p. 4). Exercise is an important component of physical well-being Rath et al.(2010) discovered that the benefits of exercise increase with its frequency. Yet all exercise is not the same. Public health research suggests that intense exercise holds substantial health benefits not found in more relaxed physical activities (Warren and Perlroth 2001;Meltzer and Jena 2010). Given the demanding nature of entrepreneurial work we sought to discover whether more intensive exercise was related to less stress for entrepreneurs. A consistent physical regimen is a major commitment by an entrepreneur because time spent exercising is also time away from the business (Goldsby et al.2005;Goldsby et al.2019). We contend however that the self-management practice of frequent intense exercise is worthwhile for entrepreneurs. We therefore offer the following hypotheses:

Hypothesis 3 (3a). Exercise intensity will be negatively related to stress for entrepreneurs.

Hypothesis 3 (3b). Exercise intensity will be positively related to feelings of security.

3. ENTREPRENEURIAL PSYCHOLOGICAL STATES

Many entrepreneurs lead stressful lives due to “hard work long hours emotional energy height end job stress role ambiguity and above all risk (Buttner1992; Eden 1975 ;Kaufmann and Dant 1999;Lewin-Epstein and Yuchtman-Yaar 1991;Min1990;Bradley and Roberts2004 p. 39). Despite the stressful components of self-employment entrepreneurs often continue working long hours for financial gain in spite of the costs to their personal health (Cardon and Patel 2015). However financial gain is only one important outcome in the life of an

entrepreneur. In this paper we examine job satisfaction as the outcome of study as it relates to the choices that entrepreneurs make regarding daily practices in their life and work. Specifically we study whether the discretionary choices of workload attention to detail and exercise intensity influence stress and security and in turn job satisfaction. Job satisfaction is a long-studied subject in human resource management organizational behavior and general management Hoppock(1935) summarized job satisfaction as a holistic indicator of psychological physiological and environmental circumstances that “cause a person truthfully to say I am satisfied with my job” (Aziri2011 p. 77). As such job satisfaction has been studied as an internal state or attitude about a person’s overall view of the work they are presently doing (Vroom 1964;Locke 1976;Mullins and Christy 2005;Armstrong 2006). Job satisfaction has been extensively studied in larger organizations including its relationship to corporate entrepreneurial activity (Adonisi 2005;Holt et al.2007;Adonisi and Van Wyk2012) however a gap exists in the job satisfaction literature regarding self-employment.

Levels of stress security and job satisfaction are conditions experienced by entrepreneurs; the former to be reduced if possible and the latter two to be enhanced. Locke defines job satisfaction as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences” (Locke1976). It is an important component of mental health and work-life balance. Therefore we concentrate on stress security and job satisfaction as three indicators of psychological well-being for the individual entrepreneur. We next examine the role of each of these psychological states in our proposed model.

3.1. Security

Security is something most entrepreneurs give up when going out on their own (Morris and Lewis 1991). Therefore it would be a prized condition when it manifests. Work situations in which security is perceived as often in jeopardy can incur mental and physical harm over time (Kornhauser 1965;Beehr and Newman 1978;Frese 1985;Ivancevich 1986;Ivancevich and Matteson 1980;Warr 1987;Weitz 1970). More specifically Porter and Jick (1980) discovered that increased job insecurity can incur extreme psychosomatic conditions such as depression anxiety and irritation. Much of the seminal work on job security and quality of life examines the relationship on blue-collar workers since much of their employment status is out of their hands. However entrepreneurs may experience similar conditions of insecurity in their work. Entrepreneurs often choose to own and manage their own enterprises for autonomy reasons removing stressors of working for someone else. Yet the responsibilities that would have been carried by a “boss” are now firmly on the shoulders of the entrepreneur. We contend that entrepreneurs who operate with high levels of insecurity in their enterprise will bear significant mental costs; however entrepreneurs who can increase their sense of security in their work will experience less stress. We therefore offer the following hypothesis:

Hypothesis 4 Security will be negatively related to stress for entrepreneurs.

Herzberg (2003) described job security as the expectation an employee has of stability in their employment status. Beyond the health factors previously discussed in this paper security impacts attitudes toward organizational factors such as employee turnover (Arnold and Feldman1982) employee retention (Ashford et al.1989;Bhuian and Islam1996 ; Iverson and Roy1994) and organizational commitment (Abegglen 1958;Ashford et al.1989; Bhuiyan and Islam 1996;Iverson 1996;Morris et al.1993). These three important organizational variables have a significant effect on the sustainable performance of a company. A company with employees committed to their work and staying employed with the organization is more likely to perform better than one having to devote major resources to the endless recruiting selection and training that comes with high turnover. In turn job satisfaction has been a variable of study in much of these variables. AsImran et al.(2015 p. 841) state “Job satisfaction comes when an employee is rewarded well and is provided with those job tasks that are challenging yet interesting.” Rewarding work is an important consideration for staying with an organization. In a related manner entrepreneurial exit is a topic gaining interest in the entrepreneurship literature (DeTienne and Cardon2012;Sardeshmukh et al.2020). When entrepreneurs decide to leave their organization that often means shutting down the enterprise. In particular motivational drivers of exit many of which are not tied to financial performance are gaining prominence in the research literature (DeTienne2010;DeTienne and Cardon 2012;Wennberg et al.2010;Wennberg and DeTienne 2014;Sardeshmukh et al.2020). Research that supports insights into lessening entrepreneurial exit would prove useful for increasing economic vitality in a community. In this article we have placed our attention on job satisfaction as an important outcome for study in improving entrepreneurial work.

Given that security has been found to be of significance in studies of job satisfaction with company employees we would expect entrepreneurs would also experience more satisfaction in their work when they feel secure about their situations. We therefore offer the following hypothesis:

Hypothesis 5 Feelings of security will be positively related to job satisfaction.

3.2. Stress

Our model proposes a central role for stress in the work experience of the entrepreneur. Indeed based on the logic of the preceding hypotheses we believe that the strength of the relationships between stress and its independent variables (work overload attention to detail and exercise intensity: Hypothesis 1a Hypothesis 2a and Hypothesis 3a) and its dependent variable job satisfaction will be such that stress will be a significant mediating variable. Therefore we offer the following hypothesis:

Hypothesis 6 Stress will mediate the relationships between the independent variables (work overload attention to detail and exercise intensity) and job satisfaction for entrepreneurs.

4. METHOD

Participants: 542 entrepreneurs located in the Midwest (Indiana Ohio Illinois and Kentucky) were surveyed for this study of which 472 were completed. Of these the average age was 47 years and 79% were male. Nineteen percent had finished high school 29% had attended college 40% had completed college and 12% held graduate degrees. A wide variety of small businesses were represented.

Measures: In constructing this study to examine exercise we recognized that not all exercise is alike. An exercise intensity score was then generated by multiplying the intensity category by the frequency of the activity by the length of the session. This approach has been widely used in medical studies such as measuring level of alcoholism drug use and other health-related habits. The underlying premise is to assess the nature of activity how frequently it occurs and for how long does it occur at each frequency unit.

Exercise intensity was measured by the following formula:

$$\text{Exercise Intensity} = \sum_{i=1}^7 \text{Exercise}_i \times \text{Frequency}_i \times \text{Session Length}_i \quad (1)$$

Exercise is the intensity category of the exercise on a scale from 1 to 7 where 1 is then least vigorous and 7 is the most vigorous; Frequency is the number of days per week an exercise session of performed; Session Length is the duration of the exercise per session. This technique recognizes that not all exercise is alike and it has been widely used in medical studies such as measuring level of alcoholism drug use and other health-related habits. The underlying premise is to assess the nature of activity how frequently it occurs and for how long does it occur at each frequency unit. Simply asking respondents how much they exercise induces much interpretation and variability in comprehension of the items. Thus the exercise intensity measure attempts to better define for respondents what is being asked as well as improve the scoring for the researchers. For example a person who works out in a higher category of exertion exercise every day for an hour (such as a competitive runner) will score higher exercise intensity than a person who walks each morning for twenty minutes. However if respondents were simply asked "How often do you exercise this degree of differentiation would not be captured in the results. Therefore the results in this study capture the degree of effort the frequency and length of average session. In addition note that the sigma sign at the front of the equation addresses that many respondents may participate in numerous activities. Therefore we attempted to measure exercise intensity with a more holistic approach that captures the range of possibilities of exercise activity by the respondents.

The study utilized two new scales to measure work overload and attention to detail. To operationalize stress we used the daily hassles measure developed by (Holm and Holroyd1992). Job satisfaction was measured by 7 items on a five-point scale (1 strongly disagree to 5 strongly agree) adapted from the Minnesota Satisfaction Questionnaire and modified for the small business owner or general manager. Work overload and attention to detail were measured by 4-item and 5-item scales respectively that were developed for this study. Stress was measured by a 5-item scale from X (Holm and Holroyd1992). Job satisfaction and security were measured by 3-item and 2-item scales respectively adapted from the Minnesota Satisfaction Questionnaire (Weiss et al.1967) to apply to the small business owner or general manager. All scales were measured on 5-point scales (1 = strongly disagree to 5 = strongly agree).

Data for the analysis were collected from 472 entrepreneurs located in the Midwest (Indiana Ohio Illinois and Kentucky). Data for the analysis were selected randomly from Chambers of Commerce directories. Small business owners were interviewed by the authors using a structured interview format that resulted in a questionnaire being returned for each firm. The owners were contacted by phone and were advised that the study was part of an ongoing university effort to study entrepreneurs. They then were asked to participate and an interview time was established. Only a few of the owners contacted refused to be interviewed. Those who chose not to participate typically gave reasons such as they were too busy or they never participate in surveys. This

data collection procedure has been used in similar studies of entrepreneurial firms (McEvoy1984 ; Hornsby and Kuratko1990 ; Lyles et al.1993;Kuratko et al.1997).

A structural equation model was created to test the hypotheses. Hypotheses 1a 2a and 3a test the relationships between work overload attention to detail and exercise intensity and stress. Hypotheses 1b 2b and 3b test the relationships between work overload attention to detail and exercise intensity and security. Hypothesis 4 tests the relationship between security and stress. Hypothesis 5 tests the relationship between security and job satisfaction. Hypothesis 6 tests whether stress mediates work overload attention to detail exercise intensity and security and job satisfaction.

5. RESULTS

Self-management a foundational concept of self-leadership is a broad range of coping mechanisms and practices and is thus why we utilized three independent variables that we believe entrepreneurs can manage for decreasing stress and increasing job satisfaction. Support for the hypotheses were determined by the significance or non-significance of the associated paths in the structural equation model. Based upon the criterion Hypotheses 1a 2a 3a Hypotheses 2b 3b Hypotheses 4 Hypothesis 5 and Hypothesis 6 were supported by the data. The hypothesized structural equation model fit the data well ($X^2 = 367.6$; root mean square error of approximation (RMSEA) = 0.050; non-normed fit index (NNFI) = 0.96; comparative fit index (CFI) = 0.97; standardized root mean square residual (SRMR) = 0.042) and tested better than alternative models. The exogenous variables in this model are within the self-management theme. In short we maintain that the self-management variables lead to both security and stress enhancing the former and attenuating the latter. Security and stress in turn enhance and attenuate job satisfaction respectfully.

Table 1. Survey items and confirmatory factor loadings.

| Construct and Indicators | Standardized Loading |
|--|----------------------|
| Exercise Intensity (See text) | 1.00 |
| Job satisfaction | |
| 1. Generally speaking, I am very satisfied owning or running this business. | 0.84 |
| 2. I frequently think of selling or leaving this business. (R) | 0.65 |
| 3. I am generally satisfied with the kind of work I do in this job. | 0.59 |
| Security | |
| 1. I am satisfied with the amount of job security I have. | 0.83 |
| 2. I am satisfied with how secure things look for me in the future in this organization. | 0.88 |
| Work Overload | |
| 1. I have too many things to do | 0.91 |
| 2. There is not enough time to do the things one needs to do | 0.92 |
| 3. I have too many responsibilities | 0.81 |
| 4. I have too many interruptions | 0.70 |
| Attention to Details | |
| 1. I am always prepared. | 0.51 |
| 2. I pay attention to details. | 0.69 |
| 3. I like order. | 0.53 |
| 4. I follow a schedule. | 0.60 |
| 5. I am detail-oriented in my work. | 0.81 |
| Stress | |
| 1. I get stressed out easily. | 0.76 |
| 2. I worry about things. | 0.60 |
| 3. I get upset easily. | 0.82 |
| 4. I get irritated easily. | 0.79 |
| 5. I am easily disturbed. | 0.73 |

More specifically Hypothesis 1a stated that work overload will be positively related to stress for entrepreneurs and was supported by the data ($\gamma = 0.10$ $p < 0.01$). Hypothesis 1b stated that work overload will be negatively related to feelings of security for entrepreneurs and was supported ($\gamma = 0.18$ $p < 0.01$). Hypothesis 2a stated that attention to detail will be negatively related to stress for entrepreneurs and was supported ($\gamma = 0.09$ $p < 0.05$). Hypothesis 2b stated that attention to detail will be positively related to feelings of security for entrepreneurs and was supported ($\gamma = 0.19$ $p < 0.01$). Hypothesis 3a stated that exercise intensity will be negatively related to stress for entrepreneurs and was supported ($\gamma = 0.10$ $p < 0.01$) but Hypothesis 3b stated that exercise intensity will be positively related to feelings of security and was not supported ($\gamma = 0.01$ ns). Perhaps physical fitness is detached from the operations of the business itself but it does appear to reduce the stress levels

that an entrepreneur experiences. It would seem warranted then for an entrepreneur to participate in intensive exercise to reduce stress which also improves job satisfaction with owning and running a business. Hypothesis 4 stated that security will be negatively related to stress for entrepreneurs and was supported ($\gamma = 0.10$ $p < 0.05$). Hypothesis 5 stated that feelings of security will be positively related to job satisfaction and was supported ($\gamma = 0.71$ $p < 0.01$). In addition Hypothesis 6 stated that stress will mediate the relationships between the independent variables (work overload attention to detail and exercise intensity) and job satisfaction for entrepreneurs. The mediation was supported by the data ($R^2 = 0.1$ $p < 0.01$).

Thus we conclude that the findings suggest that overall the self-management practices of minimizing work overload increasing attention to detail and maintaining high levels of exercise intensity are beneficial to an entrepreneur by reducing stress increasing security and increasing job satisfaction.

Prior to testing our hypotheses we subjected the 20 items that measured our variables to a confirmatory factor analysis (CFA). The measurement model fit the data well: $\chi^2 = 366.4$, $df = 156$; root mean square error of approximation (RMSEA) = 0.051; nonnormed fit index (NNFI) = 0.96, comparative fit index (CFI) = 0.97, and standardized root mean square residual (SRMR) = 0.042. The items and their factor loadings appear in Table 1. All scales produced acceptable internal reliabilities. Table 2 reports the means standard deviation correlations, and internal reliabilities (coefficient alphas) for the variables.

Table 2. Means, standard deviations, correlations, and reliabilities for survey items ($n = 329$).

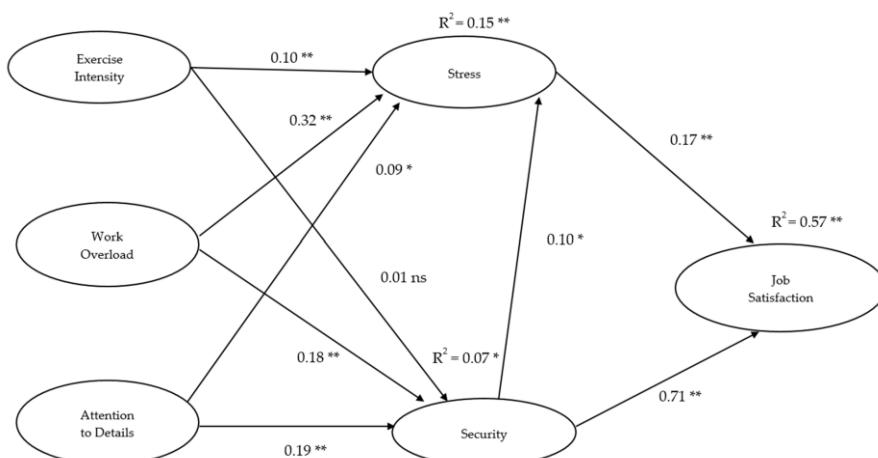
| | Construct | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|---|----------------------|--------|---------|----------|----------|----------|---------|---------|--------|
| 1 | Exercise intensity | 772.87 | 1075.32 | n/a | | | | | |
| 2 | Job satisfaction | 4.15 | 0.66 | 0.04 | (0.73) | | | | |
| 3 | Security | 3.94 | 0.89 | 0.02 | 0.60 ** | (0.85) | | | |
| 4 | Work overload | 2.67 | 0.96 | -0.06 | -0.18 ** | -0.17 ** | (0.90) | | |
| 5 | Attention to Details | 3.69 | 0.60 | 0.10 * | 0.16 ** | 0.16 ** | -0.06 | (0.77) | |
| 6 | Stress | 2.60 | 0.72 | -0.13 ** | -0.26 ** | -0.16 ** | 0.35 ** | 0.11 ** | (0.86) |

* $p < 0.05$, ** $p < 0.01$. Coefficient alphas appear on the diagonal.

Though conceptually distinct the variables job satisfaction and security could both be thought of as satisfaction variables. (They both came from the Minnesota Satisfaction Questionnaire.) Consequently we felt it prudent to test whether our instrument could distinguish between them. To test this we estimated a competing model with the job satisfaction and the security items loading on the same latent variable; that is a more restrictive model. We then invoked the chi-square difference test as per Bollen(1989). A more restrictive model i.e. with more degrees of freedom will always fit worse than a less restrictive model. If the (more restrictive model) competing model's fit is not significantly worse than the (less restrictive model) hypothesized model then the competing model will be preferred due to its increased parsimony. On the other hand if the competing model's fit is significantly worse than the hypothesized model then the hypothesized model will be preferred due to its superior explanatory property. Our hypothesized model was preferred ($\Delta\chi^2 = 115.8$ $df = 5$ $p < 0.001$) demonstrating that our instrument was able to distinguish between job satisfaction and security.

To test our hypotheses we estimated the structural equation model shown in Figure 1. It also fit the data well: $\chi^2 = 367.6$, $df = 159$; RMSEA = 0.050; NNFI = 0.96; CFI = 0.97; SRMR = 0.042. All the paths representing the hypotheses were significant, so all hypotheses were supported.

Figure 1. Standardized path coefficients. $\chi^2 = 367.6$, $df = 159$; RMSEA = 0.050; NNFI = 0.96; CFI = 0.97; SRMR = 0.042. * is $p \leq 0.05$, ** is $p \leq 0.01$, ns + nonsignificant $p > 0.05$.



6. DISCUSSION AND IMPLICATIONS

Entrepreneurship is one of most challenging but potentially satisfying pursuits in business. Yet little research has examined the job satisfaction that comes with owning and running a business. The results in this paper conclude that stress plays a significant role in the satisfaction entrepreneurs find in their line of work. More importantly as a contribution to the self-leadership-related research literature our findings also suggest that positive self-management practices can reduce the stress levels of entrepreneurs in turn increasing job satisfaction. Specifically avoiding work overload paying attention to the details of running the business and committing to a fitness regimen based on intensive exercise are helpful self-management practices for entrepreneurs. All three practices come with an important decision of whether to pursue them. Successful businesses require significant commitment in time attention and energy. In a career where there may never seem to be enough time in a day to finish what is intended entrepreneurs may find themselves overworked. However doing so is likely to lead to increased stress. Our research finds intensive exercise as one activity away from work that is a good use of that time especially in reducing stress. Yet when the entrepreneur is involved in the business paying attention to detail is another self-management practice that should be honed. Ensuring that the small matters are handled well in the daily operations helps to prevent problems that may grow into more stressful issues which also give an entrepreneur a better of sense of security in their enterprise's future.

We acknowledge that this study has limitations. First the size and regional characteristics of the study limit its generalizability. Further studies in different regions of the United States as well as globally would allow more substantive conclusions than what our findings suggest. Second the study is cross-sectional. Future longitudinal research would be warranted with self-management training on attention to detail exercise intensity and work overload with preand post-tests on stress security and job satisfaction to more conclusively validate our model. Third this study focused on behaviors with regard to self-management practices and entrepreneurship. Extending this research to include the cognitive and environmental aspects of self-leadership would offer deeper insight into the psychological states of entrepreneurs and their work. However we believe the significant findings in this study indicate that further research as described above is warranted.

In conclusion we advise entrepreneurs to follow the advice of scholars in the self-management and self-leadership literature. At the same time we hope this paper provides impetus for more scholars to follow up that line of research in entrepreneurship with more empirical studies of the benefits as well as challenges of applying self-management in entrepreneurial pursuits. While the findings in this paper suggest that self-management practices can improve the subjective experience entrepreneurs have in running their businesses treatment studies would shed more light on the phenomenon. For example surveying entrepreneurs on stress security and job satisfaction pre-test then conducting workshops on intensive exercise time management and scheduling (work overload) and perhaps mindfulness (attention to detail) and then returning to survey the post-test results on stress security and job satisfaction would be one such possible approach. Additionally while this paper examined self-management behaviors of entrepreneurs cognitive strategies would be another interesting line of research that scholars could pursue as well. Given the success of such approaches with self-management with traditional organizational managers we believe more research is warranted to study the improvement that entrepreneurs can have in their work as well.

Conflicts of Interest:

The authors declare no conflict of interest.

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