



Relevancy and Measurement of Religiosity in Consumer Behavior Research

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Abstract

Although culture and subcultural norms have been subjected to increased scrutiny in recent years as explanatory constructs for various dimensions of consumer behavior, religion as an element of culture has received only slight attention in the marketing literature. This study seeks to examine the influence of religiosity on one aspect of consumer behavior - shopping orientation. The findings revealed that three shopping orientation factors, namely quality consciousness, impulsive shopping and price consciousness were related to religiosity. It is suggested that religiosity should be included as a possible determinant of shopping orientations in consumer behavior models.

Keywords: Consumer behavior, Religious affiliation, Religiosity

1. Introduction

The construct of culture and subculture have become increasingly central to the consumer behavior literature. Previous studies in the area of culture and formation of consumption (e.g. Schouten & McAlexander, 1995; Shaw & Clarke, 1998; Thompson & Tambyah, 1998) have generally identified cultural values as important factors in determining the consumption behavior of individuals. Notwithstanding the growing body of extant literature focused on this topic, culture has been considered by researchers to be the most difficult construct to investigate because of its pervasive nature (McCort & Malhotra, 1993). Culture has been defined variously as values, norms, rituals, beliefs and symbols shared by members of a group or society. It includes patterns of behaviour, learned responses, basic assumptions, habits and traditional ways of thinking, feeling and reacting (Shweder, 1991). The very complex and abstract nature of culture makes it certainly beyond the bound of possibility for any empirical research to adequately study culture as one unified concept. This has led to the call to “unpack” culture in order to understand the underlying dimensions of cultural influences and the behavioral consequences of them (McCort & Malhotra, 1993).

There is a considerable body of extant literature focused on culture and its influence on various aspects of consumer behavior. However, among this body of work, there are limited examples of research that incorporate the role of religion as an element of culture with consumer behavior. Instead, researchers have mainly focused on other subcultural factors such as ethnicity, nationality and values as important predictors of consumer behavior.

Religion is an important cultural factor to study because it is one of the most universal and influential social institutions that has significant influence on people's attitudes, values and behaviors at both the individual and societal levels. Whether working directly through taboos and obligation or through its influence on the culture and society, religious values and beliefs are known to affect ritualistically and symbolically human behavior. Religion and its associated practices often plays a pivotal role in influencing many of the important life transitions that people experience (e.g. births, marriages and funeral rites), in values that come to be important to them (e.g. moral values of right and wrong), in shaping public opinion on social issues (e.g. cohabitation, premarital sex, family planning, organ donation, and the like), in what is allowed and forbidden for consumption (e.g. restriction on eating and drinking) and in many other aspects that pertain to everyday life. These norms however vary between different religious faiths and the degree of observance determine to what extent these norms are kept.

Still, observant believers are not the only ones who tend to reconcile their religious beliefs with their behaviors. Religious requirements and regulations often take on an extended meaning beyond observant believers. For instance, dietary laws represent an obligation for observant families and at the same time, a sort of habit or preference for non-observant members of the community. Here, religion refers to, not only a belief binding the spiritual nature of man to a supernatural being, but mainly a sub-system of culture that determine customs and norms of the society. This system is supposed to influence believers' conducts as a sign of reverence or faith and those of agnostics and atheists, as a pillar of cultural environment.

Even though social beings' behaviors and attitudes are directly influenced by at least religion-rooted cultural aspects of their living environments, religion's impact on consumption-related behaviour have been only very modestly studied in the marketing literature. Hirschman (1983) ventured three possible reasons to explain why religion per se has not been adequately examined in the consumer behavior literature. The first reason for the slow development of literature in this area is the possibility that consumer researchers are unaware of the possible links between religion and consumption patterns. The second reason is a perceived prejudice against "religion" within the research community; once being a "taboo" subject and too sensitive to be submitted for investigation (i.e. the potential for inadvertent offence and the legal protection afforded freedom of religion). Finally, she claims that religion is everywhere in our life and therefore may have been overlooked by researchers as an obvious variable for investigation in the field.

Although Hirschman made this assertion some years ago, it is still true today. To date, few studies have investigated religion as a predictor of consumption patterns even though there have been calls for such research in the literature. An analysis conducted by Cutler (1991) that examined the frequency with which papers on religion were published in the academic marketing literature from 1956 to 1989 found that only thirty five articles had a religious focus with nearly 80% of these articles published in the 1980s. Of these, only six were specifically identified as articles within the consumer behavior discipline.

The purpose of this study is to investigate the role of religious factors in explaining differences in consumer behavior. The study aims to contribute to our current stock of understanding of this relationship as well as to provide a basis for further investigation in this promising research area. One aspect of consumer behavior has been selected for empirical investigation - shopping orientation.

2. Theoretical Perspectives

2.1 Defining Religiosity

The search for a generally accepted theory or definition faces enormous difficulties in the case of religion (Clarke & Byrne, 1993). Scholars identify at least three historical designations of the term: (1) a supernatural power to which individuals must respond; (2) a feeling present in the individual who conceives such a power; and (3) the ritual acts carried out in respect of that power (Wulff, 1997). Such designations have defied social scientific consensus and thus "it is hard to make any generalization [concerning religion] that is universally valid" (Peterson, 2001, p. 6). As a result, different theories and definitions of religion are often used in the literature. Among others, religion has been defined as:

"A belief in God accompanied by a commitment to follow principles believed to be set forth by God".

(McDaniel & Burnett, 1990, p. 110)

"A socially shared set of beliefs, ideas and actions that relate to a reality that cannot be verified empirically yet is believed to affect the course of natural and human events".

(Terpstra & David, 1991, p. 73)

"An organised system of beliefs, practices, rituals and symbols designed (a) to facilitate closeness to the sacred or transcendent (God, higher power or ultimate truth/reality), and (b) to foster an understanding of one's relation and responsibility to others in living together in a community".

(Koenig, McCullough & Larson, 2000, p. 18)

"A social arrangement designed to provide a shared, collective way of dealing with the unknown and un-knowable aspects of human life, with the mysteries of life, death and the different dilemmas that arise in the process of making moral decisions".

(Johnson, 2000, p. 259)

"A cultural subsystem that refers to a unified system of beliefs and practices relative to a sacred ultimate reality or deity".

(Arnould, Price & Zikhan, 2004, p. 517-518)

"A system of beliefs about the supernatural and spiritual world, about God, and about how humans, as God's creatures, are supposed to behave on this earth".

(Sheth & Mittal, 2004, p. 65)

A scrutiny of these various definitions reveals the inconsistency underlying the understanding and perception of the concept of religion among researchers. Clarke and Byrne (1993) identified three sources of doubt about the possibility of producing a satisfactory definition of religion. They relate to (1) conflicts and unclarities in the ordinary use of the term; (2) the confused meaning left to the term from its history; and (3) the obvious divergence in scholarly purposes and approaches to the definition of religion. Thus, because religion may be not definable in general terms, "it must be defined for each research setting" (Wilkes, Burnett & Howell, 1986, p. 48).

2.2 Measuring Religiosity

Traditionally religiosity has been conceptualized as a unidimensional construct with church attendance and denomination being the primary measure (Bergan, 2001). Though this unitary measure may be simple at the cost of validity and remains a frequently used measure within the literature (Schwartz & Huismans, 1995), many researchers argued that frequent use does not make such a unidimensional assessment an acceptable research practice. As Bergan (2001) very aptly pointed out, the reliance on religious attendance as a sole measure of religiosity may be insufficient and lead to incorrect conclusions. In fact, the unidimensional view of the nature of religiosity gives rise to one major concern that relates to the difficulty in equating greater attendance of worship in congregation and increased religious commitment. A person may attend prayers in congregation for several reasons, for example, to avoid social isolation, to please their colleagues, or it can be a form of prestigious action to dominate over others. Thus we cannot say that those who are high in religious practice are high in religiosity because this practice could be a routine action more than devotional.

The recognition of the multidimensional nature of religiosity allows for a more thorough understanding of the potential importance of different dimensions or forms of religiosity. Psychometric research conducted in the area of psychology has successfully produced a plethora of scales to measure a wide variety of religious phenomena including attitudes, beliefs and values (Hill & Hood, 1999). Most research has focused upon indices of intrinsic (religion as an end), extrinsic (religion as a means) and quest (religion as a search) dimensions of religiosity. However, there is no consensus among experts as to the number of dimensions that make up the religiosity construct. Religiosity is an intricate concept and a variegated human phenomenon, and seems to cover considerable ground such as behaviors, attitudes, beliefs, feelings and experiences. Religious scholars and sociologists do not agree on whether adequate measures of individual religiosity can be developed and therefore such measures are subjectively devised by researchers to fit their research objectives. Thus, the content and number of religious dimensions vary considerably and may depend on the nature of the research, purpose and context.

Wilkes et al. (1986) contends that the use of a multi-item measurement of religiosity provides a better understanding of its true nature and “may achieve high validity at the cost of sheer impracticality for almost all consumer research” (p. 49). In their study, the dimensionality of religiosity construct was assessed with four items: frequency of church attendance, confidence in religious values, importance of religious values and self-perceived religiousness.

McDaniel and Burnett (1990) initiated an alternative approach of measuring religiosity for consumer research by operationalizing religious commitment in terms of cognitive and behavioral measures of religiosity. The cognitive dimension, defined as the “degree to which an individual holds religious beliefs” (McDaniel & Burnett, 1990, p. 103), was composed of three summated items designed to evaluate the importance of religion: self-ascribed religiousness and two religious-oriented questions interspersed within a list of AIO-related questions. The behavioral dimension was assessed as two separate factors: (1) frequency of church/synagogue attendance and (2) amount of monetary donations given to religious organizations.

Another approach to measure religiosity in consumer research has been the operationalization of the construct either as a means to reach self-centered ends or as an end in itself using Allport and Ross (1967) intrinsic-extrinsic Religious Orientation Scale (ROS). While the ROS has proven to have acceptable reliability and has shown some indication of applicability for marketing in general and consumer research in particular (Delener & Schiffman, 1988; Delener, 1990a, 1990b, 1994; Essoo & Dibb, 2004), one serious shortcoming of the inventory is that they were specifically designed for use with Christian or Judeo-Christian subjects. Thus, direct adaptation of the scale is not always feasible and valid to measure the degree of religiosity of other than Judeo-Christian religions, although the scale has been used in one study involving Muslim and Hindu subjects in Mauritius (Essoo & Dibb, 2004). Genia (1993), as a result of his psychometric evaluation of the ROS, recommends that the item measuring frequency of worship attendance be dropped, because it “presents theoretical as well as methodological problems” (p. 287). In measuring Islamic religiosity, for instance, this item applies only to men because they are obligated to attend worship in congregation at mosque at least once a week on Friday. The intrinsic items on the scale have also been shown to lack internal consistency and to be of questionable value for other than Christian religions (e.g. Genia, 1993).

In studying the relationship between Jewish religious intensity and repeat purchase behavior, LaBarbera and Stern (1990) used two different measures of religious intensity; one for Orthodox Jews and the other for non-Orthodox Jews. Michell and Al-Mossawi (1995), in their experiment to test the mediating effect of religiosity on advertising effectiveness among British Christians and Muslims, also used two different sets of religiosity measures.

Similarly, in their cross-cultural study of consumer behavior in Japan and the U.S., Sood and Nasu (1995) developed two different measures of religiosity. The measurement was based on the responses to nine questions related to belief in the religious practice or activity, the moral consequences and experience dimension or self-rating of one's religiosity.

From the above review, some general conclusions can be drawn: religiosity is a distinct concept which can be measured

from various perspectives. While there is some disagreement in the literature regarding the precise number of dimensions to employ in measuring it, most researchers agree that religiosity is multidimensional in nature. In addition, almost all the empirical studies seeking to specify dimensions of religiosity have been from a Christian perspective and developed with Christian subjects.

2.3 Religious Influences on Consumer Behavior

A series of studies on religious affiliation and consumer behavior that was done by Hirschman in the early 1980's showed that: 1) Jewish consumers tend to be more innovative and less brand and store loyal than non-Jewish consumers (Hirschman, 1981), 2) Catholic consumers are more influenced by price, location, transportation, and mood in making entertainment related choices than are Protestant consumers (Hirschman, 1982), and 3) Jewish, Catholic, and Protestant consumers use different evaluation criteria in making entertainment, residential, transportation, and pet choices (Hirschman, 1983).

Bailey and Sood (1993) examined the effects of religious affiliation on consumer behavior of six religious groups in Washington DC: Buddhism, Hinduism, Islam, Judaism, Catholic and Protestant. The results identified statistically significant differences in the consumer behavior of different religious groups. They found that Muslim consumers were relatively more impetuous shoppers but less likely to be informed or risky shoppers. Hindus were found to be in rational shopper group while Catholics were less likely to be informed shoppers. Buddhists are the only minority religious members in the sample to report consumer behavior similar to the societal norms.

It has been argued that religion is highly personal in nature and therefore its effects on consumer behavior depend on individuals' level of religious commitment or the importance placed on religion in their life. In an empirical study of religiosity and consumer behavior among 602 mostly Protestant consumers, Wilkes et al. (1986) reached a significant conclusion that religiosity influences several aspects of consumer's lifestyle, which eventually may affect choices and/or choice behaviour. When age, income and sex were controlled, the researchers found that people with a higher degree of religious commitment tend to be satisfied with their lives, have a more traditional sex-role orientation and are more likely to be opinion leaders.

McDaniel and Burnett (1990) investigated the influence of religiosity on the importance of various retail department store attributes held by consumers. The results show that one aspect of religiosity, religious commitment, particularly measured by cognitive religiosity and one aspect of behavioral religiosity are significant in predicting the importance individuals place on certain retail evaluative criteria. Consumers with a high degree of cognitive religious commitment viewed sales personnel friendliness, shopping efficiency, and product quality as being of greater importance in selecting a retail store than did those low in cognitive religious commitment. Religious contribution, a behavioral component of religious commitment, was positively and significantly associated with sales personnel friendliness/assistance and credit availability.

Sood and Nasu (1995) conducted a cross-cultural comparison of the effects of religiosity on general purchasing behavior for a sample of Japanese and American consumers. They suggested that there is no difference in consumer shopping behavior between devout and casually religious Japanese individuals and this could be attributed this to the fact that religion is not an important element in overall Japanese culture. On the other hand, devout Protestants in the U.S.A. were found to be more economic, buying product on sale, shopping in stores with lower prices, being open to buying foreign-made goods, believing that there was little relation between price and quality, tending to not believe advertising claims while preferring subtle and informative advertisements.

Essoo and Dibb (2004) conducted a similar study in Mauritius involving Hindu, Muslim and Catholic consumers. The results confirmed that consumers having different level of religiosity differ notably in their shopping behavior. In particular, devout Hindus were found to differ from their casually religious counterparts in four shopper types: the demanding, practical, thoughtful and innovative shopper. In the case of Muslim consumers, their findings suggest that there is no difference in consumer shopping behaviour between devout and casually religious Muslim consumers, except for the trendy shopper type. Devout Catholics were found to differ from their casually religious counterparts in four types of shopper: the demanding, practical, trendy and innovative.

The empirical findings reviewed above provide some intriguing evidence of a causal link between religion and consumer behavior, both in terms of cognitive and conative behavioral aspects. It is important to note, however, that most prior studies on this topic have been conducted among American population who are predominantly Jews, Catholics or Protestants. As such, little can be said about the robustness of previous findings in other religious contexts and cultural settings.

3. Method

3.1 Measures

Two dimensions of religiosity have been identified from the literature review: religious affiliation and religious

commitment. Religious affiliation has typically been measured relative to religious denominational membership or religious identification of the individual. Religious commitment has been measured both cognitively (feeling or affect) and behaviorally. Both dimensions are appropriate for consumer behavior research given the fact that religious affiliation is only useful as a predictor variable to assess the existence of differences between two or more religious groups but not within a specific religious group. Further, although classification based on religious affiliation enjoys the advantage of objectivity, it suffers a limitation as one may or may not identify oneself strongly with one's religiosity.

Religious affiliation was measured by asking respondents about the religions with which they identified (Muslim, Buddhist, Hindu, Christian or Other). This approach is regarded as "emic" in nature, that is, it allowed the respondent to label themselves and to ensure that those who were "born into" a particular religious tradition but no longer felt tied to it were not judgmentally labelled by the researcher (Hirschman, 1982). This method of measuring religious affiliation is the approach deemed most appropriate by cross-cultural behavioral researchers, and especially those in cultural anthropology and sub-cultural psychology.

Religiosity was measured using the Religious Commitment Inventory (RCI-10) developed by Worthington et al. (2003). The RCI-10 measures motivational and behavioural commitment to a religious value system, irrespective of the content of beliefs in that faith system and has been validated across different samples. It skillfully avoids sectarian language often utilizing terms such as "my faith" and "my religious group" and is appropriate for use across most faiths. The RCI-10 does not delve directly into the potentially sensitive and contentious theological religious realm, thus eliminating any possibility of offending participants or provoking their sensitivity. The scale consists of ten 5-point Likert-type statements ranging from "Strongly Disagree" (1) to "Strongly Agree" (5) with six statements expressing intrapersonal religiosity (cognitive) and four expressing interpersonal religiosity (behavioral).

The cognitive dimension focuses on the individual's belief or personal religious experience while the behavioral dimension concerns the level activity in organized religious activities. These two dimensions of religiosity appear theoretically sound and empirically substantiated and investigations into religiosity effects must consider both factors. Individuals may perceive themselves to be highly religious (cognitive component) but for whatever reason, are not behaviourally expressive in their religious beliefs, e.g. they do not attend church, tithe and so forth (behavioral component) or they may be motivated to give generously of their time and money to organized religion by appeals to their need for prestige and social appearances while not ascribing strongly to religious precepts.

Twenty-six items for shopping orientation were included in the questionnaire, obtained from Shamdasani, Hean and Lee (2001) which was validated by a Singaporean sample. This was chosen over other inventories because of its use of a Singaporean sample and which is thus thought of as valid to represent the general characteristics of consumers in an Asian environment. Both Malaysian and Singaporean consumers share many similarities in terms of socio-demographic composition, making this inventory equally applicable for the present study. A 5-point Likert scale was used to measure the shopping orientation of respondents, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). The shopping orientation scale had a mix of both positive and negative statements.

Seven questions were developed to ascertain respondents' demographic information. These include gender, age, marital status, education attainment, work status, ethnic identity, religious affiliation and household's monthly income.

3.2 Data Collection and Sample Characteristics

The research data was collected by means of a survey. Using area sampling procedure, three hundred respondents across five residential areas in Kuala Lumpur were randomly sampled for this study. Of these, two hundred and twenty-six questionnaires were deemed usable for data analysis.

The sample consisted of slightly more female respondents (55.3%). The largest proportion of the respondents was Muslim (45.6% of the total sample), followed by Buddhist (25.2%), Hindus (15%) and Christians (14.2%). The sample was divided with respect to education: 43.8% had diplomas, 43.8% were first degree holders while postgraduate degree holders 10.6%. Respondents who possessed secondary education represented 23.9% of the sample. In terms of income, the greater number of respondents (48.6%) fell into the middle-income category, indicated a household income of RM1500 to RM3500 per month. Overall, the sample appeared to be younger, more educated and includes more middle-income earners.

4. Results

4.1 Investigation of the Measures

Data were analyzed using SPSS for Windows (version 11.5). As a preliminary step, religiosity and shopping orientation items were factor analysed to reduce the variables to a manageable number of components. Factoring ceased when all eigenvalues of greater than one were obtained and when a set of factors explaining a large percentage of the total variance was achieved. An accepted method of interpretation of factor loadings is to regard as significant any variable with a loading of 0.4 or greater as associated with the appropriate factor (Hair, Anderson, Tatham & Black, 1998).

Reliability analysis was then carried out to examine the internal consistency of the factors obtained where Cronbach's alpha coefficient at 0.5 or higher was considered acceptable (Kerlinger & Lee, 2000).

The factor analysis of the 10 religiosity items extracted two factors which had eigenvalue greater than one. The first factor was labeled as "intrapersonal religiosity" and the other one was labeled as "interpersonal religiosity". These factors produced alpha coefficients of 0.85 and 0.68 respectively and their factor loadings ranged from 0.553 to 0.818, indicating high internal consistencies and reliability. Similar procedure was also applied to the 26 shopping orientation items. The principal component analysis and the ensuing varimax rotation produced six factors that yielded eigenvalue greater than one. These six factors were named as (1) "brand consciousness", (2) "shopping enjoyment", (3) "fashion consciousness", (4) "quality consciousness", (5) "impulsive shopping" and (6) "price consciousness". Loadings for these factors varied in a range between 0.566 and 0.835. Cronbach's alpha coefficients ranged from 0.65 to 0.83, indicating acceptable internal consistency and reliability for these six factors. Table 1 summarizes the results.

4.2 Effects of Religious Affiliation

The results of ANOVA analyses (Table 2) indicated that there were no significant differences in shopping orientations among consumers affiliated with different religions.

4.3 Effects of Intrapersonal Religiosity

Statistically significant differences among groups existed in three of the six shopping orientations (Table 2). Those three orientations included quality consciousness ($F = 11.898$, $p < 0.001$), impulsive shopping ($F = 12.468$, $p < 0.001$) and price consciousness ($F = 11.599$, $p < 0.001$). The results indicated no significant differences among groups for brand consciousness, shopping enjoyment and fashion consciousness orientations.

Post-hoc pairwise comparisons were conducted on significant findings to determine in detail these differences. For quality consciousness, the significant contrast existed between low and high ($p = 0.000$) and between medium and high ($p = 0.002$) groups. Subjects in the high religiosity group appeared to exhibit a substantially higher quality consciousness than the low and medium groups ($M_s = 4.01$ for high, 3.75 for medium and 3.53 for low).

In relation to impulsive shopping, significant differences were found between low and high ($p = 0.000$) and between medium and high ($p = 0.000$) groups. Subjects with a high level of intrapersonal religiosity appeared to exhibit less shopping impulsiveness than the other two groups ($M_s = 2.68$ for high, 3.22 for medium and 3.29 for low). However no significant contrast was observed between low and medium groups.

For price consciousness orientation, significant differences were found between low and medium ($p = 0.022$) and between low and high ($p = 0.000$) groups. Subjects in low religiosity group appeared to exhibit a lower price consciousness than their counterparts in medium and high religiosity groups ($M_s = 3.34$ for low, 3.67 for medium and 3.9 for high). No significant difference was observed between medium and high groups.

4.4 Effects of Interpersonal Religiosity

As displayed in Table 2, significant differences among groups were found in five of the shopping orientations. Those with a significant difference are the brand consciousness ($F = 3.333$, $p < 0.05$), fashion consciousness ($F = 3.193$, $p < 0.05$), quality consciousness ($F = 11.906$, $p < 0.001$), impulsive shopping ($F = 8.555$, $p < 0.001$) and price consciousness ($F = 16.11$, $p < 0.001$). The F-ratio for the price consciousness variable was highly significant, indicating strong differences in the level of price consciousness among the three religious groups. No differences among groups are indicated for the shopping enjoyment orientation.

Post-hoc pairwise comparisons were conducted on significant findings in order to assess mean differences between groups. For brand consciousness, significance differences were observed between low and medium groups ($p = 0.038$). Subjects in the medium group appeared to exhibit higher level of brand consciousness than the low group ($M_s = 3.2$ for medium and 2.81 for low). The high group was intermediate in this regard ($M = 2.9$) but not significantly different from either low or high groups.

With respect to fashion consciousness orientation, a significant difference was found between low and medium groups ($p = 0.039$). The cell means indicate that subjects in the medium group exhibited higher level of fashion consciousness than those in the low group ($M_s = 3.02$ for medium and 2.66 for low). The high group was intermediate in this regard ($M = 2.76$) and not significantly different from either low or high groups.

In relation to quality consciousness, a significant difference was found between low and medium ($p = 0.006$) and between low and high groups ($p = 0.000$). By comparison, subjects in the high and medium groups appeared to exhibit a higher level of quality consciousness than subjects in the low group ($M_s = 4.00$ for high, 3.93 for medium and 3.53 for low).

As with impulsive shopping, significance differences were indicated between low and high ($p = 0.01$) and between medium and high ($p = 0.000$) groups. An examination of the mean scores show that subjects in the high group appeared

to exhibit lower level of shopping impulsiveness ($M = 2.77$) than the other two groups ($M_s = 3.34$ for medium and 3.16 for low).

Finally, for price consciousness orientation, significant differences were found between low and medium ($p = 0.028$) and between low and high ($p = 0.000$) groups. The cell means indicate that subjects in the high group exhibited higher level of price consciousness ($M = 3.94$) than their counterparts in the low group ($M = 3.34$). Medium group was intermediate in this regard ($M = 3.66$) but not significantly different from the high group.

5. Discussion

Findings of this study suggest that significant differences exist in shopping orientation among consumers with different levels of religiosity. Both dimensions of religiosity (intrapersonal and interpersonal) may be significant in predicting certain aspects of shopping orientation. More specifically, three shopping orientation factors, namely price conscious, quality conscious and impulsive shopping, were found in the present study to be consistently related to religiosity. It appears that highly religious individuals, as defined by both intrapersonal and interpersonal measures of religiosity, are most likely to be concerned with price (i.e. prone to look for deals), look for quality in product when they shop and less likely to make impulsive purchase decision. However, no significant differences were found across the groups with regards to shopping orientation, indicating the lack of explanatory power of religious affiliation in explaining variation in this aspect of consumer behavior.

The present study has provided some new information that adds to our current limited stock of knowledge concerning the influence of religion on consumer behavior. Evidently, religion does have an effect on reported behavior with the degree of religiosity was found to be more important than belonging to any particular religious faiths. This is among major contribution of this study as until now the existing literature on this subject, while supporting for the inclusion of religious variable as a reliable and valid predictor in consumer research, provide little consensus agreement on which measure (whether categorical measure of religious denomination or multidimensional measure of religiosity) is the most efficient in explaining variation in aspects of consumer behaviour. It appears that the differences between consumer behavior in general were much more overt for religiosity than merely for religious affiliation. This implies that religiosity may serve as a potentially powerful predictor and determinant of consumer behavior.

Another theoretical contribution of this study is the identification of religiosity dimensions. While there is no consensus in the literature regarding the exact number of religiosity dimensions, most researchers agree that religiosity is a multi-dimensional construct that necessitates its components to be studied individually. Thus, in keeping with the injunction to measure religiosity in a multi-dimensional manner (Wilkes et al. 1986), the study utilized a multi-item scale covering cognitive and behavioral aspects of religiosity in order to obtain a clear picture of how religious the subjects really are. As the result of factor analysis have confirmed, religiosity could be represented by two religious dimensions namely intrapersonal religiosity and interpersonal religiosity, with the former mainly represents the cognitive dimension while the latter mainly represents the behavioral dimension of religious commitment. The dimensionality of religiosity found in this study lends support for Worthington et al.'s (2003) conceptualization. These two religious dimensions are particularly important in consumer research since many explanations of consumer decision-making process revolve around the concept of cognitive and behavior (Solomon, 2002; Arnould et al. 2004).

While no researcher thus far has adapted the RCI-10 inventory as measurement device for religiosity construct, the use of this inventory in the current research has proved to be a reliable measure since a high alpha coefficient of 0.85 was obtained for the scale. The reliability tests performed on the two components of the scale, intrapersonal religiosity and interpersonal religiosity, also showed a high degree of internal consistency with alpha coefficients of 0.85 and 0.68 respectively. The high alpha values for both scales confirmed prior reliability tests of the scale (Worthington et al. 2003). Although a higher alpha level would be preferred for interpersonal religiosity, the scale is generally acceptable for an initial research effort. This scale was used in the current study to measure the degree of religiosity of four different religious groups which had not previously been measured using this scale. Experience from this study would indicate that those who seeking a short religiosity scale for use in survey research involving non-Judeo Christian respondents, particularly in the non-Western culture, should probably consider the RCI-10 inventory. Moreover, apart from the fact that this scale is neutral (i.e. free from bias towards specific tenet of any religious faiths), from the methodological perspective, a shorter version of the religiosity scale but at the same time maintaining excellent psychometric support would save time in research protocol by cutting the number of items nearly in half (e.g. as compared to 20-item Religious Orientation Scale developed by Allport and Ross). More importantly, a shorter version of religiosity scale may be preferable and even practical because it is sometimes difficult in getting the participation of religious respondents due to the sensitive nature of the topic being researched.

Finally, the findings reported in this paper provide empirical evidence concerning religion's influence on consumer behavior in a non-Western culture. A review of relevant literature showed that the majority of past studies addressing the linkage between these two constructs have been typically conducted with Western Judeo-Christian cultures where Jews, Protestants and Catholics are predominant in its society; other countries with different socio-cultural milieus are

underrepresented in research investigating this issue. As such, these studies provide limited supports on the generalizability of the research findings. This study contributes to the current literature as the first piece of empirical endeavor to probe the relationship between religion and consumer behavior in a totally different cultural framework - Malaysia. There has been no report to date of empirical study that explored the influence of religion on consumer behavior in the context of Malaysian culture. The present research may lead international consumer researchers to a better understanding of the relevancy of religiosity on consumer behavior across different cultural settings, especially in those where the four world's major religions namely Islam, Buddhism, Hinduism and Christianity, reflect the multi-character of the population.

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Table 1. Principal component factor analysis

Factor	No. of item	Eigenvalue	Percentage of variance	Cronbach Alpha
<i>Religiosity</i>				
Intrapersonal religiosity	6	3.25	32.5	0.85
Interpersonal religiosity	4	2.32	23.18	0.68
<i>Shopping orientation</i>				
Brand consciousness	4	2.87	13.67	0.83
Shopping enjoyment	4	2.56	12.17	0.78
Fashion consciousness	4	2.46	11.73	0.8
Quality consciousness	3	2.1	10.0	0.73
Impulsive shopping	3	1.85	8.82	0.66
Price consciousness	3	1.78	8.45	0.65

Note: Factors were extracted by using principal component method with a varimax rotation

Table 2. ANOVA results

Variable	Religious affiliation		Intrapersonal religiosity		Interpersonal religiosity	
	F	Sig.	F	Sig.	F	Sig.
Brand consciousness	1.157	0.327	0.393	0.676	3.333	0.037*
Shopping enjoyment	1.462	0.226	1.600	0.204	1.087	0.339
Fashion consciousness	0.817	0.486	0.085	0.919	3.193	0.043*
Quality consciousness	1.002	0.393	11.898	0.000**	11.906	0.000**
Impulsive shopping	0.951	0.417	12.468	0.000**	8.555	0.000**
Price consciousness	1.350	0.259	11.599	0.000**	16.11	0.000**

*p<0.05; **p<0.01

Table 3. Mean values

Variable	Religious affiliation				Intrapersonal religiosity			Interpersonal religiosity		
	M	H	B	C	L	M	H	L	M	H
Brand consciousness	3.00	2.89	3.04	2.71	2.88	3.00	2.92	2.81	3.20	2.90
Shopping enjoyment	3.39	3.17	3.11	3.23	3.18	3.21	3.39	3.17	3.37	3.30
Fashion consciousness	2.76	2.75	2.99	2.70	2.76	2.78	2.81	2.66	3.02	2.76
Quality consciousness	3.90	3.71	3.75	3.81	3.55	3.75	4.08	3.53	3.93	4.00
Impulsive shopping	2.95	3.10	3.22	3.06	3.29	3.22	3.68	3.16	3.34	2.77
Price consciousness	3.74	3.64	3.45	3.65	3.34	3.67	3.90	3.34	3.66	3.94

M = Muslim; H = Hindu; B = Buddhist; C = Christian

L = Low; M = Medium; H = High

Table 4. Summary of results

Dependent variable	Independent variable		
	Religious affiliation	Intrapersonal religiosity	Interpersonal religiosity
Brand consciousness	n.s.	n.s.	M>L
Shopping enjoyment	n.s.	n.s.	n.s.
Fashion consciousness	n.s.	n.s.	M>L
Quality consciousness	n.s.	H>L,M	H,M>L
Impulsive shopping	n.s.	H<L,M	H<L,M
Price consciousness	n.s.	L<M,H	L<M,H

L = Low; M = Medium; H = High