



Confirmatory factor analysis of the Machiavellian Personality Scale



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ARTICLE INFO

Article history:

Received 1 January 2015

Received in revised form 25 February 2015

Accepted 8 March 2015

Available online 23 March 2015

Keywords:

Machiavellianism

Personality

Dark triad

Confirmatory factor analysis

Structural equation modeling

Factor structure

Reliability

Suppression

ABSTRACT

According to Christie and Geis (1970), Machiavellianism predisposes one to self-interested behavior, manipulation, and deceit often at the expense of others. The measurement of Machiavellianism began with the Mach IV (Christie & Geis, 1970), which has long suffered from an indeterminate factor structure and poor reliability. Dahling, Whitaker, and Levy (2009) developed the Machiavellian Personality Scale (MPS) to address these shortcomings. In the current examination of the MPS, a four-factor structure is supported with confirmatory factor analysis, but the relationships in a full structural equation model between the four subscales and the criterion of empathy is problematic in that some MPS subscales are negative, some positive, and some unrelated to empathy. Additionally, reliability issues arose with the MPS as have historically occurred with the Mach IV. The four subscales of the MPS appear to act as suppressors of each other, further complicating the predictive relationship between Machiavellianism and other variables.

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1. Introduction

Niccolò Machiavelli penned his treatise “The Prince” in 1513 but it was Christie and Geis’ seminal work in 1970 that launched an initial stream of theoretical and empirical examinations of interpersonal manipulation known as Machiavellianism. Relying on an iterative process, preliminary scales based on 71 items were ultimately refined into the Mach IV, a 20-item Likert scale designed to tap the nature of an individual’s interpersonal tactics, views on human nature, and abstract or generalized morality (Christie & Geis, 1970: 14–15). Despite its widespread use the Mach IV has been plagued by inconsistent and sometimes poor reliability and an indeterminate factor structure, both of which have led to a reliance on the overall Mach IV measure rather than any of a varying number of poorly measured sub-scales (see Rauthmann (2012) for a summary of previous research examining these and other problems with the Mach IV).

In spite of the aforementioned measurement issues with the Mach IV, numerous studies have empirically examined the relationship between Machiavellianism and constructs like:

leadership (Drory & Gluskinos, 1980); theft (Fehr, Samson, & Paulus, 1992; Harrell & Hartnagel, 1976); job satisfaction (Gemmil & Heisler, 1972; Heisler & Gemmill, 1977; Hunt & Chonko, 1984); helping behaviors (Wolfson, 1981); and occupational choice (Chonko, 1982; Fehr et al., 1992; Hunt & Chonko, 1984). After the development of the scale and initial research enthusiasm for Machiavellianism, interest in the construct eventually plateaued (Wilson, Near, & Miller, 1996). As Dahling, Whitaker, and Levy (2009) noted, this was unfortunate given the potential relevance of Machiavellianism to contemporary organizations.

More recently, research on Machiavellianism has enjoyed resurgence. After Paulus and Williams (2002) coined the term “dark triad” to describe the socially malevolent combination of Machiavellianism, narcissism, and sub-clinical psychopathy, research interest in the dark triad and the factors that comprise it has proliferated. While the Mach IV instrument continues to be frequently used, recurring critiques of it have prompted renewed interest in its psychometrics as well as the development of alternative scales (Dahling et al., 2009; Hunt & Chonko, 1984; Rauthmann, 2012; Rauthmann & Will, 2011). As reported in Rauthmann (2012: 347), German researchers have developed several alternative versions of a Mach scale: Machiavellian Attitudes; Machiavellianism/Conservatism; and the German Machiavellianism Scale. While alternative scales have been developed by U.S. researchers (Andrew, Cook, & Muncer, 2008; Aziz,

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May, & Crotts, 2002; Dahling et al., 2009; Valentine & Fleischman, 2003), only Dahling et al.'s (2009) Machiavellianism Personality Scale (MPS) has been widely used.

Dahling et al. (2009) provided a thorough analysis of the weaknesses associated with the Mach IV scale and proposed an alternative multi-dimensional measure with four distinct subscales: Distrust of Others, Amorality, Desire for Control, and Desire for Status. Moreover, they argued that "...we see these dimensions as manifestations of Mach(iavellianism) that are likely to be highly correlated and *share similar relationships with antecedents and consequences*" (Dahling et al., 2009: 228; italics added for emphasis). Despite their aspiration to provide researchers with a Machiavellianism measure that would improve upon the flawed Mach IV scale, the published studies which have used the MPS have suffered from some of the same problems as the Mach IV.

For example, Whitaker and Dahling (2013) examined the relationship between scores on the MPS and promotability ratings by supervisors. Although they conducted a confirmatory factor analysis (CFA) using four parcels of items with one parcel for each sub-scale to verify the underlying factor structure for the MPS, all their subsequent analyses relied on the aggregate MPS measure with Cronbach's alpha of .79. They did not report alphas for the sub-scales. In their suggestions for future research, they obliquely acknowledged this limitation of their use of the overall MPS score instead of subscale scores when they noted that "...future research should focus on more specific, dimension-level relationships" (Whitaker & Dahling, 2013: 369).

Similarly, Zagencyk, Restubog, Kiewitz, Kiazad, and Tang (2014) used the MPS in two independent samples (alphas for the 16-item MPS of .88 and .79). Unfortunately, their reliance on only the aggregate MPS undercut their ability to achieve their purported goals. Surprisingly, Kuyumucu and Dahling (2014) also opted to rely on only the aggregate MPS Machiavellianism measure ($\alpha = .83$), citing Zagencyk et al. (2014) as their support for that decision. Thus, Whitaker and Dahling (2013), Zagencyk et al. (2014), and Kuyumucu and Dahling (2014) all opted to use the overall MPS scale instead of its sub-scales and therefore failed to report alpha reliability at the sub-scale level.

In contrast, Niemi and Young (2013) examined both the aggregate MPS measure as well as the four MPS subscales in their analysis of data from five independent samples. Their analyses, however, revealed a markedly inconsistent pattern of relationships between the four MPS subscales and some dependent variables in that the correlations between the sub-scales of the MPS were in opposite directions of each other in their relationship with purity values from the Moral Foundations Questionnaire (Graham et al., 2011). Specifically, purity was significantly positively related to the MPS subscales of Desire for Status and Distrust of Others, significantly negatively related with amorality, and non-significantly related to Desire for Control. Moreover, the overall MPS score was non-significantly correlated with purity values. These results appear contrary to Dahling et al.'s (2009) stated purpose of the MPS to have the four subscales relate similarly with other variables. As in previous studies that used overall MPS scores instead of sub-scale scores, Niemi and Young's (2013) completely omitted information about score reliability on both the subscales and the overall MPS scale.

Miller and Konopaske (2014) analyzed the four subscales of the MPS as individual predictors in a test of the specificity matching principle (Epstein, 1979; Fleeson, 2004). In regression analysis, three sub-scales were positively related to perceived work entitlement and one was a negative predictor. Their mixed results suggest that the MPS may not yield reliable scores at the subscale level (for one subscale, $\alpha = .64$) and are similar to Niemi and Young (2013) in that the subscales do not always relate consistently (either all negatively or all positively) with other variables.

Because previous uses of the MPS have resulted in many of the same problems that plague the Mach IV, the current study uses CFA and structural equation modeling (SEM) in a psychometric examination of the MPS. We use CFA to examine the MPS at the item level (instead of using item parcels), which except for the original authors of the MPS, has not yet been conducted. This item-level CFA allows us to more properly examine the hypothesized four-factor CFA structure for the MPS. Additionally, using SEM we hypothesize that the four subscales of the MPS are all negatively related to empathy, a construct previously found to be consistently negatively related to Machiavellianism (e.g. Andrew et al., 2008; Giammarco & Vernon, 2014). Lastly, sub-scale alphas are calculated to verify Miller and Konopaske's (2014) reliability results.

2. Method

2.1. Participants

Two hundred eighty-two college students provided data for this study. Most of the participants were female (57.7%). The mean age was 21.53 years and self-reported racial or ethnic group membership was as follows: 64.3% White, 6.3% Black, 23.4% Hispanic, 3.7% Asian, and 2.3% other. The mean level of full-time and part-time work experience was 23.03 months and 40.53 months, respectively. Nearly 61% were currently employed. Of those 172 currently employed participants, 11% were the direct supervisor or manager of other employees. Of those 19 managers, the mean number of direct reports was five.

2.2. Measures

2.2.1. Machiavellianism Personality Scale (MPS)

The MPS (Dahling et al., 2009) is comprised of four sub-scales: Distrust of Others (five items), Desire for Status (three items), Desire for Control (three items), and Amorality (five items). Sample items for each sub-scale include, respectively: "I dislike committing to groups because I don't trust others", "I want to be rich and powerful someday", "I like to give the orders in interpersonal situations", and "I am willing to sabotage the efforts of other people if they threaten my own goals". Cronbach's coefficient alpha of internal consistency reliability for scores on these four sub-scales was, respectively: .59, .65, .71, and .79.

2.2.2. Empathy

This construct was measured using the eight-item scale from the International Personality Item Pool (IPIP) developed by Goldberg (1999) and Goldberg et al. (2006). Scores on the IPIP Empathy scale have resulted in higher reliability than Cloninger, Przybeck, Svrakic, and Wetzel's (1994) Temperament and Character Inventory (TCI) measure of empathy. Goldberg (1999) reported a correlation between the IPIP Empathy scale and the TCI Empathy scale of .86. Sample items include: "I feel others needs" and "I have a good word for everyone." Cronbach's alpha for scores in this sample was .82.

2.3. Procedures

Anonymous data were collected with a self-report paper-and-pencil survey from 282 participants that were administered during class time in a course required of both business majors and minors at a large university in the American southwest. Almost 63% were business majors (e.g. finance, management, marketing, accounting, computer information systems) and the others were business minors who had declared majors in fields as diverse as chemistry, fashion merchandising, and English, amongst others. In exchange for

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