### ORIGINAL PAPER

# Work and Women's Well-being: Religion and Age as Moderators

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Abstract Religion has been found to moderate the stress-strain relationship. This moderator role, however, may be dependent on age. The present study tested for the three-way interaction between work experience, age, and religiosity in the prediction of women's well-being, and predicted that work experience and religiosity will combine additively in older women, while in younger women religiosity is predicted to moderate the relationship between work experience and well-being. In a sample of 389 married Malay Muslim women, results of the regression analyses showed significant three-way interactions between work experience, age, and religiosity in the prediction of well-being (measured by distress symptoms and life satisfaction). While in younger women the results were in line with the predictions made, in the older women, both additive and moderator effects of religiosity were observed, depending on the well-being measures used. These results are discussed in relation to the literature on work and family, with specific reference to women's age, religion, as well as the issue of stress-strain specificity.

**Keywords** Age · Work · Religiosity · Well-being · Additive effect · Moderator

The present study examines the joint influence of age and religion on the relationship between work experience and women's well-being. Religion has been shown to act as a moderator in the stress–strain relationship (e.g., Ellison et al. 2001; Idler 1995; Pargament 1997). This moderator role of religion, however, may be dependent on age for studies have shown that older women are more religious than younger ones (e.g., Chatters and Taylor 1989; Koenig 1994, 1997). In doing so, the study combines two areas of interest in the stress-health literature; work and family experiences in relation to women's well-being, and second, the extent to which this relationship is conditioned by age and religion of the women. While the work and family area has been prolific due to the increased female labor force participation, together with the prevalence of dual-earner and single-parent families,

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the link between religion and health is less clear (Miller and Thoresen 2003). As a background to the present work, relevant findings pertaining to the two areas are outlined below.

## Work and Family Roles in Relation to Women's Well-being

The increase of women into the labor force, especially that of married women with children, has prompted researchers to question the effects of occupying multiple roles on their well-being, and this can be seen in the debate between the role-enhancement (e.g., Marks 1977) and the role-scarcity hypotheses (e.g., Coser 1974). While this debate has spurred a vast amount of literature, the current focus is on identifying variables that may assist women in combining their roles. Family-friendly work policies, personality variables, and social support are among some of the variables that have been shown to moderate the relationship between work-family experiences and outcomes (e.g., Carlson 1999; Glass and Finley 2002; Noor 2006a; Stova et al. 2001). Religion, however, has not been considered as a possible moderator, and the present study aims to examine the role of religion in this relationship.

According to the assumptions of the gender model, for women, family situations rather than work conditions are predicted to have stronger impact on their well-being. However, many studies have indicated that this is not the case; women similar to men reported work to explain for more variance in well-being than family life (e.g., Duxbury and Higgins 1991; Noor 1995). In the present study only the work role is considered because work operates both as a dominant constraint on family life and as a source of economic and personal sustenance.

## **Religion and Mental Health**

The relationship between religion and mental health is not as straightforward as it first seems. While many studies tend to show that religion (and its various indicators) is positively related to positive mental health outcomes (e.g., Bergin 1983; Koenig 1995, 1997; Williams et al. 1991), others suggest the opposite; that religious involvement has no effect, and in some cases even negative effect on mental health outcomes (Batson et al. 1993; Francis et al. 1981; O'Connor et al. 2003). Currently, the work in this field has moved from attempting to verify whether religion is positively or inversely associated with health to identifying the mechanisms through which religion operates on mental health.

There are currently two models regarding the mechanisms through which religion influences mental health. The first, known as the main or direct effects model, is based on the assumption that religion (religious affiliation or religious involvement) is related to positive mental health. Studies showing a direct inverse relationship between indicators of religiosity and negative mental health have been posited as supporting this model. McCullough et al. (2000), for example, examined the association between a measure of religious involvement and all-cause mortality and found that individuals low in religious involvement were more likely to have died at follow-up than individuals high in religious involvement. Religion, by bringing comfort to lonely, anxious, and depressed people, makes them less likely to suffer ill-health (Levin et al. 1996). In addition, religion brings people together and the resulting increase in social support is related to lower rates of depression, anxiety, and other mental health problems (e.g., Francis 1997; Koenig 1997).



However, other researchers have failed to corroborate these findings (e.g., Batson et al. 1993; Ferraro and Albrecht-Jensen 1991; Sloan and Bagiella 2001).

The buffering model, on the other hand, suggests that religion may buffer the impact of stress on distress by allowing people to change the nature of the stressful role experience in certain ways or to use it as a coping strategy. Support for this model is provided by studies examining the moderator role of religion (e.g., Ellison et al. 2001; Idler 1995; Pargament 1997). For example, in a 2-year longitudinal study of a community sample, Williams et al. (1991) found that attendance at religious services buffered the effects of increased numbers of undesirable life events on subsequent psychological distress. On the other hand, other studies testing for the moderator role of religion have been less clear (e.g., Park et al. 1990; Sorenson et al. 1995). For example, Ellison (1991) constructed global scales of divine interaction and existential certainty and tested for religious buffering effects on perceived life satisfaction. These effects emerge for individuals who scored high on scales of overall existential certainty and who experienced traumatic life events. However, Ellison failed to find religious buffering for subjective perceptions of divine interaction (i.e., feeling close to God and frequency of prayers).

Taken together, these results present a confusing picture and one can cite studies to support either the main or moderator (buffering is a special case of a moderator effect where the moderator variable is related to well-being only for persons under stress, see Cohen and Wills 1985) effect of religious involvement on health. Mirola (1999) suggested that the discrepancy in these findings may be due to the measures of religiosity used as well as its stress-related outcomes. An alternative explanation is that the different patterns of results reflect individual styles of adaptation and responding due to age. Studies have shown that older people are more religiously involved than younger ones (e.g., Chatters and Taylor 1989; Koenig 1994, 1997; Levin and Markides 1988) while others have failed to find an association between religion and well-being among undergraduates or younger adults (Lewis et al. 1997; Lewis et al. 2000; O'Connor et al. 2003). The study by Wink and Dillon (2002) examining religious and spiritual development from childhood to old age using archived data from two birth cohorts found a significant increase in religiousness and spirituality from midlife to older adulthood, particularly among women. While a cohort effect may be operative to some extent, it cannot by itself explain the greater religiousness of older people.

# The Present Study

As mentioned, the different patterns of results found by past studies on the relationship between religion and mental health may reflect individual styles of adaptation and responding due to age. As older people are more religious than younger ones, we expect differences in the way younger and older women perceive and use religion in their lives. In younger women, work may compete with family demands more strongly because at this stage of life women have just started in their work while at the same time trying to negotiate family responsibilities (building up the marital relationship and caring for young children). As they grow older, work may be less stressful because they have become more established at work (or if they are unsatisfied with work they would have left and seek other alternatives) and the family is also more matured. Thus, while younger women have to make more work-family tradeoffs, older ones are seen to be more secure in their jobs. On this basis, we hypothesize that the moderating effect attributed to religious involvement may well be a function of women's age. We know of no study that has considered the



combined effect of age and religiosity as moderators in the stress-strain relation. This is important because the relationship between religion and well-being may be different in younger and older women. In addition, the joint effectiveness of considering two moderators simultaneously may provide a better understanding of why some women remain healthy despite their encounter with stressful experiences. Hence, we will be testing for a significant three-way interaction between work experience, age, and religiosity in the prediction of well-being (and to compare the interaction patterns in younger and older women). Thus, the first hypothesis:

**H1:** Age and religiosity will act as joint moderators in the relationship between work experience and well-being. Here, we expect a significant three-way interaction between work experience, age, and religiosity in the prediction of well-being.

Because older people have been found to be more religious than younger ones, and more secure in their work, we hypothesize religiosity and work experience to predict well-being in an additive manner in older women (where religiosity and work experience are directly and simultaneously related to well-being, each contributing independently to the explained variance); hence the second hypothesis:

**H2:** In older women, work experience and religiosity will predict well-being in an additive manner.

On the other hand, younger women may use religion as a coping strategy by recasting/ reappraising the meaning of everyday stresses so that they seem less stressful and more manageable. In other words, we predict religiosity to moderate the adverse effects of work on well-being (where religiosity is expected to alter the nature of the relationship between work experience and well-being). Therefore, the following hypothesis is proposed:

**H3:** In younger women, religiosity is predicted to buffer the relationship between work experience and well-being, such that religiosity is related to well-being (low distress and high satisfaction) only for women under stress (those with adverse work experience).

In this study, both positive and negative mental health were included on the assumption that well-being is more than just the absence of symptoms of distress; it is also the presence of positive affect. This is in line with more recent work in women's roles (e.g., Noor 2006b) and the emerging field of positive psychology that has pointed out the need for psychology to focus on mental "wellness" (Seligman 2002) as opposed to its usual dependence on mental illness.

## Method

# Participants and Procedure

Participants were solicited from among members of the Employees Provident Fund (a social security organization set up by the government to provide retirement benefits to private-sector employees and non-pensionable public service employees) and several local universities. The participants were all employed married Malay Muslim women with at least one child at home. A total of 692 questionnaires were given out and 399 questionnaires were received. Incomplete and/or missing responses reduced the final number to 389 (a response rate of 56.2%). The age range of the participants was from 21 to 57 years with a mean age of 35.67 years (SD = 8.21 years).



In general, the women were relatively well educated, with 62.2% having at least 11 years of schooling. The majority of the participants held clerical/secretarial jobs (49.6%), followed by managers (18.1%) and teachers (14.8%). The rest (17.5%) were made up of university lecturers, lawyers, doctors, programmers, salespersons, etc. The participants were all in full-time employment and the average number of hours spent at work per day was 8.37 (SD = .92). Most participants worked 5.5 days a week.

#### Measures

# Well-being

Symptoms of psychological distress and life satisfaction were used to assess well-being. These two scales were chosen because previous studies have shown that roles and religiosity had different effects on positive and negative mental health outcomes (e.g., Barnett and Marshall 1991; Ellison et al. 2001).

## General Health Questionnaire

The General Health Questionnaire (GHQ) developed by Goldberg (1978) was used to measure symptoms of psychological distress. The 12-item version of the GHQ was used in the present study and the scale assesses the extent to which participants experienced a list of somatic and affective symptoms over the past 6 weeks. Sample items include 'In the past six weeks have you been able to concentrate on whatever you're doing?' and 'In the past six weeks have you lost much sleep over worry?' Items were scored using a four-point Likert scale with higher scores indicating higher distress symptoms.

## Life Satisfaction

Life satisfaction was assessed by the 5-item scale developed by Diener et al. (1985) to assess the individual's own judgment of his/her quality of life. Sample items are 'In most ways my life is close to my ideal' and 'If I could live my life over, I would change almost nothing'. Participants rated each item along a 7-point Likert response scale (from  $1 = strongly\ disagree\ to\ 7 = strongly\ agree)$  with higher scores reflecting greater satisfaction.

# Work Experience

Work experience was measured using the modified version of Baruch and Barnett's (1986) measures of role attributes, which included both positive and negative items pertaining to the role. In the present study, several items were changed to suit the present context. Sample items include 'Work gives rise to conflicting demands' and 'Hours at work fit your needs'. Participants rated each item using a 4-point Likert response scale (from 1 = not at all to 4 = very much indeed). Negative items were reverse-scored and the higher the total score, the higher the quality of work experience.

### Religiosity

Religiosity was assessed by the 14-item Muslim Attitude toward Religion Scale developed by Wilde and Joseph (1997) and sample items include 'Saying my prayers helps me a lot'



and 'My religion helps me lead a better life'. The scale was rated on a 5-point Likert response format (from  $1 = strongly\ disagree$  to  $5 = strongly\ agree$ ), with higher scores indicating higher attitudes toward religiosity.

### Control Variables

Education and negative affectivity (NA) were controlled before considering the effects of the other predictor variables (work experience, age, and religiosity) on the well-being measures. First, the variance due to education was partialled out because past studies have shown that better educated people (Kaplan 1996; Lantz et al. 1998) were more likely to be religious, resulting in increased well-being. In addition, as shown by Ross and Huber (1985), when other aspects of status are held constant, education is the single most important aspect of status for women's well-being. Kessler and McRae (1982) also found that, for women, employed or not, education has the largest net effect on reducing distress.

A measure of negative affectivity (the neuroticism scale of Eysenck's EPQ-R Short Scale, Eysenck et al. 1985) was included in the analysis in view of evidence that this personality trait (a tendency to perceive both self and the environment negatively) tends to inflate the stressor–strain relations in cross-sectional, self-report study (Brief et al. 1988; McCrae 1990; Moyle 1995).

Two sets of questionnaires were prepared, one in English and another in Malay language, and participants chose the version that they were more comfortable with. To ensure that the two versions were equivalent, the original English measures were adopted into Malay using the back-translation method. Two steps were involved. First, the English version of the measures was translated into Malay. Second, the Malay version of the measures was translated back into English. At this stage, any items that appeared discrepant to the meaning of the original items were translated again.

## Statistical Treatment

Multiple regression was the statistical technique used. It examined the extent to which the predictor variables and their interactions accounted for variance in the well-being measures. Cross-product terms were used to test for interaction effects and these were entered into the regression only after both the variables forming the product had been entered as main effects. To facilitate interpretation of the interaction terms, the continuous predictor variables were standardized before analysis (Cohen and Cohen 1983).

The hierarchical analysis used in the present study was carried out in six stages for each of the two outcome measures. At Step 1, education and negative affectivity were entered. Work experience, age, and religion were each entered consecutively in the following three steps, to see their individual contributions to well-being. The three two-way interactions between work experience, age, and religion were entered simultaneously at Step 5 and finally, at Step 6, the three-way age × work experience × religiosity interaction term.

#### Results

Prior to the regression analyses, the means and standard deviations of the variables used in the analyses were calculated and the reliability (coefficient alpha) of each of the scales used was determined (see Table 1). The mean values and distributions of the continuous



	Mean	SD	Reliability <sup>a</sup>	1	2	3	4	5	6
1. Education	35.67	8.21							
2. Negative affectivity	3.53	1.42		09					
3. Work experience	4.02	2.90	.78	.12*	25**				
4. Age	59.97	6.76	.72	13**	15**	.03			
5. Religiosity	52.62	3.63	.87	.10	16**	.13*	.15**		
6. Distress	9.52	4.86	.86	02	.45**	33**	03	21**	
7. Life satisfaction	23.96	6.31	.86	.16**	31**	.33**	.16**	.25**	41**

Table 1 Means, standard deviations, Cronbach alpha reliabilities, and intercorrelations of measures

Note: Education was coded as 1 = primary 1-6; 2 = forms 1-5; 3 = form 6; 4 = diploma; 5 = degree; and 6 = postgraduate degree

variables were within the expected ranges, and the coefficient alpha values indicated acceptable reliability.

As shown in Table 1, the inter-correlations between the predictor variables ranged from low to moderate. The two outcome measures were negatively related to one another. While age was positively related to religiosity and life satisfaction, it was not associated with distress. Work experience and religiosity were both related negatively to distress but positively associated with life satisfaction.

### Prediction of Psychological Distress

The results of the regression analysis predicting psychological distress are shown in Table 2 (left-hand side). At Step 1, negative affectivity was a significant and positive predictor of distress scores. Work experience, entered at the second step, contributed significantly to the explained variance. Age, entered next, was non-significant. However, religiosity, entered at Step 4, was significant; higher religiosity was associated with lower distress scores. At the next step, the  $R^2$  increment for three two-way interactions was not significant. However, the three-way interaction between age, work experience, and religiosity, entered in the final step of the analysis, was significant. Overall, the model was significant F(9, 379) = 16.59, p < .0001; it accounted for 29.8% of the variance in psychological distress.

### Prediction of Life Satisfaction

The life satisfaction measure was analyzed using the same model as for psychological distress. The results are shown on the right-hand side of Table 2. At the first step of the analysis, both education and negative affectivity were significant (those with higher education reporting higher life satisfaction levels, while those with high negative affectivity scores were associated with low life satisfaction). Work experience, entered at Step 2, contributed significantly to the explained variance. Age and religiosity, entered in the next two consecutive steps, were both significant; older women and higher religiosity were associated with higher satisfaction. None of the three two-way interactions was significant. However, the three-way interaction between age, work experience, and religiosity was



<sup>&</sup>lt;sup>a</sup> This column shows the coefficient alpha reliabilities for each scale

<sup>\*</sup> *p* < .05; \*\* *p* < .01

Measures	Psycholo		Life satisfaction					
	$\Delta R^2$	F	p	В	$\Delta R^2$	F	p	В
Step 1	.202***				.116***			
Education		<1	ns	.228		5.72	.017	.436*
Negative affectivity		82.77	.0001	1.849***		38.99	.0001	-1.255***
Step 2	.053***				.073***			
Work experience (WE)		25.57	.0001	-1.070***		32.62	.0001	1.524***
Step 3	.002				.013*			
Age		1.08	ns	.381		6.00	.015	.518
Step 4	.017**				.024**			
Religiosity		8.63	.004	616*		11.28	.001	1.187***
Step 5	.015				.003			
Age × Religiosity		<1	ns	.198		<1	ns	.308
$Age \times WE$		6.73	.017	516*		<1	ns	104
WE × Religion		<1	ns	.245		<1	ns	.269
Step 6	.008*				.011*			
Age × WE × Religiosity		4.08	.05	503*		5.33	.02	.808*
Cumulative $R^2$	.298				.240			

Table 2 Hierarchical regression analysis of age, education, negative affectivity, work experience, and religiosity in relation to well-being

Note: The B values are the unstandardized regression coefficients from the final stage of the regression analysis

significant. Overall, the model was significant, F(9, 327) = 12.53, p < .0001; it accounted for 24.0% of the variance in life satisfaction.

The results of the two hierarchical regression analyses provided support for the first hypothesis, where for both measures of well-being, significant three-way interactions were found. To discern the pattern of interactions in the findings with respect to hypotheses 2 and 3, the following were carried out.

1. Evaluation of the work experience × age × religiosity interaction for psychological distress

Following from Cohen and Cohen (1983), the form of the three-way interaction was evaluated by creating the regression equation predicting distress from the unstandardized coefficients shown in Table 2. Initially, equations predicting distress from work experience and religiosity were derived for two levels of age: at 1 standard deviation above the mean (older women) and at 1 standard deviation below the mean (younger women). Further substitution allowed equations predicting distress from work experience to be derived for high and low levels of religiosity (1 standard deviation above the mean and 1 standard deviation below the mean), at the two levels of age.

Figure 1 shows the form of the interaction. In the older women, the lines representing high and low levels of religiosity were almost parallel; in this case, work experience and religiosity predicted outcome in an additive manner, each contributing independently to the explained variance in distress scores.

On the other hand, the figure shows that in younger women high distress occurs only when low religiosity is combined with adverse work experience; neither religiosity nor



<sup>\*</sup> p < .05; \*\* p < .01; \*\*\* p < .0001

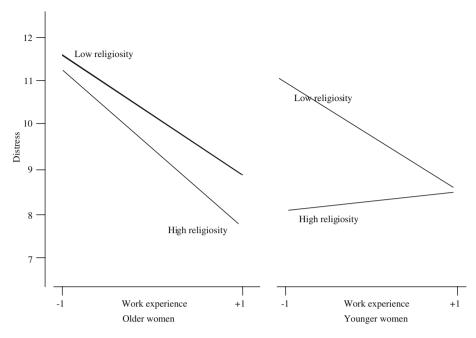


Fig. 1 The relationship between work experience and symptoms of psychological distress for older and younger women at high and low levels of religiosity

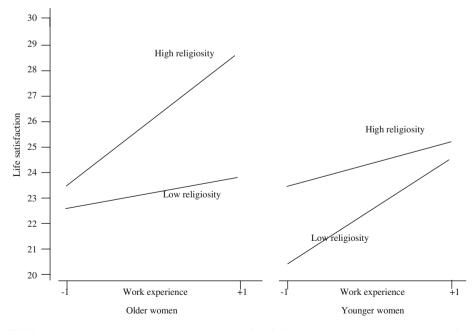


Fig. 2 The relationship between work experience and life satisfaction for older and younger women at high and low levels of religiosity



work experience alone gives rise to high distress. In other words, in younger women, high religiosity acts to buffer the negative relation between work experience and distress.

These observations are in line with the predictions made in hypotheses 2 and 3.

2. Evaluation of the work experience  $\times$  age  $\times$  religiosity interaction for life satisfaction Again, using the approach described by Cohen and Cohen (1983), the form of the three-way work experience  $\times$  age  $\times$  religiosity interaction was determined from unstandardized coefficients from the final regression equation (Table 2). Figure 2 shows the form of the interaction. In the younger women, as predicted, high religiosity moderated the adverse effects of low work experience on satisfaction. For the older women, however, a moderation effect was also observed, where the relationship between work experience and life satisfaction was significant only for those with high religiosity scores such that the highest life satisfaction scores were associated with those with high work experience.

In general, the figure also shows that older women have higher satisfaction scores than younger ones.

While these findings are consistent with the prediction made in hypothesis 3, it did not support the prediction in hypothesis 2.

### Discussion

The present study was carried out to test for the three-way interaction between work experience, age, and religion in the prediction of women's well-being (measured by psychological distress and life satisfaction), and to compare the forms of the interaction for younger and older women. In general, the results showed that religiosity has the potential to exercise a protective influence on women's well-being and that this relationship is moderated by age. Specifically, in younger women, as predicted, high religiosity moderated the effects of adverse work experience on well-being. Among older women, however, the results are not as straightforward. While religiosity and work experience combined additively to predict distress (as hypothesized), this was not found when life satisfaction was used as the outcome measure. In this case, a moderation effect was observed, where the relationship between work experience and life satisfaction was significant only for those with high religiosity. Thus, both main and moderator effects of religion were found depending on women's age and the measure of well-being used. Before discussing the interaction terms, the effects of the predictor variables are first considered.

The results showed that work experience was a significant predictor for both psychological distress and life satisfaction. This is consistent with past studies showing that work explains for substantial variance in well-being measures (e.g., Karasek and Theorell 1990; Schrabracq 2003; Tennant 2001), even after taking into account the control variables (education and negative affectivity). It seems that the economic instrumentality of work on one's well-being is the same for Malay Muslim women as in their Western counterparts. Work is central and with the income from work women can fulfill both their personal and familial needs. The quality of the work experience then directly predicts both distress and life satisfaction.

Age was related only to life satisfaction, where older women reported higher life satisfaction than younger women. This is consistent with both cross-sectional and longitudinal studies showing that life satisfaction increased to approximately 65–70 years and then declined (e.g., Hamarat et al. 2002; Mroczek and Spiro III 2005). The present study did not have any respondent beyond 57 years old. The present finding, in contrast to past studies (e.g., Charles et al. 2001), did not find distress to decrease as people age.



Religiosity was a significant predictor for both measures of well-being contributing to substantial explained variance independently of the control variables, work experience and age. These findings are consistent with past studies showing religion and aspects of religion (e.g., religious commitment, private religious activities like prayer) to be associated with lower rates of depression (e.g., Koenig 1995; Nelson 1989) and higher life satisfaction (e.g., Ellison et al. 1989; Levin et al. 1995). The analysis carried out in the present study was more rigorous compared to previous studies because it controlled for certain variables that have been shown to confound the relationship between work, age, religiosity, and well-being. Even after controlling for these variables, religiosity was still predictive of both measures of well-being, implying the importance of this variable to the well-being of Malay Muslim women. Islam, as all other religions, is associated with well-being because it provides a guide on how to live one's life, offers comfort and solace in good and bad times, and gives meaning and identity to individuals. Considered in this context, religion would be positively associated with life satisfaction and negatively with psychological distress.

## Age and Religion as Joint Moderators

As mentioned earlier, another explanation for the different patterns of result regarding main or moderating effect of religion on mental health may reflect individual styles of adaptation and responding due to age. Furthermore, the inconsistent results may be attributed to the fact that the two-way interaction between stressor and religion is too simplistic to capture the more complex relationships between existing variables. While the present study showed work experience and religion to predict well-being (main effects of both variables on outcome), the significant three-way interaction between work experience, age, and religion showed that the interaction effects differed in younger and older women as well as with respect to the outcome measure that was used. The significant three-way interaction in the prediction of distress, for example, showed that younger and older women with high and low religiosity responded differently to adverse work experience. In younger women, religion buffered the negative effects of adverse work experience on distress. In older women, however, religion and work experience were both beneficial, each contributing additively to the explained variance in distress scores. These findings were in line with the predictions made.

With respect to life satisfaction, the significant three-way interaction showed that in the younger women the finding was in line with the prediction made, i.e., that religion would buffer the negative effects of low work experience on outcome. However, in older women, the hypothesis was not supported; religiosity interacted with work experience such that the relationship between religiosity and life satisfaction was significant only at high work experience, where those with high religiosity and high work experience had the highest satisfaction scores. Thus, these findings suggest that younger and older women may not make use of religion in the same way, which may affect their well-being differently. Therefore, the mixed findings regarding main and moderator effects of religion in the past, to an extent, may be due to these age differences between respondents.

Past studies have shown that older women are more religious than younger ones. While a cohort effect may be possible (where older women in the sample grew up during a period when religion had greater influence on society and the family), there is mounting evidence to show that aging itself may affect a person's interest in religion. Existential concerns at this time in life might prompt older women to reexamine their views about God or perhaps



adopt a religious worldview to take into account the changes in their lives (Jung 1966). For these older women, religion is generally beneficial to their well-being.

The findings of this study contributed to the literature in this area by showing that younger women, who are not usually associated with high religiosity, make use of religion to moderate negative work experience. Although this may be specific to the sample used in the present study, there is lately a trend whereby younger women are also increasingly turning toward religion.

The different patterns of findings observed for the two outcome measures also reflect the issue of specificity in the stress–strain relations as well as the importance of using both positive and negative outcomes in studies of women's well-being. Although correlated, the two outcome measures are distinct measures, each having different predictors. One practical implication here is that in trying to reduce stress or strain one needs to consider the outcome chosen and to examine the perspective that describes the outcome. In addition, the inconsistent findings of main or moderator effect of religion on well-being may be due to the stress-related outcome that is chosen.

#### Limitations

The study has some limitations. The data used were cross-sectional, and thus it is impossible to ascertain the causal ordering of the relations among study variables. Although it was assumed that work and religiosity preceded well-being, the reverse may also hold, where those with better well-being take on work and religious commitments.

The religiosity measure used only assessed high or low attitude toward religion. Religiosity, however, has been shown to be multidimensional, including formal and informal religious support, religious coping, closeness to God, etc. (Hill and Pargament 2003). Therefore, the measure used in the present study may be limited. Furthermore, the sample was made up of only Malay Muslim women. Compared to women from other ethnic groups and countries, this sample may be relatively more religious due to their background. Therefore, caution is needed in generalizing the present findings to other groups of women.

In spite of these limitations, the findings of this study have contributed to the literature on work, religiosity, and health outcomes. In younger women, the results were in line with the predictions made, i.e., religiosity interacted with work experience in the prediction of well-being. In older women, however, both additive and moderator effects of religiosity were observed, depending on the well-being measures used. These findings relating to how work, religiosity, and well-being are linked in a patriarchal society that subscribes to the importance of the family unit and religion should be informative for researchers.

## References

- Barnett, R. C., & Marshall, N. L. (1991). The relationship between women's work and family roles and their subjective well-being and psychological distress. In M. Frankenhaeuser, U. Lundberg, & M. Chesney (Eds.), *Women, work and health* (pp. 111–136). New York: Plenum Press.
- Baruch, G. K., & Barnett, R. C. (1986). Role quality, multiple roles involvement and the psychological well-being in mid-life women. *Journal of Personality and Social Behavior*, *3*, 578–585. doi:10.1037/0022-3514.51.3.578.
- Batson, C. D., Schoenrade, P., & Ventis, W. K. (1993). Religion and the individual: A social-psychological perspective. Oxford: Oxford University Press.
- Bergin, A. E. (1983). Religiosity and psychological well-being: A critical re-evaluation and meta-analysis. *Professional Psychology: Research and Practice, 14*, 170–184. doi:10.1037/0735-7028.14.2.170.



- Brief, A. P., Burke, M. L., George, J. M., Robinson, B. S., & Webster, J. (1988). Should negative affectivity remain an unmeasured variable in the study of job stress? *Journal of Applied Psychology*, 73, 193–199. doi:10.1037/0021-9010.73.2.193.
- Carlson, D. S. (1999). Personality and role variables as predictors of three forms of work-family conflict. *Journal of Vocational Behavior*, 55, 236–253. doi:10.1006/jybe.1999.1680.
- Charles, S. T., Reynolds, C. A., & Gatz, M. (2001). Age-related differences and change in positive and negative affect over 23 years. *Journal of Personality and Social Psychology*, 80, 136–151. doi: 10.1037/0022-3514.80.1.136.
- Chatters, L. M., & Taylor, R. J. (1989). Age differences in religious participation among Black adults. Journals of Gerontology, 44, S183–S184.
- Cohen, J., & Cohen, P. (1983). Applied multiple regression /correlation analysis for the behavioral sciences. New Jersey: Erlbaum Hillsdale.
- Cohen, S., & Wills, T. A. (1985). Stress, social support and the buffering hypothesis. *Psychological Bulletin*, 98, 310–357. doi:10.1037/0033-2909.98.2.310.
- Coser, L. (1974). Greedy institutions. New York: Free Press.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71–75. doi:10.1207/s15327752jpa4901\_13.
- Duxbury, L. E., & Higgins, C. A. (1991). Gender differences in work-family conflict. *Journal of Applied Psychology*, 76, 60–74. doi:10.1037/0021-9010.76.1.60.
- Ellison, C. G. (1991). Religious involvement and subjective well-being. *Journal of Health and Social Behavior*, 32, 80–99. doi:10.2307/2136801.
- Ellison, C. G., Boardman, J. D., Williams, D. R., & Jackson, J. S. (2001). Religious involvement, stress, and mental health: Findings from the 1995 Detroit area study. *Social Forces*, 80, 215–249. doi: 10.1353/sof.2001.0063.
- Ellison, C. G., Gay, D. A., & Glass, T. A. (1989). Does religious commitment contribute to individual life satisfaction? *Social Forces*, 68, 100–123. doi:10.2307/2579222.
- Eysenck, S. B. J., Eysenck, H. J., & Barrett, P. (1985). A revised version of the Psychoticism Scale. *Personality and Individual Differences*, 6, 21–29. doi:10.1016/0191-8869(85)90026-1.
- Ferraro, K. F., & Albrecht-Jensen, C. M. (1991). Does religion influence adult health? *Journal of the Scientific Study of Religion*, 30, 193–202. doi:10.2307/1387213.
- Francis, L. J. (1997). The psychology of gender differences in religion: A review of empirical research. *Religion*, 27, 81–96. doi:10.1006/reli.1996.0066.
- Francis, L. J., Pearson, P., Carter, M., & Kay, W. (1981). The relationship between neuroticism and religiosity among English 15- and 16-year olds. *Journal of Social Psychology*, 114, 99–102.
- Glass, J. L., & Finley, A. (2002). Coverage and effectiveness of family-responsive workplace policies. Human Resource Management Review, 12, 313–337. doi:10.1016/S1053-4822(02)00063-3.
- Goldberg, D. P. (1978). Manual of the General Health Questionnaire. Windsor: NFER Publishing.
- Hamarat, E., Thompson, D., Steele, D., Matheny, K., & Simons, C. (2002). Age differences in coping resources and satisfaction with life among middle-aged, young-old and oldest-old adults. *Journal of Genetic Psychology*, 163, 360–367.
- Hill, P. C., & Pargament, K. I. (2003). Advances in the conceptualization measurement of religion and spirituality: Implications for physical and mental health research. *American Psychologist*, 58, 64–74. doi:10.1037/0003-066X.58.1.64.
- Idler, E. L. (1995). Religion, health, and nonphysical senses of self. Social Forces, 74, 683–704. doi: 10.2307/2580497.
- Jung, C. G. (1966). Psychology and religion. New Haven, CT: Yale University Press.
- Kaplan, G. A. (1996). People and places: Contrasting perspectives on the association between social class and health. *International Journal of Health Services*, 26, 507–519. doi:10.2190/4CUU-7B3G-G4XR-0K0B.
- Karasek, R., & Theorell, T. (1990). Healthy work: Stress, productivity and the reconstruction of working life. New York: Basic Books.
- Kessler, R. C., & McRae, J. A. (1982). The effects of wives' employment on the mental health of married men and women. *American Sociological Review*, 47, 216–227. doi:10.2307/2094964.
- Koenig, H. G. (1994). Aging and God. Binghamton, NY: The Haworth Press.
- Koenig, H. G. (1995). Religion and older men in prison. *International of Geriatric Psychiatry*, 10, 219–230.
- Koenig, H. G. (1997). Is religion good for your health? Binghamtom, NY: The Haworth Pastoral Press.
- Lantz, P. M., House, J. S., Lepkowski, J. M., Williams, D. R., Mero, R. P., & Chen, J. (1998). Socioeconomic status, health behaviors and mortality: Results from a nationally representative prospective study of U.S. adults. *Journal of the American Medical Association*, 279, 1703–1708. doi: 10.1001/jama.279.21.1703.



- Levin, J. S., Chatters, L. M. & Taylor, R. J. (1995). Religious effects on health status and life satisfaction among Black Americans. *Journal of Gerontology (Social Sciences)*, 50B, S154–S163.
- Levin, J. S., & Markides, K. S. (1988). Religious attendance and psychological well-being in middle-aged in middle-aged and older Mexican Americans. Sociological Analysis, 49, 66–72. doi:10.2307/3711104.
- Levin, J. S., Markides, K. S., & Ray, L. A. (1996). Religious attendance and psychological well-being in Mexican Americans: A panel analysis of three generations data. *Gerontologist*, 36, 454–463.
- Lewis, C. A., Lanigan, C., Joseph, S., & de Fockert, J. (1997). Religiosity and happiness: No evidence for an association among undergraduates. *Personality and Individual Differences*, 22, 119–121. doi: 10.1016/S0191-8869(97)88910-6.
- Lewis, C. A., Maltby, J., & Burkinshaw, S. (2000). Religion and happiness: Still no association. *Journal of Beliefs and Values*, 21, 233–236. doi:10.1080/713675504.
- Marks, S. (1977). Multiple roles and role strain: Some notes on human energy, time, and commitment. *American Sociological Review*, 42, 921–936. doi:10.2307/2094577.
- McCrae, R. R. (1990). Controlling neuroticism in the measurement of stress. Stress Medicine, 6, 237–241. doi:10.1002/smi.2460060309.
- McCullough, M. E., Hoyt, W. T., Larson, D. B., Koeniq, H. G., & Thoresen, C. (2000). Religious involvement and mortality: A meta-analytic review. *Health Psychology*, 19, 211–222. doi: 10.1037/0278-6133.19.3.211.
- Miller, W. R., & Thoresen, C. E. (2003). Spirituality, religion, and health: An emerging research field. *American Psychologist*, 58, 24–35. doi:10.1037/0003-066X.58.1.24.
- Mirola, W. A. (1999). A refuge for some: Gender differences in the relationship between religious involvement and depression. *Sociology of Religion*, 60.
- Moyle, P. (1995). The role of negative affectivity in the stress process: Tests of alternative models. *Journal of Organizational Behavior*, 16, 647–668. doi:10.1002/job.4030160705.
- Mroczek, D. K., & Spiro III, A. (2005). Change in life satisfaction during adulthood: Findings from the Veterans Affairs Normative Aging study. *Journal of Personality and Social Psychology*, 88, 189–202. doi:10.1037/0022-3514.88.1.189.
- Nelson, P. B. (1989). Ethnic differences in intrinsic/extrinsic religious orientation and depression in the elderly. Archives of Psychiatric Nursing, 3, 199–204.
- Noor, N. M. (1995). Work and family roles in relation to women's well-being: A longitudinal study. *British Journal of Social Psychology (Special Issue on Health and Social Psychology)*, 34, 87–106.
- Noor, N. M. (2006a). Locus of control supportive workplace policies and work-family conflict. *Psychologia: An International Journal of Psychology in the Orient*, 49, 48–60. doi:10.2117/psysoc.2006.48.
- Noor, N. M. (2006b). Malaysian women's state of psychological well-being: Empirical validation of a conceptual model. The Journal of Social Psychology, 146, 95–115. doi:10.3200/SOCP.146.1.95-115.
- O'Connor, D. B., Cobb, J., & O'Connor, R. C. (2003). Religiosity, stress and psychological distress: No evidence for an association among undergraduate students. *Personality and Individual Differences*, 34, 211–217. doi:10.1016/S0191-8869(02)00035-1.
- Pargament, K. I. (1997). The psychology of religion and coping: Theory, research, practice. New York: Guildford Press.
- Park, C., Cohen, L., & Herb, L. (1990). Intrinsic religiousness and religious coping as life stress moderators for Catholics versus Protestants. *Journal Personality and Social Psychology*, 59, 562–574. doi: 10.1037/0022-3514.59.3.562.
- Ross, C. E., & Huber, J. (1985). Hardship and depression. *Journal of Health and Social Behavior*, 26, 77–91. doi:10.2307/2136655.
- Schrabracq, M. J. (2003). Everyday well-being and stress in work and organizations. In M. J. Schrabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), The handbook of work and health psychology (pp. 9–36). Chichester: Wiley.
- Seligman, M. E. P. (2002). Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment. New York: Simon and Schuster.
- Sloan, R., & Bagiella, E. (2001). Religion and health. Health Psychology, 20, 228. doi: 10.1037/0278-6133.20.3.228.
- Sorenson, A., Grindstaff, C., & Turner, R. (1995). Religious involvement among unmarried adolescent mothers: A source of emotional support? *Sociology of Religion*, 56, 71–81. doi:10.2307/3712040.
- Stova, A. Z., Chiu, R. K., & Greenhaus, J. H. (2001). Negative affectivity, role stress, and work-family conflict. *Journal of Vocational Behavior*, 60, 1–16. doi:10.1006/jvbe.2001.1812.
- Tennant, C. (2001). Work-related stress and depressive disorders. *Journal of Psychosomatic Research*, 51, 697–704. doi:10.1016/S0022-3999(01)00255-0.
- Wilde, A., & Joseph, S. (1997). Religiosity and personality in a Moslem context. *Personality and Individual Differences*, 23, 899–900. doi:10.1016/S0191-8869(97)00098-6.



- Williams, D. R., Larson, D. B., Buckler, R. E., Heckman, R. C., & Pyle, C. M. (1991). Religion and psychological distress in a community sample. *Social Science and Medicine*, 32, 1257–1262. doi: 10.1016/0277-9536(91)90040-J.
- Wink, P., & Dillon, M. (2002). Spiritual development across the adult life course: Findings from a longitudinal study. *Journal of Adult Development*, 9, 79–94. doi:10.1023/A:1013833419122.

