

Impact of an Entrepreneurial camp on Students' Psychological Capital

Tiina Brandt

Haaga-Helia University of Applied Sciences, Helsinki, Finland

Tiina.Brandt@Haaga-Helia.fi

Abstract: Psychological capital is a positive quality that describes person's attitudes towards work and life in general. It includes four dimensions: self-efficacy, optimism, hope and resilience. There are plenty of research of positive impact of psychological capital on individuals' working life, and research show that short interventions impact positively into the psychological capital dimensions. Here the interest was to see if the intensive 3-weeks innovation and entrepreneurial camp impacts on the students' psychological capital. 95 participants did answer on the questionnaire during the last week of the camp. Results indicated that impact of the camp was positive in all the psychological capital dimensions. The dimension Hope increased mostly, indicating that camp impacted positively on attitudes for target setting and finding the different paths to gain those. The dimension Resilience did not increase so much, which may be because the students were quite tired at the end phase of the camp. Interestingly those students who had intentions to start own business, had more increase of psychological capital than those who were unsure about their intentions of becoming entrepreneur. Also, students from US reported more increase in their psychological capital than European students.

Keywords: Entrepreneurship, Innovativeness, Psychological Capital, Study camp

1. Introduction

Entrepreneurship has typically been connected with characteristics like risk-taking, innovativeness and competitiveness. There is plenty of research indicating that risk-taking attitudes and behaviours are distinguishing characteristics of entrepreneurship (e.g. Das and Teng, 1997; Douglas and Shepherd, 2002; Stewart et al, 1998).

Psychological capital (PsyCap) illustrates individuals' positive capacity in terms of the components of optimism, resilience, self-efficacy, and hope (Luthans et al., 2006). It has been found to have several positive impacts on individuals' life at organizations and work-related matters (Avey et al., 2011; Luthans et al., 2005; Luthans et al., 2008; Peterson et al., 2011). Some studies have been focused also in psychological capital and entrepreneurship (e.g., Akmaliah and Pihie, 2009; Saeid et al., 2011). It has huge impact on individuals' working life. It is not permanent trait, but it can be increased with interventions. For example, 1-4 hours micro-interventions have been noted to have positive impact on the psychological capital (Lupsa et al., 2019). Interestingly, leaders' have impact on their team members' psychological capital (Brandt, 2022).

Here the study focus, if the 3-weeks intensive entrepreneurial student camp acts as an intervention method improving students' psychological capital. Also interest is to compare USA and European students and also students with entrepreneurial intentions to those without.

1.1 Entrepreneurial intentions

The Theory of Planned Behaviour (TPB) (Ajzen, 1991) is one of the models in the study of entrepreneurial intent in different countries (Autio et al., 2001; González-Serrano et al., 2016; Krueger et al., 2000; Liñán and Fayolle, 2015; Moriano et al., 2012). Ajzen (1991) postulates that behaviour is a function of beliefs that influence a certain behaviour. These beliefs are considered important premises that determine personal attitude, intention and perceived behaviour control. The more favourable the subjective norms and attitudes towards behaviour, the greater the perceived degree of control of the individual, leading to a stronger intention to perform a certain behaviour (Ajzen, 1991). Previous studies have used TPB to predict certain variables that are related to entrepreneurship. These variables include entrepreneurial intentions, entrepreneurial behaviour and entrepreneurial skills and attitudes. Entrepreneurial intention is the "self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future" (Thompson, 2009, p. 676). Entrepreneurial intention is the first step towards taking entrepreneurial action such as contemplating a start-up. The second variable of interest is entrepreneurial behaviour. Based on the TPB, intentions are correlated with behaviour and linked to behavioural control. Intention plays a central role in TPB by connecting norms, attitudes and behavioural control with enacted behaviours.

1.2 Entrepreneurial qualities

Entrepreneurial qualities have been typically related to ability to take risks (Frishamme and Andersson, 2009) and multiple research indicates this (e.g. Begley and Boyd, 1987; Carland et al, 1995; Karabey 2012; Pekkala et al, 2019; Zhang et al, 2015). Other authors have shown that highly risk-minded entrepreneurs are generally willing to take on high-risk ventures for the chance of high returns (Covin and Slevin, 1989; Lumpkin and Dess, 1996). Some research indicates that with risk-taking ability the need for autonomy in decision making is also needed. The stronger the risk-taking tolerance of the individual has, and the stronger is their preference for decision-making autonomy, the stronger is their intention to be self-employed (Douglas and Shepherd, 2002). The intervention study indicated that people can learn to take risks (Kyrö and Tapani, 2008).

Competitiveness drives efforts which improve performance (Krishnan et al., 2002) and it is associated with the adaptation of deep learning strategies (King et al., 2012) and related to learning effort as well as general self-efficacy (Wang and Netemeyr, 2002). Many studies have focused on entrepreneurial orientations and the relationship of aggressive competitive orientation to firm performance and business success (Covin and Covin, 1990; Matchaba-Hove et al, 2013). *Innovativeness* is important in order to create something new and succeed in changing situations. In relation to competitiveness, it has noted that aggressive competitive orientation is related to firm performance and business success (Covin and Covin, 1990; Matchaba-Hove et al, 2013).

Other factors like age, gender and personality have been studied in relation to entrepreneurship. Age impacts so, that older people are significantly less likely to engage in entrepreneurial activity than younger individuals (Curran and Blanckburn, 2001; Hart et al, 2004), but on the other hand survival rates of businesses established by older entrepreneurs are higher than those of younger entrepreneurs (e.g., Cressy and Storey, 1995; Rotefoss and Kolvereid, 2005). In case of personality, some preferences have more tendencies towards entrepreneurship than others. For example, intuitive and thinking personality preferences have been noted to be acting more as entrepreneurs than their opposite preferences sensing and judging (e.g. Brandt & Helander, 2020; Carland and Carland, 1992).

Researchers studying students used a variety of measures for entrepreneurial attitudes that included a mixture of attitude and trait measures, often including items referencing risk-taking and innovativeness (Domke-Damonte et al., 2008; Langkamp-Bolton & Lane, 2011; Levenburg & Schwarz, 2008; Macko & Tyszka, 2009; Zampetakis et al., 2009) as well as proactivity (Langkamp-Bolton & Lane, 2011; Zampetakis et al., 2009).

1.3 Psychological capital and entrepreneurial tendencies

A comprehensive definition of PsyCap is “an individual’s positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success” (Luthans, Youssef, & Avolio, 2007, p. 3).

In working life, it has been noted that psychological capital has a huge impact on the individuals’ experiences and success. There are multiple studies of its positive impacts on individuals’ life at organizations and work-related matters (Avey et al, 2010; Avey et al, 2011; Bergheim et al, 2015; Luthans et al, 2008; Peterson et al, 2011). For example, Karatepe and Karadas (2015) found that employees scoring high on psychological capital are more satisfied with their jobs, careers, and lives. It has also been associated with positive career mobility (Järlström and Brandt, 2017) and objective career success measured in wages and hierarchical career progression (Järlström et al, 2020). At the organizational level, it is connected to organizational performance (Hmieleski and Carr, 2008), business excellence (Hsu et al., 2014) and competitive advantage (Youssef and Luthans, 2010).

In relationship with entrepreneurship, psychological capital seems to have also positive connection. According to the study of Contreras et al. (2017) with the sample of 100 persons, the results indicate that entrepreneurial intention is related to psychological capital with dimensions of self-efficacy and resilience and as an integrated construct as a whole. A study by Ebhrem et al (2019) highlighted the importance of psychological capital in explaining why some students are more willing to start-up business than others. Indeed, the higher the student’s psychological capital, the higher the intention to start-up a business. Further, according to study of Brandt (2022) with 457 persons, the PsyCap correlated with Entrepreneurial tendencies as well as Growth orientation. The Entrepreneurial tendencies correlated all dimensions but Hope and Growth correlated with all dimensions. Both

were correlated with whole construct of PsyCap. Concerning psychological capital dimensions, the relation between self-efficacy and entrepreneurial behaviour has been widely established (Akmaliah and Pihie, 2009; Chandler & Jansen, 1997; Chen et al, 1998; Saeid et al., 2011). Also, optimism (Laguna, 2006; Lingfei and Li, 2011; Robledo et al, 2015) and hope (Laguna, 2006) are predictors of entrepreneurial intention and hope indicates entrepreneurs' satisfaction with business ownership according to Jensen and Luthans (2002). According to these studies it seems like persistence is the only dimension which has not been studied as a relationship with entrepreneurship.

2. Methodology

2.1 Sample

Totally, 95 students responded to the questionnaire of psychological capital. Altogether the camp includes about 300 students. 53% of respondents were women and coming from Europe (62%). Representatives from USA were 38%. Most of the respondents (72%) were between 21 years – 30 years old. 59% of respondents were students, and 30,5% were students having the job or own company. 80% of respondents were university students, 10,5% at applied sciences, and 4,2% were having doctor degree.

2.2 European Innovation Academy (EIA)

The European Innovation Academy (EIA) (<https://www.inacademy.eu/portugal/>) is the 3 weeks study camp fostering innovativeness and entrepreneurship with students. Students will form the enterprise with international teams during camp. They will get help from mentors with the business background. The best ones will get rewarded after the final pitch day.

2.3 Measuring impact on psychological capital

Students rated the list of psychological capital items from -3 to +3 indicating if the camp decrease or increase this psychological capital item. Factor analyses (Varimax) produced seven dimensions of PsyCap: 1) Self-Efficacy, 2) Successful, 3) Resilience 4) Optimistic 5) Positive future 6) Goal orientation 7) Finding way.

Self-efficacy was measured with 5 items, such as "I am able to resolve most of the problems if I try enough". Cronbach's alpha was 0.876. *Successful* was measured with three items, such as "I regard myself as quite successful". Cronbach's alpha was 0.762. *Resilience* was measured with 5 items, for example: "I recover and get over disappointments fast". Cronbach's alpha was 0.8359. *Optimistic* was measured with 4 items, such as "I think most of the people that I meet are very nice". Cronbach's alpha was 0.723 *Positive future* was measured with 3 items, such as "At the uncertain situations I trust that things will turn out right". Cronbach's alpha was 0.788. *Goal orientation* was measured with 3 items, for example: "I am thinking often how to reach my goals". Cronbach's alpha was 0.866. *Finding way* was measured with 4 items, such as: "If I don't reach the goals the way I planned, I will find the other way". Cronbach's alpha was 0.779.

Originally PsyCap includes only four dimensions (i.e. Hope, Resilience, Optimism, Self-Efficacy), but here the results are more specific. Self-Efficacy and Successful can be described as Self-Efficacy, Optimistic and Positive as Optimism and lastly, Goal orientation and Finding way can be described as Hope.

2.4 Measuring Innovativeness and Proactiveness

Students were asked to rate their innovative and proactive behaviour at the Likert scale 1-7. Factor analyses (Varimax) divided as planned two dimensions. Innovativeness was measured with 6 items, such as "I consider innovative opportunities". Cronbach's alpha was 0.779. Proactiveness was measured also with 6 items, such as "I make important organizational members enthusiastic for innovative ideas". Cronbach's alpha was 0.779.

3. Results

1) Impact of the camp to the psychological capital

The students evaluated that all the dimensions of the psychological capital were having positive impact due to the camp (see Table 1). Especially dimension Hope (Goal orientation + Finding the way) had positive impact, but also dimensions measuring Optimism, and Self-Efficacy were having positive impact. Least positive impact had Resiliency, even it was also positive.

2) Comparison of those becoming entrepreneurs and those who will not start business

The interest was to see if the students will have the interest to become entrepreneur after the EIA-camp. Results were:

- 1,1% will not definitely start own business at the future
- 7,4% will not probably start own business at the future
- 34,7% did not know if they will start own business at the future
- 34,7% will probably start own business at the future
- 21,2% will definitely start own business at the future

The respondents were divided into two groups comparing 1) those with entrepreneurial intentions, and 2) those without entrepreneurial intentions. Results indicated that all PsyCap means were higher in the group with entrepreneurial intentions (see Table 1.) There were statistically significant differences in the all dimensions but Optimistic and Successful.

3) USA vs. EUROPE, gender

The differences between continents indicated that the EIA-camp impacted more US participants' PsyCap than European ones. The difference was statistically significant in of Resilience and Optimism (see Table 1). In case of gender there were no statistically significant differences.

Table 1: Impact of the EIA camp on the psychological capital

	Impact all (N=95)	Comparison:			Comparison:		
		YES Entrepren. intentions n=50	NO entrepren. intentions n=34	t-test two-sided p.	USA (n=32)	EUROPE (n=50)	t-test two-sided p.
Self-Efficacy	+1,41	+1,62	+1,13	0,008**	+1,66	+1,30	0,076
Successful	+1,53	+1,68	+1,30	0,027*	+1,68	+1,41	0,209
Resilience	+1,00	+1,24	+0,70	0,015*	+1,42	+0,73	0,007**
Optimism	+1,48	+1,58	+1,37	0,115	+1,72	+1,33	0,038*
Positive future	+1,44	+1,73	+1,09	0,002**	+1,53	+1,35	0,425
Goal Orientation	+1,64	+1,90	+1,33	0,003**	+1,85	+1,51	0,117
Finding Way	+1,57	+1,79	+1,28	0,002**	+1,77	+1,45	0,093
PC Total	+1,55	+1,72	+1,31	0,122	+1,78	+1,39	0,141

4) Innovativeness, proactiveness and psychological capital

In the Table 2 can be seen the correlation analyses of innovativeness and proactiveness with PsyCap dimensions. All the dimensions correlated, indicating that positive improvement in PsyCap correlated with innovativeness and proactiveness.

Table 2: Pearson bivariate correlations

	Innovativeness	Proactiveness
Self-Efficacy	0,319**	0,478**
Resilience	0,410**	0,460**
Finding Way	0,431**	0,375**
Goals	0,426**	0,320**
Positive future	0,416**	0,398**
Optimism	0,218*	0,361**

	Innovativeness	Proactiveness
Successful	0,432**	0,787**
PC Total	0,412**	0,504**

4. Conclusions

The results showed that all the aspects of the psychological capital were increased. Students thought that especially Hope (Finding Way and Goal Orientation) was increased. Hope means target setting and finding the different paths to gain the target. It may be that the idea of having business target was so clear in every aspect that it impacted how the students think. The goal-setting mindset did increase during the camp.

Resilience was the dimension which did had lowest increase (but still did increase). The lower increase in resilience might be because many students experienced the camp as very demanding, there were long days to build the business and gain the clients, with team members you did not know earlier. It would be interesting to send the questionnaire later, e.g. after one year of the camp, and then see what are the results – maybe camp's impact on resilience would be higher when measuring it later.

When comparing the students with and without entrepreneurial intentions the interesting results were found. The camp was especially useful for those who were thinking to start their own business at the future. The EIA impacted more positively in their Self-Efficacy, Resilience, Positive future, Goal orientation, and Finding Way - dimensions. According to these results, it seems like that those students who were having entrepreneurial intentions, did get the most out of the camp in regard of PsyCap. It should be noted, that camp might have impact on entrepreneurial intentions to one or the other direction.

When comparing US and European students the EIA-camp had more positive impact on US students' PsyCap. Especially Optimism and Resilience improved more than European students. The state of PsyCap was not measured when students arrived at the camp, so it is not known if the US students were having lower levels of PsyCap in advance.

Interestingly, there were correlations between PsyCap dimensions and innovativeness and proactiveness. So it seems that improvement in PsyCap is connected to higher Innovativeness and Proactiveness which are regarded important prerequisites for entrepreneurship. Further analyses would be needed to confirm these results.

According to these results the EIA enhances students' psychological qualities aside of entrepreneurial knowledge. Some of the studies of entrepreneurial education show that education can exert positive effects on entrepreneurial self-esteem (e.g. Jones et al., 2008). These results support these studies, indicating that entrepreneurial camp has impact on the wider construct of persons' attitudes, including self-esteem. Psychological attitudes are important when willing to start own business. EIA camp was highly demanding for some of the most ambitious students, when needing persistence to do long days, solve the set-backs, gain customers, and negotiate with team members from different cultures. When there are clear goals (hope) the working is more systematic and the focus and main purpose do not disappear. Self-esteem gives the strength to defend own idea and negotiation and selling skills. Optimistic mindset is needed to keep the working atmosphere positive. According to earlier studies the persistence has had the lowest correlations with entrepreneurship, these results support this when also the entrepreneurial camp had the lowest intervention impact on persistence-dimension. Most probably those students' who applied and travelled to the EIA, already had their psychological capital at very high level, but interestingly, this experience still did increase that. It would be interesting to study the psychological capital at team level, if the top-ten teams have higher psychological capital than others.

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