

Correlates of the Openness to Experience Domain

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ABSTRACT - Three studies are described ($N_s = 59, 31, 25$) which examined correlates of the Openness to Experience dimension of the five-factor theory of personality (FFT). Participants completed the M5 Questionnaire, a FFT instrument derived from the IPIP item set (Goldberg, 1999), in addition to measures of religious fundamentalism, religious tolerance, and artistic interests. At the domain level, Openness correlated negatively with the Religious Fundamentalism Scale (Altemeyer & Hunsberger, 2004), positively with the O*Net Artistic Interest Scale (U.S. Department of Labor), and positively with items assessing open-mindedness to a novel religious situation. At the facet level, the Religious Fundamentalism Scale correlated negatively with Intellect and Liberalism. The O*Net Artistic Interest Scale correlated positively with the Adventurousness and Artistic Interests. Together, these findings support the validity of the M5 Questionnaire as a measure of the FFT Openness dimension as well as providing additional understanding of the nature of this domain.

Over the past two decades, the Five-Factor Theory of personality (FFT) has emerged as the dominant paradigm for studying personality. Perhaps the most widely elaborated version of the FFT is that described by Costa and McCrae (1995) and assessed by the NEO Personality Inventory-Revised (NEO-PI-R; Costa & McCrae, 1992). This particular broad-bandwidth personality inventory, among others, is a proprietary instrument, copyrighted by authors and publishing companies. Although personality research has experienced substantial resurgence in recent years, a lack of freely available personality inventories is a major constraint. Cost factors are problematic for graduate students and other researchers, and copyright issues inhibit the flexible editing and modifying of measurement tools that could enhance theory development. Goldberg (1999) addressed this issue by developing a scientific *collaboratory* known as the International Personality Item Pool (IPIP; 2001). The IPIP was developed with the intention to provide rapid access to measures of personality and other individual differences to promote the advancement of personality theory. The IPIP is a public-domain collection of personality items of similar format (2,413 items at the time of this writing), providing scales measuring constructs analogous to those measured by many major proprietary personality inventories.

The M5 Questionnaire

The M5 Questionnaire (M5; McCord, 2002) is designed to assess traits of normal personality. The M5 is an instrument based on the facets and domains described by Costa and McCrae (1995). The M5 is a self-report measure comprised of 336 items from Goldberg's International Personality Item Pool (2001), which determines personality scores identified at five basic domains; Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience. In addition to these five broad domains, each domain contains six independent, lower-level facets, which provide more narrow descriptors of each broad domain. The Openness to Experience domain, the focus of the present review, consists of the following facets; Imagination, Artistic Interests, Emotionality, Adventurousness, Intellect, and Liberalism. The M5 makes claim to strong internal reliability and generally good validity based on data provided on the IPIP website. This present report is intended to provide further empirical support for the M5 and to extend our knowledge about the Openness to Experience domain.

Study 1

Owings, Ulrich, and McCord (2004) provided validity data for the Openness to Experience domain of the M5 Questionnaire by examining 59 college students' scores with their performance on a 10-item measure associated with the construct of Openness to Experience designed specifically for the purposes of their study. Participants viewed a stereotypical picture of a Muslim college student and heard five novel statements pertaining to the Muslim religion. Participants were then asked to complete the M5 Questionnaire and a 10-item questionnaire assessing their reactions to the unfamiliar religious situation.

Results revealed statistically significant correlations between the M5 Openness to Experience domain and 4 of the 10 items used to assess the participants' response to the novel religious situation. Statistically significant correlations between M5 domain/facet scores and the 10-item questionnaire are presented in Tables 1 and 2. Positive correlations existed between the M5 Openness to Experience domain and the participants' willingness to engage in a one to one interaction with the Muslim student ($r = .482, p < .01$), willingness to attend a service of the Muslim student's faith ($r = .449, p < .01$), and willingness to attend a meeting of the Islamic student organization on campus ($r = .358, p < .01$). Furthermore, a significantly negative correlation was found for the M5 Openness to Experience domain and a question assessing the extent to which the participant would be "bothered by" having the individual as a roommate ($r = -.351, p < .01$).

These results suggest that an individual's willingness to interact with another individual of an unfamiliar faith, attend a worship service of an unfamiliar faith, and attend a meeting of a student organization for a novel faith demonstrated a significant positive correlation with the Openness to Experience domain. Interestingly, the participants' degree of discomfort in living with the Muslim college student illustrated a significant negative correlation with the Openness to Experience domain. Overall, the results established strong evidence for the validity of the M5 Openness to Experience domain as a measure of personality attributes associated with a willingness to experience a novel situation.

Study 2

In a similar study, Miller and McCord (2007) examined the relationship between religious fundamentalism and personality based on the Five Factor Theory in order to elucidate the nature of religious fundamentalism. Validity data for the Openness to Experience domain of the M5 Questionnaire were provided by comparing 31 college students' scores on the M5 Questionnaire with their scores on the Religious Fundamentalism Scale (Altemeyer & Hunsberger, 2004). The Religious Fundamentalism Scale is a 20-item questionnaire that measures attitudes about one's religious beliefs.

Statistically significant negative correlations were found between the Openness to Experience domain and the Religious Fundamentalism Scale ($r = -.418, p < .05$) as well as for the Intellect facet ($r = -.437, p < .05$) and the Liberalism facet ($r = -.540, p < .01$). Correlations between M5 domain/facet scores and the Religious Fundamentalism Scale are detailed in Tables 1 and 2. These results demonstrate that there is a significant negative correlation between how open an individual is to new experiences and their belief in an absolute religious authority and firm adherence to a set of religious principles.

Study 3

King-Vogel and McCord (2006) explored the validity of the Artistic Interests facet (O2, under the Openness domain) of the M5 Questionnaire by comparing 25 college students' scores with their performance on other measures associated with the construct of artistic interest. Participants completed the 336-item M5 Questionnaire, the 30-item Artistic Interest Scale of the O*Net Interest Profiler (U.S. Department of Labor), and a 15-item media presentation constructed specifically for their study. The latter measure was constructed in Microsoft PowerPoint and included 10 works of visual art, some more well-known than others, followed by 5 musical selections. Subjects rated each item on a 5-point Likert-type scale reflecting their degree of interest in the stimulus, and scores were summed producing a total "Media" score, with higher scores indicating higher levels of artistic interest.

The authors found a moderate correlation for the O*Net Artistic Interest scale and the Openness to Experience domain of the M5 Questionnaire ($r = .429, p < .05$) as well as a statistically significant positive correlation for the Adventurousness facet ($r = .430, p < .05$). Interestingly, the Media score correlated with only a single facet of the M5 Questionnaire, Artistic Interests ($r = .533, p < .01$). Correlations between M5 domain/facet scores and the Artistic Interest Scale on the O*Net Interest Profiler and the Media presentation are presented in Tables 1 and 2. These findings evidence a high level of discriminant validity for the Openness to Experience domain, further contributing to the notion that the M5 Questionnaire is an accurate measure of an individual's aesthetic interests.

Summary

The least researched and least understood domain of the FFT, Openness to Experience encompasses a distinct set of traits independent of the other basic personality factors. This particular construct has been commonly conceptualized as a measure of intellectual openness versus closedness (Widiger & Lynam, 1998).

Table 1
Correlations Between M5 Domain Scores and
Measures of Openness to Experience

M5 Domain	RFS	O*Net	Media	Q1	Q3	Q5	Q8
Neuroticism	-	.032	.174	-.214	.017	.009	.085
Extraversion	-	.175	-.187	.424**	-.126	.195	.134
Openness	-.418*	.429*	.339	.482**	.351**	.449**	.358**
Agreeableness	-	-.003	.378	.140	-.221	.398**	.269*
Conscientiousness	-	-.114	-.114	.104	.118	-.013	-.039

Note. Dashes indicate correlations were not provided by the authors. RFS = Religious Fundamentalism Scale; O*Net = Artistic Interest Scale on the O*Net Interest Profiler; Media = media presentation.

* $p < .05$ ** $p < .01$

Q1 = Would you be willing to engage in a one to one interaction with him on these issues?

Q3 = Would it bother you to have this individual as a roommate?

Q5 = Would you attend a service of this individual's faith?

Q8 = Would you attend a meeting of the Islamic student organization on campus?

Table 2
Correlations Between Openness Facet Scores and
Measures of Openness to Experience

Openness Facet	RFS	O*Net	Media	Q1	Q3	Q5	Q8
Imagination	-	.200	.232	.213	-.238	.403**	.204
Artistic Interests	-	.238	.533**	.353**	.339**	.297*	.310*
Emotionality	-	.196	.116	.270*	-.100	.373**	.279*
Adventurousness	-	.430*	.099	.355**	-.114	.248	.214
Intellect	-.437*	.389	.096	.466**	-.214	.307*	.240
Liberalism	-.540**	.232	.189	.132	-.309*	.052	.094

Note. Dashes indicate correlations were not provided by the authors. RFS = Religious Fundamentalism Scale; O*Net = Artistic Interest Scale on the O*Net Interest Profiler; Media = media presentation. * $p < .05$ ** $p < .01$

Q1 = Would you be willing to engage in a one to one interaction with him on these issues?

Q3 = Would it bother you to have this individual as a roommate?

Q5 = Would you attend a service of this individual's faith?

Q8 = Would you attend a meeting of the Islamic student organization on campus?

As assessed by the NEO-PI-R (Costa & McCrae, 1992), Openness may be observed in six distinct areas; Fantasy, Aesthetics, Feelings, Actions, Ideas, and Values. Likewise, the Openness to Experience domain of the M5 Questionnaire (McCord, 2002) contains six lower-level facets offered by Goldberg in the IPIP analog of the NEO-PI-R; Imagination, Artistic Interests, Emotionality, Adventurousness, Intellect, and Liberalism. Based on the descriptors of these two personality inventories (and the many other comparable measures of personality) one may conclude that individuals who generally score high in Openness to Experience tend to value art and beauty, possess a vivid imagination, appear intellectually curious, and remain open or willing to experience a wide range of emotions and/or feelings.

Due to the paucity of research dealing exclusively with the Openness to Experience dimension, the present review was designed to contribute to the literature on this topic. The three aforementioned studies were selected on the basis of their concise content with the rationale that three narrowly conducted investigations would offer a much clearer indication of the Openness to Experience dimension rather than a more elaborate study of the full five-factor theory of personality. Not surprisingly, these data support the idea that the Openness domain includes aesthetic interests and intellectual tolerance and open-mindedness to new ideas. Consistent negative relationships were noted with measures of religious fundamentalism. Finally, these data offer additional support for the validity of the M5 Questionnaire (McCord, 2002).

Prospective studies will provide more inclusive evidence for the Openness to Experience domain with particular focus on the Imagination facet (OI, under the Openness domain) of the M5 Questionnaire. Furthermore, due to the three abovementioned studies' decision to utilize a convenience sample coupled with the accepting nature of the Openness domain (the focus of the preceding investigations), the present review may not provide a truly representative sample of all individuals. The next step will be random administration of the M5 Questionnaire in order to eliminate the bias involved in convenience sampling with the intention of measuring openness.

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