Abstract
The aim of present study was to examine the relationships between Dark Triad traits - Machiavellianism, narcissism and psychopathy with internal and external motivation to study the on a sample of university students studying in the field of helping professions. The research sample consisted of 118 university students from different study fields of helping professions (M = 22.34; SD = 1.62). Females represented 89.8% of all respondents (M = 22.10; SD = 1.4), males represented 10.2% (M = 22.9; SD = 1.6). Slovak version of Short Dark Triad (Čopková & Šafár, in review) and Work Extrinsic and Intrinsic Motivation Scale (WEIMS) (Tremblay et al., 2009) were administred. The results indicated significant relationships between Machiavellianism with identified and integrated motivation; narcissism with external, introjected, identified and intrinsic motivation, psychopathy with identified motivation.

Key words: Dark Triad, motivation, helping professions

Introduction
Research on work motivation, whether it is a helping profession or otherwise, is not exceptional in psychological research. If we focus only on the helping professions, we find the most resources in the field of examining work motivation directly among the practitioners of the helping professions. Fewer is known about the students’ motivation to study in the field of helping profession.

The reason why a person performs a certain profession, resp. why one would like to do so are usually work goals or motives in the work environment that correspond to the individual's personality. Rather, it has a tradition in the literature and research to automatically count on the fact that the job of a helping professional is chosen primarily by people who have desirable, „bright” personalities. Oluf and Furnham (2015) referred to the Big Five theory as such concept. Research findings in this area have provided a full list of personality traits and features that the helping professional should possess.

A study on a sample of psychology students examining the link between the features of the Big Five and the motives behind their choice of field of study found the following: high scores in agreeableness and conscientiousness were positively linked to desire to help, while high scores in neuroticism correlated with uncertainty as to whether the student has chosen the
right profession (Upmane, Gaitniece-Putāne, Šmitiņa, 2016). Waterman (2002) states that typical personalities with motivation to practice the helping profession are, according to the Mayers-Briggs typology, the so-called idealists who need work to make sense of them and fulfill its purpose for the good. Their other characteristics are sociability, energy, organization, focus on life and its possibilities, introversion, intuitiveness, peace, spirituality and idealism. Just as the „bright side“ can influence the choice of a profession, one can choose his future profession on the basis of certain aspects of a given profession that satisfy the needs or reflect the values associated with the specifics of the Dark Triad traits. Obviously, those who exhibit the features of the Dark Triad - Machiavellianism, narcissism and psychopathy are more likely to seek out professions where they can more easily exercise power what is typical for Machiavellianism, they have the opportunity to show and experience the excitement, self-affirmation that is characteristic of narcissism or to emotionally separate, typical of psychopathy (Prusik & Szulawski, 2019). These personalities choose as a profession law, economics, business or politics, for example. On the other hand, it is also necessary to keep in mind that helping professions also offer the possibility of satisfying selfish needs, what results from the fact that the helping professional has power over the individual he helps (Bakir et al., 2003).

1 Dark Triad and Helping Professions

Although the phenomenon of the Dark Triad (Paulhus & Williams, 2002) is a relatively new concept when compared to classical personality theories, its individual components - Machiavellianism, narcissism and psychopathy - have been much longer examined by experts. Machiavellianism, narcissism and psychopathy do not have a common origin in research. Present findings point out that despite a different basis, the personality characteristics in the Dark Triad concept share certain common characteristics - self-assertion, emotional coldness, lack of honesty and absence of humility, socially mischievous character with behavioral tendencies to support oneself, insincerity and aggression (Lee & Ashton, 2005; Paulhus & Williams, 2002). Machiavellianism is characterized by emotional separation and a tendency to manipulate in order to achieve personal goal regardless of the others (Al Aïn, Carré, Fantini-Hauwel, Baudouin, & Besche-Richard, 2013). Narcissism is characterized by exaggerated self-love, inflated self-confidence, a sense of importance and superiority over others, an extremely positive but at the same time vulnerable self-image (Morf & Rhodenwalt, 2001). Psychopathy is characterized by high impulsiveness, excitement seeking, low empathy, low anxiety (Paulhus & Williams, 2002), lack of concern for others, lack of guilt and remorse and emotional shallowness (Forsyth & O’Boyle, 2012). However, it must be emphasized that in all three aversive traits we are talking about subclinical features. That is, the behavior of individuals
exhibiting these characteristics is not extreme enough to attract the attention of clinical psychologists or psychiatrists.

The work of a helping professional is defined as an interaction of a professional and a client. The aim of this interaction is supporting the growth or resolution of an individual's physical, psychological or intellectual problems and improving their condition in many ways (Graf, Sator & Spranz-Forgasy, 2014). Thus, helping professions are also characterized as helping an individual through a helping worker using their interpersonal relationship (Kopřiva, 1997). Géringová (2011) considers doctors, medical staff, psychologists, social workers, psychotherapists, educators, speech therapists and, in certain way, policemen, rescuers or firefighters to be workers in the helping professions. The person who comes to the helping workers - whether they are doctors, social workers, psychologists or others - tries to seek help and support and clearly experience a problematic situation. This problem automatically puts the person in a subordinate role to the assisting person. Selingson's (1992) findings suggest that narcissism is often a preferred personality structure in psychologists.

Bakir et al. (2003) pointed to the reality where people in healthcare professions commonly encounter recklessness, egoism, and a greater interest in themselves than in the welfare of the patient. Bucknall et al. (2015) identified significantly higher narcissism in surgeons and psychopathy in nurses. Pegrum and Pearce (2015) reported significant psychopathy in surgeons and, surprisingly, pediatricians. Bratek et al. (2015) report low levels of Machiavellianism in professional care practitioners, but pointed out the dynamics of Machiavellianism in practice, as higher levels of Machiavellianism in their study were reported by medical aspirants compared to doctors. Authors suggested the level of Machiavellianism declined with the length of practice. In their work, Adams and Maykut (2015) discussed the potential dangers of inappropriate care of nurses and other medical staff if they would have dark features. Lenkov, Rubtsova and Nizamova (2018) recorded the highest incidence of dark personality traits among university teachers. More detailed results showed a significantly higher level of psychopathy among elementary and secondary school teachers. In the case of Machiavellianism and narcissism, university teachers have the highest results. It is important to note that for example, police officers’s traits such as stress-resistance, low anxiety, courage or high self-confidence are welcomed features due to the difficulty of the profession despite it is characteristic of subclinical psychopathy. Those traits work as a protection against the traumatic experiences of the police (Babiak, 1995).

2 Dark Triad and Work Motivation

Work motivation was defined by Pinder (1998) as a set of energy forces coming not only from internal, but also from external environment. These energy forces help to initiate work behavior, determining its form, direction, intensity and duration. Theoretical approaches to
work motivation do not differ, in principle, from approaches to motivation in general. We can say that they reflect them. Perhaps in the context of work motivation the most frequently used is the Self-Determination Theory (SDT).

Self-Determination Theory (Deci & Ryan, 1985) is one of the basic theories explaining the motivation and regulation of an individual's behavior. Specifically, it focuses mainly on explaining the motivational resources of the individual. Deci and Ryan (1985, 2002) distinguish five levels of regulation of motivated behavior. Those levels represent a continuum from non-self-determined to self-determined behavior. The first is amotivation, forming the lowest level, where the regulation of behavior takes place in the complete absence of awareness of the subjective meaning of the target (Senécal et al., 1995). The individual does not know why he should try, so he is characterized by passive action or a complete absence of activity in favor of the goal (Deci & Ryan, 2000). This is followed by external regulation, where behavior is driven by awareness of external rewards (Deci, 1971) or the expectations of other people and society (Sheldon & Elliot, 1998). In the case of introjected regulation, as the third level, the behavior is internalized, but not yet fully internally accepted by the individual, so it is only partially self-determined. Therefore, it also brings with feelings of guilt and shame for possible non-compliance with external requirements or sanctions (Ryan, 1982). The fourth level of identified regulation covers the behavior already accepted by the individual, perceived as springing from his Self. Therefore, the goals it pursues are internally accepted and perceived as relevant and important (Deci & Ryan, 2000). The highest, fifth level, is represented by intrinsic, autonomous regulation. The behavior of an individual is guided only by his full, real, self-interest (Deci, 1971). The procedure is therefore completely self-determined, chosen by him regardless of external circumstances. After achieving this degree of motivation, the individual is able to satisfy three basic needs according to SDT - autonomy (perceived choice and sense of internal source of behavior), competence (perceived effectiveness and confidence in environmental interactions) and relatedness (perceived connection with people and sense of social belonging) (Jonason & Ferrell, 2016).

As reported by Tremblay et al. (2009), todays four methods are used to determine the motivation to pursue a profession - they are projective, objective, implicit / explicit or subjective methods, while they are mostly based on large theories of motivation. As well as their methodology Work Extrinsic and Intrinsic Motivation Scale, which used the following results. Workers with self-determined motivation showed a higher degree of commitment and commitment to their work, they felt connected to it and loyal to the employer. On the contrary, workers with a higher level of non-self-determined motivation were more likely to perform only minimal work to secure remuneration or avoid punishment. They were also more prone to non-collegiate behavior, which bordered on deviant work behavior. These results could lead to the Dark Triad construct we are looking at, for which antisocial to deviant tendencies are typical.
Barbuto and Scholl (1998) also created the Motivation Source Inventory questionnaire on internal and external motivational sources, where motivational sources marked as intrinsic process and internal self-concept correspond to internal motivation, sources marked as instrumental motivation, external self-concept and goal internalization correspond to external motivation. In his study, Waterman (2002) addressed the motivational resources for choosing a career in the helping professions. He states that many help workers generally mention in their life histories emotional neglect and abuse and other unpleasant experiences such as inadequate emotional but also physical dependence of parents on children, and in the case of socially weaker families also frequent contact with helping professionals such as social workers. Based on these experiences and the subsequent choice of a helping profession, such individuals are referred to in the literature as wounded healers (DiCaccavo, 2002). Another source of motivation is simply the need to help others, work with people, support others and society, the belief that they can succeed in this type of profession, the hope of effective social change. Less important motivating sources cited by helping workers were becoming better person, good job opportunities, job security, good working conditions, status, and good pay (Hanson & McCullagh, in Waterman, 2002).

On the other hand, the later side of the motivation to pursue a helping profession and the tendencies behind it cannot be overlooked. Even in a person with a strong will to help others, there may be a desire to abuse the power that the worker has acquired over clients in their profession. The dark motivation for the performance can be saturated by hidden selfish goals and an effort to show off one’s own personality for the perpetual need for admiration or the desire for power. There are egoistic goals disguised by need to help. Various research findings have also suggested that cases of the occurrence of the Dark Triad in helping workers are not rare (Babiak 1995; Bakir et al. 2003; Bucknall et al. 2015; Pegrum & Pearce 2015; Selingson 1992).

Jonason and Ferrell (2016) sought relationships between the three basic needs according to the Self-determination theory (competence, autonomy and relatedness) and the Dark Triad traits. In their research, psychopathy did not correlate significantly with the need for competence and relatedness. It had a significant negative relationship with the need for autonomy. Machiavellianism and narcissism correlated significantly negatively with all three needs. In their study, Prusik and Szulawski (2019) concluded that the Dark Triad acts as a motivator for dishonest behavior, supporting motives for success and power. In particular, Machiavellianism was associated with competition in the workplace, low teamwork, and organizational commitment. Narcissism was associated with the need for affiliation and self-affirmation. Psychopathy was associated with competition, low preference in choosing a helping profession, and rebellion against authority. The authors of a study focusing on Dark Triad, work motivation, and burnout syndrome clarified that the relationship between Dark
Triad and burnout is influenced by motivational sources, with features of the Dark Triad being positively associated with external motivational sources (Prusik & Szulawski, 2019).

The aim of present study was to examine the relationships between Dark Triad traits - Machiavellianism, narcissism and psychopathy with internal and external motivation to study the on a sample of university students studying in the field of helping professions. We also focused on testing the differences in these variables with respect to the area of helping professions.

3 Method

Participants

The research sample consisted of 118 university students from different study fields of helping professions. Their age ranged 18 - 25 years ($M_{\text{age}} = 22.34$; $SD = 1.62$). Females represented 89.8% of all respondents ($N = 106$), aged 19 - 24 years ($M_{\text{age}} = 22.10$; $SD = 1.4$). Males represented the remaining 10.2 % of respondents ($N = 12$), aged 18 - 25 ($M_{\text{age}} = 22.9$; $SD = 1.6$). Due to the broader spectrum of representatives of various study fields of helping professions, we have merged some fields into larger groups for further analysis according to the key focus of the particular future helping profession. Three groups were identified in this way: education fields - kindergarten teacher, elementary school teacher, secondary school teacher (15.2 %); healthcare fields - doctor, nurse, physiotherapist, nurse, sanitary, dental technician (35.6 %); social fields - social worker, psychologist, special pedagogue (49.2 %).

Convenience and purposive sampling method has been used.

Measures

Short Dark Triad (Čopková & Šafár, in review). The scale is a Slovak version based on the original Short Dark Triad (Jones & Paulhus 2014). It consists of 27 items that saturate the three subscales - Machiavellianism ("Most people can be manipulated."), narcissism ("I insist on getting the respect I deserve.") and psychopathy ("I like to get revenge on authorities."). Each dimension consists of 9 items. The respondent responds on a 5-point likert scale (1 = strongly disagree; 5 = strongly agree). For each of the subscales, the score is calculated separately as the sum of the points indicated by the respondent. There are 5 reverse coded items in the questionnaire, what must be reversed before calculating the final score. The indicators of the internal consistency of the scales expressed by the Cronbach alpha coefficient were as follows - $\alpha_m = 0.734$; $\alpha_n = 0.733$; $\alpha_p = 0.655$.

Work Extrinsic and Intrinsic Motivation Scale (WEIMS) (Tremblay et al., 2009). The questionnaire was translated into Slovak with the help of two experts. The respondent originally answered the question in this questionnaire: "Why do you do what you do?" Since we used the questionnaire on a sample of university students, we transformed the wording of the
question into "Why do you want to work in the field you decided to study?". Respondents answered this question on a 7-point scale (1 = strongly disagree; 7 = strongly disagree) on 18 items, three of which each belong to each of its six subscales: intrinsic motivation ("Because I derive much pleasure from learning new things."), regulation by integration ("Because it has become a fundamental part of who I am."), regulation by identification ("Because I chose this type of work to attain my career goals."), regulation by introjection ("Because I want to be a "winner" in life."), external regulation ("Because this type of work provides me with security."), and amotivation ("I don't know, too much is expected of us."). In addition to the score for each subscale, it is also possible to calculate scores for self-determined motivation (sum of scores in subscales intrinsic, integrated and identified) and non-self-determined motivation (sum of scores in subscales introjected, external and amotivation).

Procedure
Questionnaires were submitted to the respondents in the time period March 2019 - April 2019 in the form of a pencil-paper. Respondents were informed that the completion of the questionnaire is voluntary and anonymous and the data will be processed only in this research study. All respondents agreed to participate in the survey. The collected data were subjected to statistical analysis in IBM SPSS Statistics 21 software.

There were no missing data in the data file. Testing the normality of the data distribution using the Kolmogorov-Smirnov test showed that the data are subject to normal distribution (p < 0.05). Descriptive indicators of the normality of the data distribution indicated that the value of skewness and kurtosis did not exceed the criterion >± 1. Internal consistency was determined using Cronbach's alpha (Cronbach's α). We described the obtained data using other descriptive indicators (mean, standard deviation). The significance of relationships between variables was examined by Pearson correlation coefficient. We tested between-subject variability using One-way ANOVA. The Bonferroni test was used as a post hoc test.

4 Results

In the first step of the analyzes, we focused on determining the strength and significance of the relationships between the components of the Dark Triad and the components of motivation to perform the helping profession.

Based on the results shown in Table 1, we conclude that there is a significant weak positive relationship between Machiavellianism and non-self-determined motivation. Looking at the relationships of the components of non-self-determined motivation (amotivation, external, introjected motivation), we did not notice any significant relationships. On the contrary, Machiavellianism has no significant relationship with self-determined motivation, only with its components - positive with identified motivation and negative with integrated
motivation. Narcissism correlated significantly positively with external and introjected motivation for choosing a helping profession, as well as significantly positively correlated with identified and intrinsic motivation. Psychopathy significantly correlated only with the identified motivation. In all cases, however, we must state that the significant relationships found were not strong. These results suggest that the elements that would be associated with the characteristics typical of the dark side of the personality - Machiavellianism, narcissism and psychopathy - do not play a very important role in motivating them to perform the helping profession.

Table 1: Pearson correlation

|                      | MACHIAVELLIANISM | NARCISSISM | PSYCHOPATHY |
|----------------------|------------------|------------|-------------|
| AMOTIVATION          | 0.097            | -0.155     | 0.134       |
| EXTERNAL             | 0.137            | 0.183*     | 0.021       |
| INTROJECTED          | 0.115            | 0.218*     | 0.111       |
| IDENTIFIED           | 0.276*           | 0.198*     | 0.187*      |
| INTEGRATED           | -0.306*          | 0.015      | -0.174      |
| INTRINSIC            | -0.124           | 0.195*     | 0.018       |
| SELF-DETERMINED      | -0.108           | 0.114      | 0.146       |
| NON SELF-DETERMINED  | 0.189*           | 0.158      | -0.015      |

*p≤0.01; *p≤0.05

The average scale value in Machiavellian within the three groups of students created on the basis of the field of study ranged from 2.46 to 2.99, so respondents scored more in the part of the scale that expressed disagreement with statements to a neutral attitude (mean value 3). The average scale value in narcissism ranged from 2.44 to 2.98, so the same applies as in Machiavellianism. We observed lower average scale values in psychopathy, ranging from 1.68 to 2.11, with respondents disagreeing with the submitted statements.

An analysis of the significance of the differences in the Dark Triad between groups of students studying in different areas of the helping professions showed that these groups differ in two dark characteristics - Machiavellianism and psychopathy (Table 2).
Table 2: Dark Triad (One-Way ANOVA)

|                      | HP    | M     | SD   | F    | p     |
|----------------------|-------|-------|------|------|-------|
| **MACHIAVELLIANISM** | HEALTHCARE | 23.14 | 4.67 | 8.764 | ≤0.001* |
|                      | SOCIAL | 26.91 | 6.04 |      |       |
|                      | EDUCATION | 22.11 | 4.42 |      |       |
| **NARCISSISM**       | HEALTHCARE | 23.29 | 6.05 | 0.998 | 0.372 |
|                      | SOCIAL | 24.09 | 5.67 |      |       |
|                      | EDUCATION | 21.94 | 5.03 |      |       |
| **PSYCHOPATHY**      | HEALTHCARE | 15.09 | 4.47 | 9.051 | ≤0.001* |
|                      | SOCIAL | 18.97 | 5.31 |      |       |
|                      | EDUCATION | 15.78 | 2.76 |      |       |

HP= helping profession; M=mean; SD=standard deviation; p=significance level

Post hoc testing showed that in Machiavellian students studying in the social field scored significantly higher than in the field of healthcare (p = 0.002) and education field (p = 0.004). We reached the same results in psychopathy - students of social sciences scored significantly higher than students of healthcare (p < 0.001) and education field (p = 0.041).

Table 3 presents the results of testing the significance of differences between groups of students in non-self-determined motivation to perform a helping profession. The analysis showed that students in the social, health and educational fields do not differ in non-self-determined motivation. However, we found different results when testing the significance of differences in individual degrees of non-self-determined motivation. The results shown in Table 3 show that students in different directions differ significantly in the level of amotivation, external and introjected motivation

Table 3: Non-Self-determined motivation (One-Way ANOVA)

|                  | HP    | M     | SD   | F     | p     |
|------------------|-------|-------|------|-------|-------|
| **AMOTIVATION**  | HEALTHCARE | 6.88  | 4.06 | 6.530 | 0.002* |
|                  | SOCIAL | 8.78  | 4.03 |       |       |
|                  | EDUCATION | 10.94 | 4.71 |       |       |
| **EXTERNAL**     | HEALTHCARE | 11.59 | 4.11 | 4.542 | 0.013* |
|                  | SOCIAL | 10.52 | 3.61 |       |       |
|                  | EDUCATION | 8.39  | 3.50 |       |       |
Post hoc testing showed that students of education fields score significantly higher in amotivation than students of healthcare (p = 0.002). We obtained the exact opposite result with external motivation - healthcare students scored significantly higher compared to education students (p = 0.010). We reached the same result in the case of introjected motivation (p = 0.005).

Table 4 shows the results of testing the significance of differences between groups of students in self-determined motivation to perform a helping profession. The analysis showed that students in the social, healthcare and educational fields differ significantly in self-determined motivation. They also differ from each other in individual levels of self-determined motivation - identified, integrated and intrinsic.

Table 4: Self-determined motivation (One-Way ANOVA)

| HP            | HEALThCAR | SOCIAL | EDUCATION | M   | SD  | F    | p      |
|---------------|------------|--------|-----------|-----|-----|------|--------|
| IDENTIFIED    | HEALThCAR |        |           | 11.29| 2.94| 4.849| 0.010* |
|               | SOCIAL     |        |           | 11.16| 3.24|      |        |
|               | TEACHING   |        |           | 8.83 | 2.07|      |        |
| INTEGRATED    | HEALThCAR |        |           | 18.88| 2.92| 9.409| ≤0.001*|
|               | SOCIAL     |        |           | 15.34| 4.73|      |        |
|               | TEACHING   |        |           | 15.83| 4.42|      |        |
| INTRINSIC     | HEALThCAR |        |           | 16.09| 3.63| 3.905| 0.023* |
|               | SOCIAL     |        |           | 14.64| 3.17|      |        |
|               | TEACHING   |        |           | 13.50| 4.45|      |        |
| SELF-DETERMINED | HEALThCAR |        |           | 46.26| 7.17| 7.481| 0.001* |
|               | SOCIAL     |        |           | 41.14| 8.69|      |        |
|               | TEACHING   |        |           | 38.17| 9.62|      |        |

*HP = helping profession; M = mean; SD = standard deviation; p = significance level
Post hoc testing showed that in self-determined motivation, healthcare students scored significantly higher than social fields students \((p = 0.009)\) and education fields students \((p = 0.002)\). Students of healthcare scored significantly higher in the identified motivation compared to students of education fields \((p = 0.013)\) and students of social fields compared to students of education fields \((p = 0.014)\). Students of healthcare scored significantly higher in integrated motivation compared to students of education fields \((p = 0.030)\) and social fields \((p<0.001)\). Students of healthcare scored significantly higher in intrinsic motivation than students of education fields \((p = 0.032)\).

**Conclusion**

The aim of present study was to examine the relationships between Dark Triad traits - Machiavellianism, narcissism and psychopathy with internal and external motivation to study the on a sample of university students studying in the field of helping professions. We also focused on testing the differences in these variables with respect to the area of helping professions.

Based on the measured low average scale values of the Dark Triad traits, we can assume that these dark personality characteristics are not significant in adepts for the performance of helping professions. This result is supported by the statement of Kowalski et al. (2017) who claim that people with a higher degree of these traits do not really tend to be helping professionals. High rates of these traits could negatively affect the performance of such a profession, as can be understood from the views of various authors (BACP, 2018; Levická, 2007; Schavel, Čísecký & Oláh, 2008; Géringová, 2011).

In the first place, we focused on testing the significance of the relationships between the Dark Triad traits and the levels of regulation of motivated behavior according to the Self-Determination theory (Deci & Ryan, 1985). Amotivation did not correlate with any of the the Dark Triad traits. Based on this result, it is possible to assume that when choosing a helping profession, adepts follow specific motives, whether they have or do not have the Dark Triad traits. It means that they are aware of what leads them to make this choice (Sénécal et al., 1995). We found positive significant relationships between narcissism, external and introjected motivation. This result corresponds to the fact that external motivation is based on the expectations of other people (Sheldon & Elliot, 1998) and at the same time narcissistic individuals are dependent on a positive response from the social environment (Ryan, 1982) to maintain a positive self-image (Morf & Rhodenwalt, 2001). Externally demonstrated prosociality automatically associated with the performance of the helping profession (Bakker et al., 2006; Mláčik & Záskodná, 2008) can only be a reflection of the dark motivation to admire one’s personality, where the need to help masks an egoistic goal. Motivation driven by the need for affiliation and self-affirmation was also associated with narcissism in the research of
Prusik and Szulawski (2019). In the same research, the authors reported that the Dark Triad traits were positively associated with external motivational sources. All three features of the Dark Triad correlated positively with the identified motivation. This means that individuals with traits of Machiavellianism, narcissism and psychopathy may perceive the future performance of the helping profession as a means to achieve certain goals they consider important (Deci & Ryan, 2000). For Machiavellians it may be gaining power over others (Al Aïn et al., 2013), for narcissists gaining attention and consolidating a sense of superiority (Morf & Rhodenwalt, 2001; Rohr, 2016), for psychopaths satisfying the need for excitement (Paulhus & Williams, 2002). Machiavellianism was negatively correlated with integrated motivation, which suggests that Machiavellians are not motivated to choose a helping profession by a genuine interest in the profession (Deci & Ryan, 2000). The intrinsic motivation to practice the helping profession has been demonstrated in narcissism, suggesting that narcissists should enjoy this kind of profession with real pleasure (Deci, 1971), which may be related to their need for affiliation, autonomy and competence with which narcissism correlated in the study of Jonason and Ferrell (2016).

The results of our research indicate that social fields students (social workers, psychologists, special educators) show a significantly higher degree of Machiavellianism and psychopathy than students of pedagogical fields and healthcare. Studies where students from different directions would be compared in this way are not known. However, there are studies that point to a higher rate of aversive traits in healthcare professionals (Admas & Maykut, 2015; Bakir et al., 2003; Bratek et al., 2015; Bucknall et al., 2015; Pegrum & Pearce, 2015), pedagogical workers (Lenkov et al., 2018) and social workers (Babiak, 1995; Selingson, 1992). We obtained relatively conflicting results when testing for differences in the types of motivation to perform the helping profession, because at all levels of motivation (except amotivation), healthcare students scored significantly higher compared to the rest of the groups. These results suggest, motives that lead students to choose a health care profession are diverse. We consider it a limit of our research that the sample did not consist of individuals who would score extremely in the features of the Dark Triad. This greatly narrowed the possibilities of interpreting the results. However, as there are not yet standards that would determine the extreme values of the achieved score, such a selection is not possible. However, it is likely to help achieve more representative results. The size and heterogeneity of the sample is also limiting. In the future, it is possible to consider that similar research will be carried out on a more homogeneous sample from the point of view of the field of study.

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