

"CLAW YOUR WAY" - MACHIAVELLIANISM AMONG THE MEDICAL COMMUNITY

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SUMMARY

Background: Machiavellianism is a personality trait characterized by emotional detachment and tendency to manipulate others to achieve one's own goal. It is presumed that people high in Machiavellianism would more likely choose business-related occupations, whereas low Machiavellians would prefer helping professions, therefore medical professionals are expected to be low-Machs.

Subjects and methods: This is a questionnaire study on 509 respondents: medical school candidates (16.1%), medical students (65%), medical trainees (9.8%), residents (6.3%) and specialists (2.8%) aimed at assessing the level of Machiavellianism, as measured with Mach-IV score, a self-report questionnaire.

Results: The overall mean Mach-IV score was 59.24±6.07. The highest mean Mach-IV score, 61.80±6.94, was found in the group of medical school candidates. The lowest mean Mach-IV score, 57.61±7.88, was reported in the group of registered specialists. Male gender was found to be positively correlated with the mean Mach-IV score, which in women was 58.97±6.08 and in men it was 60.16±6.01. There was a negative correlation between the mean Mach-IV score and the age of post-graduate participants. When we divided all participants into subgroups of "low Machs" (<60 points) and "high Machs" (≥60 points), we found that both subgroups were similarly numerous - 49.5% and 50.5%, accordingly. The highest representation of "high Machs" was found in the subgroup of medical studies candidates (65.85%), then in the students (47.73%) and in the group of post-graduates (45.16%). Gender differences remained statistically significant - 47.33% of women and 60.18% of men were "high Machs".

Conclusions: Machiavellianism level among medical candidates, students and doctors is relatively high, however is gradually decreasing with the progress of career.

Key words: Machiavellianism - dark triad - medical students - Mach-IV

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INTRODUCTION

The term "Machiavellianism" takes its origin from Niccolò Machiavelli (1469–1527), an Italian politician theorist, philosopher and writer, often referred to as "the father of the modern political thought" (McCormick 2014). He is most known for his treatise "The Prince", a "textbook" which provides advice on how to manage people, for example: "If an injury has to be done to a man it should be so severe that his vengeance need not be feared"; "Never attempt to win by force what can be won by deception"; "Since love and fear can hardly exist together, if we must choose between them, it is far safer to be feared than loved"; "The promise given was a necessity of the past: the word broken is a necessity of the present" (Machiavelli 2003). In psychology, Machiavellianism is a term used to describe a personality trait characterized by emotional detachment and tendency to manipulate to achieve one's own goal regardless of other people (Al Ain 2013). Children high in this personality trait were described as socially skilled, liked by peers and good at building alliances (Hawley 2003). However, Machiavellians were also found to be untrustworthy (Gunnthorsdottir 2002). Regarding the motivations, high Machs compared to low Machs were found to give high priority to money, power and competition and relatively low priority to community building, self-love, and family concerns (Jones 2009). It has also been

observed that males are slightly more Machiavellian than females (Christie 1970). Machiavellianism, along with subclinical narcissism and subclinical psychopathy, is one of the three personality traits referred to as the dark triad, the term coined by Paulhus and Williams (2002).

SUBJECTS AND METHODS

Sociodemographic characteristic of the participants

The participants were 509 voluntary respondents, 82 of which (16.1%) were medical school candidates, 331 (65%) were medical students, 50 (9.8%) were medical trainees, 32 (6.3%) were residents and 14 (2.8%) were specialists. In the group of students, 52 of them (15.7%) were during the first year of studies, 57 (17.2%) during the second, 75 (22.7%) during the third, 59 (17.8%) during the fourth, 36 (10.9%) during the fifth and 52 (15.7%) during the sixth year of medical studies. Females were predominant and constituted 77.4% of the study group (n=394). With regards to marital status, 246 (48.3%) of the respondents were single, 217 (42.6%) were in a relationship, 45 (8.8%) were married and one person (0.2%) was divorced. The vast majority of the respondents (n=493; 96.9%) was childless, 13 respondents (2.5%) had one child, 10 (2%) had two children

and 3 (0.6%) had more than two children. The mean age of all the respondents was 23±5 years, the mean age of females was 22.9±4.7 years and the mean age of males was 23.3±5.8 years.

Instruments and procedures

All the respondents were asked to fill a brief socio-demographic questionnaire and Mach-IV test. Mach-IV test is a self-report tool developed by Richard Christie and Florence L. Geis (Christie 1979). It consists of twenty statements, to which the respondents refer in a five-point Likert scale. Individuals scoring high on the scale (over 60 points out of 100) tend to endorse statements such as: "Never tell anyone the real reason you did something unless it is useful to do so," "The best way to handle people is to tell them what they want to hear", "The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught". The authors suggested a three-dimension structure of Machiavellianism and classified the items of Mach-IV into three categories: Interpersonal Tactics, Cynical View of Human Nature and Disregard for Conventional Morality (Christie 1970).

Statistical analysis

Statistical analysis was conducted with Statistica v. 12 software. Continuous variables were compared using the Mann–Whitney U test. Categorical variables were compared by Chi square test. Correlations were evaluated using Spearman’s rank correlation coefficient. A p value of <0.05 was considered significant.

RESULTS

The overall mean Mach-IV score (59.24; SD=6.07) oscillated around 60 points, which is the borderline between "low Machs" and "high Machs". The highest mean Mach-IV score was found in the group of medical school candidates (61.80±6.94) and the lowest score was reported in the group of registered specialists (57.61±7.88) (for details see Table 1). The most important finding of our study was the statistically significant

(p=0.0196) relationship between the stage of medical career and mean Mach-IV score - the highest score was found in medical school candidates and respondents before and during the first years of medical school and gradually decreased over time (Figure 1 and 2).

Gender was found to be a statistically significant (p=0.016) factor related to the mean Mach-IV score (Figure 3), which in women was 58.97±6.08 points and in men it was 60.16±6.01 points. When divided into subgroups, gender differences remained statistically significant only in the groups of second and fourth year

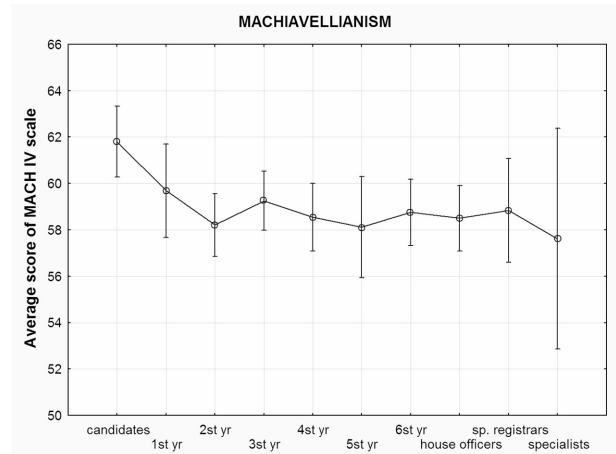


Figure 1. Mean Mach-IV score in all particular sub-groups

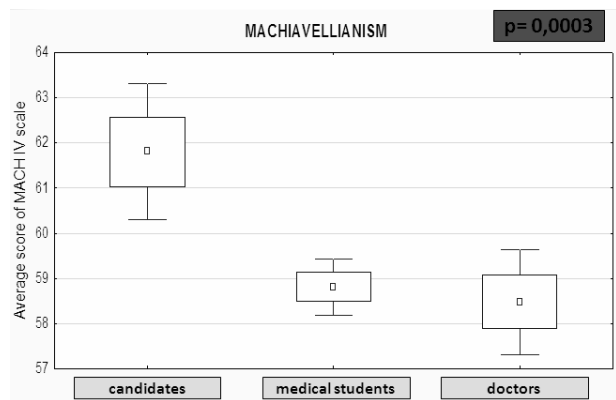


Figure 2. Differences in Mach-IV score between candidates, medical students and doctors

Table 1. Mean, minimal and maximal Mach-IV score in all particular sub-groups

Group	Number of respondents	Mean	SD	Min.	Max.
Candidates	82	61.80	±6.94	45	75
1st year students	52	59.69	±7.23	40	77
2nd year students	57	58.21	±5.11	43	69
3rd year students	75	59.25	±5.52	41	72
4th year students	59	58.54	±5.58	39	71
5th year students	36	58.11	±6.44	46	74
6th year students	52	58.75	±5.16	47	74
Trainees	50	58.50	±4.95	48	69
Residents	30	58.83	±5.98	47	74
Specialists	13	57.61	±7.88	42	68
All	509	59.24	±6.07	39	77

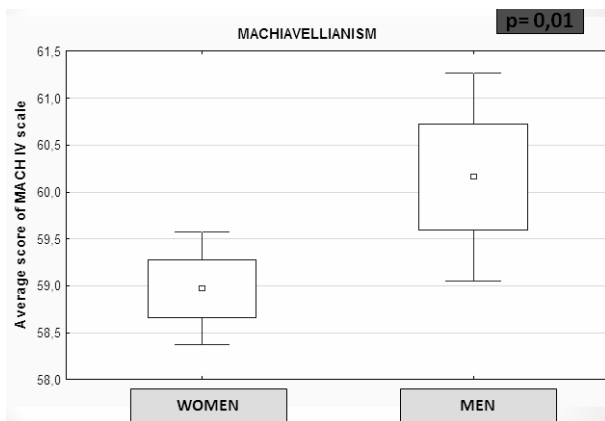


Figure 3. Gender differences in the Mach-IV score

students. Another factor significantly correlated ($p=0.15$) with mean Mach-IV score was the age of post-graduate participants (namely medical trainees, residents and specialists). The overall Mach-IV score was not found to be significantly correlated with mean age ($p=0.127$), marital status ($p=0.89$) and having children ($p=0.54$). To confirm the observed relationships, we divided all participants into subgroups of "low Machs" (<60 points) and "high Machs" (≥ 60 points). It was found that both subgroups were almost identically numerous - 49.5% of "low Machs" and 50.5% of "high Machs". When divided into subgroups, the highest representation of "high Machs" was found in the subgroup of candidates - 65.85% ($n=54$), which is in line with previously described findings. In the group of students there was 47.73% ($n=158$) of "high Machs" and in the group of post-graduate slightly less - 45.16% ($n=42$). Gender differences remained statistically significant ($p=0.016$) – 47.33% of women and 60.18% of men were "high Machs". The relationships with age, marital status and having children were not statistically significant.

DISCUSSION

Almost since the development of Mach-IV scale, Machiavellianism was studied in the context of the choice of profession. Presumably, people scoring high on Machiavellianism scale would more likely choose business-related professions, whereas those scoring lower would prefer helping professions (Skinner 1986). Also, it was reported that law students have higher Machiavellianism scores than other students, however some studies did not support this hypothesis (Hunt 1984; Moore 1995). Corral and Calvete (1999) compared law and psychology female students and found the only statistically significant difference in Mach-IV score for the sub-scales referring to the perception of human nature (law students scored higher than psychology students in Cynical View and lower in Positive View). The authors explain that law as a profession requires such features as manipulation of others and skepticism with regards to human nature. Medicine, as one of the "helping professions" is presumed to endorse the opposite features. Surprisingly, almost a half of our

respondents were found to be high Machiavellians (Mach-IV score ≥ 60). Comparatively, 20 years ago Merrill (1995) found only 15% of students to be high Machs. The author reported, unlike than in our study, that mean scores of senior and junior students did not differ and there were no significant differences in two different age groups (20-30 years and 31-40 years). Consistently with our study, males scored higher than females. Presumably, the higher Machiavellianism level in our sample is a signum temporis. The tendency to act Machiavellian among medical professionalism might be a result of inefficiently financed healthcare systems and higher expectations of patients and doctors themselves. As Dailey wrote in his interesting article on modeling manipulation in medical education: "As residents and medical students progress through their medical training, they are presented with multiple instances in which they feel they must manipulate the healthcare system and deceive others in order to efficiently treat their patients" (Dailey 2010).

CONCLUSIONS

The most important finding of our study is that Machiavellianism level among medical candidates students and professionalism is relatively high, however is gradually decreasing on different stages of medical career. The major shortcoming of our research and also an idea for future study is the lack of comparative group of other professionals.

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