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THE ASSOCIATION BETWEEN RELIGIOSITY, WELL-BEING, AND MENTAL HEALTH AMONG COLLEGE STUDENTS FROM MALAYSIA

LA ASOCIACIÓN ENTRE RELIGIOSIDAD, BIENESTAR Y SALUD MENTAL ENTRE ESTUDIANTES UNIVERSITARIOS DE MALASIA

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Abstract: This study aimed to explore associations between religiosity, subjective well-being, and mental health. Muslim college students from Malaysia ($n = 238$) were recruited. Males obtained significantly higher mean scores on happiness, satisfaction and mental health than females did, whereas women scored significantly higher on religiosity than men. Exploratory factor analysis identified two factors separately: “Well-Being and Religiosity”, and “Mental Health and Happiness” in men, and “Well-Being and Happiness”, and “Self-Esteem, Mental Health and Religiosity” among women. Multiple regression revealed that religiosity predictors were the self-rating of physical health in men and mental health among women. In conclusion, those who consider themselves as internally religious experienced greater well-being and health. Religious practices may be incorporated in psychotherapeutic procedures in Malaysian clients.

Keywords: spirituality, positive psychology, love of life, Southeast Asia, Islam.

Resumen: El propósito de este estudio fue explorar las asociaciones entre la religiosidad, el bienestar subjetivo y la salud mental. Se reclutó a estudiantes universitarios musulmanes de Malasia ($n = 238$). Los hombres obtuvieron puntuaciones medias significativamente mayores de felicidad, satisfacción y salud mental que las mujeres, mientras que ellas puntuaron significativamente más en religiosidad que los hombres. El análisis factorial exploratorio identificó dos factores por separado: “bienestar y religiosidad” y “salud mental y felicidad” en hombres y “bienestar y felicidad” y “autoestima, salud mental y religiosidad” entre las mujeres. La regresión múltiple reveló que los predictores de la religiosidad fueron las autovaloraciones de la salud física de los hombres y de la salud mental entre las mujeres. En conclusión, aquellos que se consideran religiosos internamente experimentaron mayor bienestar y salud. Se debería incorporar las prácticas religiosas en los procedimientos psicoterapéuticos para los clientes malayos.

Palabras clave: espiritualidad, psicología positiva, amor por la vida, sudeste asiático, Islam.

The main objective of the present study was to investigate the associations between religiosity, well-being and mental health among an under-studied sample of college students from Malaysia.

RELIGION

Religion has played an important role as one of the most powerful forces in life, death, health, and disease. Anthropologists have recognized that the Neanderthals already had

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some sense of transcendence and of spirituality, a fact that is more striking in the remnants of archeological excavations of *Homo sapiens* settlements (Maj, 2010). The interest in the psychological study of religion dates back around a century and a half (see, for example: Galton, 1872; James, 1902/1985). However, the psychological studies on religion and religiosity disappeared from the psychological literature for nearly a century (Jones, 1994). Recent decades have witnessed an increasing interest in the psychology of religion (Aghababaei et al., 2016; Argyle, 2000; Emmons & Paloutzian, 2003; Gorsuch, 1988; Loewenthal, 2000; Paloutzian, 2016; Pargament, 1997; Spilka, Hood, Hunsberger, & Gorsuch, 2003; Tekke, Watson, Hisham İsmail, & Chen, 2015; Wulff, 1997). Novak (1998) stated that the twenty-first century will be “the most religious century” in recent years. Durkheim (1915/1965) considered the core of religion to be the formation of a “moral community centered around a common system or beliefs and practices related to sacred things.” More recently, the World Health Organization (2001) has regarded spiritual values as a component of quality of life.

RELIGIOSITY

Religiosity reflects human characteristics or the amount of importance of religion in the life of a person (Ellor & McGregor, 2011). Religiosity is a complex concept and has many definitions (Holdcroft, 2006). Different authors defined different dimensions of religiosity. To take some examples, Fukuyama (1961) identified four dimensions of religiosity as cognitive, cultic, creedal, and devotional. Lenski (1963) identified four different expressions of religiosity: associational, communal, doctrinal, and devotional. Glock and Stark (1965) defined five dimensions of religiosity as follows: experiential, ritualistic, ideological, intellectual, and consequential. Religiosity was defined in this study as the participant's score on the Arabic Scale of Intrinsic Religiosity (see the Method section).

Allport and Ross (1967) identified two basic dimensions of religiosity: intrinsic and extrinsic. The extrinsically motivated persons use religion for their own ends, such as status, sociability, and self-justification, and often shape a creed to fit their own ends, so they use religion as a *means*. This is a utilitarian outlook of religion. On the other hand, the person with intrinsic religiosity lives his religion and sees religion predominantly as an *end*. These persons internalize the total creed of their faith, find their master motive for life in religion, and bring their needs into harmony

with their religious beliefs. Subsequent empirical research has supported the psychological preference of intrinsic over extrinsic religiosity (Donahue, 1985). Thus, the religiosity scale used in this study tapped the intrinsic orientation.

Religion has aroused academic attention because of its protective effects on enhancing health and alleviating suffering, among other factors (Koenig, 2009). Religiosity is associated with many influences such as an increase in happiness (Francis, Robbins, & White, 2003; Francis, Tekke, & Robbins, 2016; French & Joseph, 1999; Myers & Diener, 1995). Religiosity influences life satisfaction by increasing optimism and providing social support (Salsman, Brown, Brechting, & Carlson, 2005). Other contributions of religiosity include lower suicide and substance abuse rates (Diener, Tay, & Myers, 2011; Kim-Spoon, Farley, Holmes, & Longo, 2014). Similarly, spirituality is correlated with decreased levels of state anger, trait anger, and anger expression (Kattimani, Sarkar, Bharadwaj, & Rajkumar, 2015; Tekke, Watson, Kayadibi, & Chen, 2018).

SUBJECTIVE WELL-BEING

Subjective well-being (swb) refers to the individual's evaluations of his or her life and relative amounts of positive and negative emotional experiences (Diener, 2000). This evaluation is based on a consideration of past events, and includes a cognitive assessment of life satisfaction and an affective assessment of happiness (Diener, 2006). There are many synonyms for swb including happiness, joy, satisfaction, enjoyment, fulfillment, pleasure, contentment, and other indicators of a life that is full and complete. Health is the strongest predictor of swb (Koenig, King, & Carson, 2012). Well-being has been linked to resiliency (Tugade & Fredrickson, 2004), the ability to cope with stressful life events (Smith, McCullough, & Poll, 2003), and improved physical health (Veenhoven, 2008).

MENTAL HEALTH

Mental health is a relatively enduring emotional and behavioral state of good adjustment, subjective state of well-being, and it is not the mere absence of mental illness. Mental health is highly correlated with swb. Well-being is the positive side of mental health and one of the most salient correlates of mental health is the concepts of subjective well-being and happiness (Diener, 2000), as well as

hedonic and eudaimonic approaches to positive psychological functioning (Ryan & Deci, 2001).

Using the medical model, the definition of mental health in terms of a relative absence of pathology is common (Albee, 2000; Boorse, 1976; Maddux, 2005). Given the criticism of the medical model approach to mental health (e.g., Abdel-Khalek, 2011; Wang, Zhang, & Wang, 2011), some researchers, particularly in the positive psychology movement, argued that descriptions of mental health have to be augmented by descriptions of mental wellness (e.g., Ryff & Singer, 1998; Seligman, 2002; Snyder & Lopez, 2005). The dual-factor model of mental health encompasses low score on pathology and high level of psychological well-being (Abdel-Khalek, 2011; Heubeck & Neill, 2000; Massé et al., 1998; Wang et al., 2011).

RELIGIOSITY, SUBJECTIVE WELL-BEING, AND MENTAL HEALTH ASSOCIATIONS

A great number of studies suggest a positive relation between religiosity, swb, and mental health (Abdel-Khalek, 2006a, 2012a, 2012b; Abdel-Khalek & Lester, 2012, 2017; Abu-Raiya, Ayten, Agbaria, & Tekke, 2018; Ball, Armistead, & Austin, 2003; Chatters, 2000; Ellison, 1991; Ferriss, 2002; Harris, 2002; Hill & Pargament, 2003; Koenig, 1997, 2004; Koenig et al., 2012; Levin & Chatters, 1998; Soydemir, Bastida, & Gonzalez, 2004). However, religiosity is not always associated with well-being. Some studies have found very weak, or non-significant associations between religiosity and well-being (Lewis, 2002; Lewis, Maltby, & Burkinshaw, 2000; Lewis, Maltby, & Day, 2005; Snoep, 2008). Different reasons have been given for these negative results (e.g., the design of the study, the sample, the measuring scales). Nevertheless, the number of studies yielding positive relations between religiosity and both swb and mental and physical health exceeded those with negative associations.

The study of sex differences (assumed to be biological) or gender differences (assumed to be cultural) has a long history in psychology and many research studies have reached conflicting results (Chrisler & McCreary, 2010; Del Giudice, 2015; Del Giudice, Booth, & Irwing, 2012; Hyde, 2005). In the sex differences in religiosity, swb, and mental health previous studies indicated contradictory results (Abdel-Khalek, 2006a, 2012a, 2012b; Abdel-Khalek & Lester, 2017; Sullins, 2006). Therefore, it is important to investigate sex differences in the present sample.

THE AIMS OF THE PRESENT STUDY

The fourfold aims of the present study were: (1) to examine the gender-related differences on measures of religiosity, swb, and mental health, (2) to examine the correlations between the scales, (3) to analyze the correlation matrices to identify the main components, and (4) to explore the predictors of religiosity. It was expected that (1) there will be significant gender-related differences, (2) there will be significant correlations between religiosity, swb, and mental health, (3) two factors will be extracted from the correlations, and (4) swb and mental health variables will be the predictors of religiosity.

The present study is unique in a number of ways. First, the majority of published studies in this field have been carried out with Western and Christian samples. The Malaysian Muslim population is under-represented in this domain. As Hackney (2010) stated:

The narrowness of this field of inquiry creates limits on our ability to generalize findings beyond Christianity, prevents researchers from knowing whether or not we have discovered a pattern that is common to most faiths or restricted to Christian adherents (p. 353).

The main objective of this study was to explore the religiosity associations with swb and mental health among a sample of college students from Malaysia. The Malaysian participants have certainly specific cultural and socio-historical characteristics. Notwithstanding the probable differences between Arab and Asian societies, the present sample and the vast majority of participants in the Arabic studies were Muslims.

Second, four of the five questionnaires in this study were developed in an Arabic Islamic culture by a non-Western psychologist. The Arabic versions of these four scales are frequently used in the Arabic context. The English forms of two of these four scales were administered in U.S. samples. However, this study is unique because it is the first time the English forms of these questionnaires are used in non-English native speaking participants.

METHOD

Participants

A convenience volunteer sample of 238 Muslim Malaysian college students was recruited (105 men, 133 women).

They were students at the International Islamic University Malaysia, Kuala Lumpur, Malaysia. This sample was chosen because of its availability for the present researchers and to compare its results with many international studies on college students on this topic. They were studying in the English language. The mean age of men was 21.64 ($SD = 1.51$), and for women 21.50 ($SD = 1.53$).

Participants' involvement in this study was voluntary and confidential. It was also in full conformity with the institutional guidelines for the conduct of ethical research. Researchers administered the questionnaires to different groups of students in a classroom setting. Completion of the questionnaire took less than an hour.

Questionnaires and Rating Scales

The Arabic Scale of Intrinsic Religiosity. The Arabic Scale of Intrinsic Religiosity (ASIR; Abdel-Khalek, 2017) assesses internal religiosity regardless of any given religion or denomination. The ASIR consisted of 15 statements (e.g., "Religion is the most important thing in my life", "I consider myself committed to religion", and "I believe that God is close to me"), each item answered with a five-point intensity scale, anchored by 1 (*strongly disagree*) and 5 (*strongly agree*). The total score could range from 15 to 75, with higher scores representing higher religiosity. An exploratory factor analysis identified one high loaded factor. Cronbach's alpha and test-retest reliabilities reached .91 and .87, respectively, indicating high internal consistency and temporal stability. Criterion-related validity ranged between .53 and .74 against the Muslim Attitude towards Religiosity Scale and the single-item self-rating scale of religiosity, indicating acceptable to high validity. Descriptive statistics were available for university students from Egypt, Kuwait, and Algeria. The ASIR was significantly correlated with positive psychology variables, i.e., mental health self-efficacy, satisfaction with life, optimism, love of life, and well-being. It has Arabic and English equivalent forms.

The Self-Esteem Scale. The Self-Esteem Scale (S-ES; Rosenberg, 1989) consists of 10 items requiring the respondent to report feelings about the self directly. The S-ES has good psychometric properties in its original English version (Blascovich & Tomaka, 1991). Consistent results have been obtained with this scale in the Arab context (Abdel-Khalek, Korayem, & El-Nayal, 2012), indicating its construct and convergent validity. A five-point Likert scale response format was adopted in the present version, anchored by 1 (*no*) and 5 (*very much*). The total score can

range from 10 to 50, with higher scores representing higher self-esteem.

The Arabic Scale of Happiness. The Arabic Scale of Happiness (ASH; Abdel-Khalek, 2013) comprised 15 brief statements (e.g., "I have an overall sense of well-being", "My life has meaning", and "I feel that I am successful"), plus five filler items. Each item was answered on a five-point intensity scale. The total score on the ASH could range from 15 to 75, with higher scores indicating higher happiness. A principal axis factor analysis followed with oblique rotation (pattern and structure matrices) yielded two factors labeled: General Happiness and Successful Life. Item-remainder correlations ranged from .42 to .77. Cronbach's alphas and test-retest reliabilities ranged from .82 to .94, indicating good internal consistency and temporal stability. The construct validity of the ASH ranged between .55 and .79 against the Fordyce Happiness Measure, the Subjective Happiness Scale, and the Oxford Happiness Inventory. The ASH statistically significantly correlated with mental health, satisfaction with life, optimism, love of life, and self-esteem, so construct validity was adequately demonstrated. The ASH has two equivalent Arabic and English forms.

The Arabic Scale of Mental Health. The Arabic Scale of Mental Health (ASMH; Abdel-Khalek, 2011) was developed as a screening measure and research tool for adults and adolescents. It has two equivalent Arabic and English forms. The scale comprises 40 brief statements (e.g., "I enjoy my life", "I feel safe", and "I am content with myself"), plus 10 filler items. Each item is answered on a five-point intensity scale ranging from 1 (*not at all*) to 5 (*very highly*). The total score on the ASMH can range from 40 to 200, with higher scores indicating better mental health. An exploratory factor analysis yielded six components labeled: Satisfaction, Self-Confidence, Optimism, Enjoyment, Meaningful Life, and Stability. Extensive data on reliability and validity are available.

The Love of Life Scale. The Love of Life Scale (LLS; Abdel-Khalek, 2007b) contains 16 short statements (e.g., "There are many things that make me love life", "Love of life gives me hope", and "Life deserves to be loved"), answered on a five-point Likert scale format, anchored by 1 (*no*) and 5 (*very much*). The total score on the LLS can range from 16 to 80, with higher scores indicating a higher love of life. Cronbach's alpha reliability was .91, and one-week test-retest reliability was .81 among college students, indicating high internal consistency and temporal stability. Factor analysis yielded three factors labeled Positive Attitude towards Life, Happy Consequence of

Love of Life, and Meaningfulness of Life, with moderate inter-factor correlations. Construct validity is indicated by significant positive correlations of the LLS with happiness, optimism, self-esteem, hope, life satisfaction, and extraversion. An exploratory factor analysis of the total scores on the LLS and the last-mentioned six questionnaires yielded a general factor of well-being in which the LLS loaded .78 onto this factor. A simultaneous multiple regression revealed that the best predictors of LLS were happiness, optimism, self-esteem, and hope.

The reliability of the questionnaires. The Cronbach's alpha reliability was computed for the five questionnaires with a sample of Malaysian college students ($n = 52$ men; $n = 55$ women). Table 1 sets out the results. Inspection of Table 1 indicates that all the alpha coefficients were high except for the Self-Esteem Scale. For men this coefficient was acceptable but low among women.

Table 1. *Reliability of the questionnaires*

Scale	Men	Women
Arabic Scale of Intrinsic Religiosity	.855	.833
Self-Esteem Scale	.691	.600
Arabic Scale of Happiness	.887	.805
Arabic Scale of Mental Health	.956	.824
Love of Life Scale	.946	.901

Self-Rating Scales

Four separate self-rating scales, in the form of questions, were used to assess physical health, mental health, happiness, and satisfaction with life. These scales are as follows:

- (1) What is your estimation of your physical health in general?
- (2) What is your estimation of your mental health in general?
- (3) To what degree do you feel happy in general?
- (4) To what degree do you feel satisfied with your life in general?

Each question was followed by a scale of numbers from 0 to 10. The research participant was requested: (a) to respond according to his or her global estimation and general feeling (not their present states); (b) to know that the zero is the minimum, and that 10 is the maximum score; and (c) to circle a number which seems to them to

describe their actual feelings accurately. A high score indicates the rating of the trait or the attribute at a high level. The one-week test-retest reliabilities of the four self-rating scales ranged between .76 and .88, indicating high temporal stability and corroborating the trait-like nature of the scores. Criterion-related validity of these scales have been adequately demonstrated (Abdel-Khalek, 2006b, 2007a, 2012a).

Statistical Analysis

The structure of the data was almost normal. The skewness and kurtosis were in the normal range. Questionnaires and rating scales with missing data were excluded and only complete records were used for analysis.

For each set of data for men and women, means, standard deviations, t -ratios, and Pearson product-moment correlations were computed. The correlational matrix of the total scores on the five questionnaires as well as the scores on the four self-rating scales (9×9) for men and women were separately subjected to a principal components analysis. The Kaiser test, i.e., Eigen value ≥ 1.0 was followed to determine the number of factors to be retained. The salient loading was considered to be $\geq .40$. The Varimax method of orthogonal rotation was used. Multiple stepwise regression analysis was also used (SPSS, version 18.0).

The reason for using the exploratory factor analysis was to estimate the main components underlying the correlations. As stated by Gorsuch (1983):

The purpose is to examine the structure of a given domain as represented by the sample of variables. The long-term interest is to identify basic conceptual dimensions that can be examined in future research... the principal factors represent the greatest proportion of the variance of the variables in the fewest possible dimensions (p. 121).

RESULTS

Table 2 presents the descriptive statistics and the t -values. Reference to this table indicates that men obtained significantly higher mean scores than women did for the self-rating scales of happiness and satisfaction with life. On the other hand, women obtained a significantly higher mean score than their male counterparts did for the ASIR.

Table 3 sets out the correlation matrices separately for men and women. The main interest in the present study was

Table 2. Mean, standard deviation, and *t*-value of the scales

Scale	Men (n = 105)		Women (n = 133)		t	p
	M	SD	M	SD		
Questionnaires						
Religiosity	65.00	6.40	67.41	5.68	3.03	.003
Self-esteem	31.64	4.02	30.98	4.25	1.22	—
Happiness	55.47	7.48	53.63	6.94	1.96	.052
Mental health	152.27	20.19	147.53	17.27	1.95	.053
Love of life	64.61	9.94	64.41	8.90	0.16	—
Self-rating scales						
Physical health	7.15	1.53	7.10	1.70	0.26	—
Mental health	7.45	1.70	7.05	1.86	1.70	—
Happiness	7.47	1.52	7.01	1.78	2.15	.032
Satisfaction	7.44	1.58	6.80	1.76	2.96	.003

Table 3. Pearson correlation coefficients between the study scales among men (*n* = 105; upper matrix), and women (*n* = 133, lower matrix)

Scale	1	2	3	4	5	6	7	8	9
1. Religiosity	—	.055	.085	.133	.059	.302 **	.194 *	.281 **	.216 *
2. Self-esteem	.292 **	—	.372 **	.281 **	.061	.128	.129	.269 **	.026
3. Happiness	.278 **	.351 **	—	.757 **	.553 **	.196 *	.375 **	.417 **	.291 **
4. Mental health	.381 **	.429 **	.794 **	—	.722 **	.197 *	.224 *	.322 **	.215 **
5. Love of life	.140	.157	.537 **	.630 **	—	.089	.078	.103	.016
6. Physical health	.255 **	.245 **	.467 **	.460 **	.379 **	—	.545 **	.643 **	.437 **
7. Mental health (self-rating)	.276 **	.296 **	.544 **	.519 **	.371 **	.695 **	—	.531 **	.330 **
8. Happiness (self-rating)	.260 **	.132	.457 **	.484 **	.355 **	.335 **	.450 **	—	.591 **
9. Satisfaction	.262 **	.181 *	.419 **	.378 **	.325 **	.315 **	.480 **	.643 **	—

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

the association between religiosity and other variables. Inspection of this table indicates that the correlations between religiosity and the four self-rating scales among men were statistically significant. Among women, all the correlations between religiosity and other scales were statistically significant except with the LLS.

To explore the factor structure of the study scales, exploratory factor analyses were conducted for men and women separately because there were statistically significant differences between them for five of the nine scales. Table 4 presents the principal components analysis results. Two components were retained for men and for women. Both factors accounted for 58% of the common variance in men and in women. These components could be la-

beled: “Well-Being and Religiosity”, and “Mental Health and Happiness” in men. In women the two components could be labeled: “Well-Being and Happiness”, and “Self-Esteem, Mental Health and Religiosity”.

Multiple regression analysis was calculated with religiosity as the dependent variable. Table 5 reveals that the main predictors of religiosity were the self-rating scale of physical health in men and mental health in women.

DISCUSSION

The present study has successfully demonstrated its aims. As for the first hypothesis, the statistically significant gen-

Table 4. *Orthogonal (Varimax) factor solution for the scales for men (n = 105) and women (n = 133)*

Scale	Men		Women	
	I	II	I	II
Religiosity	.471	.004	.159	.572
Self-esteem	.105	.418	.028	.813
Happiness	.263	.854	.604	.562
Mental health	.146	.913	.566	.660
Love of life	.085	.829	.583	.316
Physical health	.818	.079	.535	.437
Mental health (self-rating)	.706	.186	.657	.414
Happiness (self-rating)	.838	.249	.830	.030
Satisfaction	.716	.080	.799	.025
Eigen value	2.714	2.535	3.094	2.203
% of variance	30.157	28.162	34.378	24.482
Total variance	58.319		58.860	

Table 5. *Stepwise regression for predicting religiosity*

Predictor	B	β	SE	t	p	R ²
Men						
Physical health	1.265	0.302	0.393	3.219	.002	.091
Constant	55.955		2.872	19.481	.0001	
<i>F</i> -ratio = 10.365 ($p < .002$)						
Women						
Mental health (scale)	0.125	0.381	0.027	4.715	.0001	.145
Constant	48.934		3.945	12.406	.0001	
<i>F</i> -ratio = 22.228 ($p < .0001$)						

der-related differences were found in happiness, satisfaction, and mental health with men obtaining higher mean scores. This result was consistent with previous findings with Arab participants (Abdel-Khalek, 2012a, 2012b). On the other hand, women obtained a statistically significant higher mean score on religiosity than did their counterparts. This result was congruent with previous findings (Abdel-Khalek, 2006a; Spilka et al., 2003, p. 154; Sullins, 2006). Miller (2003, p. 49) stated that woman's spirituality is a basic normal component of her life. However, there were no significant gender-related differences in the other scales. Therefore, the first hypothesis was only partially verified.

Regarding the second hypothesis, most of the Pearson correlations were statistically significant and positive. It is important to examine the religiosity associations with the other scales. For men, the correlations of religiosity were only significant with the four self-rating scales of physical

health, mental health, happiness, and satisfaction with life. These significant correlations ranged from .194 to .302. For women, all the correlations between religiosity and the other scales were statistically significant and positive, except with the LLS. The significant correlations ranged from .225 to .381. It is particularly noteworthy that the religiosity-swB associations in women were higher than that among men. This finding may be relevant to the significantly higher mean score of religiosity in women than in their male peers (see Table 2). Spilka et al. (2003, p. 154) indicated that religiosity is more important for women than men inasmuch as the high degree of religiosity strongly helps women to cope with life hardships. Generally, the religiosity associations with swB and mental health were significant, but some scales, particularly in men, were not sensitive to this relation. These results were consistent with previous findings (see the introduction).

The third hypothesis was verified. The exploratory factor analysis yielded two components labeled “Well-Being and Religiosity” and “Mental Health and Happiness” in men. In women, the two components could be labeled “Well-Being and Happiness” and “Self-Esteem, Mental Health, and Religiosity”. Therefore, at least one component in men and in women connected religiosity with swb or mental health. These results add evidence to the main thesis that religiosity is associated with both swb and health. These results are consistent with previous findings from East and West (e.g., Abdel-Khalek & Lester, 2012, 2017; Luehr & Holder, 2016).

In the stepwise regression, the main predictors of the dependent variable, i.e., religiosity as assessed with the ASIR were the self-rating scale of physical health in men and the ASMH among women. The physical health and mental health as predictors of religiosity among men and women, respectively, deserve a thorough investigation. A preliminary interpretation may be that genuine religiosity entails good physical health inasmuch as in Islam it is highly desirable for men to pray at the mosque five times a day. This requires good physical health. Women are exempted from praying at the mosque since they have to pray at home. On the other hand, the psychological, mental, and spiritual aspects of religiosity are more important for women.

What is the mechanism that could mediate the effect of religiosity on swb and health? As for health, Emmons and Paloutzain (2003) stated that there is a complex causal mechanism responsible for the relationship between religiosity and health endpoints. One particularly promising explanation might involve the experience of religiously engendered emotions such as hope, love, forgiveness, and gratitude. Because the expressions of praise and thanks giving are key components of religious worship, the physiological effects of gratitude hold promise for understanding religion's impact on health. Following a similar pattern, Wallace and Williams (1997) enumerated several factors mediating religion and better health relationship, including health-related behaviors and practices, social support, group identity, coping skills, and guideline provisions for a coherent value system.

Limitations

The results from the present investigation must be viewed within the limitations imposed by the data. Foremost among them is the limited age range and the probable high educational level of college students in comparison with

the general population. The present results on college students may not strongly speak of the broad Malaysian context. For this reason, the present researchers do not claim any kind of generalization of their results. Furthermore, the single item self-rating scales have specific limitations. Foremost is the limited range of scores, short in covering the complexity of these constructs, and the influence of social desirability (Gillings & Joseph, 1996). However, the single-item self-rating scales were used by the present researchers in more than 40 studies revealing the same results as the multi-item questionnaires (e.g., Abdel-Khalek, 2012a).

Conclusion

As far as the present research on Malaysian college students is concerned, its salient results are the high mean scores for happiness, satisfaction, and mental health among men, and the high mean score on religiosity in women. Most of the religiosity correlations with swb and mental health were statistically significant and positive. The principal components analysis identified two components labeled “Well-Being and Religiosity” and “Mental Health and Happiness” in men, and “Well-Being and Happiness” and “Self-Esteem, Mental Health and Religiosity” in women. Predictors of religiosity were the self-rating scale of physical health in men and mental health in women. Based on the present data, it could be concluded that those who obtain high scores on religiosity experienced greater well-being, and physical and mental health. By the same token, but on a contrary direction, the present results suggest that those who obtain high scores on swb are more religious. Religiosity may be considered as a salient component of, and a contributing factor to, happiness and well-being among this sample of Muslim Malaysians.

The main recommendation in this domain is to replicate the present study with a probability sample from the general population other than college students. A suggested next step in this respect, as a future research, would be to replicate and extend this study using samples from different age groups and demographic/socio-economic variables, such as adolescents or old aged. Furthermore, a replication of the present investigation using patients suffering from physical diseases is suggested inasmuch as those patients may use religiosity as a coping mechanism to adapt to their disease. Further research seems appropriate.

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