Finding the Connection between the Level of Empathy, Life Satisfaction and Their Inter-Sex Differences

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Abstract: The research was focused on investigating the mutual relations between empathy and life satisfaction. In this work we used the current and older theories and research that address these areas and the relationship between them. We also focused on the differences in the level of empathy and life satisfaction between men and women. The research sample consisted of 240 respondents aged 20 to 24, consisting of 128 women and 112 men. Each respondent participated in the same testing. We used the non-standardized Empathy Quotient EQ questionnaire to determine the level of empathy, and we chose the SWLS Life Satisfaction Scale, which is non-standardized, to measure life satisfaction. In the research we confirmed that there were no differences in the selected sample between men and women in the level of empathy or life satisfaction. The obtained results also confirmed the relationship between empathy and life satisfaction.

Keywords: *empathy; life satisfaction; mutual connections; differences between men and women.*

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Introduction

The term empathy comes from the Greek term "empathia" which translates as empathy, emotional involvement (Prekopová, 2004). It was E.B. Titchener in 1909 when translating the work of T. Lipps from 1906 who used the term empathy (Preston, De Waal, 2002). According to Baron-Cohen (2014), one becomes empathetic just from stopping to focus on himself and focusing on the mind of another. Empathy is not only the ability to recognize, what another person is feeling and experiencing, it is also the ability to respond adequately and correctly to this recognition (Baron-Cohen, 2014, Decety, 2012). Mlčák (2008, 2009) defines it as comprehension and understanding of the situation of another, without evaluation or assessment. Although every person has empathy, not everyone uses it to the same degree. Development depends on the experience to date and, of course, willingness and interest in trying to understand another person (Buda, 1994). During life, it can change and evolve, and it is assumed that when a person is mature, empathy is also stabilized (Mesárošová, Dančíšínová, 1999). Empathy and gender research conducted by Baron-Cohen et al. (2005) demonstrates that women acquire and show empathy faster than men. According to his findings, women tend to pay more attention than men to whether they are fair to others (Baron-Cohen et al., 2005; Toussaint & Webb, 2005; Hojat, 2007). His findings are identical to the results of Hofmann's studies (1977), who also confirmed that women have a higher level of empathy than men (Hofmann, 1977 in Mlčák, 2008, Doktorová, 2016). Auyeung et al. (2009) also found that empathy in women was higher than empathy in men. Although many studies (Baron-Cohen et al., 2005; Hofmann, 1977; Auyeung et al., 2009) show that women have a higher level of empathy, this finding is not unambiguous because it is important what method we use to measure empathy and what theory of empathy we work with. While women have a higher level of emotional empathy, in terms of cognitive empathy, there have been no significant differences detected between women and men to date (Schieman, 2000). On this basis, it is very important how we determine empathy. Because if methods are based only on affective empathy, higher scores should be achieved by women (Doktorová, 2016; Carré et al. 2013; Schick & Cierpka, 2003). However, when there are also cognitive items in the empathy detection method, there should not be a gender gap (Toussaint & Webb, 2005).

Blatný (2010) regards life satisfaction as a major component of well-being and defines it as a global and conscious assessment of one's own life

as a whole. According to the author, its important factors are temperament characteristics of personality and positive self-evaluation (Blatný, 2005). Pavova et al. (1991) claim that life satisfaction characterizes how an individual subjectively evaluates his / her life (Huebner., 2001). Donovan and Halpern (2002) complement this definition and define life satisfaction not only as a subjective but also as a broad dimension of human well-being. It is broad because it is not precisely defined by components and therefore it is important to distinguish overall life satisfaction with specific areas such as family, work, health (Donovan, Halpern, 2002). Haybron (2007) considers life satisfaction to be a broadly shared goal of humanity, and to be happy with life in general means to have a favorable attitude towards life as a whole (Haybron, 2007). Wood, Rhodes, Whelan (1989 in Blatný et al., 2010) claim that men and women do not differ in overall satisfaction but differ in its sources. Social relations are more important in achieving overall satisfaction for women than for men. They also more often express both positive and negative emotions. Although they suffer from depression more often than men, compared to them, they more often enter extremely high values in personal well-being, and higher levels of positive emotions in research (Wood, Rhodes, Whelan, 1989; in Blatný et al., 2010). Although most studies have found no significant sex differences in life satisfaction (eg. Gilman & Huebner, 2006; Huebner et al., 2000), Moksnes & Espnes (2013) found that men achieve higher life satisfaction scores than women.

Shanafelt et al. (2005) found that there is a positive relationship between empathy and well-being. Thus, as the empathy score increases, so does the personal well-being score. A study by Tkach (2006) found that individuals who systematically do kindness to others achieved a higher level of happiness and well-being and lower levels of negative effects than those who did not show kindness. These findings are also related to the findings of Sariçam et al. (2015), who investigated, whether there is a link between emotional intelligence, hope, and life satisfaction. According to their results, emotional intelligence and hope positively influenced life satisfaction. Hicks and Diamond (2008) found that empathy affects the increase of positive emotions and life satisfaction. A study by Morelli, Lieberman and Zaki (2015) also confirmed these assumptions. The findings of the above research are not consistent with the study by Lee, Brennan & Daly (2001), in which they found that affective empathy was in a negative relationship with life satisfaction. However, this study showed that individuals with higher cognitive empathy scores also achieved higher life satisfaction scores. The basic aim of our research is to find out whether there is a relationship between empathy and life satisfaction on a sample of students of social work

and psychology aged 20 to 24. In the research we also focus on comparing the differences in the level of these three variables between men and women. We set 1 research question and 2 hypotheses according to the set goals. The research question was based on research by Baron-Cohen et al. (2005), Hoffmann (1977), Auyeung et al. (2009), Doktorová (2016), Carré et al. (2013), Schick & Cierpka (2003), Toussaint & Webb (2005) that dealt with the difference in the level of empathy between men and women. Since men and women did not differ in all the cases, we formulated the following hypothesis:

RQ: Are there any statistically significant differences in the level of empathy between men and women?

Based on the results of research by Wood, Rhodes and Whellan (1989 in Blatný et al., 2010), Gilman and Heubner (2006), Heubner et al. (2000), Hubinská (2016), who did not find significant differences between the scores of men and women in life satisfaction, we formulated the following hypothesis:

H1: There are no statistically significant differences in the level of life satisfaction between men and women.

Studies by Shanafelt et al. (2005), Tkach (2006), Sariçam et al. (2015), Hicks and Diamond (2008), Morelli et al. (2015), who found a significant relationship between empathy and life satisfaction, stimulated a third hypothesis:

H2: There is a statistically significant link between empathy and life satisfaction in a positive way.

Methods

The research sample

We obtained our sample by deliberate selection. We examined the relations between the investigated variables on a sample of 120 people (100%), of which 56 were men (46,7%) and 64 women (53,3%) who had the status of a student in Psychology or Social Work. We chose these two fields deliberately because there are prerequisites for prosocial and empathetic behavior in both psychologists and social workers. Participants were between the ages of 20 and 24, i.e. falling into the period of young adulthood. Examining the given variables is extremely important, because for the effective practice of the profession. We tried to balance the participants in our research sample based on attributes such as age, sex, location of residence, marital status, socio-economic status, comparability of the schools they attended in terms of quality.

Table 1 Research sample – number of respondents

Sex	Number	%
Woman	128	53,3%
Man	112	46,7%
Total	240	100%

Source: authors of work

Research methods

The operationalization of these terms is not easy, but for our research, we define them as follows:

Empathy is the ability to understand the feelings of another person. We distinguish between cognitive and emotional, affective empathy. The primary difference between them is that cognitive empathy is the mechanism by which we take on the perspective of the other person. While emotional empathy is a mechanism for the emotional understanding of another person.

Life satisfaction can be interpreted as a major component of personal well-being. It is a global and conscious assessment of one's own life as a whole.

To verify our hypotheses, research questions and the actual implementation of research, we used the Empathy Quotient EQ questionnaire and the SWLS Life Satisfaction Questionnaire.

Empathy Quotient – EQ

Empathy Quotient is a non-standardized questionnaire, often referred to as EQ. This questionnaire was created in 2004 at the University of Cambridge by Simon Baron-Cohen and Sally Wheelwright. Baron-Cohen and Wheelwright created it because they did not consider the most widely used instrument to measure empathy at the time, Interpersonal Reactivity Index IRI, as sufficiently accurate (Baron-Cohen, 2014). This questionnaire consists of 60 questions of which 20 questions are intended to distract an individual from a persistent focus on empathy and the remaining 40 serve to determine the level of empathy. The individuals can rate themselves on a four-point Likert scale for each question. It can be used in groups and individually (Baron-Cohen, 2014). The EQ questionnaire measures both cognitive and affective aspects of empathy (Preti et al., 2011). Based on the score we can determine 4 levels of empathy, low or below average, medium or average, above average and highly above average (Baron-Cohen, 2014). Empathy Quotient is a non-standardized questionnaire for our territory. After calculating the internal consistency, our result was consistent with the

reported value in the originals of the tests, where for EQ the value of reliability is $\alpha = 0,835$ (Lawrence et al., 2004, in: Baron-Cohen, 2014).

SWLS Life Satisfaction Scale

To measure life satisfaction, we used the non-standardized self-assessment Satisfaction with Life Scale (SWLS) by Diener et al. (1985). Life satisfaction measurement in SWLS is based on five assertions in which an individual evaluates their overall satisfaction with life. Each statement can be answered by one of seven responses that are organized on the Likert scale from totally disagree to completely agree (Diener et al. 1985). Since this questionnaire is unstandardized, we decided to verify the internal consistency value. Our Cronbach alpha score has reached a value $\alpha = 0,81$.

The course of the research

The initial phase included data collection, which we distributed in December 2018 and January 2019. Even before the actual implementation, each respondent was instructed about the anonymity of the results and that they serve only for research purposes. It was also explained to them that the research consists of two parts, two questionnaires and that there are no correct or incorrect answers in the questionnaires, as well as to fill in as accurately as possible the answers that are most relevant to them. If they were interested and wanted to know their results, they could put a mark or a name on the submitted questionnaires. It was about their school, the location in which they lived, family status, socio-economic status, and a few questions about the family environment from which they came. The task of the respondents was to record in a paper-and-pencil format answers from three questionnaires into the record sheets. We started with the Empathy Quotient EQ and finished testing with the SWLS Life Satisfaction Scale.

Statistical processing of results

The results obtained from respondents from the Empathy Quotient EQ and SWLS Life Satisfaction Scale were statistically processed in the program SPSS Statistics 21.0. In the program we then chose parametric and nonparametric variants of comparative and correlation tests according to the normality test results. We used the Mann-Whitney U test to compare the statistical differences in the empathy levels between men and women. To determine the differences in the level of life satisfaction of men and women, we used the Student's T-test for two independent samples. In determining whether empathy and life satisfaction are positively linked together, we used Spearman correlation analysis.

Results

In the research question, we examined *whether there were differences between men and women at the level of empathy*. In the first step, we tested the normality of the variables used. Due to the non-confirmation of normality, we performed non-parametric testing of differences (Table 2). Based on the results ($p = 0,954$), it can be concluded that there are no statistically significant differences in the degree of empathy between men and women.

Table 2 Mann-Whitney U test – empathy, sex

	Sex	N	Average rank	U	Sig.
Empathy	Man	112	60,30	1781,000	0,954
	Woman	128	60,67		

Source: authors of work

Hypothesis H1 was formulated to *determine whether there was a significant difference in the level of life satisfaction of men and women*. The first step was to test the normality of the variables used. Normality was confirmed in both groups. We performed parametric testing of differences (Table 3), based on which we accept the hypothesis ($p = 0,631$).

Table 3 Student's t-test for two independent selections - life satisfaction, sex

	Sex	N	Mean	SD	t	Df	Sig.
Satisfaction	Man	112	23,1	6,65	-0,482	118	0,631
	Woman	128	23,7	6,18			

Source: authors of work

The hypothesis H2 was formulated so *to find out whether empathy and life satisfaction were positively related*. The normality of the variables used was not confirmed. Based on this, we used a non-parametric Spearman correlation analysis (Table 4). The strength of the correlation relationship is assessed at 0-0,1 as trivial, at 0,1-0,3 as weak, at 0,3-0,5 as medium. In the range of 0,7-0,9, the correlation is reported to be very large and at 0,9-1 as perfect (Cohen, 1988). Based on the results we accept the hypothesis H2, while the

correlation coefficient shows a positive strong relationship between empathy and life satisfaction ($r = 0,86$; $p = 0,000$). We can state that the higher the level of an individual's empathy, the higher the level of life satisfaction.

Table 4 Spearman correlation analysis - life satisfaction, empathy

		Satisfaction
Empathy	Correlation coefficient	0,86**
	Sig. (1-way)	0,000
	N	240

Source: author of work

Discussion

Interpretation of results

Based on the fact of day-to-day experience with individual situations where it is necessary to use empathic behavior, we can conclude that empathy affects human life and is necessary for individual functioning in society. Based on the starting points, we decided to find out how the level of human empathy affects their overall life satisfaction. We then investigated whether there was a significant difference between men and women in these variables. The task was, therefore, to accept or reject the hypotheses and research question set out by us concerning those relationships. This was based on several pieces of research that have confirmed the relationships between these variables. Shanafelt et al. (2005); Tkach (2006); Sariçam et al. (2015); Hicks and Diamond (2008); Morelli et al. (2015) confirmed, that there is a positive relationship between empathy and life satisfaction, that is, that they are positively related.

In the research question, we investigated whether there is a statistically significant difference in the level of empathy between men and women. We based our research on Auyeug (2009), Baron-Cohen et al. (2005) and Hofmann (1977), in which women achieved higher empathy scores than men, but also on research by Doktorová (2016), Carré et al. 2013, Schick & Cierpka (2003), Toussaint & Webb (2005), in which there were no differences between men and women in terms of overall empathy. There was no statistically significant difference between the sexes in the variable empathy. This means that men and women did not differ in the level of empathy. From the results we interpret that the average ranking of men $M = 60.3$ did not differ from the average ranking of women $M = 60.67$.

The reason for achieving a higher score can be justified through the choice of the research sample made up of students and graduates of psychology and social work. In such professions, which are based on helping other people, it is likely that a person, whether female or male, will be empathetic and prosocial. This could be the reason that our assumption was not confirmed. Our result, i.e. that there is no significant difference in the level of empathy between men and women, can also be justified by the findings of Schieman (2000), who states that women achieve a higher level of emotional empathy than men. However, there are no inter-sex differences in cognitive empathy. The method we used for measuring empathy, the Empathy Quotient questionnaire, contains both emotional and cognitive empathy items, and therefore, based on the findings of Schieman (2000), we justify our outcome that the result would be significant when measuring empathy by specific components of emotional empathy, or in assessing the level of empathy by another method that focuses only on determining the level of emotional empathy. Then we would likely achieve a higher degree of empathy in women than in men. Using a method that detects both components of empathy could have led to a balance of the differences between men and women in affective empathy. Therefore, what theory we use as a basis to determine empathy is important, as well as what component of empathy the empathy method is focused on.

In the first hypothesis we investigated whether there was no significant difference in the level of life satisfaction of men and women. We found out that there is no significant difference in the level of life satisfaction between men and women. The average score of women in the SWLS Life Satisfaction Questionnaire was $M = 23,7$ and the average score of men was $M = 23,1$, which indicates a level of moderate life satisfaction for both groups (Diener et al. 1985, Hubinská, 2016). The results can be interpreted in such a way that sex is not important for a person's satisfaction with life. Other factors, according to Levin and Chatters (1998), such as health, age and socioeconomic status play a role (Levin, Chattersová, 1998, in: Kebza, 2005). Personality, social and demographic factors can also be considered as the main determinants of life satisfaction (Kebza, 2005, Hubinská, 2016). This knowledge can be applied in professional counseling, but also in practice. Based on the findings, we can assume that there are no differences in life satisfaction in the profession of psychologists and social workers in every culture. It would be interesting to find out if life satisfaction changes with age.

In the second hypothesis we investigated whether empathy and life satisfaction were positively related. This finding was also confirmed by a

study by Tkach (2006), which found that more empathetic people achieve greater personal well-being. Sariçam et al. (2015) found out that emotional intelligence, of which empathy is also a component, affects life satisfaction. Hicks and Diamond (2008), as well as Morelli et al. (2015) have confirmed that empathy affects life satisfaction. Empathy has a strong positive relationship with life satisfaction. The result shown in Table 4 agrees with the findings of Shanafelt et al. (2005), Sariçam et al. (2015), Tkach (2006), Hicks and Diamond (2008), Morelli et al., (2015), that the higher the level of empathy, the higher the level of life satisfaction and vice versa. Based on this finding, we can conclude that the more empathic a person is, the more satisfied they are with their lives, while a person with low empathy is not satisfied with their life. If a person is not satisfied with their life, they tend to somatize (Mičková et al., 2018). This is also confirmed by the findings of Goleman (2017), according to whom people with developed emotional intelligence are more satisfied and more balanced. We are also inclined to this finding, which is that a person who knows and controls his emotions is a balanced one. Such an individual can understand and empathize with other people, thus having a positive relationship with themselves and their surroundings and thus being more satisfied with their lives. This finding is useful for all cultures.

Research limitations

After conducting the research, we noticed some limitations that we did not sufficiently overcome.

One of the limitations is that we did not select the sample by random but by deliberate sampling. Because we have only worked with a specific group, we cannot generalize the results to the whole population. Our sample consisted of students of psychology and social work, but it would also be interesting to investigate the relationship between empathy and life satisfaction on students of non-humanities, or to compare the differences between differently focused disciplines. In the future, we would also focus on verifying our results on a larger sample ($N = 120$). Another limitation is that we did not know our respondents personally and we carried out the research at the first meeting with them.

Certain limitations can also be observed in the selection of our methods. The limitation of our work could be the focus on life satisfaction only as a cognitive component of personal well-being. In the future, we would choose a method that looks at overall well-being. Also, we have not identified various circumstances that may have affected an individual's life

satisfaction at the time. We used two non-standardized questionnaires in our research, which we also consider to be a limitation of our research. If we selected another questionnaire to measure our variables that would be standardized, the results would be more reliable. Regarding the choice of methods, we consider the overall administration as the limitation. It took about 50 minutes to complete, as the total battery consisted of 173 items. For this reason, we had to remove 3 incomplete questionnaire batteries from our sample. The distortion of our results could also be due to the use of questionnaires, which took the form of self-assessment scales, where individuals could consciously change answers to show themselves in a better light or gave socially desirable answers. The distortion could also have occurred unconsciously because often, one cannot objectively evaluate oneself, so one should rather be evaluated by another. Since the questionnaires have many disadvantages, such as limiting answers and choosing only from the available items, or misunderstanding the questions asked, we would avoid questionnaire methods in the future and choose another method, such as an experiment, to carry out our research. We consider the lack of motivation of our respondents to influence our results as a limitation. If respondents were financially motivated, they would do more to fill in the questionnaires. As our respondents were not motivated, lack of attention, lack of concentration or insincerity when filling in the questionnaire could have occurred. Another limitation concerns the momentary emotional state that we did not survey from the respondents and which could have played a role in distorting our results.

Consequences of the findings

We consider our work to be a good topic for a more extensive and detailed examination in the future, i.e. the relationship of empathy and life satisfaction, which we would extend to personal characteristics, as all these items are important for humans and their functioning in society. If such research were done on a representative sample, which means not only the humanities, we would know what features to support and develop, especially in children, to raise them to be as emphatic and happy with their lives as possible. Alternatively, the results of research on a representative sample could be applied and established in the design of a program to increase empathy, life satisfaction, based on some personality characteristics. Introducing empathy training into school curricula could help influence the next generation and thus help the whole society. As far as research is concerned, it would be interesting to examine the correlations between the

variables from the second part of CAQ, i.e. clinical scales, empathy and life satisfaction.

Utilization of the acquired knowledge can also be considered for application in career counseling. By using the relationships we have obtained between these two variables, we could help individuals decide on their future professions. Based on their characteristics, we would be able to predict their level of empathy and life satisfaction, thus explaining to them what career they were more suited to, and we would know which variables they should work on to better prepare for their future prosocial or other application.

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