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Empirical Analysis of Religiosity as Predictor of Social Media Addiction

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ABSTRACT

This study attempts to examine the relationship between religiosity and social media addiction. In the past religiosity has been found to offer protection from some forms of addiction such as smoking and alcohol consumption. However, no such thing has been done to examine the effect of religiosity on social media addiction. To investigate the matter, the present research utilized a well-known Internet addiction scale and modified it to fit social media (Young, 1996). Factor analysis of the addiction scale yielded three addiction factors: "Social Consequences", "Time Displacement" and "Compulsive Feelings". The religiosity scale produced a single factor. Linear regression analysis was then used to examine the relationship between religiosity and social media addiction. Results indicate that religiosity was a significant predictor of two addiction factors: "Social Consequences" (negative) and "Time Displacement" (positive), but not "Compulsive Feelings". This means religiosity protects against social consequences of social media, but enhances time displacement and had no effect on compulsive feelings. Future research should address the operationalization of the concept of religiosity to account for multiple dimensions. It should also scrutinize the concept of addiction to see whether it fits social media usage in general.

Keywords: Social media, addiction, internet, religiosity, Kuwait.

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1.0 Introduction

There is considerable progress in research on Internet addiction since the mid-1990s, particularly as increasing incidents among university students have been observed by resident medical staff (Wallace, 2014). The language used to refer to this occurrence vary greatly in the body of work on this phenomenon. In addition to 'problematic Internet use', terms such as 'Internet addiction', 'dysfunctional Internet use', 'Internet dependency', 'pathological Internet use', 'compulsive Internet use' have been used to illustrate what is fundamentally the same behavior (Kuss and Griffiths, 2012). For the current research, I will use 'Internet addiction' primarily due to its wide usage in the literature.

Studies in different countries have produced varying results of the pervasiveness of Internet addiction. Research in Great Britain, for instance, revealed that Internet addiction is widespread among 18% of young persons (Neimz, Griffith and Banyard, 2006). Research in Italy established that rate at only 0.8% (Poli and Agrimi, 2012). Also, a large sample survey in China puts the rate at 12% among male and 5% among female students (Lau, 2011). Internet addiction is not just limited to university campuses; it also extends to high school as well as middle school students. A longitudinal survey carried out in Hong Kong revealed a incidence rate of Internet addiction as high as 26.7% in the high school student segment of society (Yu and Shek, 2013).

Concerning time spent online, studies indicate that individuals, who regard themselves as Internet addicts, indicated that it varies greatly from 8.5 hours per week to 21.2 hours per week (Yang and Tung, 2007). Other studies found that the more time one spends online, the greater the likelihood of them showing signs of Internet addiction (Leung, 2004; Widyanto and McMurran, 2004).

With regard to users' psychological profile, research has shown a relationship between self-esteem, social anxiety, loneliness, depression, locus of control, and Internet addiction (Selfhout et al., 2009; Sun et al., 2005). Whang et al. (2003) reported that Internet addicts displayed an elevated level of loneliness and depression in comparison to non-addicts. Other findings discovered that computer self-efficacy was a significant correlate of problematic Internet use. Internet addiction was also related to poor mental health and low self-esteem in young adults (Yen et al., 2009).

2.0 Social media addiction

While none of the earlier studies addressed the use of mobile social media per se, it is safe to say the results of computer related Internet addiction also apply to mobile Internet since they both essentially use the same medium. The introduction of anytime, anywhere Wi-Fi in mobile phones and the pervasiveness of free social media apps made them impossible to differentiate from personal computers when it came to Internet addiction. Also, as their name indicates, mobile phones are portable allowing trouble-free access to the Internet irrespective of time and place. Portability makes them the perfect medium for Internet addicts.

Mobile social media present a large number of experiences from a psychological perspective, each with potential that can result in problematic behavioral patterns. For instance, a socially inclined person might expend a lot of time on Facebook, repeatedly checking their profile to have a glimpse of the number of 'likes' their latest post got from viewers. Others, with a narcissistic inclination, may find Instagram to be an addictive arena for them to present themselves to others with 'selfies.' Another fuel for social media addiction may be social anxiety. The fear of missing out (FOMO) offers an explanation for frequent social media any time of day at the expense of other activities (Przybylski et al., 2013).

'Mobile phone addiction' is sometimes used to differentiate it from the construct of Internet addiction. Past studies of online addiction did not address problematic mobile phone use. Mobile phones today offer access to almost all Internet applications along with voice and video calls, text messaging, video

recording. In addition, there are numerous engaging apps intended especially for small screens, but their results can also be shown on any screen. Also, they have the added element of being always accessible, an attribute qualitatively different from the traditional personal computer in all of its forms and sizes.

Mobile phones can be used while strolling, traveling in buses or trains and even while driving a car. These 'micro time slots' in which people can take part in numerous online activities were not available just a decade ago. Micro time slots can lead to obsessive mobile phone usage and can interfere with face-to-face interaction and harm academic performance (Almenayes, 2014a).

Studies of problematic mobile media usage are far and few in between but the phenomenon has garnered mounting interest in recent times. Research conducted in Taiwan on female college students, for example, revealed that students, who received high scores on an assessment of mobile phone addiction, exhibited more extraversion and anxiety, and somewhat lower self-esteem (Fu-Yuan and Chiu, 2012). Women seem to be more susceptible to mobile phone addiction than men.

Another aspect of mobile phones, that may have a significant implication for addictive behavior, is 'texting' whether directly or by using social media such as Whatsapp and comparable applications. The latest studies reveal that young individuals are beginning to discard Facebook and choose Twitter instead, especially as their parents started to utilize the former and ask their children to interact with them (Madden et al., 2013). These kinds of applications are on the rise, enabling a large number of features like Vine, which enables clients to make six-second videos to display to their followers. The common characteristic of these applications is their 'stickiness', the proclivity to have users utilize the app regularly. Stickiness is a feature of their business models that rely on the heap of data on user activities to share with business clients for segment-specific selling of goods and services.

3.0 Religiosity and communication technology

As a cultural organization, religion needs to be considered in the structure of technology espousal and Internet utilization patterns, since it can easily escape us that it pervades almost all facets of life with its associated rituals (Hirschman 1983). Instead of the general propensity to view technology adoption, media usage and religion independently, the interrelation between the medium used and religion must be thought of jointly for a wider and deeper appreciation of the interplay between the two (Buddenbaum 2002). The relationship between religiosity and communication technology as an empirical concern is a complex and multi-dimensional as there remains an apparent intrinsic conflict between science and religion with their distinct and singular world views (Brossard et al. 2009).

It is imperative to know the difference between religion (a person's religious sect) and religiosity (the strength of a person's observance of their religion's customs, and the extent to which their day-to-day life is directed by the main beliefs espoused by their religion). Religion can be a very dominant power guiding moral conduct and discouraging religious people from participating in many socially objectionable behaviors (Durkheim 1912/1995). Research constantly describes religiosity as being a factor in discouraging smoking, drug abuse and other harmful substances, and wanton sexual activities (Koenig et al. 2001; Wallace et al. 2003; Dunn 2005; Weaver et al. 2005). This may be the result of religion's normative function with the above behavioral patterns being opposite to the standards of religious parties of which an individual is a member. In addition, religion has an integrative function in the form of social support coming from the religious group of which the individual is a member. This support plays a role as a substitute to the unacceptable behaviors as 'anxiety-reducing' methods (Hood et al. 2009). Therefore, the more emotionally involved people are in the norms of their religion and the more incorporated they are into their religious group (i.e., the greater their religiosity is), the less vulnerable they are to various chemical and behavioral dependencies.

Secularization theory, as proposed by Weber (1958), proposes that increased Western weight put on rational thought, scientific empiricism and technological advancement over the past 400 years have

caused a steady decline of spirituality and religion as acceptable worldviews about the natural world (Swatos & Christiano 1999). Using secularization as a theoretical structure, Armfield and Holbert (2003) posited the weakness of religiosity should be positively related to Internet use since the content found on the web is primarily secular and empty of religious values. The findings in US survey data were in accordance with this argument.

Secularization theory is one of the main models in the study of mass communication and religion (Buddenbaum & Stout 1996) and offer the foundation for the work in the current research. This theory suggests that affinity to strong religious values is a sign of a way of life that is traditional, and that this way of life is coming under increasing attack from growing secularism that is widening across the globe (Swatos & Christiano 1999). All types of mass media are theorized to reveal the move toward growing secularization, presenting a largely secular picture of the world we live in. As a result, strong religious beliefs correlate negatively to all forms of mass media use because the vast majority of media content does not reflect traditional religious values. This argument is consistent with the personal identity function outlined in uses and gratifications perspective (e.g. Blumler, 1979), which proposes that individuals often turn to media to reinforce some pre-existing norms or values and shy away from mass media that do not share their values.

Despite the fact that religiosity has been established as a buffer to addictive behavior, little has been done to examine its effect on Internet addiction in general and social media addiction in particular. Since social media overuse has been defined as a form addiction, and religiosity as providing some protection against it, one would expect several empirical efforts to examine this hypothesis. However, little has been done to test specifically this proposition (Al-Menayes, 2014b). The current study aims to examine the notion of religiosity as a shield against social media addiction by testing the idea empirically to verify its viability and hopefully provide a stepping stone towards further investigation.

In light of the studies above and findings this study asks: Is there a relationship between religiosity and social media addiction. This is based on the premise that religion shields its followers from socially undesirable behaviors such as addiction to various substances. First, the study will try to delineate empirically the meaning of religiosity. Second, the study will try to provide an operational treatment of the concept of social media addiction. Lastly the investigation will attempt to establish whether there is an empirical relation between the two. More specifically, the current research will try to address three related questions:

RQ1: What are the dimensions of Religiosity?

RQ2: What are the dimensions of Social Media addiction?

RQ3: Does religiosity affect Social Media Addiction?

4.0 Method

4.01 Sample and Procedures

The study relied on a survey data where respondents filled out a paper questionnaire. The data were collected from a sample of purposively selected college students reflecting the fact that youth constitute the majority of social media users. College students enrolled in mass communication courses at a large state university were asked to take part in this study. The questionnaires were circulated over a span of three months beginning in March 2014. The final sample size was 1327. The language used in the questionnaire was Arabic.

The responses were both anonymous and confidential, and students were free not to take part in the survey if they wish. The participants' age ranged from 18 to 31 with 96% falling in the 18 to 25 years range. The mean age was 21.87 years. The sample consisted of 395 (29.8%) males and 931 (70.2%) females. The gender sample distribution is reflective of the enrollment profile of the university students which is 70%

female. Lastly, because this is a public university, the vast majority of students are Kuwaiti nationals by law, so recording their nationality was not necessary. The questionnaires were distributed during regular class sessions. The instrument included Likert scale questions, used to measure the individual's perceptions, attitudes and behaviors, as well as demographic questions and questions about media use behavior.

4.02 Measurement

Social media addiction

A fourteen item Likert scale was utilized to quantify social media addiction. The measurement was based on Young's (1996) scale of Internet addiction, and the range was from 'strongly disagree' (1) to 'strongly agree' (5). Table 1 shows the English version of the items that were originally in Arabic.

Table 1: Means and Standard Deviations of Social Media Addiction Scale (original in Arabic)

Variable	M	SD
1. I often find myself using social media longer than intended.		
2. I often find life to be boring without social media.	4.20	.95
3. I often neglect my schoolwork because of my usage of social media.	3.98	1.09
4. I get irritated when someone interrupts me when I'm using social media.	3.25	1.22
5. Several days could pass without me feeling the need to use social media.	3.25	1.20
6. Time passes by without me feeling it when I am using social media.	2.66	1.32
7. I find it difficult to sleep shortly after using social media.	4.18	.94
8. I will be upset if I had to cut down the amount of time I spend using social media.	2.89	1.28
9. My family complain frequently of my preoccupation with social media.	2.89	1.19
10. My school grades have deteriorated because of my social media usage.	2.90	1.37
11. I often use social media while driving.	2.44	1.24
12. I often cancel meeting my friends because of my occupation with social media.	2.66	1.36
13. I find myself thinking about what happened in social media when I am away from them.	1.67	.97
	3.03	1.24
14. I feel my social media usage has increased significantly since I began using them.	3.67	1.15

n = 1327, range = 1 - 5

Religiosity

The measurement of religiosity was based on five items using a Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (5). The items were designed to measure the strength of the role that religion plays in one's life.

5.0 Results

5.01 Dimensions of addiction to Social Media (SM)

Fourteen Likert-scale items were used in the questionnaire to estimate the dimensions underlying our key variable "social media addiction." Exploratory factor analysis with principal axis factoring (PAF) extraction method was carried out on the scale to determine if any latent factors exist. Four items were discarded due to loadings under 0.5. All items were standardized to make them comparable for analysis purposes. Table 2 shows results of this analysis.

The analysis produced three factors. The first included five items explaining 31.06 percent of the variance, an Eigenvalue of 4.34 and Cronbach's alpha of 0.75. I call this factor *Social Consequences of SM* since the items seem to reflect how SM usage affects one's daily life activities. The second factor

contained three items explaining 11.82 percent of the variance, an Eigenvalue of 1.65 and Cronbach's alpha of 0.66. I call this factor *Time Displacement* since the items reflect the time dimension as it relates to SM usage. The third factor had four items explaining 8.84 percent of the variance, Eigenvalue of 1.23 and Cronbach's alpha of 0.61. I call it *Compulsive Tendencies* since the items seem to reflect that dimension. Table 2 shows results of this analysis.

Table 2: Exploratory factor analysis of Social Media Addiction Scale (SMAS)

Factors	Mean	SD	1	2	3
Factor 1: Social consequences					
1. I get irritated when interrupted using SM.					
2. My family complain because of SM.	2.90	1.20	0.513		
3. School grades deteriorated because of SM.	2.44	1.37	0.561		
4. I often cancel meetings because of SM.	1.67	1.24	0.669		
5. I find myself thinking about SM.	3.03	0.97	0.623		
		1.24	0.531		
Factor 2: Time displacement					
6. I find myself using SM longer than intended.	4.20	0.95		0.637	
7. Time passes without feeling using SM.	4.18	0.94		0.660	
8. I neglect my schoolwork because of SM.	3.25	1.22		0.550	
Factor 3: Compulsive feelings					
9. I find life boring without SM.	3.98	1.09			0.616
10. Days pass by without the need to use SM.*	2.66	1.32			-0.525
11. I will be upset if I cut down SM use.	2.89	1.19			0.522
12. My SM use increased since when I started.	3.67	1.15			0.550
Eigenvalue			4.34	1.65	1.23
% of the variance explained			31.06	11.82	8.84
Cronbach's alpha			0.75	0.66	0.61

Notes: Loadings < 0.50 were suppressed. * Item wording was reversed for reliability analysis.

All labels are tentative pending further investigation of the subject based on thorough theoretical grounding. The three-factor result is inconsistent with the Arabic version of the IAT that had a single factor even though it contained far more items (Hawi, 2013). The result is also different from findings in the U.S. (two factors), the U.K. (six factors) and France (one factor) (Tavakol M and Dennick R. 2011; DeVellis RF. 2003). Discrepancies are most likely due to sampling procedures and differences inherent in the study sample for each location. These factors can be demographic characteristics, cultural norms, or socioeconomic factors.

5.02 Dimensions of religiosity

The five items of the religiosity scale were subjected to factor analysis using Principal Component Analysis (PCA) with varimax rotation. Only a single factor emerged from this analysis. Table 3 show results of this analysis. As can be seen, all items had strong loadings on this factor with a minimum of .79 and a maximum of .89 suggesting a robust variable. Furthermore, Cronbach's alpha was .90 signaling strong internal consistency in the religiosity scale. The scale explained 73.35 percent of the variance suggesting that the single factor model has a robust goodness of fit instilling confidence in further exploratory analysis.

Table 3: Factor analysis of the religiosity scale: PCA with Varimax Rotation

Item	Mean	SD	Factor Loading
1. Religion plays an important role in my life.	4.5	.71 .69	.79

2. Without religion my life would be in chaos.	4.6	.64	.88
3. Religion gives meaning to my life.	4.6	.70	.89
4. Religion organizes my life.	4.5	.63	.89
5. Prayer has a positive effect on my life.	4.7		.80
Eigenvalue			3.66
% of the variance explained			73.35
Cronbach's alpha			.90

n = 1327, range = 1-5

5.03 The relationship between religiosity and SM Addiction

To test the relationship between religiosity and Social media addiction I used linear regression analysis. Religiosity was entered in the equation as the independent variable while Social Media addiction was used as the dependent variable. It is reasonable to assume that religiosity precedes social media usage since it is one of the major components of early socialization. Hence it was treated as an antecedent in the regression equation.

Table 4 shows results of the regression analysis. As can be seen, religiosity is a significant negative predictor of the "Social Consequences" addiction factor. This means the more religious a person is, the lower they will score on this particular factor. Conversely, religiosity is a significant positive predictor of the "Time Displacement" factor. This indicates that individuals who score high on religiosity are more likely than others to score high on the "Time Displacement" factor as well. Finally, the "Compulsive Feelings" factor showed no significant relationship with religiosity.

Table 4: Regressing social media addiction factors on religiosity

SM Addiction Factors	B	SE B	β	T
1. Social Consequences	-.082	.025	-.092	-3.34*
2. Time Displacement	.088	.024	.100	3.62*
3. Compulsive Feelings	.013	.023	.016	0.56

Note: For factor 1, $R=.092$, $R^2=.008$, $F=11.18^{**}$, $df=1$. For factor 2, $R=.100$, $R^2=.010$, $F=13.13^{**}$, $df=1$. For factor 3, $R=.016$, $R^2=.000$, $F=.316$, $df=1$. * $p<.00$

6.0 Conclusion

This study aimed to uncover the underlying factors in social media addiction and their connection to religiosity. To explore the subject, the study used an recognized Internet addiction scale and modified it to fit social media (Young, 1996). Factor analysis of responses from a sample of 1326 respondents revealed three social media addiction factors. These factors were then regressed on a scale of religiosity. This scale contained a single factor based on factor analysis. Results indicated that social media addiction had three factors; "Social Consequences", "Time Displacement" and "Compulsive feelings. Religiosity, on the other hand, contained a single factor. Both of these results arrived at using factor analysis of their respective scales.

The relationship between religiosity and social media addiction was then examined using linear regression. The results indicated that only two of the addiction factors were significantly related to religiosity. These are "Social Consequences" and "Time Displacement". The two that are related worked in opposite direction making it difficult to make a sweeping generalization about the relationship between religiosity and social media addiction. Future research should address the operationalization of the concept of religiosity to account for multiple dimensions. This will require multiple pretesting and perhaps focus groups to be able to tap what religion means to the individual in their everyday life.

The definition and operationalization of social media addiction are still in its infancy. It is difficult at this juncture to come up with policy implications. Instead, efforts should be directed to further refining the measurement of the concept. We need to be sure that heavy social media usage is indeed a form of addiction as defined by the Diagnostic and Statistical Manual (DSM-5). Otherwise, it may be a form of dependency and less of an addiction. If this is the case, then measurement instruments should be refined to reflect the fact to increase the validity of the procedures. Therefore, future work should focus on conceptualization and measurement concerns before embarking on empirical work geared for policy guidance.

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