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May the testing of integrity help to employ people with mood disorders?

Abstract:

Background: Integrity involves adherence to a set of moral principles and the courage to act on those principles. In clinical psychology and other health professions, consideration of integrity ensures that the upmost care and respect is given to all- regardless of individual background or mental health condition. However, despite the salience of integrity in clinical practice, it is frequently neglected in the literature. Thus, the main aim of the present study was to test a theoretical model and investigate the use of integrity assessments in clinical populations.

Subjects and Methods: Participants (N=80) were assessed using the Structured Interview of Personality Organization (STIPO), self-reports and simulated cheating task.

Results: Statistical analysis revealed that age, as well as agreeableness; conscientiousness, impression management, moral values and dark triad traits, accounted for 63% of the variance with age and impression management as significant predictors. Integrity was a predictor for cheating at work (Adj. $R^2 = 0.41$), unethical work behavior (Adj. $R^2 = 0.27$) and simulated cheating task (Adj. $R^2 = 0.07$).

Conclusions: The results of the study suggest the possibility of using integrity tests in mood disorders with a moderate level of mood and anxiety impairments.

Keywords: integrity, integrity test, counterproductive, mood disorder

INTRODUCTION

Employment is an essential social determinant and may enhance health and well-being (Khalema & Shankar 2014). Unfortunately, the majority (around 80 – 90%) of individuals with some form of mental disorder are unemployed (Tse 2004). Employers of individuals with mental illness must also deal with their unpredictable work performance and behavioral problems (Mechanic et al. 2002), such as absenteeism (Secker & Mebrey 2003). Thus, employers are less likely to hire individuals with a mental health condition, and frequently encounter issues with these individuals during the course of their employment.

In modern workplaces, depression is the most common and highly prevalent mental health problem (Steward et al. 2015). The negative emotion experienced by individuals with depression predicts feelings of low social support and job satisfaction, and may lead to burnout over time (emotional exhaustion and depersonalization) (Iverson et al. 1998). Moreover, depressed individuals may have difficulty concentrating and performing their work duties, as a result of the mild to moderate degree of cognitive impairment associated with depression (Begovic et al. 2017).

INTEGRITY AND RELATED VARIABLES – THEORETICAL MODEL DEVELOPMENT

Integrity tests have been used in practice for decades. Over the years, their primary function has been to assist companies with their employee selection procedure (Ones & Viswesvaran 2007). Although there are a number of research studies on the relationships between integrity tests and other variables, these relationships are not used in practice. These tests allow companies to assess candidates'

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values and behavior and determine if they suitably align with the employer's expectations. For instance, counter-productive work behavior can take many forms such as employee theft, disciplinary problems, absenteeism, or verbal abuse (Anjum & Parvez 2013) and might be a consequence of personality traits like narcissism (Penney & Spector 2002), agreeableness (Mount et al. 2006) or negative emotions (Krischer et al. 2010).

The majority of studies focusing on the relationship between personality traits and integrity use questionnaire methods based on the Big Five Model of Personality. According to this model, tests of integrity are consistently correlated with three of the Big Five dimensions: Conscientiousness, Agreeableness and Emotional Stability (Sackett & Wanek 1996).

On the other hand, integrity tests showed strong negative correlations with psychopathic personality traits (Connelly et al. 2006).. Furthermore, O´Boyle, Forsyth, Banks & McDaniel (2012) have demonstrated that counterproductive work behavior is associated with increases in all three dimensions of the Dark triad – narcissism, machiavellianism and psychopathy (Paulhus & Williams 2002).

Another possible factor influencing performance on integrity tests may be an individual's level of moral disengagement, which may be used to excuse or remove oneself from undesirable behaviors. Moral disengagement has been shown to have a strong negative correlation with moral identity (Moore et al. 2012). Moral identity describes the extent to which an individual places importance on moral action (Aquino and Reed, 2002). People with high moral identity will strive for consistency between their self-moral conceptions and their actions (Aquino & Reed 2002), whereas people with high integrity will strive for consistency between their words and actions (Kaiser & Hogan 2010), as well as between their actions and values (Gostick & Telford 2003). Thus, moral disengagement is yet another factor that seems to influence integrity and thus warrants further evaluation. Moreover,

a potential source of inaccuracy in self-report measures resides in the tendency to engage in socially desirable responding (SDR) (Paulhus & Reid 1991). Previous studies showed that social desirability is one of the largest limitations of integrity studies, yet despite these unfavor-able characteristics it can be controlled for and is outweighed by the strengths of integrity measures (Coyne & Bartram 2002). This should also be examined further.

Based on the literature review, integrity is predicted to be related to the following personality traits; moral disengagement, moral identity, and social desirability. Figure 1 shows the proposed integrity model- where integrity serves as both dependent and independent variable depending on the specific relationship. The left side of the model shows the variables that could be influencing integrity. These are hypothesized as independent (social desirability, moral identity, moral values and personality characteristics). The right side of the model presents the proposed dependent variables (moral disengagement, cheating, work deviance, moral reasoning, simulated cheating task), which may be influenced by the level of moral integrity. If the statistically significant correlations are confirmed, linear regression models will be applied to evaluate the explained variance. We hypothesize that the model may be helpful in the practical investigation of integrity by linking relevant variables and enabling the measurement of expected relationships that increase the objectivity of the measurement at the individual level.

The goal of the presented study is to examine the personal and moral variables displayed in the model above and their relationships with integrity in psychiatry. We selected patients with mood or anxiety disorders for a relatively smaller alteration of cognitive functions compared to e.g. schizophrenia. We assume that if the model is confirmed in this group of patients, the next step could be to extend to the range of psychotic disorders. A further goal also was to determine which variables influence the integrity and which variables are influenced by integrity.
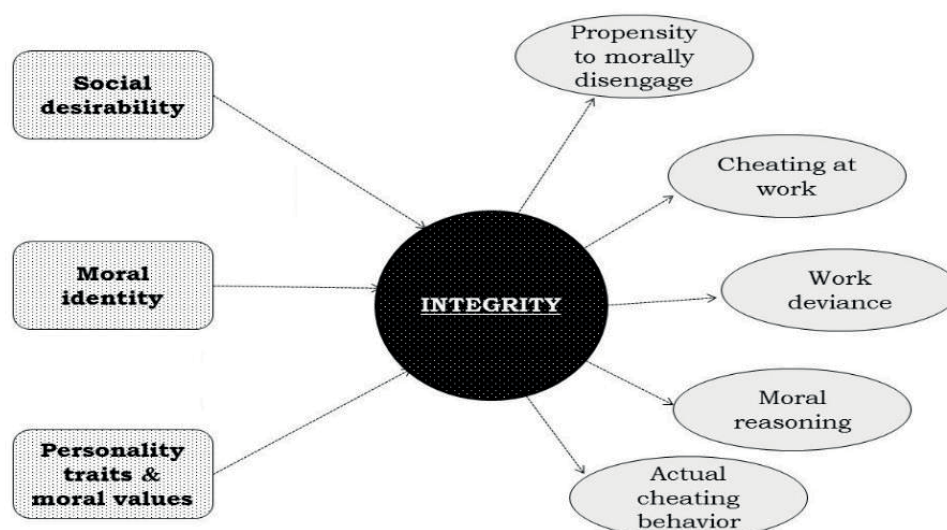

Figure 1: Theoretical model of integrity.

METHOD

Procedures

Inpatients were contacted by a psychiatric psychologist and, after explaining the purposes of the study, were asked to sign an informed consent. Each participant completed a set of self-report measures that assessed integrity, attitudes towards unethical workplace behavior, personality, health status and concepts associated with morality. Aside from the questionnaire methods, a computerized behavioral task was also administered, which allowed participants to easily cheat and thus gain more money. Finally, data concerning demographic information and personality functioning were gathered through a semi-structured interview.

Ethical standards

The presented study was approved by the ethical committee of the [removed for the blinded review] National Institute of Mental Health, Topolová 748, Klecany, 250 67 and has therefore been performed in accordance with the ethical standards laid down by the Declaration of Helsinki in 1964. Each participant was given an informed consent together with information regarding the study prior to inclusion into the study. The participation was on voluntary basis and each subject has received a financial reward 300 CZK. All gathered data was handled in a confidential manner and subject´s identity was kept strictly anonymous.

Participants

The study sample consists of 80 National Institute of Mental Health patients (37 men and 43 women) with the mean age 36.21 years (SD = 12.24) ranging from 18 to 66 years. The inclusion criteria contained hospitalization or attendance of psychiatric day care center for mood or anxiety disorders, while the relevancy of the criteria for the diagnosis was described as score > 20 on Montgomery-Asberg Depression Rating Scale (MADRS) or Beck Depression Inventory (BDI-II) score > 29 for mood disorders, for anxiety disorders Beck Anxiety Inventory (BAI) score > 26. Depressive disorder was diagnosed according to the Mini-International Neuropsychiatric Interview (M.I.N.I.) in 60% of the participants, while the rest 40% was treated for anxious disorder. Other inclusion criteria included at least primary school level education and one year of work experience. The exclusion criteria included alcohol dependency or abuse or drug abuse in the last 12 months prior to inclusion in the study.

MEASURES

Self-report measures

Integrity test was originally developed by the authors of this study Tereza Příhodová a Marek Preiss to evaluate the overall integrity level from the work, moral and personal perspective. The construction of the test was based on the Employee Integrity Index, developed by Ryan and Sackett (1987), as well as, Bennett and Robinson's (2000) assessment of counterproductive work behavior. The items focus on honesty in relation to companies, use of time, conscientiousness at work, use of work benefits, resistance to theft, principledness, general honesty, resistance to fraud. The integrity test showed very good level of overall internal reliability (0.866) and split-half reliability (0.808), similarly satisfying was the level of test-retest reliability (r=0.831, p<0.01). The measure consisted of 34-items, which were rated on a 5-point Likert type scale ranging from strongly disagree (1) to strongly agree (5). Thus, a higher score indicated a higher level of integrity.

The propensity to morally disengage scale (Moore et al. 2012) is a 24 items scale and it was used to assess 8 mechanisms pertinent to the propensity to morally disengage. The standardized Cronbach´s alpha was 0.85.

The 12 items scale **The Self-Importance of Moral Identity** (Aquino & Reed 2002) consists of internalization and symbolization scale. For the purposes of this study, we have used only the internalization scale, as this scale evaluates the strength of one's self-concept as a moral person. The standardized Cronbach´s alpha was 0.71.

The level of social desirability was assessed using the Czech version of the **Balanced Inventory of Desirable Responding** (BIDR; Preiss & Mačudová 2013). The measure consists of 2 subscales: Self-deception and Impression management. The standardized Cronbach´s alpha was 0.78.

The Big Five Inventory with 44 items (BFI-44) was used to assess 5 personality traits of the Big Five model. For the purposes of this study, we have used the validated Czech version prepared by Hřebíčková and colleagues (2016).

Another short self-report measuring evaluating more negative traits of personality included in the study was **The Short Dark Triad** (SD3; Jones & Paulhus 2014). This 27-item questionnaire assesses 3 non-clinical domains encountering Machiavellianism, Narcissism and Psychopathy. The standardized Cronbach´s alpha was 0.72.

Cheating at Work Scale (Sims, 1993) evaluates one´s believes concerning dishonest behavior at work. For the purposes of this study, Sims version of the scale was used. The standardized Cronbach´s alpha was 0.93.

The Unethical Work Behavior Scale was used for the assessment of counterproductive and cheating behavior. This method consists of an antisocial work behavior scale (Robinson & O´Leary-Kelly 1998) labeled as Interpersonal Scale and the Organizational Deviance scale in our study (Bennett & Robinson 2000). In this task, participants rated the extent to which they engage in unethical behaviors. Higher scores indicated a higher level of unethical work behavior. The standardized Cronbach´s alpha was 0.88.

The moral reasoning was assessed with **Conflict at The School Task.** It is a short moral dilemma story about a female student Monika, who had an outstanding academic record and thus was able to work as a teacher´s assistant (TA). She was asked by fellow students to copy and disseminate the final exam. She has done so, but right before the test, the teacher found out about her actions and

handed over the case to the school principle. As the task has both qualitative and quantitative measures, participants were asked to identify with the school director and choose from 4 action choices what to do and then in the space provided justify their decision. Based on Kohlberg (1969) classification the nature of the story allows to reach only the conventional (punish everyone) and pre-conventional (punish Monika) levels.

Interview method

The Structured Interview of Personality Organization (STIPO) was chosen to assess several personality traits and moral values using an in-depth structured interview. STIPO is fairly new method developed by Clarkin and colleagues (2003 and 2007), while the Czech version was prepared by Riegel and colleagues (2015).

This very detailed instrument takes about 3 hours to complete and assesses individuals Identity, Quality of object relations, Primitive defenses, Coping and Rigidity, Aggression, Moral values, and Reality testing dimensions. Higher scores, calculated by the arithmetic score, indicate higher level of pathology. The standardized Cronbach´s alpha was 0.94.

Behavioral task

The Visual Perception Task originally developed by Gino and colleagues (2010) allowed us to measure the actual tendency towards cheating behavior. In this computerized task, participants were presented with a square, which was divided by a vertical line into two parts. In each part of the square, there were different numbers or red-colored, non-overlapping dots. In total there were 20 dots. The task was divided into 6 blocks, in each block participants were presented with 50 squares varying in numbers of dots on the right and left side from the vertical line. Each trial was exposed for about 4 seconds and participants were had to choose whether more dots were presented on the right or left side. However, participants were also told, that if they choose "more on the right" option, they would receive more money (5 cents converted to Czech crowns based on the current exchange rate) compared to choosing "more on the left", where they have received only 0.5 cents (converted to the Czech crowns based on the current exchange rate). The aim of the task here is then to choose between the correct answers that maximize profit.

Statistical analysis

The data was analyzed in R (R Core Team, 2016). To determine the normality of the distribution of the scores, the Shapiro-Wilk test of normality was used. The data shown atypical distribution, and thus nonparametric tests were used in further analyses. Spearman´s rho was used to determine the relationship of the Integrity score to other variables and group differences were examined using the Wilcoxon-Mann-Whitney (effect size is given by the rank biserial correlation r_{rb}) and Kruskal-Wallis tests (effect size measured by epsilon-squared ε^2). For linear regression analysis, the data was assigned a rank, and transformed to normal distribution. Regression analysis was also performed with the variables that significantly correlated with the Integrity score. Model assumptions were then tested with the Durbin-Watson test (independence of assumptions), Shapiro-Wilk test (normal distribution of residuals), and residuals vs. fitted plot (linearity), scale-location plot (homoscedasticity), and residuals vs. leverage plot (influential cases).

RESULTS

Descriptive statistics of measured variables encountered results of the Shapiro-Wilk normality tests that are presented in Table 1.

Statistical analysis revealed a strong positive correlation between the Integrity and Impression management scale measured by BIDR, and strong negative correlations with the Psychopathy scale measured by the SD3, overall Moral disengagement score, Attitude and Perception scale of cheating at work and Organizational and Interpersonal scale of work deviance (Table 2).

Moderate positive correlations were found between the Integrity and Conscientiousness measured by BFI, and moderate negative correlations were found between Integrity and Machiavellianism, Narcissism assessed by SD3 and Moral values assessed by STIPO. Weak positive correlation was found between Integrity score and Agreeableness measured by BFI and weak negative correlation was found between Integrity and the simulated cheating task of error and equal ratio measured in the Visual perception task.

Results of the moral reasoning test are presented as categorical data, with majority of subjects (54%) choosing the option with the highest moral predisposition. Only a mere 32% of subjects chose the average moral option, and 13% of subjects chose the least moral option. Only 1 subject chose other. No statistically significant relationship was found between the Integrity and moral reasoning task assessed by the Conflict at the school test (Kruskal-Wallis $\chi^2 = 6.6$, df = 3, p = 0.09, $\varepsilon^2 = 0.09$). Moreover, Integrity score correlated moderately with subject´s age (rho = 0.36, p = 0.001).

Linear regression models

Prior to the construction of regression models, we have assumed that personality characteristics (measured by BFI-44, SD3, and STIPO) and social desirability (measured by BIDR) scores would predict Integrity. Correlation analysis showed a significant relationship between Integrity and Agreeableness and Conscientiousness (BFI-44), all SD3 variables, Impression management (BIDR) and Moral values (STIPO). We used rank transformation on the data, which resulted in normal distribution for all variables used.

The model explained the same proportion of variation and satisfied all assumptions of linear regression (independent observations: DW = 2.21, p = 0.8; normal distribution of residuals: W = 0.96, p = 0.08; linear relationships, homoscedasticity, no observations with large

Table 1: Descriptive statistical data for measured variables

	N	min	max	M	SD
Age	80	18.00	66.00	36.21	12.24
Integrity score	80	64.00	160.00	123.25	17.97
Mood scales					
MADRS score	80	0.00	46.00	18.61	9.62
BDI-II score	80	0.00	50.00	23.41	12.19
BAI score	78	2.00	54.00	19.96	12.35
BFI-44					
Extraversion	80	0.25	3.50	1.82	0.67
Agreeableness	80	1.11	4.00	2.59	0.66
Conscientiousness	80	0.33	3.67	2.27	0.67
Neuroticism	80	0.88	4.00	2.58	0.70
Openness	80	1.00	3.80	2.49	0.70
SD3					
Machiavellianism	80	12.00	35.00	21.64	5.63
Narcissism	80	8.00	30.00	18.48	5.58
Psychopathy	80	9.00	37.00	20.05	6.41
BIDR					
Self-deception	79	33.00	95.00	58.90	11.83
Impression management	79	47.00	134.00	91.52	17.07
STIPO					
Identity	51	0.20	1.70	0.88	0.42
Objective relations	51	0.20	1.70	0.86	0.47
Primitive defense	51	0.20	2.00	0.91	0.48
Coping/rigidity	51	0.30	1.90	1.12	0.38
Aggression	51	0.10	1.60	0.59	0.32
Moral values	51	0.10	1.50	0.65	0.31
Reality testing	51	0.10	1.30	0.54	0.34
Moral values					
Moral disengagement	80	25.00	129.00	59.71	21.28
Moral identity	79	20.00	65.00	40.67	8.79
Work deviance					
Cheating attitude	79	21.00	62.00	33.75	8.92
Cheating perception	79	22.00	75.00	34.16	8.98
Work deviance interpersonal	74	7.00	37.00	12.95	6.16
Work deviance organizational	74	12.00	51.00	22.89	9.26
Computer task					
VPT – Ratio of beneficial and detrimental error	80	0.21	100.00	9.095	26.09

Table 2: Correlational relationships between Integrity test and other measured variables

Variable		rho	p
Age		0.36	0.001*
BFI-44	Extraversion	-0.09	0.403
	Agreeableness	0.24	0.030
	Conscientiousness	0.33	0.003*
	Neuroticism	-0.11	0.319
	Openness	-0.23	0.038
SD3	Machiavellianism	-0.43	<0.001*
	Narcissism	-0.40	<0.001*
	Psychopathy	-0.56	<0.001*
BIDR	Self-deception	-0.03	0.806
	Impression management	0.55	<0.001*
STIPO	Identity	-0.12	0.415
	Objective relations	-0.17	0.233
	Primitive defense	-0.22	0.121
	Coping/rigidity	0.02	0.863
	Aggression	-0.15	0.296
	Moral values	-0.41	0.003*
	Reality testing	-0.16	0.259
Moral values	Moral disengagement	-0.59	<0.001*
	Moral identity	-0.03	0.779
	Cheating attitude	-0.59	<0.001*
	Cheating perception	-0.62	<0.001*
	Work deviance interpersonal	-0.50	<0.001*
	Work deviance organizational	-0.62	<0.001*
VPT	Simulated cheating task – error ratio	-0.22	0.045
	Simulated cheating task – equal ratio	-0.22	0.048

Note. * = a significant result after applying the Bonferroni correction individually in each category: p value 0.05 divided by the number of variables in each category.

overall influence: plots). The collective effect of the variables was significant ($F_{(8, 42)} = 11.84$, $p < 0.0001$, $R^2 = 0.63$). Thus, the individual predictors were examined further and indicated that age (t = 3.763, $p < 0.0001$) and impression management (t = 2.530, p = 0.02) were significant predictors in the model. The model with original scores still satisfies all linear regression assumptions $F_{(8, 42)} = 13.11$, $p < 0.0001$, $R^2 = .65$; with age (t = 3.696, p < 0.001), Narcissism (SD3, t = -2.118, p <0.05), and Impression management (BIDR, t = 2.245, p < 0.05) as significant predictors.

Further, we have analyzed Integrity as a predictor of the scores of Moral disengagement, Moral identity, moral reasoning measured by Conflict at the school, Cheating at work, Work deviance and simulated cheating task measured by the Visual Perception Task. Moral identity and moral reasoning did not have a significant relationship with Integrity, therefore, we employed the moral disengagement, cheating at work, work deviance, and c as dependent variables. The results are presented in Table 3 below. Some models did not pass the Dubin-Wilson test for independence of observations (Work deviance – Organizational scale) or Shapiro-Wilk test for normality of residuals distribution (Moral disengagement, Cheating at work – Perception scale, Work deviance – Organizational scale).

For a better understanding of the presented results we have created the chart showing the relationship between variables and the effect of independent variables in Figure 2.

DISCUSSION

Previous research showed that there are low correlational relationships between integrity and job performance, training performance, counterproductive work behavior and turnover rate (Van Iddekinge et al. 2012). We examined the relationship between integrity and some aspects of counterproductive work behavior (cheating at work and work deviance) together with other variables. Our results support previous research and provide evidence of strong negative correlations between cheating and work deviance. Furthermore, integrity tests have exhibited robust validity in predicting job performance and other job-related characteristics (Luther 2000), as well as in expected correlational relationship between personality-based integrity tests and maximal performance (0.27). This indicates the predictive power of integrity tests (Ones & Viswesvaran 2007). Moreover, as may be seen above, we have confirmed these assumptions and found a moderate negative (Machiavellianism and Narcissism scale) and weak positive (Agreeableness) correlation with personality-based tests. The collective effect of the variables was significant and explained 63% of the variance. The individual predictors were examined indicated that age and impression management were significant predictors in the model.

In addition, this study was quite unique, as it examined the clinical population, which is typically not evaluated using integrity tests. Yet as was already mentioned, such assessment is very beneficial. It allows for the precise evaluation and prediction of counterproductive behavior in patients with mood disorders. In spite of the fact that these individuals are able to work, the majority of them are unemployed because of discrimination, stigma or employers´ doubts about their unpredictable work performance and work behavior. The results of our study show the usability of the integrity test in individuals with mood disorders and its ability to predict the counterproductive work behavior.

Table 3: Integrity as a predictor for other measured variables

	F	p	Adj R^2	DW	p	W	p
Moral disengagement	73.92 (1, 77)	< 0.001	0.49	1.87	0.548	0.993	0.939
Cheating Attitude scale	54.91 (1, 77)	< 0.001	0.409	2.057	0.609	0.990	0.801
Cheating Perception scale	68.03 (1, 77)	< 0.001	0.462	1.988	0.488	0.966	0.032
Work deviance Interpersonal	27.86 (1, 72)	< 0.001	0.269	1.768	0.162	0.993	0.962
Work deviance Organizational	53.76 (1, 72)	< 0.001	0.420	1.375	0.003	0.967	0.049
VPT – Ratio of beneficial and detrimental error	4.967 (1, 78)	0.029	0.048	1.984	0.481	0.984	0.408

Note. VPT = Visual Perception Task
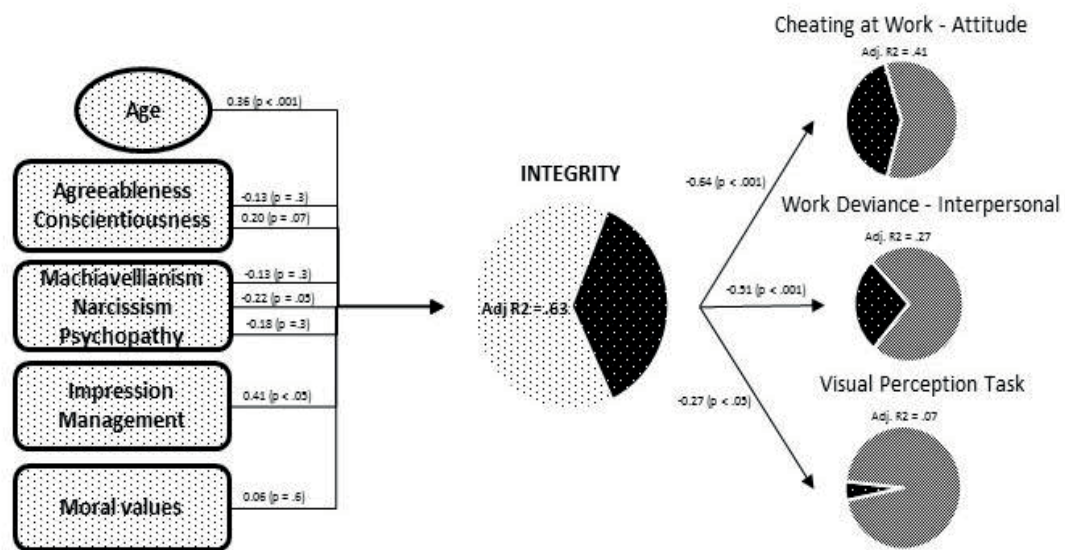
Figure 2: Actual model of integrity of a clinical sample.

In our hypothesized theoretical model, we have assumed that integrity will be dependent on social desirability, moral identity, personality traits and moral values (Figure 1). It was further hypothesized that integrity will be the independent variable, influencing moral disengagement, cheating at work, work deviance, moral reasoning and simulated cheating behavior (Figure 1). Statistical analysis revealed that not all assumption was supported, thus the model was changed and specified (Figure 2). However, the integrity was a predictor for cheating at work, unethical work and simulated cheating task.

Results of the statistical analysis revealed that all dependent measures, with the exception of moral reasoning task and moral disengagement task, contributed to the final model (Figure 2). Overall integrity score showed a strong negative correlation with both scales of cheating at work and both work deviance scales. Weak negative correlation was also found with the simulated cheating task. Furthermore, as Figure 2 shows, the linear regression model explains 41% of the variance on the attitude scale of the cheating at work questionnaire and 27% of explained variance on the interpersonal scale of work deviance questionnaire. These findings are supported by previous research by Martin and colleagues (2009), who have also used Bennett and Robinson´s (2000) work deviance questionnaire, together with integrity measure. Similarly, Lucas and Friedrich (2005), found that academic dishonesty or cheating was predicted by the attitude scale of workplace theft, which was measured by Employee Integrity Index (EII), measure, which was also used during the construction of our integrity test. Unlike past research that use self-re[ort measures to determine the tendency towards unethical behavior, our study decided to use a simulated cheating task. Results of the statistical analysis showed a weak significant correlation between integrity and actual cheating task and that integrity explained 7% of the actual cheating variance.

Age was a demographic variable that was not originally assumed in the proposed model, yet we found a striking moderate correlation (rho = 0.36, p = 0.001) and have decided to include it in the new model (Figure 2). The explanation for such strong correlation could be found in the interplay between integrity and integration of personality. The process of integration occurs during different stages of life (Erikson´s psychosocial stages) and level of integrity growth during these developmental periods. Furthermore, research also shows that personality traits often associated with integrity such as Conscientiousness,

(Husbands et al. 2015) also significantly correlate with age (Denissen et al. 2008). Thus, overall, these findings support our results.

Variables omitted from the integrity model

In the past, both overt and personality-based integrity tests showed a strong, negative correlation with the psychopathic personality, whilst only modest correlational relationships were found with ego development and moral reasoning (Connelly et al. 2006). In the presented study, we found significant differences in the correlational relationships between the two morality tests used. While we have found a strong negative correlation between moral disengagement and integrity, there was no statistically significant correlation with moral identity (Figure 2). Lack of association between integrity and moral identity in our study might be explained by cultural differences. The measure was originally developed for US population (and non – clinical population). This conclusion is also supported in the pilot study, where at least two items should be excluded from the original scale (Juríčková et al. 2017).

The hypothesis regarding the relationship between moral disengagement and integrity was supported. However, we were not able to use moral disengagement construct in the final model (Figure 2), due to the atypical distribution. It is further hypothesized that with normal data distribution, we should be able to predict moral disengagement based on integrity level. Similar conclusions were also drawn by Mobley and colleagues (2012), who argue that ethical leaders, representing moral individuals possess a higher integrity level and thus rarely practice moral disengagement.

Statistical analysis revealed that in the moral reasoning test (Conflict at the school test), the majority (54%) of subjects chose the punishment of everyone involved (both students and Monika), which was the most moral choice. This finding is supported by Kohlberg´s classification (1969), as it represents the realization of the necessity to obey laws and social norms in order for the society to function (Kohlberg 1969). In general, we may see that story prepared and allowed for the desired variance in respondents. It may give us a general idea about how patients, despite their impacted cognitive abilities due to their mental health condition, are capable for solving moral dilemmas even on conventional levels. Moral reasoning was hypothesized (Figure 1) to be in a statistically significant relationship with the overall Integrity score. However, based on the results of the Kruskal-Wallis test there was no significant relationship found. The lack of evidence between these two variables might have been due to the nature of the story, which even though it represents a moral dilemma may have been distant in nature for the number of adults- who are more likely to deal with work--related moral dilemmas.

Statistical analysis revealed no significant correlations with the overall Integrity score, suggesting no influence of these mood variables and morality. Since in clinical practice, one of the typical observed feature is a frequent presentation of cognitive deficits in combination with mood disorders, it was necessary to evaluate the relationship between mood and integrity. Based on our study, it seems that if cognitive deficits are part of mood disorders, they do not influence integrity. It may be due to the relatively small impact on decision-making and moral reasoning abilities that their mental health condition causes. The conclusion of no impact of cognitive deficits in mildly depressed clinical sample was also supported by previous research done by Müller-Thomsen and colleagues (2005). Consequently, these conclusions enable the use of integrity tests in mood disorder with a moderate level of mood and anxiety impairments.

Limitations

One of the main limitation was the number of participants included in the study (N=80). The lack participants involved was mainly due to the level of detail involved in this method- which required in-depth assessment for the sake of fewer participants. Moreover, as the study design was quasi-experimental and the sampling method was opportunistic, we were not able to make any generalizable conclusions. All conclusions are drawn and tied to the specific clinical sample collected. Another limitation of our study was the fact that it examined statistical relationships with rather low values. This was most likely due to the fact that we used a mixture of methods (questionnaires, behavioral task, interview). However despite the low correlations, we believe that by combining different methods, we gained an advantage in our study overall.

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