



Short Communication

The association between religiosity, generalized self-efficacy, mental health, and happiness in Arab college students



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ARTICLE INFO

Article history:

Received 18 October 2016

Received in revised form 6 December 2016

Accepted 8 December 2016

Available online 27 December 2016

Keywords:

Religiosity

Self-efficacy

Mental health

Happiness

Arab college students

ABSTRACT

Research is rare on the relationship between religiosity and subjective well-being using Arab participants. The aim of the present study was to explore the associations between religiosity, generalized self-efficacy, mental health, and happiness. A sample ($N = 702$) of Muslim Arab college students was recruited. They responded to four scales as follows: the self-rating scale of religiosity, the self-rating scale of happiness, the Arabic Scale of Self-Efficacy, and the Arabic Scale of Mental Health. The results indicated that male students obtained significantly higher mean total scores on self-efficacy and mental health than did their female counterparts. All of the Pearson correlations between the study scales were statistically significant and positive in both men and women. A principal components analysis identified a single component which could be labeled "Mental health, well-being and religiosity". It appears that participants who see themselves as religious are more likely to see themselves as self-efficacious and to have greater levels of mental health and happiness. Because the strongest association was found between self-efficacy and mental health in men and women, enhancing self-efficacy may be a useful intervention to improve mental health.

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1. Introduction

Three trends can be identified in contemporary psychology: a greater interest in religion and spirituality, the globalization of the field (so that research is carried out in many different cultures) and, most recently, positive psychology (Abdel-Khalek & Scioli, 2010). In positive psychology, the main concept is subjective well-being, including happiness, satisfaction with life, and mental health, among other factors (Argyle, 2002; Lucas & Diener, 2008), and many studies have appeared on the association between happiness and religiosity (e.g., Koenig, King, & Carson, 2012).

The general aim of the present research was to examine the relationship between generalized self-efficacy, mental health, religiosity, and happiness in a sample of Arab college students; an under-studied population. To the best of our knowledge, there are no published research studies with Arab participants on this topic, and very few studies have examined the relationship between religiosity and self-efficacy.

Religion is one of the most powerful forces in life, death, health, and disease. Research on religion has undergone rapid growth during the last few decades (e.g., Loewenthal, 2000; Spilka, Hood, Hunsberger, & Gorsuch, 2003). Religiosity may be defined as "a particular

institutionalized or personal system of beliefs, values, and practices relating to the divine - a level of reality or power that is regarded as the source or ultimate transcending yet immanent in the realm of human experience" (Worden, 2005, p. 221).

In his social cognition theory, Bandura (1997) defined self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). He reported on the different ways that self-efficacy affects behavior, cognition and health, as well as clinical, social and occupational functioning. Bandura (1977) proposed four sources of personal efficacy expectations: performance accomplishments, vicarious experience, verbal persuasion, and psychological states. Self-efficacy makes a difference in how people think, feel and act (Schwarzer & Hallum, 2008). In social cognition theory, human motivation and actions are regulated by forethought. The theory implies that self-efficacy is a powerful predictor of behavior, affecting intentions, goals and outcome expectations which, in turn, are also predictors of behavior (Bandura, 2002; Luszczynska, Scholz, & Schwarzer, 2005b).

Generally speaking, mental health denotes personal and social adjustment as well as the absence of pathological signs, symptoms and syndromes. Satcher (2000) stated that mental health refers to "the successful performance of mental functions, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and cope with adversity. Mental health is indispensable to personal well-being, family and interpersonal relationships, and making

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contributions to the community and the society. Mental health is the spring board for thinking and communication skills, learning, emotional growth, resilience, and self-esteem... Successful performance rests on a foundation of mental health" (p. 6). (See also Vaillant, 2003). There are two different approaches in the assessment of mental health. The traditional trend was based on the medical model and referred to mental health as the low scores on the psychopathology scales, mainly anxiety and depression. The other approach used the positive indicators to mental health as reported, for example by Satcher (2000) and Vaillant (2003) as well as the Arabic Scale of Mental Health (Abdel-Khalek, 2011).

Happiness is commonly understood to be how much one likes the life that one lives or, more formally, the degree to which one evaluates one's life as a whole positively (Veenhoven, 2009). Psychological research on happiness has focused on an individual's long-term emotional state of happiness and the positive evaluation of one's life (Oishi & Gilbert, 2016). Argyle, Martin, and Lu (1995) proposed three possible components of happiness: positive emotions, satisfaction, and the absence of negative emotions such as depression or anxiety. Lucas and Diener (2008) stated that the balance of positive to negative emotions is a powerful determinant of happiness or subjective well-being.

There are many correlates and predictors of happiness. Myers (2000) found that personality traits, religious faith, marriage, and social support seemed to be the best predictors of happiness. A growing body of research, however, shows that both the conception and the predictors of happiness vary cross-culturally (Oishi & Gilbert, 2016). Research has also demonstrated an apparent connection between happiness and religiosity (e.g., Argyle, 2002; Koenig et al., 2012). Meltzer, Dogra, Vastanis, and Ford (2011) carried out a large-scale survey in Great Britain ($N = 2992$). They found that young people (11–19 year olds) with a stated religion who had weakly held beliefs or who regarded religious practice as unimportant were those with the greater likelihood of having emotional disorders.

Religiosity appears to be a strong predictor of behavior and health. Religious involvement can provide comfort, meaning and hope during time of adversity (Abdel-Khalek, 2014). Religiosity has also been linked to healing processes in the human body, promoting both the prevention and the treatment of diseases. Moreover, religious people sometimes have healthier life styles, cope well with stress, and live longer and more satisfying lives (Koenig, 2008; Koenig et al., 2012; Pargament, 1997). Several studies have highlighted the positive effects of intrinsic religiosity and the negative effects of extrinsic religiosity with respect to health-related behaviors (Wallston et al., 1999). It would be of interest to explore these associations in Muslim respondents inasmuch as research has shown that they have high religiosity scores (see: Thorson, Powell, Abdel-Khalek, & Beshai, 1997).

Several studies have reported a significant positive association between religiosity and general self-efficacy (Bryd, Hageman, & Isle, 2007; Watson, Morris, & Hood, 1988; Wright, 2010). Byrne (2012) found a significant, albeit small, positive relationship between general self-efficacy and intrinsic religiosity in four countries: Ireland, Mexico, Spain and the USA ($N = 1158$) (see also: Mersaleh, Rezai, Kivi, & Ghorbani, 2010). Other studies have found that general self-efficacy was positively related to some measures of religiosity, unrelated to some measures, and negatively related to other measures (Lee, 2007; Daaleman & Dobbs, 2010; Frey, Daaleman, & Peyton, 2005; Jang & Johnson, 2003). Two studies found no significant association between religiosity and self-efficacy among cardiac and stroke patients (Miller, McConnell, & Klinger, 2007; Omu, 2010). The inconsistency in the results on the association between religiosity and self-efficacy may be due to the differences between the samples, the scales used in the research, and the design of the research, among other factors.

Regarding the association between self-efficacy, mental health and well-being, Luszczynska et al. (2005b) examined 1933 respondents in three countries (Germany, Poland and South Korea) and found that general self-efficacy was significantly related to mental health, well-being

and quality of life. Similarly, Luszczynska, Gutierrez-Dona, and Schwarzer (2005a), studying 8796 participants from Costa Rica, Germany, Poland, Turkey, and the USA, found positive associations between general self-efficacy and personality, well-being, stress appraisals, social relations, and achievement. Adeyemo and Adeleye (2008) found that emotional intelligence, religiosity, and self-efficacy were predictors of psychological well-being among adolescents in Nigeria. Parto (2011) also reported that self-efficacy was significantly associated with mental health in adolescents.

In a study of working and non-working women, Sahu and Rath (2003) found that working women had higher self-efficacy scores than did non-working women, and there was a strong association between self-efficacy and well-being. Singh, Shukla, and Singh (2010) recruited 160 Indian elderly respondents and found that perceived self-efficacy emerged as an important predictor of mental health among both elderly men and women. The elderly who perceived themselves to be self-efficacious and to have control over their environment reported better mental health. Using a large sample of normal adolescents from the Netherlands, Muris (2002) found that low levels of self-efficacy accompanied high levels of trait anxiety/neuroticism and depressive symptoms.

The results of research on sex differences in these variables conflict. For religiosity, some studies have indicated that women obtain higher mean scores than did their male counterparts (Abdel-Khalek, 2006a; Spilka et al., 2003, p. 154; Sullins, 2006), while other studies have reported that there are no sex differences in religiosity (Abdel-Khalek, 2013a). Regarding happiness, some studies have reported that men had higher mean scores, other studies have reported that women had higher mean scores, while some studies have found no significant differences between men and women in happiness (Abdel-Khalek, 2006a, 2012a, Argyle, 2002).

As for mental health, studies on three Arab samples of college students from Egypt, Kuwait, and Qatar found that men obtained higher mean scores for mental health than did their female counterparts (Abdel-Khalek, 2011, 2012a, 2013b). Using three Kuwaiti samples ($N = 741$) in late adolescence, early and middle adulthood, Alansari and Abdel-Khalek (2012) found that men had higher scores on measures of self-efficacy.

The State of Kuwait is an Arab country in Western Asia, situated on the northern edge of Eastern Arabia at the top of the (Arab) Persian Gulf. It shares borders with Iraq and Saudi Arabia. Kuwait has nearly 10% of the world's oil reserves. Gross domestic product (GDP) is \$200 billion, and GDP per capita is \$84,309. Kuwait's population in 2014 was estimated to be 3,491,022, including 1.3 million non-nationals (Central Intelligence Agency, 2014).

Regarding the levels (mean scores) of the present variables among Kuwaiti samples of college students, previous studies have indicated that Kuwaiti students were more religious than American students (Thorson et al., 1997), whereas Americans obtained a higher mean scores on measures of mental health and happiness than did their Kuwaiti counterparts (Abdel-Khalek & Lester, 2012, 2013). There is no similar comparative research on self-efficacy

One of the aims of the present study was to test the cross-cultural generality of the results obtained with Western populations. The majority of published research in this domain has been carried out on Western, Anglo-Saxon, English-speaking, Christian populations. Therefore, the present study will extend the current knowledge base and fill a gap in the literature by using an Arab, Muslim sample, a highly under-represented population in the scientific literature. Another aim of this study was to estimate the psychometric properties of its scales. The study was designed to test the following hypotheses: (a) sex-related differences will be significant for religiosity, generalized self-efficacy, mental health, and happiness, in which women were hypothesized to score less favorably on these variables, (b) the correlations will be statistically significant and positive between the study variables, and (c) only one component will be extracted from the correlation matrices.

2. Method

2.1. Participants

A convenience volunteer sample ($N = 702$) took part in the study (311 men; 391 women). Their ages ranged from 18 to 27. ($M = 20.4$, $SD = 1.7$). All of them were Muslim, Kuwaiti citizens. They were college students in different departments, colleges and classes at Kuwait University. Data on the socioeconomic status and the religious denomination (Sunna, Shi'a) were not collected.

2.2. Measures

2.2.1. The self-rating scales of religiosity and happiness

These scales consist of two, separate single-item questions as follows: "What is your level of religiosity in general?" and "To what degree do you feel happy in general?" These questions were followed by a scale of numbers from 0 to 10. The participants were requested (a) to respond according to his or her global estimation and general feeling (and not their present states), (b) to know that the 0 is the minimum, and that 10 is the maximum score, and (c) to circle a number which seems to him or her to accurately describe their actual feeling. High scores indicate a high level of religiosity and of happiness. The researchers prefer to use the single-item self-rating scales of religiosity and happiness because the test battery was extremely long. Several studies have supported the merits of using single-item, self-rating scales (Wills, 2009; Zullig, Ward, & Horn, 2006). As Wills (2009) has stated, the single-item self-rating scale is based on the assumption that individuals will assume the most relevant meaning that comes to their mind in relation to the subject of the question and answer accordingly. This type of measure is useful from a parsimonious point of view when the battery of tests contains a large number of scales. However, these scales do have limitations (Gillings & Joseph, 1996). For example, single-item scales cannot provide data on the internal consistency of the scales (e.g., Cronbach alpha).

2.2.2. The Arabic scale of self-efficacy

This scale was based on three previous scales (see: Chen, Gully, & Eden, 2001; Schwarzer & Jerusalem, 1995; Sherer et al., 1982) and developed by Alansari and Abdel-Khalek (2012). Those three scales consist of 35 items. These items were translated into Arabic and administered to male and female participants of different ages by. The item-remainder correlations were calculated, and 15 items with low correlations were excluded. The final version of the scale contained 20 items. Response options ranged between 0 (No) and 4 (Very much), the possible total score could range from 0 to 80, and a high score indicated high self-efficacy. Good reliability and validity were demonstrated (See Table 1).

2.2.3. The Arabic scale of mental health

This scale was developed as a generic screening measure and research tool for adults and adolescents. It has two equivalent Arabic and English forms. The scale comprises 40 brief statements plus 10 filler items. Each item is answered on a 5-point intensity scale, ranging from 1 (Not at all) to 5 (Very Highly). The total score can range from 40 to 200,

with higher scores indicating better mental health. A principal components analysis yielded six components labeled: satisfaction, self-confidence, optimism, enjoyment, meaningful life, and stability. Extensive data on reliability and validity are available (Abdel-Khalek, 2011, 2012b, 2012c).

2.3. Procedure

The Arabic forms of the two self-rating scales and the two questionnaires, along with other scales, were administered anonymously to students in their classrooms during the university hours. They volunteered for the study after the researcher briefly explained its purpose and assured them of anonymity. If any student did not want to participate, he or she could leave. The consent procedure was oral. Trained assistants collected the data.

SPSS (2009) was used for the statistical analysis of the data. Means, standard deviations, t -tests, Pearson product moment correlation coefficients, and principal components analyses (PCA) were used. For the PCA, The Kaiser criterion, i.e., eigenvalue > 1.0 was used to define the number of factors to be retained. The data set was not tested for outliers or normality.

The one-week test-retest reliability was computed for the self-rating scales of religiosity and happiness using another small sample of 30 students (since the major study was conducted with anonymity), and Cronbach's alpha reliability was computed for the self-efficacy and mental health scales.

The criterion-related validity was computed for all scales: the rating scale of religiosity against the Intrinsic Religious Motivation Scale (Hoge, 1972), previously translated by Abdel-Khalek (2007), the rating scale of happiness against the Oxford Happiness Inventory (Argyle et al., 1995), previously translated into Arabic by Abdel-Khalek (2006b, 2007), the Arabic Scale, of Self-Efficacy against a local Arabic Scale (Al-Mahmoud, 2006), and the Arabic Scale of Mental Health against several criteria (Abdel-Khalek, 2011, 2012a, 2012b) (See Table 1).

3. Results

Before testing the hypotheses, it is important to estimate the psychometric characteristics of the scales. Table 1 presents the psychometric data for the scales. Reliabilities ranged between 0.86 and 0.94, and the criterion-related validity ranged from 0.50 to 0.90, that is, between acceptable and high.

Table 2 sets out the descriptive statistics and the t values. Inspection of this table indicates that men obtained significantly higher mean total scores than did women for self-efficacy and mental health. However, there were no significant sex-related differences in the two self-rating scales of religiosity and happiness.

Table 3 presents the correlation matrices separately for men and women. All the correlations were statistically significant and positive in both men and women. The strongest correlation was between self-efficacy and mental health for both men and women.

To examine the factorial structure of the study scales, principal components analyses were conducted for men and women separately because there were statistically significant differences between them for

Table 1
Reliability, criterion-related validity (CRV) for the study scales.

Scales	Reliability	CRV
Religiosity	0.87	0.50
Self-efficacy	0.91	0.90
Mental health	0.94	0.87
Happiness	0.86	0.63

Note: The one-week test-retest reliability was computed for the self-rating scales of religiosity and happiness, whereas Cronbach's alpha reliability was computed for the other two questionnaires.

Table 2

Mean (M), standard deviation (SD), and t value of the study variables in men ($N = 311$) and women ($N = 391$).

Scales	Men		Women		t
	M	SD	M	SD	
Religiosity	6.41	2.14	6.24	2.06	1.02*
Self-efficacy	53.84	10.49	49.57	10.96	5.24*
Mental health	149.56	25.20	141.64	27.06	4.00*
Happiness	7.55	1.94	7.54	2.01	0.51*

* $p < 0.0001$ (two-tailed).

Table 3

Pearson correlation coefficients between the scales for men ($n = 311$; the upper matrix) and women ($n = 391$; the lower matrix).

Scales	Religiosity	Self-efficacy	Mental health	Happiness
Religiosity	–	0.119*	0.190**	0.202**
Self-efficacy	0.179**	–	0.685**	0.411**
Mental health	0.215**	0.708**	–	0.665**
Happiness	0.141**	0.416**	0.664**	–

* $p < 0.05$ (two-tailed).

** $p < 0.01$ (two-tailed).

two of the four scales. The Kaiser criterion (eigenvalues > 1.0) was applied. A single component was identified for men and for women. It accounted for 56% of the common variance. This component could be labeled: Mental health, well-being, and religiosity (see Table 4).

4. Discussion

Most of the research on religiosity has been carried out using Western, Anglo-Saxon, English-speaking, and Christian populations. Arabic Muslim participants are highly under-represented in this field of study. Furthermore, previous studies have reached conflicting results on the association between religiosity and self-efficacy, as well as the existence of sex-related differences. The present study was designed to provide data for this neglected group.

It is important to note that the trustworthiness of any results depends on a number of different elements, including the sample size and the psychometric parameters of the scales. The present results were based on a large Arabic sample ($N = 702$) of college students. The reliability of the study scales was high (ranging from 0.86 to 0.94). As stated by Kline (1993, p. 13), a reliability of 0.7 is a minimum for a good test, and the present reliabilities exceeded that criterion. Furthermore, the criterion-related validities for these scales ranged from acceptable to high (from 0.50 to 0.90) (see Table 1).

As for the first hypothesis, the statistically significant sex-related differences were found in self-efficacy and mental health with men obtained higher scores. This result was consistent with previous findings (Abdel-Khalek, 2011, 2013a, 2013b; Alansari & Abdel-Khalek, 2012; Spilka et al., 2003). However, there were no significant sex-related differences in religiosity and happiness. This result is in conflict with previous findings from another Kuwaiti sample (Abdel-Khalek, 2006a), as well as from other studies (Spilka et al., 2003, p. 154; Sullins, 2006), in which women obtained significantly higher mean scores than did their male counterparts. Therefore, the first hypothesis was only partially verified.

The second hypothesis was verified, that is, statistically significant and positive correlations were found between all of the study variables: religiosity, self-efficacy, mental health, and happiness. This result was consistent with a number of previous findings reviewed above (see: e.g., Byrne, 2012; Luszczynska, Gutierrez-Dona, et al., 2005; Luszczynska, Scholz, et al., 2005). Therefore, it may be concluded that religiosity is associated with positive traits such as self-efficacy, mental health, and happiness. Religion may provide believers with hope and meaning in their lives. Moreover, religion may be a source of strength

Table 4

Principal components analysis for the scales among men ($n = 311$) and women ($n = 391$).

Scales	Component 1	
	Men	Women
Religiosity	0.345	0.358
Self-efficacy	0.801	0.820
Mental health	0.919	0.924
Happiness	0.806	0.787
Eigenvalue	2.254	2.274
% Variance	56.360	56.862

from the social support of a religious community and religious activities, as well as a subjective feeling of closeness to God (Miller & Kelley, 2005).

The third hypothesis was also supported. The principal components analysis yielded a single component labeled “Mental health, well-being, and religiosity”. This result adds evidence to the main thesis that mental is associated with the positive traits of self-efficacy, religiosity, and happiness, and this result is consistent with research results from other societies and cultures (see: e.g., Koenig et al., 2012).

There are some limitations in the present study. There are many other variables that might be selected for study, and competing scales and inventories that might be used. The results might have been different had other variables and scales used. Furthermore, there is a possible effect of response set on the results, namely social desirability and the “desire to please the researcher.” None of the scales used a “lie” scale to examine such tendencies. College students have a limited range of ages, and the results need to be replicated on the general population, as well as in other Arab countries. Finally, the impact of the particular type of Muslim belief needs to be examined.

One practical implication of this study is that, because the strongest association was found between self-efficacy and mental health, a proposed program to enhance self-efficacy may be a useful intervention target to ameliorate mental health. In addition, Islamic beliefs and practices may have the potential to be useful in psychotherapy, particularly in treating anxiety and depression in Arab patients. Strengthening religious feelings may help to increase the psychological well-being of patients.

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