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Exploratory Factor Analysis of a Self-Control Scale from an Islamic Perspective

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Abstract

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Differences between cultures force some psychological variables to differ. Self-control has been found to be an important and significant factor in a person's life, thus it needs to be enriched with plenty of research in order to put its usefulness and efficacy in motion. However it has been found that the Islamic concept of self-control is in some ways different from that of Western concept. This acted as a drive to come up with studies on the Islamic perspective of self-control. Just like any psychological variable, it needs to be measured in order to monitor it. The current study aims to conduct an exploratory factor analysis to a newly developed self-control scale from an Islamic perspective. After the authors distributed the preliminary item pool of the scale to a sample of 201 undergraduate and postgraduate students, and performed the pilot study, they ran the EFA process with the 55 original scale items, and resulted in 4 dimensions scale with 19 items. The rationalization of the new constructs and the implications of findings are discussed.

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Keywords: factor analysis; self-control; Islamic perspective.

1. Introduction

It has been said that “knowing reasons solves wonders”. Thus just like any other serious problem, reasons leading to crime and deviant behavior are important factors in analyzing the issue and finding effective solutions for them according to each particular factor. In most cases, crime committers don't lack sufficient information on the harmfulness and the horror of their behaviors, but in fact they lack some proper psychological and mental processes that work to inhibit them from approaching this way

of handling their problems, especially in stressful states. Based on the above it's highly hypothesized that a highly significant number of crimes are consequences of low self-control.

The last hypothesis is supported by plenty of studies that attribute the various types of deviation and crimes to the lack of self-control. Cheung and Yuet (2008), predict that high scores in self-control will provide enough power to prevent delinquency in a Chinese context, as the bivariate results showed that low self-control correlates with delinquency (Cheung and Yuet, 2008).

In another study by Allahverdipour et al. (2006) they examined relationships between self-control status and substance abuse and substance abuse-related behaviors in a high school setting. Results show that students with poor self-control report that they had used drugs and smoked to a significant extent; they also experienced pressure from their peers to use drugs and smoke (Allahverdipour et al., 2006).

Similar to the previous studies, Stoolmiller et al. (2002) found that growth in substance use is higher among participants who show decreases in self-control and lower among participants who show increases in good self-control (Stoolmiller et al., 2002). It is obvious from the above mentioned sample of studies, that self-control is regarded as a pivotal reason to many serious issues worldwide. Hence, doing research on it is meant to contribute to solving the related problems.

However, research efforts are not going to flourish unless they stand on a solid basis. This basis is the use of scientific and standardized tests in assessing self-control. For example, if the instruments relied upon in the previous studies were lacking validity and reliability, the conclusion is not going to be true, and thus the study cannot help in the resolution process, moreover it may cause more harm than good.

The available self-control tests are developed and validated Based on Western literature, culture and samples, which do not always match the worldview of Muslims' culture, as their religion has a considerable effect on the way they exercise their self-control. Thus, this study aims to provide the Muslim population with an alternative instrument in measuring self-control, which is based on the Islamic culture.

2. Literature Review

There is a number of available self-control scales which have been developed from Western perspective, they based their scales on either cognitive, behavioural or emotional aspects. A study by June et al. (2004), entitled "High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success" came up with a self-control scale which covered the following constructs: "control over thoughts", "impulse control", "emotional control", "habit breaking", and "performance regulation". The scale showed both good test-retest reliability (.85) and internal consistency (June et al., 2014).

Another study by Julie Stein Gray (2012), titled "The development and examination of a self-control scale derived from a standard addiction research assessment". It was based mainly on the following constructs "hostility", "anxiety", and "decision making". It had good outcomes, Cronbach's Alpha of .70, coefficient Alpha of .78, as well as good convergent and cross validity (Julie, 2012). An earlier study conducted by Rosenbaum (1980), titled "A schedule for assessing self-control behaviors:

Preliminary findings”, it was developed on the following constructs “use of cognitions”, “use of problem solving strategies”, “ability to delay immediate gratification”, and “perceived self-efficacy”. The unique characteristic of this scale is that it achieved good incremental validity that was as a result of good correlations with other scales, in addition to good test-retest correlation (.86) (Rosenbaum, 1980).

The literature of self-control seems to be growing interestingly and getting attention from many researchers. However the studies conducted were concerned only about the cognitive, behavioral, and emotional aspects, while they overlooked the aspect of spirituality that has been confirmed to be of an enormous effect on the human life. It has been also found that the focus of most studies is being centred on the West, with Western populations, and under Western theories and philosophies, whereby there were no such Eastern populations and theories included.

Thus the researchers of the current study join the group of those self-control researchers, but bring in a new perspective on self-control which is the Islamic point of view, and study it on a Muslim sample. This is because the Islamic stand on self-control is believed to be the appropriate mechanism that explains self-control with the Muslim populations.

3. Methodology

3.1. Participants

The target population of the current study was male and female undergraduate students from four (4) faculties of the International Islamic University Malaysia IIUM’s main campus. IIUM main campus consists of 8 faculties namely; Ahmed Ibrahim Kulliyah of Laws, Centre for Languages and Pre-University Academic Development, Institute of Education, Kulliyah of Economics and Management Sciences, Kulliyah of Architecture and Environmental Design, Kulliyah of Information and Communication Technology, Kulliyah of Engineering, and Kulliyah of Islamic Revealed Knowledge and Human Sciences. The sample of the study was chosen using multi-stage cluster sampling method whereby four (4) faculties were randomly chosen from the total of eight (8) faculties. Two (2) exact science faculties, and two (2) non-exact science faculties, and then 50 students were chosen randomly from each faculty which made up a sample of 200 students. The reason why this method of sampling was used here is to make the sample balanced and diverse in terms of specialization besides gender, the thing that definitely affects the results of this study.

3.2. Data collection

Participants were approached at different places of the IIUM main campus, and they were administered the developed measurement instrument of self-control from Islamic perspective. Time of administration for each participant was not an issue rather it was at the convenience of the participants, however the overall estimated time was two weeks. The instrument was attached with a cover letter that introduces the researchers as well as the purpose of conducting the study. It also assured them of the confidentiality of the data they were about to provide. In addition, it provided them with instructions on answering the instrument.

3.3. Data analysis

Data was keyed-in in an SPSS sheet, after that it was run through Exploratory Factor Analysis EFA using the SPSS software. This is to organize and reduce data, and prepare it for further steps.

3.4 Pilot study

The initial validation process of the self-control scale from Islamic perspective was done. It contained 40 respondents who were selected randomly from among students of the International Islamic University Malaysia. The aim behind this process is to make sure that the instrument is clear and easily understood by the sample. In order to determine the instruments' readiness for the study; Cronback's Alpha, which tells about the instruments' reliability, was found to be high (.908). This serves as an indication that the scale in hand is up to standard for respondents to answer and thus ready to use for further analysis.

4. Results

After the data screening process was done and showed no errors or missing values, the initial exploratory factor analysis of the scale was run. The results showed that the original item pool of the self-control scale from the Islamic perspective was not organized, and that called for an alternative version of the scale that aims to satisfy the aim behind constructing this scale which is to make it an organized and sound item pool that is represented by relevant and sufficient constructs. Tables below display the original self-control scale from the Islamic perspective's KMO and Bartlett's test, and Eigenvalue respectively.

Table 1. Original scale's KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.783
Bartlett's Test of Sphericity	Approx. Chi-Square	3323.611
	Df	1485
	Sig.	.000

Table 2. Eigenvalues and variance explained of the original scale

Total	Cumulative %
3.725	6.773
3.405	12.965
3.220	18.819
3.101	24.458
3.077	30.053
2.926	35.374
2.407	39.750
2.373	44.065
2.239	48.137
1.788	51.388
1.665	54.416

The exploratory factor analysis of the alternative self-control scale from the Islamic Perspective was conducted, the results showed that the scale was qualified for factoring and items reduction process where in this analysis, Principle Components PCA was utilized. As presented in table 3, Kaiser-Meyer-Olkin value was found to be .828 which exceeded the recommended value of .60. Such significant results can be seen with the Bartlett's test of Sphericity which showed a statistically significant result. The above stated outputs serve to indicate that the data of the alternative self-control scale from the Islamic perspective is suitable for factor analysis.

Table 3. KMO and Bartlett's test of the alternative scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.828
Bartlett's Test of Sphericity	Approx. Chi-Square	934.040
	Df	171
	Sig.	.000

The exploratory factor analysis of the alternative version of the self-control scale from the Islamic perspective reveals a presence of four (4) components namely: 1)- avoiding Islamically unacceptable enjoyment, 2)- strong Islamic faith, 3)- practice of Islamic teachings, and 4) striving (*Mujahadah*). The Eigenvalue of those four components exceeded 1. Table 4 below displays the variance recovered by each factor which made up at the end a total variance explained of 51.318, which is according to Hair et al. a satisfactory percentage (Hair et al., 2010). The conclusion of this step is that there are only four (4) meaningful factors that can be retained for this version of the scale.

Table 4. Variance explained of the alternative scale

Total	Cumulative %
2.727	14.354
2.546	27.752
2.292	39.815
2.186	51.318

The four factors of the alternative version of the self-control scale from the Islamic perspective were the resulting factors that have items loadings greater than .40. This indicated that the alternative scale has good item loadings on the real and final factors that were related to self-control from the Islamic perspective.

5. Discussion

Even though the pilot study of the scale showed a high Cronbach's alpha which meant that scale's items were clear to respondents, the EFA ended up with the fact that the scale does not have a well-organized item pool; which called for further processing to have them organized.

The possible reason behind the scale items being unorganized is the feedback gained earlier from the respondents and the experts that the scale seemed to have redundancy in its constructs and items. For example, each of the following constructs: strong faith in Allah, realization that hereafter is better than this world, wisdom behind this life and accountability seem to fit the new construct named "strong

Islamic faith". Likewise, the following constructs: acting for the sake of Allah, patience, thankfulness, fear and hope, and procrastination look identical to the construct called "practice of Islamic teachings".

Another possible reason for the disorganization is the weak items that were found having very low loadings. This is clear in the rotated component matrix table which showed 9 items having loadings less than .30. In addition to that, constructs and items seemed overlapping which produced cross-loading items, which were each of items: 8, 50, 45, and 33.

Since the constructs and thus the items were not organized, exploratory factor analysis helped in organizing them and brought out in the end 4 factors and 19 items. These items are: 1, 2, 4, 6, 7, 11, 12, 16, 20, 22, 25, 36, 37, 40, 43, 45, 46, 47, 55. The new factors are logical; they in fact have strong connection to self-control from the Islamic perspective, as this will be discussed in detail in the following paragraphs.

In fact each of the new four constructs is addressed in al-Ghazali's theory that was mentioned earlier. He stated that for one to have self-control, a person has to have good Islamic belief and practice, and in order to achieve that one has to be patient in doing that, which symbolizes striving or Mujahadah. In terms of avoiding unacceptable enjoyment, he is very strict as he tends to ask for the avoidance of even the accepted ones (Al-Ghazali, 1993).

Strong Islamic faith is an essential component of the self-control variable from the Islamic perspective. This is because there will be no self-control without having an underpinning philosophy. In Islam, the central core of faith is the belief in Allah and his oneness, as Allah SWT says in the Holy Quran, "Say, "He is God, the One. God, to whom the creatures turn for their needs, he begets not, nor was he begotten, and there is none like him" (Quran, 112:1-4). Allah also says, "God does not forgive that compeers be ascribed to him" (Quran, 4:48). Thus belief in Allah is the most essential element in this construct as we cannot think of observing other elements without one believing in Allah and his oneness where the remaining elements are considered subordinates to it. Strong belief in Allah offers an undefeatable immunity against getting involved in committing sins. Allah the exalted says, "verily those who fear God think of him when assailed by the instigations of Satan, and lo! They begin to understand" (Quran, 7:201). Those who fear God are the true believers who met the requirements of Islam. Hence, strong Islamic faith is considered to be the core construct of the scale because Allah SWT stated in the Quran that believers who have that strong faith are characterized by controlling their selves. This is in fact what is stated generally by all the scholars whose views were adopted earlier in this research especially al-Ghazali's, who believes that only those who are pious have good knowledge about Allah and that He is observant of them (Al-Ghazali, 1993).

Authentic believers are not only characterized with their strong faith in Allah, in addition to that they practice Islamic teachings in their daily lives. Their Islamic practices strengthen their self-control and make it difficult for them to fall into undesirable behaviors, and even if it happens, they hasten to repentance soon after that. Prophet Mohammad PBUH said, "The most loved thing to me (Allah) that I want my servant to do is the obligatory deeds. And my servant continues to draw closer to me with voluntary works until I love him, and if I love him I will be his ear with which he hears, his sight with which he sees, his hand with which he strikes, and his foot with which he walks. If he asks me something I shall give him and if he seeks refuge in me I shall provide it to him" (Bukhari, 1990).

Allah the exalted describes the true believers among many other things, as ones who remember Allah whenever they commit a sin, so they rush to seek Allah's forgiveness, Allah says, "And those who, if they commit a shameful act or some wrong against themselves, they remember God and seek forgiveness for their sins; for who can forgive except God? And they do not persist on their (wrong) doings knowingly" (Quran, 3:135). This is also stressed by al-Ghazali who stated in his opinion that one has to have good knowledge about works and the worships he performs to Allah so that he is considered as doing the right things which are required by the almighty, and as a result Allah accepts them from him (Al-Ghazali, 1923).

Allah reminds believers that one's efforts is imperative to get to the right path and remain steadfast on it thus, gaining the skill of self-control that holds him back from falling into wrong doings that may put his life at risk. Allah the exalted says, "We shall guide those who strive in our cause to the paths leading straight to us. Surely God is with those who do good" (Quran, 29:69). In a Hadith, the Prophet Mohammad PBUH gives the definition of a true believer where he mentioned that one of a believer's characteristics is striving against evil, he said, "Should I inform you of the (true) believer? It is he whom people trust over their wealth and lives, and the (true) Muslim is he who avoids harming Muslims with his tongue and hands, and the *mujahid* (holy warrior) is he who strives against his self and his desires in order to obey Allah, and the Muhaajir (emigrant) is the one who abandons all what Allah has forbidden" (Al-Albaani, 1995). Having a good skill of striving to obey Allah and prevent oneself from deviant behaviors is the fruit of good belief in Allah that makes one fear him and observe his instructions in all his activities. Allah SWT says, "But as for he who feared the position of his Lord and prevented the soul from (unlawful) inclination, will surely have paradise for abode" (Quran, 79:40-41). Tirmidhi asked believers, in his theory, not to relax in this life and enjoy its peace, but instead he advises them to strive and work for eternal peace in the next life (Ahmed Abdurrahim, 1988).

The last construct of the self-control scale from the Islamic perspective is "avoidance of Islamically unacceptable enjoyment". Islam recognizes men's desires and his inclination to enjoy some behaviors like eating, drinking, doing sexual activity, and so forth. This is stated clearly in the holy Quran, "Beautified for mankind is love of that they desire of women, and sons, and heaped up sums of gold, and silver, and horses branded, and cattle, and tilled land. That is enjoyment of the life of the world. And Allah, With Him is the excellent return" (Quran, 3:14). Hence, Allah who knows the nature of his creations did not stop men from enjoying his desires; rather He placed limits to that enjoyment so that there are no breaches of one another's rights. Thus, things like over expenditure, adultery, stealing, and so on are prohibited in Islam. One's self-control is apparent here when it is exercised to observe those limits and avoid unlawful behavior. Allah SWT says: "but he who feared standing before his Lord, and restrained his self from vain desires, will surely have paradise for abode" (Quran, 79:40-41). Therefore, controlling one's pleasures is a way to succeed in this life and hereafter. Moreover, the other life and this life will be maintained if everybody observes the limits of his pleasures. This fact is mentioned also by the Muslim scholars, especially al-Ghazali who goes further and say that one should avoid the lawful enjoyments, rather than falling into the unlawful ones (Al-Ghazali, 1993).

6. Conclusions

The scale has been successfully organized after going through the exploratory factor analysis process. This is not only justified by the new sound and meaningful constructs that were presented in a very logical order, but it's also justified by its conformity with Quran texts, Prophet Muhammad's sayings, and Muslim scholars' philosophies. Another reason supporting the new scale is that no single construct can stand alone in measuring self-control without the rest of the constructs, this means omitting one of the constructs will result in the scale being "handicapped".

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