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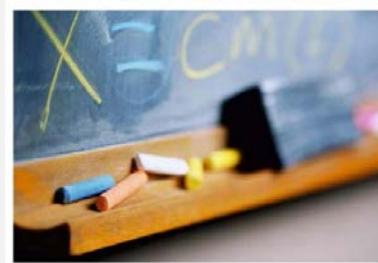
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# Machiavellianism and Emotional Intelligence in Higher Education Students

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**Abstract**

Machiavellianism as a social phenomenon reveals certain person's tendencies that are evident in communication with others in both personal and working life. Especially in the helping professions, empathy, helpfulness as well as low motivation for personal benefit is an important part of their work. The aim of this study is to determine to what extent Machiavellianism is manifested among university students with a focus on managerial professions and social professions along with to what extent emotional intelligence is involved in Machiavellianism in these students. The research, which involved 1109 university students, revealed that students of managerial professions achieve statistically significantly higher Machiavellianism scores than students of social professions. The results also show a negative connection between the degree of Machiavellianism and emotional intelligence. In managerial students, a lower degree of psychological well-being and emotionality along with a higher degree of sociability contribute to a higher degree of Machiavellianism. For students in social professions, a lower degree of self-control, emotionality and psychological well-being along with higher sociability contribute to a higher degree of Machiavellianism. The research results point to specific features that students of different professions utilise in communicating and which they can develop further during their professional training.

**Keywords:** higher education, students of helping professions, Machiavellianism, manipulative strategies, emotional intelligence.

## 1. Introduction

Machiavellianism as a personality construct can be analogically described by the statement "the end justifies the means". In other words, unethical behaviour and manipulation are acceptable or desirable if it leads to identified goals, consolidates status, and leads to escalation of power (Moss, 2005; Walter et al., 2005). Although Machiavellianism was originally understood in the concept of the

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political world, this construct gradually found its place into other scientific disciplines.

Machiavellianism is considered a personality trait (Jones, Paulhus, 2009; Al Aïn et al., 2013) that changes and becomes relatively stable over time. It has traditionally been understood in the context of environmental influences (Monaghan, 2019; Vernon et al., 2008). An individual with a tendency towards Machiavellianism manifests three basic characteristics: 1. A tendency towards manipulative strategies (e.g., deceit and flattery in interpersonal relationships); 2. A cynical perception of others as weak and untrustworthy; 3. a discrepancy between conventional morality and individual behaviour (Fehr et al., 1992).

Wastell and Booth (2003) describe Machiavellianism as a pattern of actions that stem from conscious choice, i.e. volitional Machiavellianism. Manipulative strategies stem from the individual's conscious decisions. A contrasting view describes the possibility that Machiavellianism is a consequence of the absence of certain traits or abilities such as empathy and/or emotional intelligence.

It is understandable that Machiavellianism as a personality construct (and part of the so-called Dark Triad) has been the focus of a number of researches that confirm the connection between Machiavellianism and the locus of control (Mudrack, 1990), a negative correlation between Machiavellianism and empathy (e.g., Wastell, Booth, 2003), an inability of social cooperation (Paal, Bereczkei, 2007), an ability to recognize the feelings of others (e.g. Wastell, Booth, 2003), a relationship between Machiavellianism and cognitive as well as affective empathy (Blötner et al., 2021), a relationship between Machiavellianism of the management teachers and the Students Rating of Instruction Quality (Nishant, 2021), a relationship between Machiavellianism and educational choices (Gruda et al., 2023), along with other correlations and relationships. Although there appears to be an inverse relationship between Machiavellianism and emotional intelligence, other research also points to the manipulative side of emotional intelligence (Walters, 2021). It appears that under certain conditions higher levels of emotional intelligence may facilitate emotional manipulation, which could extend the construct into the field of Machiavellianism.

**Theoretical context**
**Emotional intelligence and Machiavellianism**

In general, EI concepts can be divided into two predominant subject areas – capability EI and trait EI. The second dimension we have adopted describes EI as a personality trait related mainly to emotion (Petrides, 2010; Bucich, MacCann, 2019). EI trait measurement is based on the assumption that emotional experience is inherently subjective (Petrides, Furnham, 2003). Although some authors (e.g., Hughes, Evans, 2018; Michels, Schulze, 2021) have pointed to the limitations of trait EI, a number of studies (Austin et al., 2007; Austin et al., 2014; Petrides et al., 2011; Ali et al., 2009; Barlow et al., 2010; Stead, Fekken, 2014; O'Connor, Athota, 2013) have demonstrated its validity and relevance in relation to the study of Machiavellianism. Based on research studies, Christie and Geis (1970) have generalized the characteristics of what they term *High Mach* and *Low Mach* individuals, with differences between High Mach people, i.e., those who received a higher score in the research instrument, and Low Mach people, a category defined by the subject's emotional detachment. Unlike Low Mach individuals, High Mach people are not influenced by the emotions of others and by social pressure. According to Geis (1978), emotional "coolness" (e.g., calm detachment and aloofness) is typical of High Mach people. Christie and Geis (1970) named this trait *cool syndrome*, a pattern which is manifested in the favouring of a cognitive strategy with a low tendency to perceive individual characteristics, resistance to social influence, orientation towards cognition, along with initiating and controlling reactive structures. Resistance in relation to social influence can then manifest itself in two ways: 1. High Mach people resist *unjustified* inducements to lie or cheat; 2. High Mach people are suspicious of the explanations of experimenters and others (Christie, Geis, 1970). Not only will High Mach people remain relatively untouched by emotional involvement with others, but they also appear equally uninfluenced by their own beliefs and even their own behaviour (Christie, Geis, 1970). Similarly, other authors (e.g., Ali et al., 2009; Wastell, Booth, 2003; McIlwain, 2003) confirm that High Mach people are characterized by lack of interpersonal warmth. Their emotional coolness allows these individuals to remain cool even in emotionally tense situations and to make rational decisions to achieve their own goal (regardless of other individuals and circumstances). Interpersonal relationships are seen by High Mach people as purely utilitarian, or more precisely they understand these relationships as a means of achieving their own goals (cf. Szijjarto, Bereczkei, 2015). Conversely, Low Mach people are described by what is called a "soft touch"

characterized by susceptibility to social influence, orientation towards persons, as well as accepting and following given structures. In general, it can be stated that Low Mach people are open, receptive to the individual characteristics of each individual, more trustworthy than High Mach people, and show more sympathy towards others (Christie, Geis, 1970).

The specifics of emotional coolness have become the focus of research focusing on the link between personality traits of Machiavellianism and emotional intelligence (EI), the latter of which is generally associated with inter- and intrapersonal skills related to social ties and social engagement, leading to positive social relationships with other individuals (Austin et al., 2007).

**Career choices**

It can be assumed that a varying degree of Machiavellianism plays a role in career choices and career paths. This is supported by a number of research findings, e.g., a study by Jonason et al. (2014) indicates that people with Low Machiavellianism prefer jobs in the social service sector (teaching or nursing), a result which corresponds to the previous findings of Skinner, Giokas, and Hornstein (1976) that individuals with a high degree of Machiavellianism prefer business-related occupations, with helping professions least preferred. A number of research studies, however, do not confirm these conclusions (cf. Gruda et al., 2023). Hunt and Chonko (1984) found that workers who had a university education in business administration were not more Machiavellian than those who majored in other areas (e.g., social sciences). While it has been shown that high Machs tend not to choose helping professions, Zook and Sipps (1987) pointed out that the particular kind of helping professions studied may influence results, for example medical students of psychiatry may be more Machiavellian than counsellors or social workers.

These patterns may have emerged because, while High Mach people are able to work effectively in stressful and competitive environments where they their cool detachment is an advantage, these situations are associated with specific managerial practices. Further, High Mach people may be preferred as leaders (cf. Deluga, 2001; Ickes et al., 1986; Wilson et al., 1998). Machiavellian leaders are able to create an image of confidence despite their putative insecurity and lack of information, and they tend to form opportunistic social relationships (Christie, Geis, 1970). Nevertheless, the Machievellistic style of management has been characterized as inefficient in the long term for both the organization and the employees; results include high turnover and low employee loyalty as well as acceptance of people who do not allow alternative procedures. Thus, this management style is referred to as successful only in the short term (Gaines, Worrall, 2012).

Currently, we can see a shift in understanding the paradigm of leadership from a linear concept to so-called *connected leadership* (Balser, 2014), i.e., featuring skills that are tied to relationships and managing change. Today's leaders need right-brain skills – empathy, inventiveness, and a quest for meaning – to achieve professional success and personal satisfaction (Martin, 2007).

It turns out that characteristic features of successful life situations (in personal and professional life) are skills that are more focused on creativity, self-management and natural understanding of interpersonal relationships. Pink (2006) refers to such skills as *high concept* and *high touch*, both features more typical of Low Mach people, who possess skills that combine creativity and creativeness (high concept) while at the same time have a deeper understanding of interpersonal relationships and empathize with other individuals (high touch). Especially in helping professions, human relationships play an essential role, with such connections based on the quality of internal approach to the other person, e.g. to the client. In this paradigm, attitudes and principles in relation to the client are based on the permanent personality traits of an employee, which include in particular empathy, affection, patience and kindness (Kopriva, 2006).

The aim of this study is to enrich the scientific knowledge in the field of the selected social phenomenon – Machiavellianism in a specific social group of university students. Although it is clear that this issue has been explored to a degree in the original Machiavellianism Personality Construct of Christie and Geis (1970), this paper focuses on determining the degree of Machiavellianism in university students who study in fields focused on assisting others in so-called *helping professions* as well as students focused on managerial occupations. In terms of the described personality construct, the choice of disciplines was deliberate, since as mentioned above Machiavellism is often associated with management strategies. [1] In contrast to managers,

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[1] In similar work, Shepperd and Socherman (1997) have researched High Mach people in relation to the legal profession.

we assume that those in helping professions will tend to manifest the so-called soft touch. Since Machiavellianism is often associated with the aforementioned personality trait of emotional intelligence, in our research we focused on verifying the connection between the areas of emotional intelligence and the degree of Machiavellianism in these two groups of university students. Our main goal is to determine the rate of occurrence of Machiavellianism among university students depending on their field of specialization (managerial professions or social professions), and to determine to what extent emotional intelligence is involved in the degree of Machiavellianism in these university students.

## 2. Method
### Participants
A total of 1,109 students of selected universities from the Czech Republic and Slovakia were involved in the research. The sample consisted of students of social pedagogy/social work (N = 483) and students of management (N = 626) from Tomas Bata University in Zlín, Czech Republic (N = 425) and Prešov University in Prešov, Slovakia (N = 684). The ages of the respondents ranged from 18-57 (M = 25.39, SD = 7.25).

### Measures
The *MACH IV* test (Christie, Geis, 1970) was used to determine the degree of Machiavellianism; the test contains 20 statements regarding the respondent's personal opinions on relationships, situations, strategies, and values among people. Answers are expressed using a Likert scale ranging from 1 (complete disagreement) to 5 (full consent). The score ranges between 20–100 points, with students scoring 61–100 points falling into the category of *High Mach*, i.e., they have a high degree of Machiavellianism. Students with a score of up to 59 points (inclusive) fall into the *Low Mach* category, i.e., low rates of Machiavellianism. A score of exactly 60 points signifies students with an average Machiavellianism score. The test defines 4 components of the central dimensions of Machiavellianism (Hunter et al., 1982): *flattery* (statements 2 and 15), *deceit and lie* (statements 6, 7, 9, 10), *immorality* (statements 4, 11, 16) and *cynicism* (statements 1, 5, 12, 13). Half of the randomly spoken statements relate directly to Machiavellianism (1, 2, 5, 8, 12, 13, 15, 18, 19, 20), with the other half of the statements formulated in the opposite direction. The data from these items was recoded in data processing. The psychometric properties were acceptable in terms of both reliability ($\alpha$ = 0.64; $\omega$ = 0.63; McDonald's Omega coefficient for the subscales ranged from .43 to .62) and validity (construct validity: $\chi^2$ = 135.02; df = 56; p < 0.05; GFI = 0.98; AGFI = 0.97; TLI = 0.91; CFI = 0.94; RMR = 0.03; RMSEA = 0.04).

The level of emotional intelligence was measured using the *Trait Emotional Intelligence Questionnaire* – Short Form (TEIQue-SF). In view of the length of testing and test complexity, a shortened version TEIQue-SF was used. TEIQue-SF contains 30 self-assessment items, with selected items relating to four areas of wider significance: *well-being* (statements 5, 9, 12, 20, 24, 27), *self-control* (statements 4, 7, 15, 19, 22, 30), *emotionality* (statements 1, 2, 8, 13, 16, 17, 23, 28) and *sociability* (statements 6, 10, 11, 21, 25, 26). The EI aspects score does not reflect cognitive abilities, but rather the self-perceived capabilities and the behavioural disposition thereof. TEIQ is a tool that is based solely on the *EI feature theory*. A high well-being score reflects an overall sense of well-being that includes past and future expectations. Individuals with a high score feel positively tuned, happy and fulfilled. Low score individuals, on the other hand, have little self-esteem and are dissatisfied with their current lives. Well-being depends heavily on the scores of the other three TEIQs.

Respondents with high self-control scores have a healthy degree of control over their instincts and desires; in addition to being able to resist them, they regulate external pressures and stress well. They neither suppress their emotions, nor are they over-expressive. On the contrary, people with low scores tend to be impulsive and do not seem to be able to handle stress, with low self-control associated with inadaptability. Individuals with a high score in emotionality indicated that they control a wide range of emotional skills, i.e., they can perceive and express emotions and use these abilities to create and maintain close relationships with others. Low score individuals in this area hardly recognize their inner emotional states and rarely express their feelings to others, which often leads to less satisfactory personal relationships. The area of sociability differs from emotionality by emphasizing social relationships and social influence. Sociability focuses on

individuals as subjects within different social contexts rather than on personal relationships with family and close friends. Individuals with high sociability scores are more responsive to social interaction; they are convinced that they can listen well and communicate clearly and confidently with people from very different backgrounds. Low score individuals are convinced that they are not able to influence others' emotions and they are less likely to negotiate or establish contact with people. They are not sure what to do or say in social situations, therefore they act timidly and reserved (Petrides, Furnham, 2001; XY, 2013). Answers are expressed using the Likert scale from 1 (complete disagreement) to 7 (full consent). A total of 15 items (2, 4, 5, 7, 8, 10, 12, 13, 14, 16, 18, 22, 25, 26, 28) are reverse coded. In processing the data, the responses in these items were recoded. The psychometric properties were acceptable in terms of both reliability ($\alpha = 0.86$; $\omega = 0.90$; McDonald's Omega coefficient for the subscales ranged from .57 to .76) and validity (construct validity: $\chi2 = 1180.11$; df = 262; $p < 0.05$; GFI = 0.92; AGFI = 0.89; TLI = 0.82; CFI = 0.86; RMR = 0.13; RMSEA = 0.06).

### Data analysis

Independent t-test samples were used to identify interdisciplinary differences (students with a focus on social skills and management professions) on the impact of Machiavellianism in the university student population. The connection between emotional intelligence and the degree of Machiavellianism was investigated through the Person's correlation coefficient. One-way analysis of variation (ANOVA) was used to identify the differences in the level of emotional intelligence in Low Mach, High Mach, and students with average Machiavellianism scores. Multiple linear regression (stepwise method) was used to determine the extent to which emotional intelligence predicts the extent of Machiavellianism in a university student population. At the same time, we tested the preconditions for using the chosen test, i.e. normality and homoscedasticity was tested (Leven test, p = .965). IBM SPSS Statistics (V29.0.0) was used for testing.

### 3. Results

More than half of the students (53.9 %) are in the Low Mach category, i.e., low score Machiavellianism. 7.9 % of university students were included in the middle range of Machiavellianism. A significant proportion of students (38.2 %) fall into the category of High Mach, i.e., they achieved a high degree of Machiavellianism (Table 1).

Students in the Low Mach category (58.4 %) are predominant in social professions. In the case of those in managerial professions, the Low Mach category is slightly lower than the social professions, yet half of the students in managerial professions (50.5 %) fall into this category. In managerial professions, a large proportion of students show High Mach scores (42.6 %). In the case of students of social professions, this category is not as highly represented as in managerial professions, although the number of students in social professions who show high Machiavellianism scores is not negligible (32.5 %).

**Table 1.** Percentage representation of Machiavellianism among university students of managerial and social professions

|  | Managerial | Social | All students |
| --- | --- | --- | --- |
| Low Mach | 50.5 % | 58.4 % | 53.9 % |
| Average | 6.9 % | 9.1 % | 7.9 % |
| High Mach | 42.6 % | 32.5 % | 38.2 % |

The average Machiavellianism score (in the range of 20-100 points) for students reaches M = 58.74 (SD = 7.25), a point that is in the Low Mach category (Table 2). Considering the average Machiavellianism score for managerial and social students, we find that the average score differs significantly (p = .003). Students of managerial professions reach higher levels of Machiavellianism (M = 59.31, SD = 7.25) than students of social professions (M = 58.00, SD = 7.19). The average score of managerial professions is at the borderline of Low Mach category (up to 59 points).

**Table 2.** Mean score of Machiavellianism among university students

|  | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|
| Managerial professions | 59.31* | 7.25 | .29 |
| Social professions | 58.00 | 7.19 | .33 |
| Total | 58.74 | 7.25 | .22 |

Notes: *p < 0.01

Differences in the level of Machiavellianism are statistically significant especially in one central dimension of Machiavellianism (range 1–5), i.e., in the dimension of flattery (p = .023). Students of managerial professions accept flattery in interpersonal communication to a greater degree (M = 2.91) than students in social professions (M = 2.80). In other dimensions, the differences between managerial and social professions are not statistically significant, i.e., the groups are similar (Table 3). Students of both professions agree in terms of the dimension of deceit and lie, immoral behaviour and cynicism. Nevertheless, the results show that the values in the immorality dimension are higher than in the other dimensions (M = 3.35). On the other hand, the deceit and lie dimension is the lowest (M = 2.37).

**Table 3.** Differences in mean values of central dimensions of Machiavellianism among students of managerial and social professions

|  | Flattery | Deceit and Lie | Immorality | Cynicism |
|---|---|---|---|---|
| Managerial professions | 2.91* | 2.39 | 3.38 | 3.05 |
| Social professions | 2.80 | 2.35 | 3.31 | 2.99 |
| Total | 2.86 | 2.37 | 3.35 | 3.02 |

Notes: * p < 0.05

Machiavellianism negatively correlates with emotional intelligence in all areas of emotional intelligence with the exception of sociability (Table 4). The higher the degree of psychological well-being of the students, the lower the degree of Machiavellianism (r = -.21; p < .001), i.e., the lower acceptance of deceit and lie (r = -.24; p <.001), immoral behaviour (r = -.13; p <.001), use of flattery as a means of communication (r = -.10; p = .002) or cynical behaviour (r = -.11; p <.001). Students who are fulfilled exhibit less manifestations of Machiavellianism, accept deceit and lies as well as immoral behaviour less, use flattery in their communication less often, and show less cynical behaviour than students with lower psychological well-being.

The higher the degree of self-control of students, the lower the degree of manifestation of Machiavellianism (r = -.15; p < .001), i.e., the lower the acceptance of deceit and lie (r = -.13; p <.001), immoral behaviour (r = -.10; p = .001), use of flattery as a means of communication (r = -.10; p = .001) or cynical behaviour (r = -.10; p = .001). Students who maintain control of their actions, accept deceit and lie or immoral behaviour less use less flattery and indicate less cynical behaviour in their communication.

The higher the emotionality of the students, the lower the degree of manifestation of Machiavellianism (r = -.19; p <.001), i.e., the lower acceptance of deceit and lie (r = -21; p <.001), the use of flattery as a means communication (r = -.09; p = .003) and lower rates of cynical behaviour (r = -.16; p <.001). The degree of emotionality (perception of inner emotional states, expressing one's own feelings, and utilizing these abilities to maintain relationships with other people) is not related to whether or not students approve of immoral behaviour.

The manifestations of Machiavellianism are not related to the degree of sociability of the students (r = -.02; p = .449). The students' convictions as to whether they are able listen well as well as communicate clearly and confidently with people is not related to whether or to what extent they accept deceit and lie (r = -.02; p = .573), immoral behaviour (r = .01; p = .935) or exhibit features of cynical behaviour (r = -.05; p = .076). To some extent, the degree of sociability correlates with the use of flattery in student communication (r = -.07; p = .028). The more students

are convinced of their social influence (ability to make contact with others, negotiate, etc.), the less they use flattery as a means of communication.

**Table 4.** The connection between the areas of emotional intelligence and the central dimensions of Machiavellianism

|  | Flattery | Deceit and Lie | Immorality | Cynism | MS score |
|---|---|---|---|---|---|
| Well-being | -.10** | -.24** | -.13** | -.11** | -.21** |
| Self-control | -.10** | -.13** | -.10** | -.10** | -.15** |
| Emotionality | -.09** | -.21** | -.04 | -.16** | -.19** |
| Sociability | -.07* | -.02 | .01 | -.05 | -.02 |
| EI score | -.11** | -.20** | -.10** | -.14** | -.19** |

Notes:
** the correlation is significant at the .01 level (2-tailed);
* the correlation is significant at the .05 level (2-tailed)

To determine to what extent the areas of emotional intelligence contribute to the rate of occurrence of Machiavellianism among university students, we searched for a model that would best explain the degree of variability of the dependent variable, i.e., the manifestations of Machiavellianism among students. As indicated above, to determine the significant differences in the degree of Machiavellianism between the fields studied (focusing on managerial professions and focusing on social professions), we created two models that would respect the different effects of Machiavellianism in these two professions.

The results (Table 5) show that emotional intelligence is a predictor of the Machiavellianism of university students of social professions and managerial professions.

The model was created with three independent variables for the managerial student population, which explains the 8.9 % variability of the dependent variable, i.e., Machiavellianism ($R^2 = .089$, $p < .001$). In the population of university students of social professions, a model was created with four independent variables, which explains 7.7 % of the variability of the dependent variable, i.e., Machiavellianism ($R^2 = .077$, $p < .001$).

**Table 5.** Predictors of Machiavellianism in Students of Managerial and Social Professions

|  |  | B | SE$_B$ | β | Sig. | Partial correlation | CollinearVIF | Corrected R² % scattering |
|---|---|---|---|---|---|---|---|---|
| Managerial professions | Well-being | -2.025 | .361 | -.257 | .001 | -.219 | 1.437 | 1. step 6 % |
|  | Sociability | 1.530 | .398 | .173 | .001 | .152 | 1.389 | 2. step 7 % |
|  | Emotionality | -1.291 | .398 | -.146 | .001 | -.129 | 1.383 | 3. step 9 % |
| Social professions | Self-control | -1.279 | .471 | -.154 | .007 | -.123 | 1.672 | 1. step 4 % |
|  | Emotionality | -1.355 | .500 | -.144 | .007 | -.123 | 1.459 | 2. step 6 % |
|  | Sociability | 1.302 | .464 | .153 | .005 | .127 | 1.532 | 3. step 7 % |
|  | Well-being | -.857 | .384 | -.122 | .026 | -.101 | 1.540 | 4. step 8 % |

Well-being (p = .001), sociability (p = .001), and emotionality (p = .001) are relevant variables in explaining how Machiavellianism affects the student professions. Regarding the relative influence (the importance of each independent variable), psychological well-being (β = -.257) and emotionality (β = -.146) are the strongest variables, i.e., a higher level of mental well-being and emotionality predicts a lower degree of Machiavellianism. The amount of sociability (β =

.173) also affects the degree of Machiavellianism, for which the opposite tendency applies, i.e., a higher degree of sociability predicts a higher degree of Machiavellianism.

In particular, self-control (p = .007), emotionality (p = .007), sociability (p = .005), as well as psychological well-being (p = .026) all have a particular impact on the degree of Machiavellianism among students of social professions. Regarding relative influence, self-control (β = -.154) and emotionality (β = -.144) have the strongest effect, i.e., a higher level of self-control and emotionality predicts a lower degree of Machiavellianism. Sociability (β = .153) also affects the degree of Machiavellianism, for which the opposite tendency applies, i.e., a higher degree of sociability predicts a higher degree of Machiavellianism. Psychic well-being (β = -.122) also affects to a certain extent the degree of Machiavellianism, i.e., the higher the level of mental well-being, the lower the degree of Machiavellianism.

### 4. Discussion

Our research findings focusing on the degree of manifestation of Machiavellianism among students of social and managerial professions show that managerial students achieve a statistically significantly higher Machiavellianism score than social professions students, but the average for both groups falls into the Low Mach category and approaches the far pole, i.e., manifestations of Machiavellianism are somewhat more intense in students of managerial professions. Students in the Low Mach category (nearly 60 %) are predominant in social professions. 50 % of students in managerial professions are Low Mach. The High Mach category includes 40 % of students of managerial professions and 30 % of social professions (cf. Gruda et al., 2023).

Jonason et al. (2014) also confirmed their assumption that Machiavellianism was negatively associated with choosing a profession that involved caring for others. Similarly, an earlier study by Wertheim et al. (1978) found higher levels of Machiavellianism in law and management students than in teaching and social work students (cf. McLean, Jones, 1992).

Considering the components of the central dimensions of Machiavellianism, we find that students of both professions achieve similar manifestations in the deceit and lie dimension, immoral behaviour and cynicism, and they differ in the manifestations of the one central dimension of flattery. Students of both professions approve of deceit and lie the least, although they tend to believe that people are rather dishonest to promote their own interest. Students of managerial professions are more likely to accept flattery in interpersonal communication than those in social professions.

Similar to other studies (Ali et al., 2009; Austin et al., 2007; Austin et al., 2014; Petrides et al., 2011; Stead, Fekken, 2014), we have found that there is a negative relationship between the degree of Machiavellianism and emotional intelligence (cf. Szijjarto, Bereczkei, 2015). The negative correlation between Machiavellianism and trait EI is also supported by trait EI theory (Petrides et al., 2010). The manifestations of Machiavellianism are connected to the psychological well-being, self-control and emotionality of students. Students with a lower degree of Machiavellianism feel more fulfilled, maintain control over their actions, perceive inner emotional states more readily, express their feelings, and use these abilities to maintain relationships with other people.

It follows from the regression analysis that emotional intelligence participates in the manifestations of Machiavellianism in both researched groups (social and managerial professions). Among managerial students, mental well-being, sociability and emotionality are the main contributors to Machiavellianism. Among students of social professions, on the other hand, student self-control along with to a certain extent emotionality, sociability as well as to a lesser extent mental well-being contribute to the degree of Machiavellianism. Among students of managerial professions, a lower degree of mental well-being and emotionality as well as a higher degree of sociability contribute to increased Machiavellianism. Among students of social professions, a higher degree of self-control, emotionality, psychological well-being along with a higher degree of sociability contribute to higher Machiavellianism.

The manifestations of Machiavellianism are to some extent associated with all the areas of emotional intelligence researched. The results show that the different areas of emotional intelligence exert a different effect on manifestations of Machiavellianism in managerial professions and social professions.

Mental well-being plays an important role in the behaviour of students in managerial professions. Lower manifestations of Machiavellianism are associated primarily with a higher degree of psychological well-being in managerial students. Students of managerial professions who

feel satisfied are unlikely to feel the need to use Machiavellian strategies to achieve their own goals. Among students of social professions, psychological well-being is also involved in the manifestations of Machiavellianism, but to a lesser extent. Their self-control contributes mostly to the manifestations of Machiavellianism, with the increased level of self-control related to the reduced manifestations of Machiavellianism. If students are able to take advantage of a healthy degree of self-control, they are unlikely to have a Machiavellian tendency in their actions. Especially for students of social professions, it is crucial not to suppress their emotions, to manage impulsive behaviour, to maintain a healthy degree of control, to resist external pressures, and to cope with stressful situations.

Emotionality plays an important role in students in both the manager and social profession groups. The higher the emotionality of the students, the lower the manifestations of Machiavellianism. Students with a lower degree of Machiavellianism perceive and express emotions more readily, and they use these abilities to create and maintain close relationships with others. On the other hand, social interaction in the sense of social relations and social influence increases the manifestations of Machiavellian behaviour of both groups of students. As it turns out, the degree of the students' sociability in some situations is counterproductive and represents a risk element that may be reflected in the tendency of students to have Machiavellian behaviour. We assume that this connection is primarily due to the social influence component of emotionality. A higher conviction of students with regard to the ability to influence others' emotions and their certainty in social situations may be manifested to a higher degree among students with higher Machiavellianism manifestations.

All of this means that the lower level of manifestations of Machiavellianism is evident in students of social professions who maintain control over their behaviour (resist external pressures or stress), who more readily perceive inner emotional states, express their own feelings (in creating and maintaining close relationships with others), feel fulfilled, and at the same time who are less convinced of their social influence (the ability to make contact with others, to negotiate, etc.). On the other hand, students of managerial professions have a lower degree of Machiavellianism when students experience personal well-being (feel positive and fulfilled), are more receptive to inner emotional states, can more readily express their own feelings (in creating and maintaining close relationships with others) and, to a lesser extent, who are convinced of their social influence (ability to make contact with others, negotiate, etc.).

These results point to the possibility of working directly with students as part of their training. It is evident that emotional intelligence plays a key role in the preparation for managerial and social professions.

Emotionality (perception and expression of one's own feelings), as well as well-being, which proves to be key in managerial professions, play an important role in the professional training of students of both professions. In particular, self-control (emotion management, resistance to stress and external pressures) plays a key role among social professions students, yet proved to be less important in managerial professions. We assume that self-control is strongly associated with working in social professions, especially with regard to the specificity of this profession. Working with clients who find themselves in difficult life situations also brings difficult and stressful moments to workers who face these situations along with their clients. It is likely that self-control plays an essential role in communication with clients and manifestations of behaviour than in other types of professions.

As part of professional training of both professions, in addition to professional competencies, the development of students' social competences (Veteska et al., 2011) has also been found necessary, an approach which is also supported by our research. We consider as essential the application of socio-psychological training in the professional preparation of students who in the exercise of their profession will find themselves in daily interaction with other people, or who will act as "helping" workers in the relationship with the client. Such training of future practitioners will serve as a protective factor in their psychological resilience.

### 5. Conclusion
Our research supports the claim that the development of emotionality, self-control and well-being contributes to the reduction of Machiavellian behaviour among university students. The development of student sociability is aimed at promoting social interaction (empathy, developing communicative skills) rather than social influence (the ability to influence others'

emotions). In this context, we emphasize the specificity of the field (social and managerial) in the development of emotional intelligence among university students. In professions focused primarily on communication with clients or in the so-called helping professions, professional competence is very closely connected with the personal-social qualities of workers. Although the social intelligence (cf. Salovey, Mayer, 1990) construct carries a neutral characteristic, it can also be a predictor of ethical and unethical behaviour (XY et al., 2013). The practrical use of social techniques to manipulate others can be used both in a socially positive as well as socially negative sense.

**6. Conflict of interest**
We have no conflict of interest to disclose.

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