

# Empathic Features of Conducting Negotiations in an Entrepreneurial Environment

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**Abstract:** In business and scientific literature, empathy (i.e. the ability to accept different perspectives, put oneself in another person's place, and develop interpersonal relations) occupies an important place. However, there is a risk that, in negotiations, the ability to induce the counterparty to accept the prospect, i.e. the display of empathy, is no less critical for success. External pressure and aggression cause psychological resistance. Sometimes such resistance takes on grotesque forms, forcing people to commit actions that directly contradict their interests to demonstrate their independence. The study's novelty stems from the fact that negotiations in work as an entrepreneur depend on empathic ability. The authors show that empathy training and upgrading can improve the quality and success of negotiations, leading to concluded contracts and, consequently, to better business performance. The work has established that entrepreneurial empathy in professional activities contributes to the development of secondary socio-economic indicators of the environment and society. The study's practical significance is determined by the structure of the creation of an empathic component in the practical activities of business structures in the context of overcoming crisis phenomena in the economy.

**Keywords:** Empathy; Entrepreneurship; Environment; Formation; Development.

**JEL Codes:** D91, L26

## 1. INTRODUCTION

By analysing the views of scholars of various psychological theories on the problem of empathy, we can say that it is considered an effective way of understanding and learning the inner world of another person; it is a prerequisite for the overall development of the individual in society, for interpersonal understanding and emotional intelligence; it is an effective means of mastering and understanding moral relations and ethical standards; empathy is the basis for the moral development of the individual; high level of empathy fosters altruistic behaviour (Groch *et al.*, 2012). Empathic compassion also serves as an intermediary motive in the activities of entrepreneurs (Luo *et al.*, 2018). The need to enhance the role of empathy in personal development has long been the subject of research in psychology. This is due to the fact that empathy as a psychological phenomenon has a significant impact on the entire personality as a whole, increases motivation and productivity of activity, and expands the idea of its effectiveness (Rashid, 2006). Empathy is the ability to provide an emotional response to

the experiences, thoughts, and feelings of the object of empathy. Some researchers believe that empathy is the emotional ability to respond to signals that convey the emotional experience of another (Urban and Galawe, 2019). Others define empathy as a behavioural ability that manifests in professional behaviour in response to another person's experiences or problems. Empathy is considered as a biologically determined tendency to altruistic behaviour. Sincere sympathy (empathy) generates an altruistic motivation for helping behaviour (Le *et al.*, 2020).

There are two main contexts to consider the issue of developing empathy – personal (universal) and professional. We often talk about empathy at different age periods, in general, about empathy in our society against aggression, and lack of empathy towards other people. Empathy is also widely considered in the work of entrepreneurs. More and more modern researchers choose this activity as the subject of research (Hockerts, 2018). A number of psychological works by domestic and foreign researchers of various directions and currents indicate this (Bacq and Alt, 2018). The definition of “activity” in psychology is characterised by ambiguity and multifunctionality (Zulfiqar *et al.*, 2019). Thus, there is an opinion that “activity” is a process of

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necessary activity of a person (Camuffo *et al.*, 2012). However, a number of other authors use the term “activity” to mean:

- the individual’s ability to transform reality;
- personal development factor, attitude to the social environment, shaping one’s life and social reality;
- spiritual and material influence in the “subject-object” interaction.

Foreign and domestic psychological scientists have developed concepts and activities and the content and substance of activities as a psychological category (Urban and Galawe, 2019). On the basis of theoretical analysis, we can say that there are approaches to studying the structure of activities. Numerous studies of psychologists allow us to distinguish motivational (motivational-need sphere), target (purpose of activity), and instrumental (means of activity) components of the structure of activity. It is these structural elements that determine the internal and external organization of activities (Younis *et al.*, 2020). Within the framework of the subjective approach, the central component of the activity structure is the person who carries it out (Chang *et al.*, 2014). However, when analyzing the problem of the structure of activity, it is necessary to pay tribute to other approaches and concepts (Razavi *et al.*, 2014). Thus, the functional-algorithmic approach considers the activity from the perspective of structural analysis and comprises 5 levels:

- the level of personal motivation analysis. This level analyses the needs of the individual and possible options for their satisfaction, depending on the nature of the chosen occupation;
- the level of target component analysis. This level highlights the purpose and importance of all operations (actions), their relationship to the mental processes, and properties that ensure the performance of activity;
- the level of structural-functional analysis. This level analyses the individual subsystems and sub-structures of activities, their interaction, relevance and weight of the individual components;
- the level of information analysis. An analysis of this level helps to determine how to obtain the necessary information, which is essential for the performance of professional actions;
- psychophysiological level of analysis. This level allows the study of physiological systems that mediate activities.

Researchers of the psycho-physiological content of activities focus on a four-component structure, which includes: the entertaining component, the operational component, the activation and regulatory component, and the basic component (Cutcliffe, 2003). The activity in the concept of integral mental processes is considered from the position of the macrostructure (Ojaghi *et al.*, 2017). The concept of systemomogenesis considers activity as a coherent system of its main components. Also, within this concept, activities are seen as the unity of activities’ systemic, genetic, and

psychological aspects (Wood, 2012). Many foreign and domestic researchers are actively examining the problem of professional activity (Chiles *et al.*, 2010). Based on an analysis of their scientific work, we can say that professional activity requires special training and the necessary personal qualities (You and You, 2020). It is a psychological analysis of professional activity that makes it possible to develop empathy as a professional quality (Korte *et al.*, 2018).

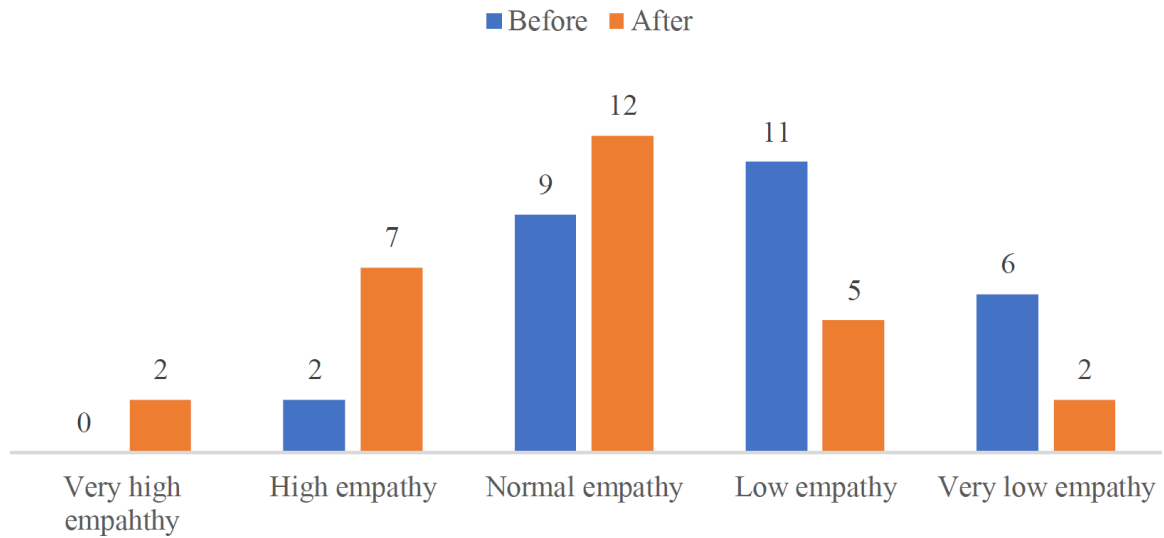
## 2. MATERIALS AND METHODS

To assess the effectiveness of the introduction of socio-psychological training in the formation of entrepreneurial professional empathy, we conducted a psychodiagnostic study. In the control phase of the experiment, we conducted it with the same set of experimental methodologies that determine the level of development and the factors of empathy as in the validation phase of the study. To confirm or refute the formative effect, we carried out a comparative analysis of diagnostic results of the declaring and forming stages. We used the Wilcoxon t-criterion to determine statistically significant changes. To assess the effectiveness of the introduction of socio-psychological training in the formation of entrepreneurial professional empathy, we conducted a psychodiagnostic study in two groups:

- 1) the treatment group (TG), whose participants took part in the training. Number – 28 people;
- 2) the control group (CG), whose participants did not participate in the forming experiment. Number – 28 people;

The educational process in the treatment group was generally different from the control group in terms of its purpose, objectives, and content. It was to provide socio-psychological training in the formation of professional empathy. For correctness and obtaining reliable results, the formation of groups was carried out according to the following indicators:

- the level of empathy. Since the test of the impact of socio-psychological training on the formation of professional empathy is primarily based on the indicator of the level of empathy, it would be advisable to level the groups in this indicator;
- readiness to take risks, an essential professional quality which, in conjunction with a high level of empathy, develops supportive behaviour;
- strategies of behaviour in stressful situations will be essential to determine whether an entrepreneur will be able to control himself in a stressful situation to provide assistance;
- the level of motivation to succeed and avoid failures, which allows us to determine how much entrepreneurs will be motivated to achieve success in solving an empathogenic situation;
- neuroticism, spontaneous aggressiveness, irritability, sociability, poise, shyness, openness, emotional lability are those properties, and qualities of a person that, as the results of the ascertaining stage showed, influence the formation of empathy or interfere with its adequate development;



**Fig. (1).** Diagram of the distribution of empathy levels of the treatment group before and after the forming experiment.

- the level of psycho-psychological stability is an essential indicator in the personality structure of an entrepreneur, because it helps to resist negative factors of professional activity, mobilise forces, and provide assistance to victims.

This approach makes it possible to speak of the effectiveness of introducing socio-psychological training in forming professional empathy, since the effect is applied to all factors contributing to the formation of empathy, and factors that reduce it. The diagnostic study in the control phase was carried out with the same set of experimental methodologies determining the level of development and the factors of empathy as in the validation phase of the study. To confirm or refute the formative effect, we carried out a qualitative analysis of diagnostic results of the ascertaining and control stages. Also, we used the Wilcoxon t-criterion to determine statistically significant changes.

**3. RESULTS AND DISCUSSION**

The results of the control section show the positive impact of the introduction of socio-psychological training in the development of entrepreneurial professional empathy. Let us compare the results for a complete picture of the changes in the treatment group after the formative impact and in the control group that did not participate in the training. Table 1 presents the results of changes in empathy in control and treatment groups.

**Table 1. Results of Changes in Empathy in Control and Treatment Groups (%).**

Indicators	Control Group n=28			TG n=28		
	<i>Before</i>	<i>After</i>	<i>Change</i>	<i>Before</i>	<i>After</i>	<i>Change</i>
Very high level of empathy	18	12	-6	0	7	+7
High level of empathy	32	32	0	7	25	+18

Normal level of empathy	25	22	-3	32	43	+11
Low level of empathy	18	21	-3	39	18	-21
Very low level of empathy	7	7	0	22	7	-15

As Table 1 shows, empathy has improved for the treatment group, unlike the control group with a slight decrease. Consider in more detail the results of the control scale of empathy in the entrepreneurs of the treatment group. Fig. (1) shows that the level of empathy has increased significantly.

As we can see, the participants of the forming experiment have a very high level of empathy increased by 7%. Positive changes can also be seen in the high level of empathy, which has increased by 18% overall. Indicators of the normal (average) level of empathy also increased by 11%. Therefore, the indicators of low and very low levels of empathy decreased by 21% and 15%, respectively. The results of the readiness to take risks diagnostics indicate changes in both the treatment and control groups. As Table 2 shows, in the control group there is an increase of 6% in the indicator of "too cautious" and a slight decrease in readiness to take risks of 3%.

**Table 2. Results of Changes in Readiness to Take Risks in the Control and Treatment Groups (%).**

Indicators	Control group n=28			TG n=28		
	<i>Before</i>	<i>After</i>	<i>Change</i>	<i>Before</i>	<i>After</i>	<i>Change</i>
Too cautious	22	28	+6	46	25	-21
Average level of readiness to take risks	39	36	-3	36	36	0
Readiness to take risks	39	36	-3	18	39	+21

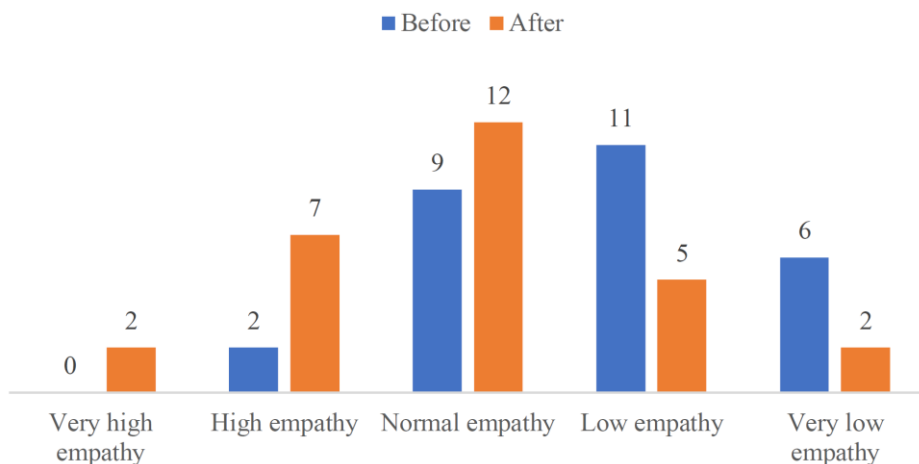


Fig. (2). Diagram of the distribution of readiness to take risks indicators of the treatment group before and after the forming experiment.

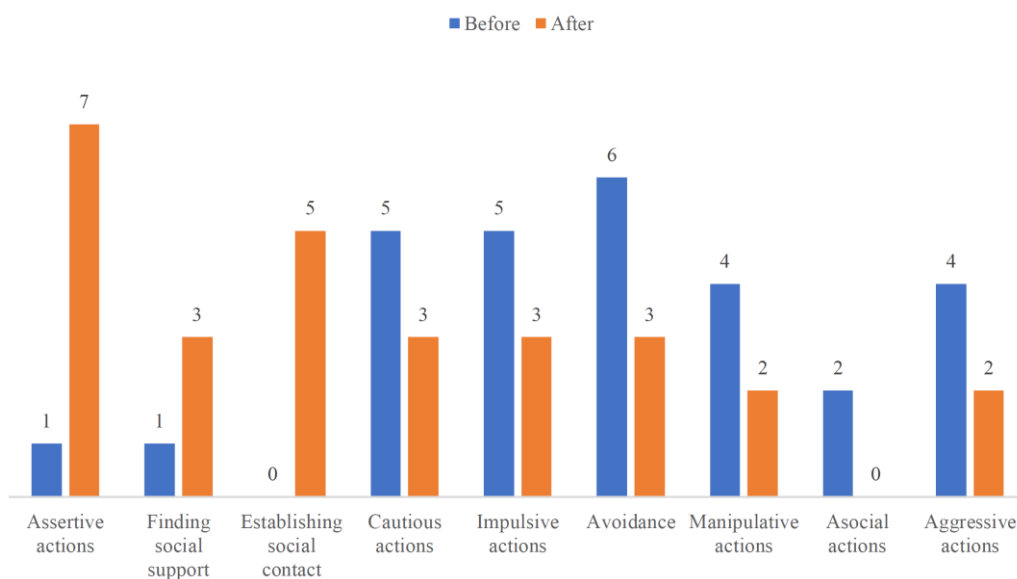


Fig. (3). Diagram of the distribution of coping strategies of the treatment group before and after the forming experiment.

Fig. (2) presents detailed results of readiness to take risks diagnostics in the treatment group. Indicators of excessive caution, coupled with increased confidence and selectivity, declined by 21%. Indicators of readiness to take risks, depending on the situation, remained unchanged. The level of readiness to take risks has significantly increased (21%).

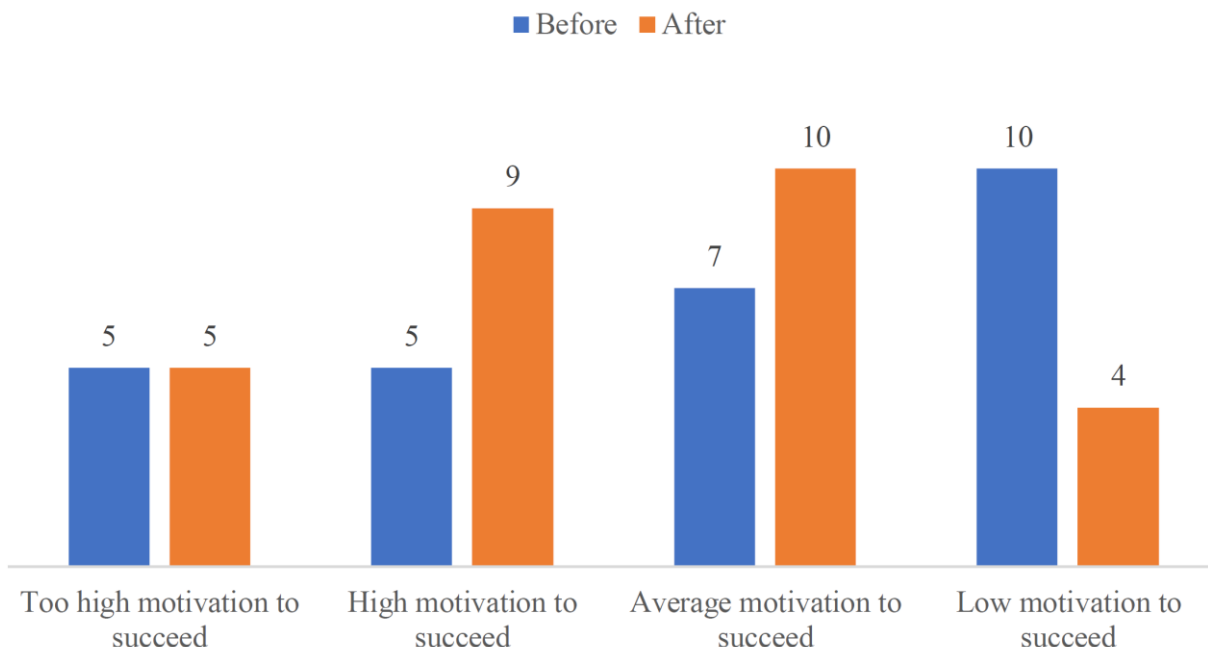
As Table 3 shows, the strategies of behaviour in stressful situations have also undergone changes. However, in the control group, the changes are not too significant, unlike in the treatment group.

Table 3. Results of Changes in Behaviour Strategies in Stressful Situations in the Control and Treatment Groups (%).

Indicators	Control Group n=28			TG n=28		
	Before	After	Change	Before	After	Change
Assertive actions	21	18	-3	4	25	+21
Search for social support	18	21	+3	4	10	+6

Establishment of social contacts	25	29	+3	0	18	+11
Cautious actions	7	3	-4	18	11	-7
Impulsive actions	4	3	-1	18	11	-7
Avoidance	7	7	0	21	11	-10
Manipulative actions	7	11	+4	14	7	-7
Antisocial actions	4	4	0	7	0	-7
Aggressive actions	7	4	-3	14	7	-7

Fig. (3) shows the results of a study of behaviour in stressful situations. We see that the indicators of assertive actions (21%), the search for social support (6%) and the establishment of social contact (18%) have significantly



**Fig. (4).** The results of the distribution of the levels of motivation to succeed of the treatment group before and after the forming experiment.

increased. Entrepreneurs have become more confident and have learned to easily establish social connections. On the positive side, cautious actions, impulsive actions, manipulative actions, antisocial and aggressive actions have all fallen by 7%. We also see that there are 10% fewer respondents who avoid solving stressful situations.

The motivation to achieve success and avoid failures have a significant impact on the development of professional empathy of entrepreneurs. Therefore, it would be advisable to check the changes in these indicators. Tables 4-5 present the results of motivation to succeed and avoid failure.

**Table 4. Results of Changes in the Level of Motivation for Achieving Success in the Control and Treatment Groups (%).**

Indicators	Control group n=28			TG n=28		
	Before	After	Change	Before	After	Change
Too high motivation to succeed	36	32	-4	21	18	-3
High motivation to succeed	32	29	-3	18	32	+14
Average motivation to succeed	18	21	+3	25	36	+11
Low motivation to succeed	14	18	+4	36	14	-22

As we can see from Table 4, there are no significant changes in the motivation to succeed in the control group.

**Table 5. Results of Changes in the Level of Motivation to Avoid Failures in the Control and Treatment Groups (%).**

Indicators	Control Group n=28			TG n=28		
	Before	After	Change	Before	After	Change
Too high motivation to avoid failure	18	12	-6	0	7	+7
Moderately high motivation to avoid failure	32	32	0	7	25	+18
Average motivation to avoid failure	25	22	-3	32	43	+11
Low motivation to avoid failure	18	21	-3	39	18	-21

The level of motivation to avoid failure in the control group has little change, namely, too high a level of motivation to avoid failure has fallen by only 6%. Figs. (4 and 5) show the way the indicators of the level of motivation to succeed and avoid failures in the treatment group have changed.

Fig. (4) shows the too high motivation to succeed decreased by 3%, and the low motivation to succeed decreased by 22%. However, the high and average levels of motivation to succeed increased significantly by 14% and 11%, respectively. Let us also analyse Fig. (5). We see that the participants of the forming experiment have become less motivated to avoid failure and are ready to move towards success with confidence. The fact that the too high level of motivation for avoiding failures decreased by 11%, and a

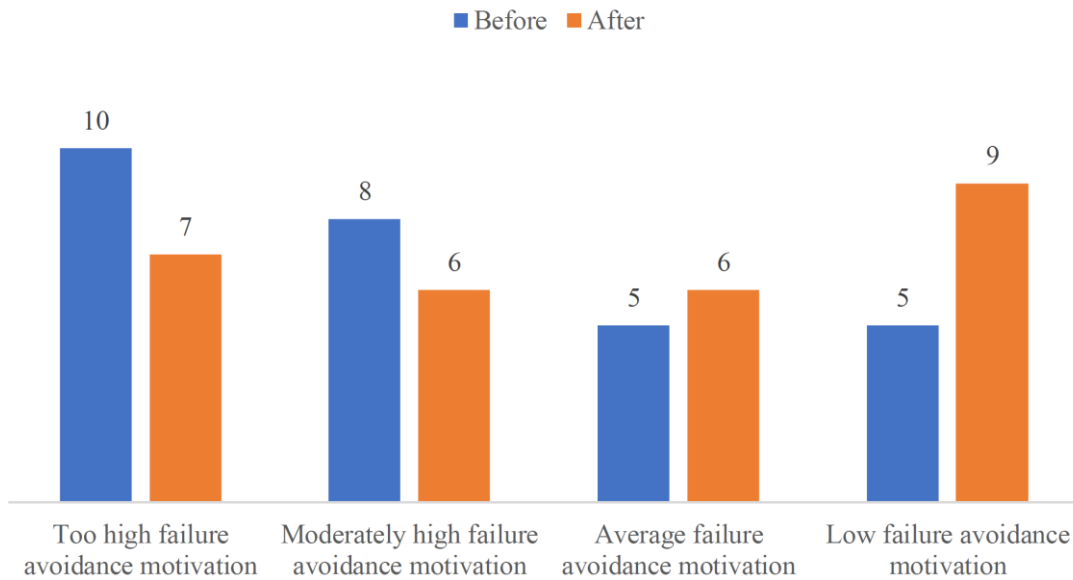


Fig. (5). Results of the distribution of motivation levels avoiding the failures of the treatment group before and after the forming experiment.

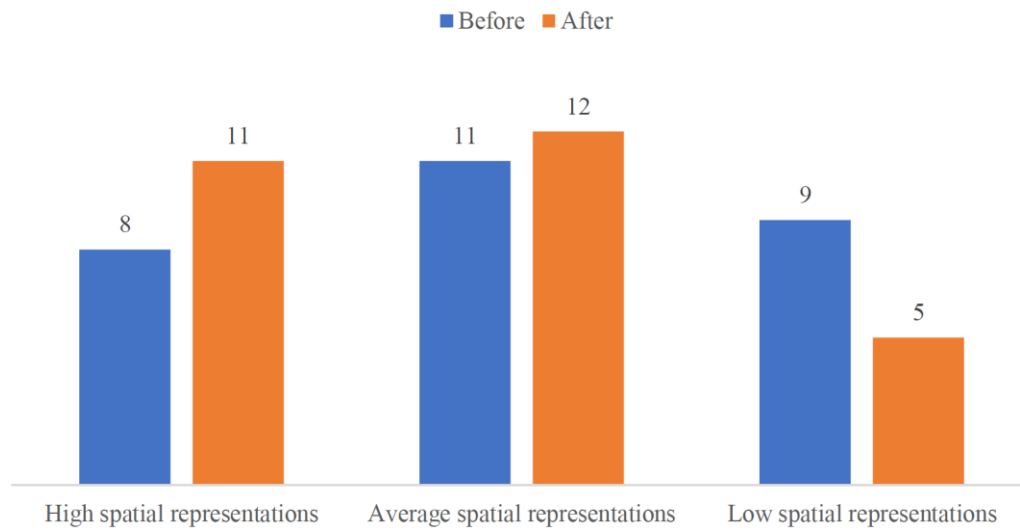


Figure 6. Results of the distribution of levels of spatial representation of the treatment group before and after the forming experiment.

moderately high level – by 6% confirm such conclusions. However, the indicators of medium and low levels of failure avoidance increased by 3% and 14%, respectively.

Table 6 presents the results of changes in the level of spatial representation in control and treatment groups. As we can see, there is a decrease in the high level of spatial representation in the control group by only 4%. However, the low spatial representation also increased by 4 per cent.

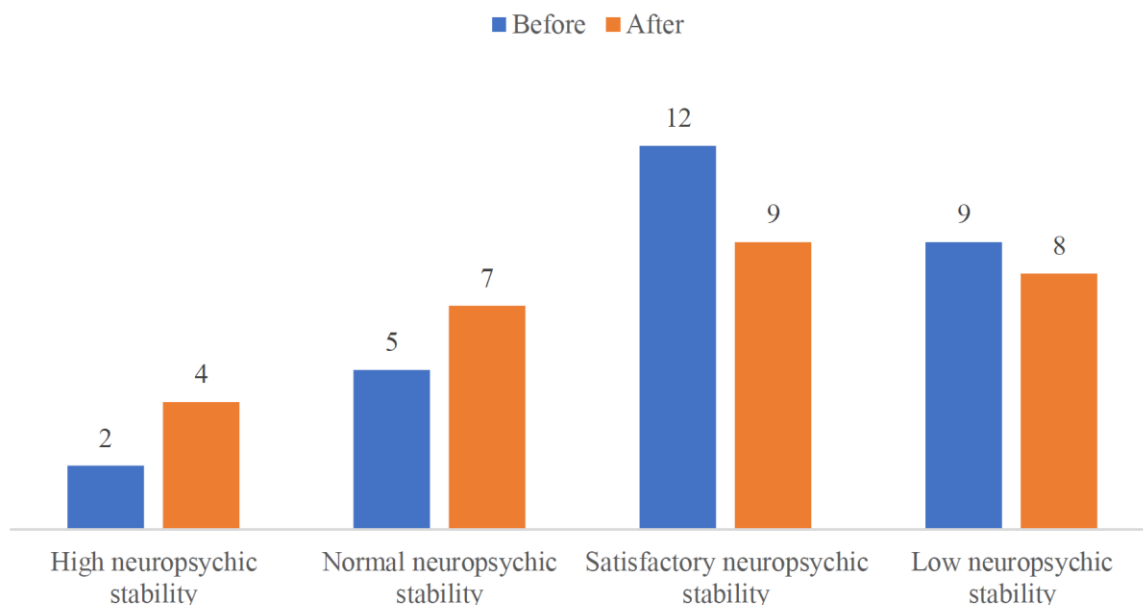
Table 6. Results of Changes in Spatial Representation in Control and Treatment Groups (%).

Indicators	Control Group n=28			TG n=28		
	Before	After	Change	Before	After	Change
High level of spatial representation	43	39	-4	29	39	+10

Average level of spatial representation	39	39	0	39	43	+4
Low level of spatial representation	18	22	+4	32	18	-14

Fig. (6) presents the results of the control cross-section of the spatial representation level study. We can talk about a trend of increasing spatial representation. Namely, the high spatial representation increased by 10% and the average by 4%. In contrast, low spatial representation decreased by 14%.

It is exercises aimed at developing professional empathy in training that led to positive spatial representation results. That is, an empathogenic situation was created on the training ground for entrepreneurs. We also determined that neuropsychic stability is vital in the professional activity and the development of empathy of entrepreneurs. Table 7 shows



**Fig. (7).** The results of the distribution of the levels of neuropsychic stability of the experimental group before and after the forming experiment.

positive changes in two groups. Nevertheless, the results of the treatment group are slightly higher than in the control group.

**Table 7. Results of Changes in Spatial Representation in Control and Treatment Groups (%).**

Indicators	Control Group n=28			TG n=28		
	Before	After	Change	Before	After	Change
High level of neuropsychiatric stability	21	25	+4	7	14	+7
Normal level of neuropsychiatric stability	29	25	-4	18	25	+7
Satisfactory level of neuropsychiatric stability	25	29	+4	43	32	-11
High level of neuropsychiatric stability	25	21	-4	32	29	-3

As Fig. (7) shows, due to the formative influence, the high and normal levels of neuropsychiatric stability increased by 7%. The satisfactory and low levels of neuropsychiatric stability changed positively by 11% and 3%, respectively.

Personal qualities will also be important for professional activity. Many key points in the implementation of complementary actions will depend on them. Table 8 shows that there are no significant changes in the studied personal qualities of the control group.

**Table 8. Results of Changes in Empathy in Control and Treatment Groups (%).**

Indicators	Control Group n=28			TG n=28		
	Before	After	Change	Before	After	Change
Neuroticism	7	3	-4	18	11	-7
Spontaneous aggressiveness	3	7	-4	14	7	-7
Irritability	11	14	-3	21	11	-10
Sociability	25	18	-7	4	21	+17
Poise	18	18	0	4	18	+14
Shyness	11	11	0	14	4	-10
Openness	21	25	+4	4	21	+17
Emotional lability	4	4	0	21	7	-7

After the forming experiment, we can talk about changes in the personal qualities and properties of the treatment group that contribute to the professional empathy of entrepreneurs. Fig. (8) shows the quantitative results of the molding effect.

Consequently, changes occurred in such indicators as neuroticism (-7%), spontaneous aggressiveness (-7%), irritability (-10%), sociability (+10%), poise (14%), shyness (-10%), openness (+17%), and emotional lability (-14%). Figure 8 shows detailed results. We also see changes in the levels of emotional intelligence. Thus, indicators of a high emotional level increased by 17.9%, indicators of an average level increased by 7.2%, and indicators of low emotional intelligence decreased by 25.1%. There are also changes in indicators of emotional intelligence. Namely, the indicator “recognition of other people's emotions” in the treatment and

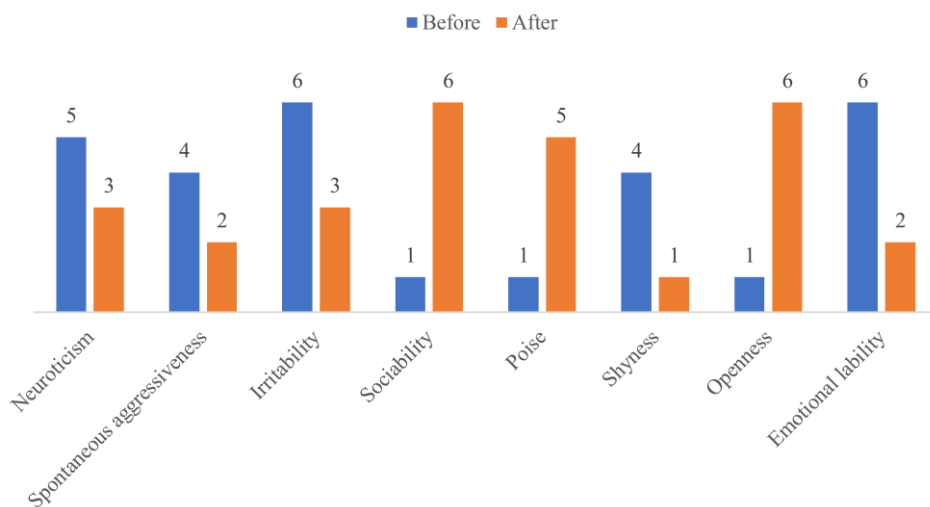


Fig. (8). Results of changes in the personal qualities of the treatment group before and after the forming experiment.

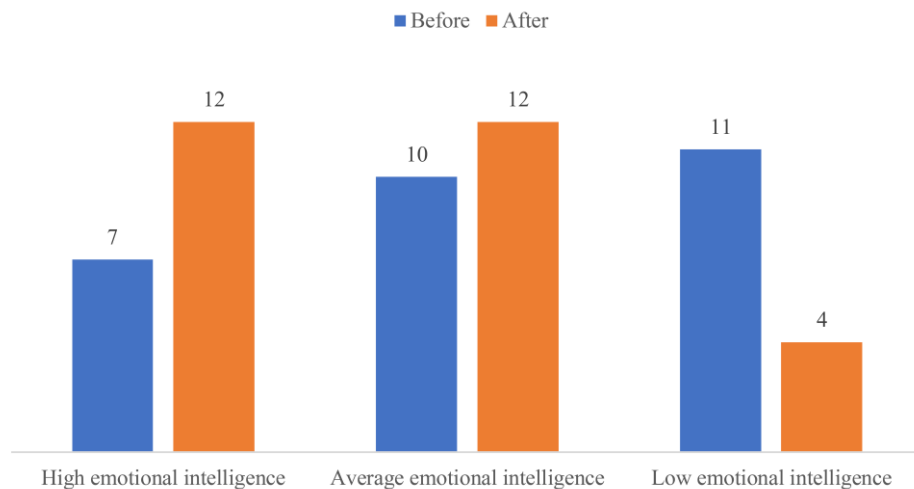


Fig. (9). Results of changes in the personal qualities of the treatment group before and after the forming experiment.

control groups increased by 3.6% and 3.5%, respectively, the indicator “managing your emotions” in the treatment group increased by 7.2%, while in the control group it decreased by 3.5%. In the treatment group, the indicator “self-motivation” increased by 3.6%, and in the control group remained unchanged. The indicator of “empathy” in the control group decreased by 3.5%, while in the treatment group there was an increase of 7.1%. The indicator “emotional awareness” removes the tendency to increase by 3.5% in the control and treatment groups. Table 9 presents detailed results.

Table 9. Results of Changes in Empathy in Control and Treatment Groups (%).

Indicators	Control Group n=28			TG n=28		
	Before	After	Change	Before	After	Change
High level of emotional intelligence	28.6	32.1	3.5	25	42.9	17.9
Average level of emotional	39.3	35.8	-3.5	35.7	42.9	7.2

intelligence						
Low level of emotional intelligence	32.1	32.1	0	39.3	14.2	25.1
Recognizing other people's emotions	28.6	32.1	3.5	32.1	35.7	3.6
Emotion managment	21.4	17.9	-3.5	21.4	28.6	7.2
Self-motivation	17.9	17.9	0	21.4	25	3.6
Empathy	21.4	17.9	-3.5	17.9	25	7.1
Emotional awareness	17.9	21.4	3.5	17.9	21.4	3.5

Fig. (9) shows quantitative indicators of the results of the formative influence at the level of emotional intelligence.

When conducting formative and control experiments, there is a need to use a statistical criterion to assess the shifts in the value of the studied criteria. In our case, there is a need to



determine whether there were statistically significant changes in the treatment group after the socio-psychological training. Therefore, we performed a statistical analysis using the Wilcoxon t-criterion.

Tables 10-18 show the results of a study of the presence of statistically significant shifts after conducting a socio-psychological training for the development of professional empathy using the Wilcoxon t-criterion.

**Table 10. The Results of Determining Statistically Significant Shifts in the Indicators of Motivation to Succeed According to the Wilcoxon t-Criterion.**

Indicators	t	p
Very high level of empathy	-2.563 <sup>a</sup>	.023
High level of empathy	-5.589 <sup>a</sup>	.000
Normal level of empathy	-3.121 <sup>a</sup>	.002
Low level of empathy	-4.942 <sup>b</sup>	.000
Very low level of empathy	-3.091 <sup>b</sup>	.002

As Table 10 shows, conducting a socio-psychological training for the formation of professional empathy of entrepreneurs contributed to an increase in the level of empathy in general. We see that the most statistically significant changes occurred in the indicators “high level of empathy” (p <0.001) and “low level of empathy” (p <0.001). Changes also occurred in the indicators “very high level of empathy”, “normal level of empathy”, and “very low level of empathy” (p <0.01). The results of determining statistically significant shifts in risk readiness indicators according to the Wilcoxon t-criterion allow us to confirm the presence of positive changes.

**Table 11. The Results of Determining Statistically Significant Shifts in the Indicators of Motivation to Succeed According to the Wilcoxon t-Criterion.**

Indicators	t	p
Too cautious	-4.913 <sup>b</sup>	.000
Average level of readiness to take risks	-2.238 <sup>a</sup>	.025
Readiness to take risks	-5.841 <sup>a</sup>	.000

As Table 11 shows, positive changes have occurred in the indicators “too cautious” and “readiness to take risks” (p<0.001). The average level of readiness to take risks remained unchanged. The presence of positive changes allows us to witness the results of determining statistically significant shifts in the indicators of motivation to succeed according to the Wilcoxon t-criterion presented in Table 12.

**Table 12. The results of Determining Statistically Significant Shifts in the Indicators of Motivation to Succeed According to the Wilcoxon t-Criterion.**

Indicators	t	p
Too high motivation to succeed	-2.705 <sup>b</sup>	.007

High motivation to succeed	-3.101 <sup>a</sup>	.002
Average motivation to succeed	-3.098 <sup>a</sup>	.002
Low motivation to succeed	-5.121 <sup>b</sup>	.000

As Table 12 shows, changes occurred in all indicators, but with different statistical significance. The indicator “low motivation to succeed” (p <0.001) underwent the greatest changes, and the indicators “too high motivation to succeed”, “high motivation to succeed” and “average motivation to succeed” show changes with a lower level of statistical values (p <0,01). Table 13 presents the results of determining statistically significant shifts in the indicators of motivation to avoid failures according to the Wilcoxon t-criterion.

**Table 13. The Results of Determining Statistically Significant Shifts in the Indicators of Motivation to Avoid Failures According to the Wilcoxon t-Criterion.**

Indicators	t	p
Too high motivation to avoid failure	-3.202 <sup>b</sup>	.001
Moderately high motivation to avoid failure	-2.653 <sup>b</sup>	.006
Average motivation to avoid failure	-2.271 <sup>a</sup>	.023
Low motivation to avoid failure	-2.921 <sup>a</sup>	.005

As we can see in Table 13, all levels of motivation have undergone changes. The indicators “too high level of motivation to avoid failures”, “moderately high level of motivation to avoid failures” and “low level of motivation to avoid failures” underwent the most positive changes (p <0.01), and the indicator “average level of motivation to avoid failures” underwent slightly less changes (p <0.05). Table 14 shows the results of determining statistically significant shifts in personal properties according to the Wilcoxon t-criterion. We can state that, to varying degrees, statistically significant positive changes have taken place.

**Table 14. The results of Determining Statistically Significant Shifts in Personal Properties According to the Wilcoxon t-Criterion.**

Indicators	t	p
Neuroticism	-2.097 <sup>b</sup>	.032
Spontaneous aggressiveness	-2.751 <sup>b</sup>	.005
Irritability	-2.367 <sup>b</sup>	.018
Sociability	-4.891 <sup>a</sup>	.000
Poise	-3.021 <sup>a</sup>	.002
Shyness	-2.398 <sup>b</sup>	.020
Openness	-4.977 <sup>a</sup>	.000
Emotional lability	-2.299 <sup>b</sup>	.022

As we can see, the most statistically significant shifts occurred in the indicators of “sociability” and “openness” (p Somewhat smaller but also positive changes have occurred

in terms of “spontaneous aggressiveness”, “irritability”, “poise”, “shyness”, and “emotional lability” (p <0.01). The least influence was found on the indicator “neuroticism” (p <0.05). Table 14 shows the results of determining statistically significant shifts in personal properties according to the Wilcoxon t-criterion.

**Table 15. The Results of Determining Statistically Significant Shifts in Behaviour Strategies in Stressful Situations According to the Wilcoxon t-Criterion.**

Indicators	t	p
Assertive actions	-5.693 <sup>a</sup>	.000
Search for social support	-2.736 <sup>a</sup>	.007
Establishment of social contacts	-4.921 <sup>a</sup>	.000
Cautious actions	-2.568 <sup>b</sup>	.008
Impulsive actions	-2.121 <sup>b</sup>	.021
Avoidance	-2.726 <sup>b</sup>	.007
Manipulative actions	-2.279 <sup>b</sup>	.022
Antisocial actions	-2.598 <sup>b</sup>	.009
Aggressive actions	-3.921 <sup>b</sup>	.000

Table 15 shows that the socio-psychological training allowed us to positively influence the choice of behaviour strategies in stressful situations. The most statistically significant changes occurred in the following indicators: “assertive actions” (p <0.001), “establishment of social contacts” (p <0.001), “aggressive actions” (p <0.001). Less significant, however, static changes have occurred in terms of “search for social support” (p <0.01), “cautious actions” (p <0.01), “avoidance” (p <0.01), and “asocial actions” (p <0.01). The smallest changes occurred in terms of “impulsive actions” (p <0.05) and “manipulative actions” (p <0.05).

**Table 16. Results of Determining Statistically Significant Shifts in the Levels of Spatial Representations by the Wilcoxon t-Criterion.**

Indicators	t	p
High level of spatial representation	-2.098 <sup>a</sup>	.032
Average level of spatial representation	-2.071 <sup>a</sup>	.036
Low level of spatial representation	-3.028 <sup>b</sup>	.002

As Table 16 shows, there have been no statistically significant changes in the level of spatial representation on the Wilcoxon t-criterion, other than the “low level of spatial representation” (p <0.01). Although not large, but statistically significant shifts occurred in the indicators of “low level of spatial representation” (p <0.05) and “average level of spatial representation” (p <0.05). Table 17 presents the results of determining statistically significant shifts in the levels of neuropsychiatric stability according to the Wilcoxon t-criterion. We see that there are positive changes in all indicators (p <0.05).

**Table 17. The Results of Determining Statistically Significant Shifts in the Levels of Neuropsychiatric Stability According to the Wilcoxon t-Criterion.**

Indicators	t	p
High level of neuropsychiatric stability	-3.061 <sup>a</sup>	.002
Normal level of neuropsychiatric stability	-3.171 <sup>a</sup>	.001
Satisfactory level of neuropsychiatric stability	-2.662 <sup>b</sup>	.009
High level of neuropsychiatric stability	-2.584 <sup>b</sup>	.011

Table 18 shows the results of determining statistically significant changes in levels and indicators of emotional intelligence according to the t-criterion of Wilcoxon. As we can see, statistically significant changes occurred in the indicators “high level of emotional intelligence” (p <0.05), “average level of emotional intelligence” (p <0.05), “low level of emotional intelligence” (p <0.05). As for the indicators of emotional intelligence, they have also undergone changes.

**Table 18. Results of the Determining Statistically Significant Changes in Levels and Indicators of Emotional Intelligence Based on Wilcoxon’s t-Criterion.**

Indicators	t	p
High level of emotional intelligence	-2.684 <sup>a</sup>	.009
Average level of emotional intelligence	-2.821 <sup>a</sup>	.005
Low level of emotional intelligence	-2.568 <sup>b</sup>	.011
Recognizing other people’s emotions	-2.193 <sup>a</sup>	.021
Emotion management	-2.828 <sup>a</sup>	.005
Self-motivation	-2.163 <sup>a</sup>	.025
Empathy	-3.621 <sup>a</sup>	.000
Emotional awareness	-2.693 <sup>a</sup>	.009

Based on qualitative analysis and the results of the t-criterion of Wilcoxon, we can say that the introduction of socio-psychological training has contributed to developing all components of professional empathy in entrepreneurs. Entrepreneurs have become more confident, are inclined to assertive actions, are more motivated to achieve success, have increased the ability to establish social contact. They became less aggressive and irritable, lost their antisocial manifestations. They also aim to solve life’s problems, not to avoid them. The indicators “sociability” and “openness” showed higher results.

**4. CONCLUSIONS**

The study provides a conceptual framework for a comprehensive programme for the socio-psychological development of entrepreneurial professional empathy and analyses its effectiveness. When designing the entrepreneurial professional empathy programme, the authors applied a comprehensive approach and considered the specific features of their professional activities. The

treatment and control groups included 28 subjects, respectively (the selection into the groups took place on the principle of voluntariness). Integrated socio-psychological programme of entrepreneurial empathy included a variety of exercises and techniques, including art therapy, group discussions, mini-discussions short lectures to enhance knowledge of empathy and its importance in personal and professional development; play methods (situational role-playing, role-playing, etc.), psychological drawings, psychogymnastics (movement), relaxation, meditation, and visualization, autogenic training methods.

The performance of the determinants was evaluated by means of qualitative analysis using the mathematical criterion of Wilcoxon statistical processing for the following indicators: the level of empathy development; readiness to take risks; strategies of behaviour in stressful situations; the level of motivation to succeed and avoid failures; neuroticism, spontaneous aggressiveness, irritability, sociability, poise, shyness, openness, emotional lability; the level of neuropsychiatric stability.

The effects of the influencing measures on the respondents of the treatment group were positive. Thus, statistically significant changes have occurred in such parameters as “high level of empathy”, “low level of empathy”, “too cautious”, “readiness to take risks”, “low level of motivation to achieve success”, “sociability”, “openness”, “assertive actions”, “establishment of social contacts”, and “aggressive actions”. In general, the results of the programme's implementation confirmed the usefulness and effectiveness of its use in enhancing the professional empathy of entrepreneurs.

## REFERENCES

- Bacq, S. and Alt, E. (2018). Feeling capable and valued: A prosocial perspective on the link between empathy and social entrepreneurial intentions. *Journal of Business Venturing*, 33(3), 333-350.
- Camuffo, A., Gerli, F. and Gubitta, P. (2012). Competencies matter: Modeling effective entrepreneurship in northeast of Italy small firms. *Cross Cultural Management*, 19(1), 48-66.
- Chang, J.Y.C., Benamraoui, A. and Rieple, A. (2014). Stimulating learning about social entrepreneurship through income generation projects. *International Journal of Entrepreneurial Behaviour and Research*, 20(5), 417-437.
- Chiles, T.H., Tuggle, C.S., McMullen, J.S., Bierman, L. and Greening, D.W. (2010). Dynamic creation: Extending the radical Austrian approach to entrepreneurship. *Organization Studies*, 31(1), 7-46.
- Cutcliffe, J.R. (2003). Reconsidering reflexivity: Introducing the case for intellectual entrepreneurship. *Qualitative Health Research*, 13(1), 136-148.
- Groch, K., Gerdes, K. E., Segal, E. A. and Groch, M. (2012). The Grassroots Londolozzi model of African development: Social empathy in action. *Journal of Community Practice*, 20(1-2), 154-177.
- Hockerts, K. (2018). The Effect of Experiential Social Entrepreneurship Education on Intention Formation in Students. *Journal of Social Entrepreneurship*, 9(3), 234-256.
- Korte, R., Smith, K.A. and Li, C.Q. (2018). The role of empathy in entrepreneurship: A core competency of the entrepreneurial mindset. *Advances in Engineering Education*, 7(1), 1-10.
- Le, T.T., Nguyen, T.N.Q. and Tran, Q.H.M. (2020). When giving is good for encouraging social entrepreneurship. *Australasian Marketing Journal*, 28(4), 253-262.
- Luo, J., Pey, K.L. and Wood, K. (2018). Crowdfunding campaign as a design-based pedagogical approach for experiential learning of technology entrepreneurship. *Proceedings of the ASME Design Engineering Technical Conference*, 3, 1-10.
- Ojaghi, S., Rezaee, B., Naderi, N., and Jafari, H. (2017). Entrepreneurship education service quality in universities based on servqual model. *Malaysian Online Journal of Educational Management*, 5(2), 60-74.
- Razavi, S.M., Esfandabadi, H.M., Esfandabadi, A.M. and Ekbatani, H. (2014). An investigation of the relationship between social capital and organizational entrepreneurship in Saipa Sazehgostar Company. *World Applied Sciences Journal*, 32(3), 465-471.
- Rashid, T. (2006). Relationship marketing and entrepreneurship: South Asian businesses in the UK. *International Journal of Entrepreneurship and Small Business*, 3(3-4), 417-426.
- Urban, B. and Galawe, J. (2019). The mediating effect of self-efficacy on the relationship between moral judgement, empathy and social opportunity recognition in South Africa. *International Journal of Entrepreneurial Behaviour and Research*, 26(2), 349-372.
- Wood, S. (2012). Prone to progress: Using personality to identify supporters of innovative social entrepreneurship. *Journal of Public Policy and Marketing*, 31(1), 129-141.
- Younis, A., Xiaobao, P., Nadeem, M.A., Kanwal, S., Pitafi, A.H., Qiong, G. and Yuzhen, D. (2020). Impact of positivity and empathy on social entrepreneurial intention: The moderating role of perceived social support. *Journal of Public Affairs*. <https://onlinelibrary.wiley.com/doi/full/10.1002/pa.2124>
- You, T.-H. and You, Y.-Y. (2020). The effect of entrepreneurship on the sustainability of social small and medium enterprises (SMEs)-Between the mediating effects of government support policy in Korea. *Research in World Economy*, 11(2), 112-121.
- Zulfiqar, S., Nadeem, M.A., Khan, M.K., Anwar, M.A., Iqbal, M.B. and Asmi, F. (2019). Opportunity recognition behavior and readiness of youth for social entrepreneurship. *Entrepreneurship Research Journal*, 11(4), 1-19.