

A Study on the Effects of Business Incubators on Entrepreneurs Under the Light of Positive Psychology

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Abstract

Business incubators support the development of start-up companies by offering a protective environment and various support services. Since the appearance of incubators, academic studies focused mostly on hard issues like their contribution to the financial success of start-up companies. Nevertheless, when it comes to soft issues, more needs to be studied, The purpose of this research is to help close some of the gaps in the literature by focusing on the contribution of business incubators to the well-being of entrepreneurs. For that purpose, the effects of incubator services on the psychological capital (PsyCap) and life satisfaction of entrepreneurs were focused on. In line with the research aim 126 interviews were made with entrepreneurs using business incubator services via an online survey. As a result, positive and significant relationships were observed between using business incubator services, PsyCap, and the life satisfaction of entrepreneurs. In addition, it was found that the positive impact of incubator services on entrepreneurs' PsyCap was created mostly through networking and business support services rather than physical services. Also, PsyCap was observed to assume a partially mediating role in the relationship between the utilization of incubator services and the life satisfaction of entrepreneurs. Finally, it was observed that the link between PsyCap and life satisfaction was mostly via the hope dimension of PsyCap. With its interdisciplinary focus and significant findings, the research is expected to be considered one of the pioneering studies in its unique area of interest.

Keywords

Business incubator; entrepreneurship; positive psychology; psychological capital; subjective well-being

INTRODUCTION

Background of the Study and The Need for Research

The value of focusing on the positive and using it in making people's lives better has been recognized quite a long ago, back in the days of ancient Greece as we see it from the story of Pygmalion and Galatea (Avey et al, 2011). Centuries later, at the beginning of the 21st century, the value of positivity was reminded by a group of psychologists led by Martin Seligman. Leading to the birth of the positive psychology movement, Seligman and his colleagues simply reminded that psychological studies should focus more on making people happier, and more productive and helping them realise their full potential (Luthans et al, 2007a).

In the years to follow, the positive psychology movement increased its sphere of influence and inspired organizational studies as well. In line with positive psychology, two major schools appeared in the organizational studies arena under the names of positive organizational scholarship (POS) and positive organizational behaviour (POB) (Luthans et al., 2007a). Of these two schools, POB was focusing especially on the individual.

Positive psychology was aiming to serve the well-being of individuals. As put forward by Luthans (2002), it had emerged due to a lack of attention on the "strengths and positive characteristics of people, that make life worth living" (p.58). Therefore, studies in POB school focused on the strengths of people, and the concept of psychological capital (PsyCap) was developed. Based on the constructs of hope, efficacy, resilience, and optimism; PsyCap represented the motivational propensities of individuals (Luthans et al, 2007b). It turned out to be among the key concepts developed under the POB school and had strong links to well-being (Avey et al., 2011).

Despite many studies have been made under POB school, there is still a lot to do. For instance, one area where still more studies are needed is the application of related approaches and concepts to the field of entrepreneurship. Indeed, further research calls are being made for entrepreneurial well-being studies and the antecedents and contextual factors affecting entrepreneurial well-being are encouraged to be researched (IECER, 2020). Calls for further research on well-being in the entrepreneurial context are quite

understandable in that entrepreneurship itself is an area that is quite important for society. Entrepreneurial activities are important for the economic development of nations and play an important role in keeping them competitive (Mazzarol & Reboud, 2017). Entrepreneurs try to survive under difficult conditions such as higher risk and uncertainty. They take psychological risks and entrepreneurial stressors may have negative effects on their well-being (Mazzarol & Reboud, 2017; Kollmann et al, 2019). Yet, finding out ways to improve their well-being may contribute positively to the success of entrepreneurial activities. In that sense, studies to be carried out under POB school carry the potential of supporting entrepreneurs. How to approach entrepreneurial well-being is an issue. Contextual factors have considerable effects on entrepreneurial activities (Mazzarol & Reboud, 2017). Therefore, one possible way of approaching entrepreneurial well-being is concentrating on the entrepreneurial ecosystem. Within this ecosystem, there exists a special type of institution that has a high potential for contributing to entrepreneurial activities as well as affecting their well-being. It is the business incubator.

Business incubators are organizations that support the development of new business ventures by providing protective environments (UKSPA, 2015). Aernoudt (2004) describes a good incubator with the following words:

A good incubator has a big enough number of new, young enterprises with growth potential, an optimal rotation rate, a high survival rate of graduates that continue to do business outside the nurturing premises, a positive impact on the perception of entrepreneurs and the creation of an entrepreneurial culture, strong links with industry, R&D centres and universities and finally a structure facilitating access to financial market (p.128).

Business incubators provide physical support, business support, and networking support services. Physical support refers to mainly support activities on space and infrastructure-related elements. It includes services like desk and office space, access to meeting rooms, car parking, internet access, leasing arrangements, etc (Ollerenshaw, 2019). Business support services refer to those that help entrepreneurs do their job more consciously and knowledgeably. In that sense, coaching, mentoring, training, counselling, and business plan services may be provided by incubators to entrepreneurs (Ratinho *et al.*, 2013). It may also include services like marketing, accounting, and financial support (Ollerenshaw, 2019).

Finally, business incubators provide networking services since it is an integral part of the incubation business and business incubators provide both internal (within the incubator) and external (outside the incubator) networking opportunities to entrepreneurs. When asked to evaluate the added value of the program, entrepreneurs mention knowledge resources (such as mentors, coaches, etc) and access to networks among the top important contributions of incubators to them (Lange, 2018).

Though the first examples of business incubators go back to the 1960s, they have gained momentum in the late 1990s and early 2000s. Parallel to the increase in business incubator activity, academic research has increased as well. Yet, these studies seem to have ignored the contribution of incubators to the psychology of entrepreneurs but rather focused on the financial and economic success of their ventures. As a result, today it is possible to speak of the lack of research on how incubators serve the psychological needs of their entrepreneurs (Ford, 2015). So, approaching entrepreneurial well-being issues over business incubators may have its merits and help enlighten a terrain that is not well discovered.

In line with the discussion above, this study focuses on entrepreneurial well-being in the context of business incubators. The purpose of the research is to explore whether there exists a relationship between being in a business incubator and the well-being of entrepreneurs who are benefiting from the services provided by the incubator. Using the tools provided by positive psychology, the potential relationship between business incubators and the well-being of the entrepreneurs is explored by mainly focusing on two questions; (1) How do the services provided by business incubators affect the PsyCap of the entrepreneurs using the services of these establishments? (2) How is the well-being of entrepreneurs affected by the changes in their PsyCap?

Main Concepts of the Study: Psychological Capital and Well-Being

Together with his colleagues, Fred Luthans has pioneered the development of the PsyCap concept. PsyCap is defined by Luthans et al. (2007a) as;

An individual's positive psychological state of development and is characterized by: (1) having confidence to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution about

succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond to attain success (p.3).

As also mentioned in the above definition PsyCap has four dimensions, which are Hope, Efficacy, Resilience, and Optimism – also called the HERO model (Donaldson et al, 2020). All these dimensions that together form PsyCap are of cognitive nature (Avey et al, 2010). They share a lot, but they also have the necessary discriminant validity to remain as separate constructs (Avey et al, 2011). Each of these four constructs can be thought of as strongholds separately, but they also create a synergy (Luthans et al, 2006). Altogether, they build PsyCap as a second-order construct (Luthans et al, 2010).

As Avey *et al.* (2011) well concluded in a meta-analysis, there is a positive link between psychological capital and well-being. Youssef-Morgan and Luthans (2015, p. 18) propose that the link between the two concepts can be explained by six different theoretical mechanisms, “formation of positive appraisals of past, present and future events” leading to greater well-being being at the forefront. In the entrepreneurial context, Bockorny and Youssef-Morgan (2019) also focused on the psychological capital of entrepreneurs and confirmed that it positively affects their life satisfaction. Likewise, Baron et al (2016) found out that as psychological capital increases, the perceived level of stress decreases, and, in turn, the SWB level of entrepreneurs increases. The link between psychological capital and life satisfaction is also confirmed by other studies which approach the issue by using the dimensions of psychological capital (Akgündüz, 2013; Sarıçam *et al.*, 2015; Alibekiroğlu *et al.*, 2018; Sapmaz & Doğan, 2012).

When it comes to the concept of well-being, it is quite complex and there are many ways of approaching the issue (Ryan & Deci, 2001). For instance, well-being may refer to the quality of life when approaching the issue from an economic perspective, whereas it may refer to inner peace or more simply happiness when approaching the issue from a rather spiritual perspective (Sfeatcu et al, 2014). A common framework that can be used when explaining the different forms of well-being under the spiritual perspective is based on the Hedonia-Eudaimonia dichotomy (Ryan & Deci, 2001). From this dichotomy derives the hedonic school of well-being, which is associated with the concept of subjective well-being

(SWB), and the eudaimonic school, which may be thought of together with the psychological well-being concept (Vázquez et al, 2009).

There are many options for approaching well-being in an entrepreneurial context such as that of business incubators. Most of the studies on well-being choose to focus on SWB (Ng & Fisher, 2013). Indeed, what is meant by psychologists with well-being usually refers to SWB (Wiklund et al, 2019). Life satisfaction represents the cognitive dimension of SWB (Amoros & Bosma, 2014). As mentioned by Bockorny & Youssef-Morgan (2019), life satisfaction is an important outcome of entrepreneurial activity. So, approaching entrepreneurial well-being through the life satisfaction concept is a considerable option. Life satisfaction is, in essence, a judgement and includes the comparison of a person's life with a standard that is determined by the individual (Diener et al, 1985). In other words, it involves the comparison of the current situation with the ideal situation. One of the key points here is that this ideal level is not determined from the outside and is set by the person himself/herself (Diener et al, 1985). Another important point about life satisfaction is that it refers to a relatively more stable element of SWB unlike the emotional elements of SWB which are temporary and volatile in their nature. This makes life satisfaction a better concept choice to be included in well-being studies (Proctor et al, 2017).

Theoretical Framework

While looking for potential links between business incubators and the well-being of entrepreneurs, one of the theories that can be referred to is the *Social Support Theory*. The concept of social support has been in the academic arena since the 1970s, starting with health and family areas (Bhanthumnavin, 2000). It may be defined as the perception or experience that arises when someone feels being cared for, being valued by other people, and that he or she is part of a network of assistance (Xi et al 2017).

There are different types or forms of social support. According to House (1981), there may be four different types of social support: (1) emotional, (2) instrumental, (3) informational, and (4) appraisal support (Jolly et al, 2020). This classification is quite parallel to the approach of Bhanthumnavin (2000) where she classifies support types under three groups as emotional, material, and informational. There are various sources of social

support such as the spouse of a person, his or her children, his or her mother and father, friends, or even a minister in a church (Abbey et al, 1985).

No matter where it comes from, the positive link between social support and well-being has been proven by many studies (Cohen & Wills, 1985). Social support decreases the anxiety, depression, and interpersonal sensitivity that people experience and help increase the quality of their life (Abbey et al, 1985). Social support is also known to be effective in PsyCap formation (Luthans et al, 2007a). It has a positive effect on resilience which assumes a protective role against depression (Bonanno et al, 2007; as cited in Fernandes et al, 2018). In a work setting, social support given by a supervisor is found to positively impact job satisfaction, quality of life, job stress, and work effectiveness (Bhantumnavin, 2000). In sum, being able to receive social support has positive reflections on the inner world of people in general.

When it comes to business incubators and entrepreneurs, incubators can be seen as potential sources of social support for entrepreneurs. Not only do incubators create mechanisms like coaching and mentoring to help entrepreneurs, but they also provide training programs and offer consulting services. In all these mechanisms there is a social element where entrepreneurs are supported by other people on behalf of the business incubator. So, in line with social support theory, it is then quite possible to expect to see the positive reflections of the efforts of incubators on the well-being of entrepreneurs.

Another important theory that has to be mentioned as far as the research is of concern is the *Social Capital Theory*. There are various forms of capital, such as financial, physical, or human capital, and social capital is one of them (Lyons, 2002). What social capital theory simply argues is that people receive resources, either tangible or intangible in nature, via their connections with other people (Miles, 2012). According to Coleman (1988), social capital exists in the relationships of people with other people. Therefore, networks of people are of vital importance in the theory of social capital (Lyons, 2002).

Social capital can both complement and substitute other capital forms (Adler & Kwon, 2002). No matter what role it assumes, social capital has many benefits; For instance, it may bring career success, higher compensation, or easier job access for an individual working in a company, or it may bring higher growth, better relations with suppliers or higher innovation for a person running his own company (Miles, 2012). In the

entrepreneurial context, it has also been found that it has a facilitation effect on entrepreneurial development (Lyons, 2002) and the establishment of start-ups (Adler & Kwon, 2002).

Entrepreneurs have the chance to benefit from strong social networks when they choose to be part of an incubator (Honig & Karlsson, 2007). In the words of Köseoğlu (2007), “Working together in the same building with firms in similar sectors and with similar demographics creates synergy in the incubator, which results in the creation of social capital” (p.13). Indeed, business incubators provide a suitable ground for the creation of social capital since they are based on the logic of resource pooling where numerous companies share the same environment (Lyons, 2002). The synergy between entrepreneurs, their suppliers, and other related actors in the incubator is also mentioned by Honig and Karlsson (2002). However, synergy is not the only potential source of social capital for an entrepreneur. Incubators offer networking services deliberately to enable entrepreneurs to increase their resource bases. These attempts help improve the social network and capital of entrepreneurs. The increase in social capital may have reflections on the inner world of entrepreneurs as well. This is because, it is empirically observed that increases in social capital can lead to an increase in PsyCap (Örgün, 2017). Therefore, through social capital formation, entrepreneurs can also psychologically benefit from using the services of an incubator.

Last but not least, the *Social Cognitive Theory* of Bandura (1986) is worth mentioning regarding the theoretical framework of the research. It is a widely accepted theory that tries to explain human behaviour focusing on personal, behavioural, and environmental factors and the interactions among them (Yakut, 2019). In other words, it is based on a three-dimensional reciprocal determinism; where the dimensions are (1) behaviour, (2) cognitive and personal elements, and (3) the environment (Wood & Bandura, 1989). A very important concept that plays a major role in social cognitive theory is self-efficacy - which is also a dimension of PsyCap. Under the social cognitive theory, self-efficacy is viewed as one of the major determinants of people’s behaviours (Stajkovic & Luthans, 1998).

According to Kushev et al (2018), social cognitive theory can provide a valuable lens that can be used in all facets of the entrepreneurial process and shed light on how complex decisions within this process are made. In that sense, a potential contribution of social

cognitive theory may come from how the self-efficacy of entrepreneurs may be affected by being part of an incubator. One potential factor that can function as leverage in increasing the self-efficacy level of entrepreneurs in a business incubator may be the ability to access resources offered by the incubator. Indeed, entrepreneurs are more likely to exploit opportunities when they have access to more resources such as those improving their managerial capabilities or support of their stakeholders (Choi & Sheppard, 2004). Incubators provide many resources of various forms to entrepreneurs either directly or through their connections with third parties. These resources are not only the ones that are acquired through the services provided by incubators but may also include soft resources such as a sense of belonging and credibility (Eveleens et al 2017). According to social cognitive theory, the cognitive evaluation of a given situation leads to an increase or decrease in the level of self-efficacy of individuals (Sinding & Waldstrom, 2014). Since access to more resources may increase entrepreneurs' confidence levels regarding their chance of successfully exploiting an opportunity (Kushev et al, 2018), then gaining access to such resources may lead to an increase in the self-efficacy level of the entrepreneurs. With the very same logic, Marshall et al (2020) argue that social cognitive theory explains the link between access to resources and well-being in the entrepreneurial context. To sum up, incubators provide access to resources that are valuable for the success of start-up companies and entrepreneurs, who cognitively process this situation and find out a reason to believe more in the success of their endeavours. This may lead to an increase in their self-efficacy and an improvement in their well-being. So, the social cognitive theory may help explain how business incubators can positively affect the inner world of entrepreneurs.

Hypotheses

In line with the research questions and the light of the theories mentioned above, the following hypotheses were formulated:

H1: Incubator services have a positive effect on PsyCap

H2: PsyCap has a positive effect on life satisfaction

H3: Incubator services (overall) have a positive effect on life satisfaction

H4: PsyCap has a mediation role in incubator services– life satisfaction relationship

Research Design

To provide answers to the research questions and test the hypotheses, a non-experimental, cross-sectional research design was adopted. Incubator services made up the independent variable of the research. The services provided by incubators were classified under three separate groups: (1) physical support, (2) business support, and (3) networking support services. The dependent variable of the research was the life satisfaction of entrepreneurs, which is the cognitive dimension of subjective well-being (SWB). PsyCap of entrepreneurs was expected to be the mediating variable of the research.

Measurement Instruments

Two scales commonly used by researchers and well accepted in their areas were selected for the research. Of these two, SWLS is one of the most common scales used in the measurement of SWB (Kurtz & Lyubomirsky, 2011). Developed originally by Diener et al (1985), SWLS is a scale that is composed of 5 items grouped under 1 single dimension. The second scale used in the research, PCQ, was developed by Luthans et al. (2007b) based on the earlier works of Parker (1998) on self-efficacy, Snyder et al. (1996) on hope, Wagnild and Young (1993) on resilience and Scheier and Carver (1985) on optimism (Luthans et al., 2007b). It is composed of 24 items, grouped under 4 dimensions.

Fieldwork

An online survey was carried out with entrepreneurs using business incubator services. The fieldwork took place between August 2021 and January 2022. The average length of an interview was 7 minutes. The links of the survey were distributed to respondents either through the distribution of survey links by incubator managers who were contacted by the researcher during fieldwork or through the submission of survey links to entrepreneurs directly by the researcher. A total of 126 interviews were completed. The respondents were

affiliated with a total of 17 different incubators - out of 130 (estimated number of incubators in Turkey).

Sample

The great majority (90%) of the participants in the sample were below the age of 40. The gender distribution of the sample showed that survey participants were mostly (81%) males. As far as the education level of participants is of concern, it turned out that more than 90% of the sample was composed of individuals who were at least university graduates. As a matter of fact, almost 1/3 (28%) of the overall sample held post-graduate degrees. The majority of the respondents (75%) had professional working experiences before. In addition to this, almost half (59%) of the survey participants mentioned that they had previous venture experiences as well. These findings showed that the typical respondent in the survey had some sort of real-life experience before his or her current endeavour.

Validity and Reliability of Measurement Instruments

To assess the validity of the measurement instruments, it was decided to carry out a factor analysis. With that purpose, Keiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity were run to measure sample adequacy. After the evaluation of the results, it was concluded that both KMO and Bartlett test results were satisfactory (KMO>0.50; Bartlett's Test – $p<0.05$), showing that the data was adequate for running a factor analysis on both measurement scales.

As a result of the factor analysis for SWLS, it was seen in the first run that all five items in the SWLS scale were loaded *under one factor with an Eigenvalue over 1 as expected*, and the factor explained 66,9% of the total variance in satisfaction with life. Since all the factor loadings were above 0.5, further extraction of the items turned out to be unnecessary. Therefore, it was decided to keep all items in the scale and it was concluded that the scale was *valid*.

When carrying out the factor analysis for PCQ, it was seen in the first run that the 24 items in the scale were unexpectedly loaded under five factors that had an Eigenvalue over 1 and that the factors explained 59,7% of the total variance in PsyCap. In addition to this, several items had factor loadings under 0.5. Therefore, it was decided to extract such controversial items from the scale and re-run the analysis. As a result of extractions in two separate runs, it was finally decided to leave 7 items out of the scale. After these extractions were made, it turned out that the remaining 17 items in the scale were loaded on four factors which, in total, explained 63% of the variance in PsyCap. Hence after these extractions, it was concluded that the scale was valid and further analysis could be made using the 17 items in the scale.

To assess the reliability of the scales, Cronbach Alpha scores were calculated. The scores of both SWLS and PCQ scales (0.87 and 0.86, respectively) were higher than 0.80, which is considered a good level of reliability. As far as the dimensions of PCQ are of concern, their reliability scores changed between 0.68 and 0.85, which meant that they were also reliable since Cronbach Alpha scores in the 0.70 range are considered acceptable and only scores that are lower than 0.60 are regarded as poor (Sekaran & Bougie, 2016).

RESULTS

Test of H1: Incubator Services Have a Positive Effect on PsyCap

A simple linear regression model was built for testing H1 and to understand the potential effect of using incubator services on PsyCap of entrepreneurs. As a result of the regression analysis, it was found that the overall model was statistically significant (F-value= 20.551; P-value< 0.05) and incubator services usage significantly predicted PsyCap of entrepreneurs ($\beta= 0.377$, P-value< 0.05). Since the adjusted R² value of the model was 0.135, the results showed that 13,5% of the variation in PsyCap was explained by the variation in incubator services usage. As a result, H1 was accepted.

Test of H2: PsyCap Has a Positive Effect on Life Satisfaction

For the test of H2, a simple linear regression model was built to understand whether PsyCap predicts life satisfaction. As a result, it was found that the overall model was statistically significant (F-value= 29.189; P-value< 0.05) as well as the effect of PsyCap on life satisfaction ($\beta= 0.437$, P-value< 0.05). The adjusted R² value of the model showed that 18,4% of the variation in life satisfaction of entrepreneurs was explained by the variation in their level of PsyCap. Thus, H2 was accepted.

Test of H3: Incubator Services Have a Positive Effect on Life Satisfaction

Again, a simple linear regression model was built for the test of H3. As a result, it was found that the overall model was statistically significant (F-value= 14.611; P-value< 0.05). As a result of the analysis, a significant and positive relationship between the independent variable, incubator services usage (overall) and the dependent variable, life satisfaction was found ($\beta= 0.325$, P-value< 0.05). Therefore, H3 was accepted.

Test of H4: PsyCap Has a Mediation Role in Incubator Services – Life Satisfaction Relationship

H4 was tested with Model 4 of Process Macro of Andrew Hayes, which is an extension that can be used both with SPSS and SAS programs and performs bootstrapping. As a result of the mediation analysis made with Process Macro, it was concluded that PsyCap had a significant partial mediation role in the relationship between incubator services usage and life satisfaction. It is because the test results for the indirect effect of PsyCap on life satisfaction were significant (the interval of BootLLCI and BootULCI did not include zero value), as well as the test results regarding the direct effect (P-value = 0.0319 < 0.05). Based on these results, H4 was accepted.

Table 1: Summary of hypotheses test results

Hypotheses		Outcome
H1	Incubator services have a positive effect on PsyCap	Accepted
H2	PsyCap has a positive effect on life satisfaction	Accepted
H3	Incubator services have a positive effect on life satisfaction	Accepted
H4	PsyCap has a mediation role in incubator services – life satisfaction relation	Accepted

Findings on Lower-Level Relationships Between Variables

Once the relationships between variables were clarified with hypothesis tests, it was decided to conduct further analysis to gain more insight into the relationships between the usage of incubator services, PsyCap of entrepreneurs, and their life satisfaction. With that purpose, lower-level relationships between research variables were put under investigation. The analysis at this stage focused mostly on understanding whether all types of incubator services were effective on PsyCap and life satisfaction of entrepreneurs or not; whether incubator services usage affected all four dimensions of PsyCap of entrepreneurs, and whether all four dimensions of PsyCap of entrepreneurs were effective on their life satisfaction. To find an answer to the questions mentioned above, it was decided to carry out a correlation analysis that took all these factors into account and then carry out regression analysis where necessary.

To check out whether all kinds of incubator services had a positive effect on PsyCap, it was decided to carry out separate regression analyses between PsyCap (as the dependent variable) and different service subgroups under incubator services as dependent variables. As a result of the analysis, there was no significant evidence regarding the existence of a linear relationship between physical support services usage and PsyCap. However, when it came to business support services, evidence showed that the linear model was significant (F-value= 18.445; P-value< 0.05) and business support services usage had a statistically significant positive effect on PsyCap ($\beta= 0.362$, P-value< 0.05). Likewise, the linear model for networking support services usage and PsyCap relationship was also significant (F-

value= 19.462; P-value< 0.05) and was the positive effect of networking support services on PsyCap ($\beta= 0.372$, P-value< 0.05). Therefore, it was found that the positive effect of incubator services usage on PsyCap of entrepreneurs was due to the business support and networking services, but not due to the physical services.

To test whether incubator services usage (overall) had a positive effect on all four dimensions of PsyCap, it was decided to run four separate regression analyses. According to the simple linear regression analysis results, incubator services usage was found to have positive and statistically significant relationships with all four dimensions of PsyCap. Indeed, the model on the relationship between incubator services usage and the hope dimension of PsyCap was significant (F-value= 14.814; P-value< 0.05) and the positive effect of overall services usage on hope was also statistically significant ($\beta= 0.327$, P-value< 0.05). According to the model, 10% of the variation in the hope level of entrepreneurs could be explained by using incubator services since adjusted $R^2 = 0.107$. As for the relationship between incubator services usage (overall) and self-efficacy, there existed a positive linear relationship between the two (F-value= 6.086, P-value = 0.015). However, it should be noted that, although the positive effect of service usage was significant ($\beta= 0.216$, P-value< 0.05), it helped explain only 4% of the total variation in self-efficacy (adjusted $R^2 = 0.039$). As for the effect of incubator services usage (overall) on the resilience dimension of PsyCap, the respective regression model built was statistically significant (F-value= 11.113, P-value = 0.01). According to this model, the effect of service usage was found to be positive and significant ($\beta= 0.287$, P-value< 0.05) and helped explain almost 8% of the total variation in the resilience level of entrepreneurs (adjusted $R^2 = 0.075$). Finally, the simple linear regression model built for understanding the relationship between incubator services usage (overall) and the optimism dimension of PsyCap was also statistically significant (F-value= 8.893, P-value = 0.03). According to this model, the effect of service usage was positive and significant ($\beta= 0.259$, P-value< 0.05), explaining 6% of the variation in entrepreneurs' optimism (adjusted $R^2 = 0.059$). To see whether the significant positive correlations between all four dimensions of PsyCap might translate into the existence of linear relationships between variables, it was decided to carry out a multiple regression analysis. Building such a model proved to be meaningful since it was statistically significant (F-value= 12.155, P-value = 0.00) and helped explain

¼ of the variation in life satisfaction. Nevertheless, the results showed that the positive effect of PsyCap on life satisfaction came only from its hope dimension as far as a linear relationship is of concern. Indeed, the significance scores of optimism, self-efficacy, and resilience dimensions of the concept were all higher than the threshold of 0.05 (P-value > 0.05).

Table 2: Summary of findings on lower-level relationships between variables

1	Physical services usage does not affect PsyCap of entrepreneurs; the positive relationship between incubator services usage and PsyCap is due to business support and networking services.
2	The positive effect of incubator services usage (overall) on PsyCap of entrepreneurs is separately valid for all four dimensions of PsyCap.
3	The positive relationship between PsyCap and the life satisfaction of entrepreneurs is through the Hope dimension of PsyCap.

DISCUSSION

Comparison of Main Findings with the Literature

The inner world of entrepreneurs in business incubators is a neglected research area (Ollerenshaw, 2019). Ford (2015) is told to be the first researcher to examine the relationship (Ollerenshaw, 2019). Being a marketing consultant at Arkansas Venture Centre, Ford had the chance to spend much time with entrepreneurs in a business incubator setting. Based on his professional experience and interviews with entrepreneurs, he proposed that business incubators could be seen as entities that foster positive social interactions among their entrepreneurs and help increase their PsyCap (Ford, 2015). If a comparison is to be made between the main findings of the research and these earlier studies in the literature, the positive linear relationship between incubator services usage and PsyCap is in line with Ollerenshaw's (2019) findings and Ford's (2015) propositions. Another main finding, the positive linear relationship between PsyCap and the life satisfaction of entrepreneurs, is also parallel to Avey et al (2011), Hmieleski & Carr (2007),

Baluku et al (2018), and Bockorny & Youssef-Morgan (2019) findings. Leaving the entrepreneurial context aside, the positive relationship between PsyCap and life satisfaction is also parallel to the findings of Sabaityte & Diržyte (2016), Singhal & Rastogi (2017), Bajwa et al (2019), Datu & Valdez (2019), Santisi et al (2020) and Diržyte & Patapas (2022).

The Impact of Specific Incubator Services on PsyCap of Entrepreneurs

The research found that the physical services provided by incubators did not have a statistically significant effect on PsyCap of entrepreneurs in contrast to networking and business support services. This is to say that, what increased PsyCap and the well-being of entrepreneurs were incubator services like mentoring, counselling, coaching, training, business planning support, or finding potential investors or suppliers. Unlike those, however, physical services like providing desk and office space, meeting rooms, car parking, and internet access to entrepreneurs turned out to be ineffective in increasing the PsyCap of entrepreneurs. Actually, it might be considered somewhat *sorrowful* to come up with this finding in that providing office space to recently established companies was - once- at the core of the business incubator idea when the concept historically first appeared in the USA in early 1960s. Nevertheless, due to changing work models and an increase in alternative workplace setting offerings available in time, it seems that physical services help little in increasing entrepreneurs' PsyCap in contemporary times.

The impact of PsyCap on the Life Satisfaction of Entrepreneurs

As far as relationships between dimensions of PsyCap and life satisfaction are of concern, the positive relationship between hope and life satisfaction is confirmed by Valle et al (2004), Gilman et al. (2006), Sariçam et al (2015), McConnell & Stull (2017) and Raats et al (2019). On the other hand, findings in the literature on the linear relationship between self-efficacy and life satisfaction (Madiha & Akhouri, 2018; Akgündüz, 2013; Datu et al, 2022, Kim & Kim, 2022) are not verified by the research. Likewise, the linear relationship which is found to exist between optimism and life satisfaction (Scheier & Carver, 1985;

Piper, 2019; Sapmaz & Doğan, 2012; Cheng et al, 2022) was also not observed during the fieldwork of the research. Finally, the positive linear relationship between resilience and life satisfaction which is found in other studies (Alibekiroğlu et al, 2018; Rivera et al, 2021; Yan et al, 2022; Wang et al, 2022) was not observed in the research. Nevertheless, those studies did not involve PsyCap in their research model but rather involved only one dimension of it. Therefore, although they provided evidence regarding the existence of a linear relationship between life satisfaction and separate dimensions under PsyCap, they did not involve PsyCap as a second-order construct in their model. So, in all of these studies, separate dimensions of PsyCap were treated and analysed as independent and individual constructs but not as dimensions of a second-order construct.

If studies in the literature that aim to measure the impact of PsyCap as a second-order construct and its dimensions on well-being through a multiple regression analysis are considered, it is seen that the findings in the literature are mixed. For instance, Bolelli (2020) found out that all dimensions under PsyCap have significant positive linear relationships (in a multiple regression model) with psychological well-being. However, in another study, Gibson and Hicks (2018) observed that although PsyCap (overall) had a significant positive effect on psychological well-being, in the multiple regression analysis only the Hope and Resilience dimensions had significant positive effects. Likewise, Göçen (2019) observed that only the Self-Efficacy and Optimism dimensions of PsyCap had significant linear relationships with psychological well-being. In yet another study, on the effect of PsyCap on life satisfaction (hence subjective well-being), Işıklı (2018) observed that only Hope and Optimism dimensions were spotted to have significant positive effects on well-being. So, all these studies indicate that the existence of a linear relationship between PsyCap and well-being might not always translate into the existence of separate linear relationships between individual PsyCap dimensions when questioned under a multiple regression model.

The Importance of Hope in PsyCap - Life Satisfaction Relationship

What makes Hope so important in leading the relationship between PsyCap and the life satisfaction of entrepreneurs? Part of the answer to this question may come from the

parallelisms between the two concepts. Arend (2020) goes as far as stating that “hope is entrepreneurship” (p.2). According to him, in line with Snyder’s (2002) conceptualization of hope, entrepreneurial activities require establishing a goal (such as setting up a company and trying to gain acceptance in the market), figuring out a way for reaching the goal (for instance, developing marketing and sales strategies) and being able to take the necessary steps on that way (operations/execution). In essence, there are several findings in the literature (Przepiorka, 2017) focusing on behaviours of goal-directed nature where hope is found to improve goal engagement in entrepreneurial settings. This is to say that, as entrepreneurs become more hopeful toward the future, they develop a higher commitment to their goals, and in turn their effectiveness increases, making it more likely that their endeavours flourish. Parallel to this, as put forward by Laguna (2008), hope is empirically found to enhance the probability of reaching an entrepreneurial goal.

When it comes to the hope – life satisfaction link, hope is found to have a positive effect on life satisfaction in general (Bailey et al, 2007) and there is no exception for entrepreneurs (Przepiorka, 2017). The reason behind this may be partly because goal involvement is claimed to play an important role in the way toward happiness (Seligman, 1991), and being hopeful means believing that one can reach his / her goals. Also, as Frankl (1946) points out, goals help the creation of meaning for man. In addition to this, hope also acts as a buffer against stress, contributing positively to life satisfaction as observed by Hmieleski and Carr (2007) who studied the impacts of hope in entrepreneurial settings.

Nevertheless, there is still a further issue that needs to be clarified! Hope, by definition, is a concept regarding the future. On the other hand, life satisfaction seems to be an evaluation of an individual regarding the present or even the past. Indeed, to recall the items in the SWLS scale developed by Diener et al (1985), life satisfaction is either defined thru items that are not bounded by a time frame - but mostly referring to the present situation- (“In most ways, my life is close to my ideal”, “The conditions of my life are excellent” and “I am satisfied with my life”) or past-looking evaluations (“So far I have gotten the important things I want in life” and “If I could live my life over, I would change almost nothing”). So, there is nothing in these items referring to the future or one’s expectations from the future. Then, given that two concepts- hope and life satisfaction- differ in their time frame, how come believing that the future will be as desired leads to a better evaluation of the

present? Is it that the individuals may be reacting positively to an expected but unrealised yet positive mental picture of the future (reaching one's own goals) as if it already is a reality?

The concept of propection and mechanisms of human perception can shed some light at this point and help understand whether positive evaluations of the future (having hope) can affect life satisfaction. Propection can be defined as “a mental representation of possible futures given the information available in the present and from experience” (Guitard & Jarden, 2022; p.1). According to Seligman and Tierney (2017), propection is about contemplations regarding the future, and it is an important feature that distinguishes mankind from other animals. Propection can be seen as kind of a mental simulation of the future (Gilbert & Wilson, 2007).

In line with the definition of propection, being hopeful might be seen as a kind of propection where an individual forms a positive image of the future where he/she reaches a given goal. It is known that such “simulations allow people to preview events and to prefeel the pleasures and pains those events will produce” (Gilbert & Wilson, 2007; p.317). Therefore, it is possible that having hope for the future, hence having created a positive mental image regarding the future might affect evaluations regarding the present time such as life satisfaction. In that case, the genuine belief (hope) of an entrepreneur in that his or her start-up will eventually succeed and reach its targets, can help increase his or her life satisfaction even if there is still a way to go. Thinking analogical, indeed, why should the archer postpone being happy, if he clearly can see that his arrow is flying in the right path towards hitting the bullseye?

CONCLUSION

As a result of the research, incubator services were found to have significant positive effects on PsyCap of entrepreneurs and their life satisfaction – hence, their well-being. This meant that the expectations formed under the light of Social Support, Social Capital, and Social Cognitive Theories regarding the interaction between business incubator services and the inner world of entrepreneurs were based on solid ground. Indeed, business

incubators turned out to be one of the settings where the dynamics explained by these theories seem to apply.

From an academic perspective, the research is believed to be important because; it focused on a unique area in terms of the relationships and the overall context they are embedded in. Indeed, to the knowledge of the author, there has been quite limited research on the effect of business incubators and their services on PsyCap and the well-being of entrepreneurs. Also, leaving business incubators aside, studies on well-being and PsyCap in an entrepreneurial context are difficult to come across in the literature.

The research is also supposed to be important for the practitioners. It provides information regarding the contributions of business incubators to entrepreneurs, which can be used as arguments in their communication activities targeting entrepreneurs. Regardless of whether incubators use it for marketing purposes or not, such findings may constitute an additional reason for applying incubators from the perspective of entrepreneurs. Therefore, providing empirical evidence on the benefits of business incubators is expected to affect the demand for these entities in a positive way, which will constitute a contribution to the dynamism in the overall entrepreneurial ecosystem.

REFERENCES AND NOTES

- Abbey A, Abramis D J, Caplan, R D. (1985). Effects of different sources of social support and social conflict on emotional well-being. *Basic and Applied Psychology*, 6(2), 111 – 129.
- Adler P S, Kwon S-W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, 27(1), 17 – 40.
- Aernoudt R. (2004). Incubators: Tool for entrepreneurship? *Small Business Economics*, 23, 127–135. doi:10.1023/B:SBEJ.0000027665.54173.23
- Akgündüz Y. (2013). Analysis of relationship between job satisfaction, life satisfaction, and self-efficacy in hospitality business. *Celal Bayar University Journal of Social Sciences*, 11(1), 180 – 204.
- Alibekiroğlu P B, Akbaş T, Ateş F B, Kırdök O. (2018). Mediator effect of self compassion in the relationship between life satisfaction and psychological resilience in college students. *Çukurova University Journal of Social Sciences*, 27(2), 1 – 17.
- Amoros J E, Bosma N. (2014). Global entrepreneurship monitor: 2013 global report. Accessed from Global Entrepreneurship Monitor Website: <https://www.gemconsortium.org/report/gem-2013-global-report>.
- Arend R J. (2020). The roles of thought and affect on entrepreneurship – A new hope. *Journal of Business Venturing Insights*, 14(2020), e00188.
- Avey J B, Luthans F, Smith R M, Palmer N F. (2010). Impact of positive psychological capital on employee well-being over time. *Journal of Occupational Health Psychology*, 15(1), 17 – 28. doi:10.1037/a0016998
- Avey J B, Reichard R J, Luthans F, Mhatre K H. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviours, and performance. *Human Resource Development Quarterly*, 22(2), 127 – 152. doi:10.1002/hrdq.20070
- Bailey T C, Winnie E, Frisch M B, Snyder C R (2007). Hope and optimism as related to life satisfaction. *The Journal of Positive Psychology*, 2(3), 168 – 175. doi:10.1080/17439760701409546
- Bajwa J, Abai M, Couto S, Kidd S, Dibavar A, McKenzie K. (2019). Psychological capital and life satisfaction of refugees in Canada: Evidence from a community-based

- educational support program. *Journal of Community Psychology*, 47(3), 504 – 516.
doi:10.1002/jcop.22134
- Bandura A. (1986). *Social foundations of thought and action*. Prentice Hall (Englewood Cliffs, NJ).
- Baluku M M, Kikooma J F, Bantu E, Otto K. (2018). Psychological capital and entrepreneurial outcomes: The moderating role of social competences of owners of micro enterprises in East Africa. *Journal of Global Entrepreneurship Research*, 8:26 (2018). doi:10.1186/s40497-018-0113-7
- Bayron C E. (2013). Social cognitive theory, entrepreneurial self-efficacy and entrepreneurial intentions: Tools to maximize the effectiveness of formal entrepreneurship education and address the decline in entrepreneurial activity. *Revista Griot*, 6(1), 66 – 77.
- Bhanthumnavin D. (2000). Importance of supervisory social support and its implications for HRD in Thailand. *Psychology and Developing Societies*, 12(2), 155 – 166. doi:10.1177/097133360001200203
- Bockorny K, Youssef-Morgan C M. (2019). Entrepreneurs' courage, psychological capital, and life satisfaction. *Frontiers of Psychology*, 10: 789. doi:10.3389/fpsyg.2019.00789
- Bolelli M. (2020). The effects of psychological capital on subjective well being: A study from Turkey. *International Journal of Management and Administration*, 4(4), 245 – 259. doi:10.29064/ijma.763064
- Bonanno G A, Galea S, Bucciarelli A, Vlahov D. (2007). What predicts psychological resilience after disaster? The role of demographics, resources, and life stress. *Journal of Consulting and Clinical Psychology*, 75(5), 671 – 682. doi:10.1037/0022-006X.75.5.671
- Cheng K J G, McMaughan D J, Smith M L. (2022). The role of optimism on the relationship between activity limitations and life satisfaction among middle-aged and older adults in the United States: A growth curve model of changes over time. *Journal of Applied Gerontology*, 41(4), 993–1001.
doi:10.1177/07334648211056638

- Choi Y R, Shephard D A. (2004). Entrepreneurs' decisions to exploit opportunities. *Journal of Management*, 30(3), 377 – 395. doi:10.1016/j.jm.2003.04.002
- Chou P. (2015). The effects of workplace social support on employee's subjective well-being. *European Journal of Business and Management*, 7(6), 8 – 19.
- Cohen S, Wills T A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310 – 357. doi:10.1037/0033-2909.98.2.310
- Coleman J S. (1988). Social capital in the creation of human capital. *The American Journal of Sociology*, Vol. 94, Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure (1988), S95 - S120.
- Datu J A D, Valdez J P M. (2019). Psychological capital is associated with higher levels of life satisfaction and school belongingness. *School Psychology International*, 40(4), 331 – 346. doi:10.1177/0143034319838011
- Datu J A D, Yuen M, Fung E, Zhang J, Chan S, Wu F. (2022). The satisfied lives of gifted and gritty adolescents: Linking grit to career self-efficacy and life satisfaction. *Journal of Early Adolescence*. Advance online publication. doi:10.1177/02724316221096082
- Diener E, Emmons R A, Larsen R J, Griffin S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71 – 75. doi:10.1207/s15327752jpa4901_13
- Diržyte A, Patapas A. (2021). Positive organizational practices, life satisfaction, and psychological capital in the public and private sectors. *Sustainability*, 2022, 14(1), 488. doi:10.3390/su14010488
- Donaldson S I, Chan L B, Villalobos J, Chen C L. (2020). The generalizability of HERO across 15 Nations: Positive psychological capital (PsyCap) beyond the US and other WEIRD countries. *International Journal of Environmental Research and Public Health*, 2020(17), 1 – 11. doi:10.3390/ijerph17249432.
- Eveleens C P, van Rijnsoever F J, Niesten E M M I. (2017). How network-based incubation helps start-up performance: a systematic review against the background of management theories. *Journal of Technology Transfer*, 42, 676 – 713. doi:10.1007/s10961-016-9510-7

- Fernandes G, Amaral A, Varajao J. (2018). Wagnild and Youngs's resilience scale validation for IS students. *Procedia Computer Science*, 138(2018), 815 – 822.
- Ford C. (2015). Beyond a social capital agenda: Exploring metrics and motives inside business incubators in Arkansas. Paper presented at the 5th International Conference on Engaged Management Scholarship, Baltimore, Maryland.
doi:10.2139/ssrn.2676288
- Frankl V E. (1946). *Man's search for meaning*. Beacon Press (UK).
- Gibson A, Hicks R. (2018). Psychological capital and core self-evaluations in the workplace: Impacts on well-being. *International Journal of Psychological Studies*, 10(2), 15 – 24.
- Gilbert D T, Wilson T D. (2007). Propection: Experiencing the future. *Science*, 317, 1351 – 1354. doi:10.1126/science.1144161
- Gilman R, Dooley J, Florell D. (2006). Relative levels of hope and their relationship with academic and psychological indicators among adolescents. *Journal of Social and Clinical Psychology*, 25, 166–178.
- Göçen A. (2019). Teachers' life meaning, psychological capital and gender's effect on their psychological well-being. *Cumhuriyet International Journal of Education*, 8(1), 135 - 153.
- Guitard J, Jarden A. (2022). Cognitive forecasting and its link to life satisfaction: An investigation of accurate and optimistic propection and retrospection. *International Journal of Well-being*, 12(2), 1-35. doi:10.5502/ijw.v12i2.1981.
- Hmieleski K M, Carr J C. (2007) The relationship between entrepreneur psychological capital and well-being. Babson College Entrepreneurship Research Conference (BCERC) 2007, Frontiers of Entrepreneurship Research 2007, Available at SSRN: <https://ssrn.com/abstract=1064021>.
- Honig B, Karlsson T. (2007). Social capital and the modern incubator: A comparison of in-group and out-group social networks. *Journal of Small Business & Entrepreneurship*, 23(1), 1 – 13. doi:10.1080/08276331.2010.10593512
- House J S. (1981). *Work stress and social support*. Addison-Wesley (Reading, MA).
- IECER. (2020). Interdisciplinary European conference on entrepreneurship research, call for papers. Accessed from: <https://www.iecer-conference.org/call-for-papers>.

- Jolly P M, Kong D T, Kim K Y. (2020). Social support at work: An integrative review. *Journal of Organizational Behaviour*, 2021(42), 229 – 251. doi:10.1002/job.2485
- Kim B S, Kim M. (2022). Self-efficacy mediates the relationship between perfectionism and life satisfaction in South Korean adults. *Social Behaviour and Personality: An international journal*, 50(4), e11226. doi:10.2224/sbp.11226
- Kollmann K, Stöckmann T, Kensbock J M. (2019). I can't get no sleep— The differential impact of entrepreneurial stressors on work-home interference and insomnia among experienced versus novice entrepreneurs. *Journal of Business Venturing*, 34(2019), 692 – 708. doi:10.1016/j.jbusvent.2018.08.001
- Köseoğlu G. (2007). Social capital development among tenant firms and between tenant firms and the host university in business incubators: A case of a Turkish business incubator. (Masters Thesis). Accessed via Turkish Council of Higher Education Thesis Center (Ulusal Tez Merkezi). (Thesis no: 217963).
- Kurtz J L, Lyubomirsky S. (2011). Positive psychology. In M. R. Mehl & T. S. Conner (Eds.), *Handbook of research methods for studying daily life* (pp. 553-568). New York: The Guilford Press.
- Kushev T, Ahuja M K, Carter R E. (2018). A social cognitive perspective on opportunity evaluation. *The Journal of Entrepreneurship*, 28(1), 35 – 67. doi:10.1177/0971355718810570
- Laguna M. (2008). Positive psychological capital and process of business start-up. *International Journal of Psychology*, 43(3–4), 390–391.
- Lange G S. (2018). The value of business incubators and accelerators from the entrepreneurs perspective. (Ph.D. Thesis, Georgia State University, USA). Web access: https://scholarworks.gsu.edu/bus_admin_diss/92
- Luthans F. (2002). Positive organizational behaviour: Developing and managing psychological strengths. *Academy of Management Executive*, 16(1), 57 – 72.
- Luthans F, Avey J, Avolio B, Norman S M, Combs G. (2006). Psychological capital development: Toward a micro intervention. *Journal of Organizational Behaviour*, 27(3), 387 – 393. doi:10.1002/job.373
- Luthans F, Youssef J M, Avolio B J. (2007a). *Psychological capital: Developing the human competitive edge*. Oxford University Press (New York).

- Luthans F, Avolio B J, Avey J B, Norman S M. (2007b). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, 2007(60), 541 – 572.
- Luthans F, Avey J B, Avolio B J, Peterson S J. (2010). The development and resulting performance impact of positive psychological capital. *Human Resource Development Quarterly*, 21(1), 41 – 67. doi:10.1002/hrdq.20034
- Lyons T S. (2002). Building social capital for rural enterprise development: Three case studies in the United States, *Journal of Developmental Entrepreneurship*, 7(2), 193 – 216.
- Madiha M, Akhouri D. (2018). Self efficacy and life satisfaction among young adults. *International Journal of Applied Science Engineering and Management*, 4(2), 19 – 29. doi:02.03.2018-1519971355
- Marshall D R, Meek W R, Swab R G, Markin E. (2020). Access to resources and entrepreneurial well-being: A self-efficacy approach. *Journal of Business Research*, 120(2020), 203–212.
- Mazzarol T, Reboud S. (2017). *Entrepreneurship and Innovation* (4th Ed). Springer (Singapore).
- McConnell H K, Stull L G. (2017). Hope, life satisfaction, and motivation. *Modern Psychological Studies*, 23(1), Article 1.
- Miles J A. (2012). *Management and organization theory*. Jossey-Bass (San Fransisco).
- Ng E, Fisher A T. (2013). Understanding well-being in multi-levels: A review. *Health, Culture and Society*, 5(1), 308 – 323. doi:10.5195/hcs.2013.142
- Ollerenshaw A. (2019). The relationship between business incubator services and the psychological capital of tenants. (Ph.D. Thesis, Federation University, Australia). Web access: <http://researchonline.federation.edu.au/vital/access/HandleResolver/1959.17/173755> .
- Örgün E. (2017). Role of organizational socialization on tge psychological capital and social capital in hotel businesses. (Ph.D. Thesis). Accessed via Turkish Council of Higher Education Thesis Center (Ulusal Tez Merkezi). (Thesis no: 491454).
- Parker S. (1998). Enhancing role-breadth self efficacy: The roles of job enrichment and other organizational interventions. *Journal of Applied Psychology*, 83, 835 – 852.

- Piper A T. (2019). Optimism, pessimism and life satisfaction: An empirical investigation. SOEP papers on Multidisciplinary Panel Data Research, No. 1027. Deutsches Institut für Wirtschaftsforschung (DIW), Berlin.
- Przepiorka A M. (2017). Psychological determinants of entrepreneurial success and life-satisfaction. *Current Psychology*, 36(2017), 304–315. doi:10.1007/s12144-016-9419-1
- Proctor C, Linley P A, Maltby J. (2017). Life satisfaction. In R.J.R. Levesque (ed.), *Encyclopedia of adolescence*, 1-8. doi:10.1007/978-3-319-32132-5_125-2.
- Raats C, Adams S, Savahl S, Isaacs S, Tiliouine, H. (2019). The relationship between hope and life satisfaction among children in low and middle socio-economic status communities in Cape Town, South Africa. *Child Indicators Research*, April 2019. doi:10.1007/s12187-018-9549-0
- Ratinho T, Harms R, Groen A J. (2013). Business incubators: (How) do they help their tenants? In R. Oakey, A. Groen, P. van der Sijde, & G. Cook (Eds.). *New technology-based firms in the new millenium*, 10, 161-182. West Yorkshire, UK: Emerald Publishing. doi:doi: 10.1108/S1876-0228(2013)0000010011
- Rivera M, Shapoval V, Medeiros M. (2021). The relationship between career adaptability, hope, resilience, and life satisfaction for hospitality students in times of Covid-19. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 29 (2021), 100344. doi:10.1016/j.jhlste.2021.100344
- Ryan R M, Deci E L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141 – 166.
- Sabaityte E, Diržyte A. (2016). Psychological capital, self-compassion and life satisfaction of unemployed youth. *International Journal of Psychology: Biopsychosocial Approach*, 2016(19). doi:10.7220/2345-024X.19.3
- Santisi G, Lodi E, Magnano P, Zarbo R, Zammitti A. (2020). Relationship between psychological capital and quality of life: The role of courage. *Sustainability*, 2020, 12, 5238.
- Sapmaz F, Doğan T. (2012). Optimism as a predictor of happiness and life satisfaction. *Mersin University Journal of the Faculty of Education*, 8(3), 63 – 69.

- Sarıçam H, Çelik I, Coşkun L. (2015). The relationship between emotional intelligence, hope and life satisfaction in preschool preserves teachers. Educational Research Association The International Journal of Research in Teacher Education, 6(1), 1 – 9.
- Scheier M F, Carver C S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. Health Psychology, 4, 219–247.
- Sekaran U, Bougie R. (2016). Research methods for business: A skill building approach (Seventh Edition). Wiley (West Sussex, United Kingdom).
- Seligman M. (1991) Learned optimism. Knopf (New York).
- Seligman M E P, Tierney J. (2017, May 19). We aren't built to live in the moment. The New York Times. <https://www.nytimes.com/2017/05/19/opinion/sunday/why-the-future-is-always-on-your-mind.html>.
- Sfeatcu R, Mițariu M C, Ionescu C, Roman M, Mițariu S C, Coldea L, Bota G, Burcea C C. (2014). The concept of well-being in relation to health and quality of life. European Journal of Science and Theology, 10(4), 123 - 128.
- Sinding K, Waldstrom C. (2014). Organizational behaviour (Fifth Edition). McGraw-Hill (Berkshire).
- Singhal H, Rastogi R. (2017). Psychological capital and career commitment: The mediating effect of subjective well-being. Management Decision, 56(2), 458 – 473. doi:10.1108/MD-06-2017-0579
- Snyder C R, Sympson S, Ybasco F, Borders T, Babyak M, Higgins R. (1996). Development and validation of the state hope scale. Journal of Personality and Social Psychology, 70, 321 – 335.
- Stajkovic A D, Luthans F. (1998). Social cognitive theory and self-efficacy: Going beyond traditional motivational and behavioural approaches. Organizational Dynamics, 26(4), 62 – 72.
- UKSPA. (2015). United Kingdom Science Park Association Fact Sheet: A Brief Introduction to Business Incubation.
- Vázquez C, Hervás G, Rahona J J, Gómez D. (2009). Psychological well-being and health. Contributions of positive psychology. Annuary of Clinical and Health Psychology, 5(2009), 15 – 27.

- Valle M F, Huebner E S, Suldo S M. (2004). Further evaluation of the children's hope scale. *Journal of Psychoeducational Assessment*, 22, 320 – 337.
- Wagnild G M, Young H M. (1993). Development and psychometric evaluation of the resiliency scale. *Journal of Nursing Management*, 1(2), 165–178.
- Wang Q, Sun W, Wu H. (2022). Associations between academic burnout, resilience and life satisfaction among medical students: a three-wave longitudinal study. *BMC Medical Education* (2022), 22: 248. doi:10.1186/s12909-022-03326-6
- Wiklund J, Nikolaev B, Shir N, Foo M D, Bradley S. (2019). Entrepreneurship and well-being: Past, present, and future. *Journal of Business Venturing*, 34(2019), 579 – 588.
- Wood R, Bandura A. (1989). Social cognitive theory of organizational management. *Academy of Management Review*, 14(3), 361 – 384.
- Xi X, Wang Y, Jia B. (2017). The effect of social support on subjective well-being: Mediator roles of self-esteem and self-efficacy. *Advances in Social Science, Education and Humanities Research*, 121, 493 – 505.
- Yakut E. (2019). A social cognitive theory perspective on marketing studies: A literature review. *Journal of Yasar University*, 14 (Special Issue), 18-33.
- Yan W, Zhang L, Li W, Kong F. (2022). How is subjective family socioeconomic status related to life satisfaction in Chinese adolescents? The mediating role of resilience, self-esteem and hope. *Child Indicators Research* (2022). doi:10.1007/s12187-022-09936-2