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RELIGION AND SPORTS APPAREL CONSUMPTION: AN EXPLORATORY  
STUDY OF THE MUSLIM MARKET

by

Murad Shreim

A Thesis

Submitted to the Faculty of Graduate Studies through the Faculty of Human Kinetics  
in Partial Fulfillment of the Requirements for  
the Degree of Master of Human Kinetics at the  
University of Windsor

Windsor, Ontario, Canada

2009

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Religion and Sports Apparel Consumption: An Exploratory Study of the Muslim Market

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## AUTHOR'S DECLARATION OF ORIGINALITY

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## ABSTRACT

The role of religion as a key factor of culture in consumer behaviour is not well-established. This research fulfilled the calls of many studies that suggested examining the relationship between religion and consumer behaviour including sports consumption behaviour. An empirical investigation was conducted to explore the relationship between Islam and sport clothing shopping behaviour taking into account the possible effects of age, sex, income, and sport participation. 265 Adult immigrant Muslims residing in Windsor, participated in this study. The results of this study indicated that Muslim consumers were looking for quality sport clothing that acknowledges their Islamic obligation. Creating branded, fashionable, and quality sport clothing with Islamic obligation could stimulate higher levels of participation. Sport clothing shopping behaviour for Muslims with low levels of religiosity were affected by age, sex, income, and sport participation similar to Western consumers, while sport clothing shopping behaviour for Muslims with higher levels of religiosity were only affected by age and sport participation; the interaction effects, sex and income, were found to be not relevant.

## DEDICATION

This work is dedicated to my lovely wife, Hala Abu Ghazaleh. Her help and support played a significant role in my education path. Despite having three kids, she did not hesitate to offer all her support to help me out finishing my master degree. Having a wife with three kids and studying for graduate degree is very hard work. Keeping balance between them is harder. However, Hala never ever made me feel that I am giving more time to my study than family. God bless you my sweet heart and bless our kids, Lara, Zeid, and Kareem. God please give me the power to take good care of them as much as I can.

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## Introduction

International sport companies aim to export their products and services overseas. They try to enter foreign markets to accomplish several goals such as expanding their brands all over the world, achieving a higher level of products and services' sales, and subsequently enhancing their expected profits (Luna & Gupta, 2001). The most attractive markets for international marketers are those with a high population, high birth rates, young age profiles, and high purchase powers, traits which all apply to the Muslim Markets (Salzman, 2008).

To tap into foreign markets, international marketers should be aware of foreign consumer behaviour, internal and external factors that influence their behaviour, and adapt their strategies to meet foreign consumers' needs, wants, attitudes, and value systems. International marketers must understand the nature of targeting different cultures and all factors that influence it such as ethnicity, race, religion, and regional or national identity. Subsequently, this understanding helps international marketers to identify the relationship between the consumer behaviour and culture. Failing to adapt marketing strategies to consumers' needs and wants will negatively affect the level of the products and services sales (Blackwell, Miniard, & Engel, 2001).

A mass of marketing literature emphasized the relationship between consumer behaviour and culture (Arnould & Thompson, 2005). However, a small number of empirical studies were conducted to examine the relationship between religion and consumer behaviour (Cutler, 1991). Religion is a sensitive issue. Religion and business seem like an uncomfortable combination (Salzman, 2008). Cutler revealed that prior to 1990 only thirty five articles in the academic marketing literature were conducted to

highlight the relationship between religion and marketing. Only six articles were specifically identified as articles within the consumer behaviour discipline (Cutler).

Nowadays, sport is a global phenomenon. The number of people involved in sports, either as participants or as spectators, is increasing, and sport consumption, including the demand for sporting goods, has increased accordingly (Lera-Lopez & Rapun-Garate, 2007). Sporting goods include sport equipment, sports apparel, and sport footwear (Shank, 2009). Several studies examined the factors that affect sport consumption such as gender, age, income, race, and sport participation (e.g., Armstrong & Stratta, 2004; Pan & Gabert, 1997; Taks & Mason, 2004). However, the influence of religion, and Islam in particular (i.e., the religion of the Muslims), has - to our knowledge - not yet been studied in the context of consuming sport clothing.

The widespread nature of McDonald's outlets around the world is a perfect example demonstrating international marketing strategy's role across cultures. When the Western company McDonald's entered foreign markets, it took into consideration many factors that affected the targeted consumer behaviour. For example, because the Muslims are forbidden to eat pork and to drink alcohol, McDonald's does not offer these products to them. This fact shows that McDonald's studied the strong influence of Islam on Muslim consumers and responded accordingly (Peter & Olson, 2008).

Islam also imposes a dress code; women are required to cover their bodies except for their face and hands, while men minimally need to cover between the navel and the knee (Khan, 2003), which will affect the wearing, and thus, the consumption of sport clothing. The current study will therefore examine the influence of Islam on sport

clothing shopping behaviour, namely sport clothing design (extent of Islamic obligation), price, quality, fashion, brand, shopping enjoyment and impulsive shopping.

### Literature Review

The current research will study the influence of religion, as a key element of culture, on consuming sport clothing in Muslim markets. More specifically, this study is designed to explore the degree to which Islam religion impacts the sport shopping behaviour of Muslims toward purchasing sport clothes. Therefore, this literature review will emphasize the theoretical frameworks that characterize the relationship between consumer behaviour and culture, with a special emphasis on religion. Moreover, it will highlight the difference between the Muslim culture and the Western culture and how marketing strategies should respond accordingly. Finally, it will stress the concept of the sport industry, sports products, and sports consumption in general and sports apparel consumption in particular, including the factors that affect it, such as demographic variables (age, gender, and income) and sport participation.

#### *The Relationship between Consumer Behaviour and Culture/Religion*

The relationship between consumer behaviour and culture/religion is the core of current research which explores cultural and religious influences on consumer behaviour in general and the consumption of sport clothing in particular.

#### *Consumer Behaviour*

The American Marketing Association (A.M.A) defines consumer behaviour as “the dynamic interaction of affect and cognition, behavior, and the environment by which human beings conduct the exchange aspects of their lives” (as cited in Peter & Olson, 2008, p. 5). This definition implies three meanings of consumer behaviour. First,



consumer behaviour is dynamic. The reason is the thoughts, feelings, and actions of individual consumers and society at large are constantly changing. Second, consumer behaviour involves interactions. In other words, marketers need to understand what products and brands mean to consumers, what consumers must do to purchase and use them, and what factors influences shopping, purchasing, and consumption. Thus, if marketers know more about how these interactions influence individual consumers and society at large, they will be better prepared to satisfy consumer's needs, wants, and values. Third, consumer behaviour involves exchanges. People give up money and other things to obtain products and services, that is, exchanges between consumers as buyers and marketers as sellers (Peter & Olson).

Solomon, Zaichkowsky, & Polegato (1999) defined consumer behaviour as “ the study of the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires” (p. 8). The authors mentioned that needs and desires to be satisfied range from hunger and thirst to love, to status or even spiritual fulfillment. According to Blackwell et al. (2001) consumer behaviour is defined as “activities people undertake when obtaining, consuming, and disposing of products and services” (p. 6). Obtaining refers to the activities leading up to and including the purchase or receipt of a product; consuming refers to how, where, when, and under what circumstances consumers use products; disposing includes how consumers get rid of products and packaging. Blackwell et al. also added that consumer behaviour is affected by consumer influences such as culture, income, values, family, ethnicity, and organizational influences such as brand, price, services, quality, and word of mouth (Blackwell et al.).

Based on Solomon's et al. (1999) and Blackwell's et al. (2001) definitions of consumer behaviour, the first process of consumer behaviour is to select and to purchase products/ services. This process can be labeled as shopping behaviour (Essoo and Dibb, 2004), buying/purchasing behaviour (Sood and Nasu, 1995), shopping orientation (Mokhlis, 2006), or shopping criteria (Smith and Frankenger, 1991). The concept of all these different names is that people take many different approaches to the act of shopping based on their past shopping experience and personal value systems (Mokhlis). For the purpose of this study, the "shopping behaviour" term will be used to refer to this process and the consumer behaviour is limited to shopping behaviour. Shopping behaviour is one of the most axiomatic concepts in consumer behaviour literature, which has been widely used to classify consumers based on their habits and styles. Shopping behaviour refers to "activities people engage in while examining or purchasing merchandise or services" (Darden and Dorsch, 1990, p. 289).

To conclude, from these different definitions, consumer behaviour including shopping behaviour is a complex phenomenon and a diverse field. Moreover, most consumer behaviour definitions are highlighting the factors that affect consumer behaviour and refer to them with different names such as social and physical environmental factors or internal and external factors (Peter & Olson, 2008).

### *Culture*

There is no unified definition for culture. Chang (2005) stated that scholars of all schools have defined culture with more than 300 definitions. Culture is the glue that unites groups. Mooij (2004) clarified that

Culture is to society what memory is to individuals. It includes the things that have worked in the past. It includes shared beliefs, attitudes, norms, roles, and values found among speakers of a particular language who live during the same historical period in a specific geographic region. These shared elements of subjective culture are usually transferred from generation to generation (p. 26).

Culture is learned and shared. It is the social heritage and life regulator. It continues to grow and change and each field of human life is related to it. Culture includes two levels: material and non-material. Without cultural patterns people would have difficulty living together (Chang, 2005). Solomon et al. (1999) explained that culture includes both abstract ideas, such as values and ethics, as well as material objects and services, such as automobiles, clothing, food, art and sport that are produced or valued by a group of people. Hence, they defined culture as “the values, ethics, rituals, traditions, material objects and services produced or valued by members of a society” (Solomon et al., p. 527).

Hawkins, Mothersbaugh, & Best (2007) defined culture as “the complex whole that includes knowledge, belief, art, law, morals, customs, and any other capabilities and habits acquired by humans as members of society” (p. 42). Hawkins et al. also presented an example to understand the concept of culture based on what people from different cultures are ordering as pizza toppings. In the United States the most popular topping is pepperoni. However, in Japan, it is squid; in England, tuna and corn; in Guatemala, black bean sauce; in the Bahamas, barbecued chicken; in Australia, eggs; and in India, pickled ginger. Some of these toppings may be disliked by people from one culture, but highly preferred by people from another culture. This implies that the preferences of pizza

toppings, as well as most of other preferences, are strongly influenced by people's culture (Hawkins et al.).

For the purpose of this study, the definition of culture is in agreement with the definition of Blackwell et al. (2001) who defined culture as “a set of values, ideas, artifacts, and other meaningful symbols that help individuals communicate, interpret, and evaluate as members of society” (p. 314). Blackwell et al. offered an explanatory model that ties the influences on culture and the elements of it (see Figure 1).

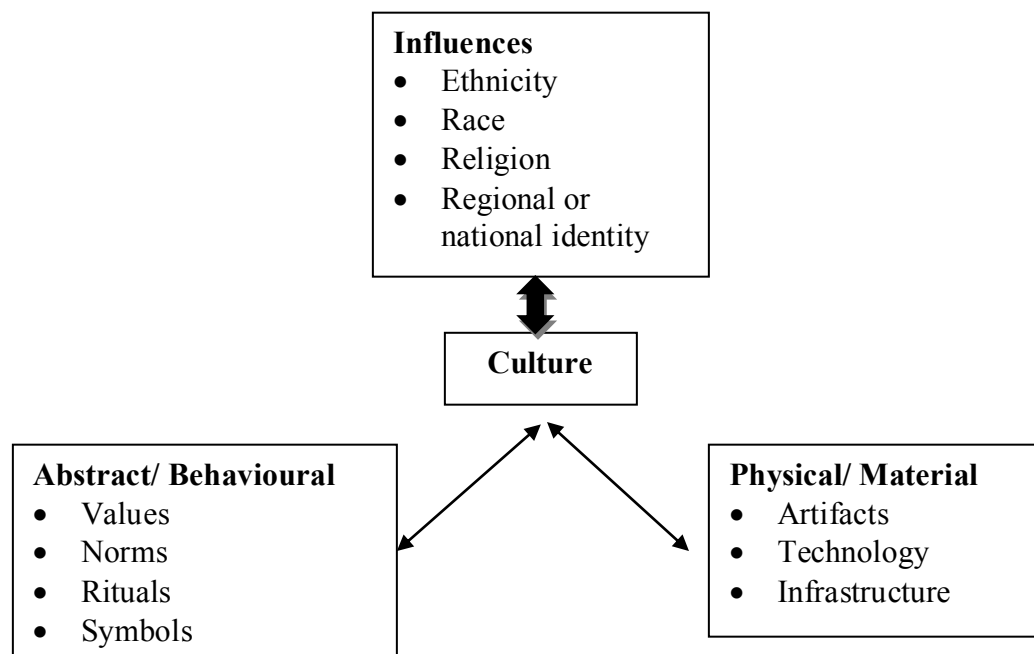


Figure 1: Influences on Culture (adapted from Blackwell et al., 2001, p. 314)

This model described culture as it mirrors certain influences from factors such as ethnicity, race, religion, and national or regional identity. The description interacts with the elements of culture which includes both abstract/behavioural and physical/material elements. Abstract/behavioural components consist of values, norms, rituals, and

symbols. Physical/material components refer to cultural technology, infrastructure, and artifacts, for example, books, computers, tools, buildings, clothes, and specific products. The researcher believes it is a two- ways relationship; certain factors such as ethnicity, race, religion, and national identity influence culture, while culture influences these factors.

All in all, from previous definitions, culture is a complex and broadly defined concept. It affects all aspects of life including consumer behaviour and it is difficult to make a distinction between culture and consumer behaviour. Culture as an external influence on consumer behaviour influences how individual consumers buy and use products, and helps explain how groups of consumers behave. Kotler (1994) identified four types of cultures distinguished by: (a) nationality (e.g., Italian, Jamaican, Namibian, etc.) in which people live in large communities and exhibit distinct ethnic tastes and proclivities; (b) religion (e.g., Catholic, Mormon, Hindu, Muslim, Jew, etc.) through which people are distinguished by specific cultural preferences and taboos; (c) race (e.g., black, oriental, Caucasian, etc) which distinguishes people by cultural styles and attitudes; and (d) geographic area (e.g., Deep South, New England, etc) which distinguishes people by their distinct lifestyles. The current study focuses on religion as a basic key factor of culture.

### *Religion*

Religion greatly influences both consumer behaviour and purchasing decision (Essoo & Dibb, 2004). Religion refers to a “unified system of beliefs and practices relative to the sacred things” (Delener, 1990, p. 27). Religion represents a fundamental part of society in most cultures and is certainly linked to many aspects of our life and

behaviour (Mokhlis, 2006). Religiosity is defined as “the degree to which beliefs in specific religious values and ideals are held and practiced by an individual” (Delener, 1990, p. 27). Based on that, Islamic religiosity can be defined as “the degree to which beliefs in Islam values and ideals are held and practiced by Muslim” (developed from Delener). Religiosity can also be called religious commitment (Worthington et al., 2003). Religious commitment affects our goals, decisions, motivations, purpose, and satisfaction. It plays an important role in how we live and experience life (Smith and Frankenberger, 1991).

Religion helps people understand and manage life events by offering guidance, support, and hope (Pargament & Hahn, 1986). Spilka, Shaver, & Kirkpatrick (1985) saw religion as providing a frame of reference to help individuals understand, expect, and control events, in addition to sustain their self esteem. Hirschman (1983) stated that religion affects diverse aspects of consumption. She also noted that despite the evidence of correlations between religion and consumption patterns, few studies have been conducted within consumer research that directly examine the role of religion on consumption patterns. An analysis conducted by Cutler (1991) revealed that prior to 1990 only thirty five articles in the academic marketing literature were related to religion, and only six of them were specifically identified as articles within the consumer behaviour discipline.

Hirschman (1983) claimed that there are three possible reasons for this gap in the literature. The first is the possibility that consumer researchers are unaware of the possible links between religion and consumption patterns. The second reason is that researchers may find that this topic is a “taboo” subject and is too sensitive to investigate.

Finally, she claimed that religion is everywhere in our life and therefore may have been overlooked as an obvious variable for investigation in the field. Cutler (1991) also stated that the problem of measurement and gender of participants are considered as reasons for the scarce appearance of this topic.

### *Theoretical Frameworks*

Many scholars have called for the development of conceptual and theoretical frameworks that characterize the relationship between consumer behaviour and culture/religion (e.g., Luna & Gupta, 2001; Arnould & Thompson 2005). Existing models of the effect of culture/religion on consumer behaviour do not offer a framework in which literature can be adequately integrated, and are not firmly grounded in theory. The models are often too complex to put into practice, and do not contain a full account of how specific cultural dimensions affect specific consumer behaviour components (Luna & Gupta, 2001). In addition, most frameworks have been developed in the United States. Schools in other countries have adapted these frameworks as if they were universal. Little has been done to compare consumer behaviour across cultures (Mooij, 2004).

However, several attempts have been made to develop an integrative and distinctive body of theoretical knowledge about consumer behaviour and culture. Accordingly, Arnould & Thompson (2005) offered the term “Consumer Culture Theory” (CCT) as a fulfillment for recurrent calls. This CCT is not a unified or a grand theory. Rather it refers to a collection of theoretical perspectives that deal with the dynamic relationship between consumer behaviours, the marketplace, and cultural meanings (see figure 2). According to CCT, culture is “a fairly homogenous system of collectively shared meaning; ways of life, and unifying values shared by a member of society”

(Arnould & Thompson, p. 869). For example, Muslims share one kind of culture and Christians share another kind of culture. CCT explores, among others, the heterogeneous characteristics among cultures such as the difference between Western culture and Muslim culture in consumer needs, wants, preferences, attitudes, and values, and how these differences affect all kinds of consumption. Thus, CCT will also fit with exploring how these differences affect sport consumption. CCT has advanced consumer behaviour knowledge by illuminating sociocultural processes and structures related to: (a) consumer identity project; (b) marketplace cultures; (c) the sociohistoric patterning of consumption; and, (d) mass-mediated marketplace ideologies and consumer's interpretive strategies.

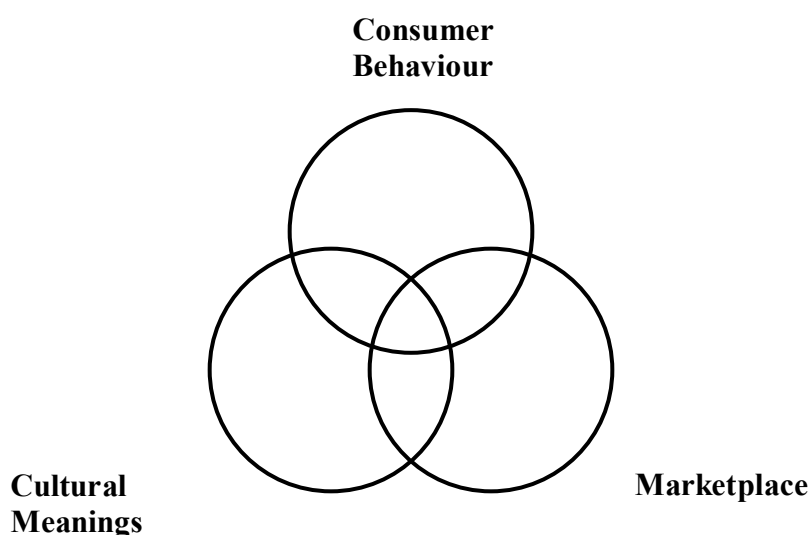


Figure 2: The Dynamic Relationship between the Three Elements of CCT

(adapted from Arnould & Thompson, 2005)

Luna & Gupta (2001) presented another attempt to develop a framework that integrates and reinterprets current research in cross-cultural consumer behaviour. The



framework can be used as a guide for marketers seeking to understand their foreign consumers. This framework is offering three major factors. First, it presents a dimensionalization of culture and it is called emic and etic approaches. The terms “emic” and “etic” are derived from the “phonemic” and “phonetic” classification in linguistics; phonemic is related to specific attributes, while phonetic is related to general attributes.

*Etic.* The etic-based definition of culture is “the collective programming of the mind which distinguishes the members of one human group from another” (Hofstede, 1980, p. 25). The focus of this definition is the comparison of one culture with another. Researchers that follow an etic approach in cross-culture consumer behaviour research generally look for the universal or culture-free theories and concepts. They search for variables and constructs common to all cultures that can be directly compared in order to discover how those cultures are different from, or similar to each other.

*Emic.* The emic-based definition of culture is

The ‘lens’ through which all phenomena are seen. It determines how these phenomena will be apprehended and assimilated. Second, culture is the ‘blueprint’ of human activity. It determines the co-ordinates of social action and productive activity, specifying the behaviours and objects that issue from both (McCracken, 1988, p. 73).

Researchers that follow emic approaches do not intend to directly compare two or more different cultures, but they promote a complete understanding of the culture through “thick description”. Thus, they do not provide “culture-free” measures that can be directly compared. Instead, they provide “culture-rich” information. Therefore, the two definitions of culture, emic and etic, can be considered as two sides of the same coin, and

both approaches together give complete understanding of the culture. Second, the framework of Luna & Gupta (2001) provides the widely accepted definition of consumer behaviour, by the American Marketing Association (see page 5), and it includes three elements: cognition, affect, and behaviour.

Third, it comprehensively integrates and interprets current research in light of the interaction between cultural manifestations and consumer behaviour components (see Figure 3). This explanatory model suggests that culture, according to Soika & Tansuhaj (1995), includes four manifestations: values, heroes, rituals, and symbols. Typically, religion of the consumer is not specifically addressed in culture, but is treated as a part of consumer values, heroes, rituals, and symbols (McDaniel & Burnett, 1990).

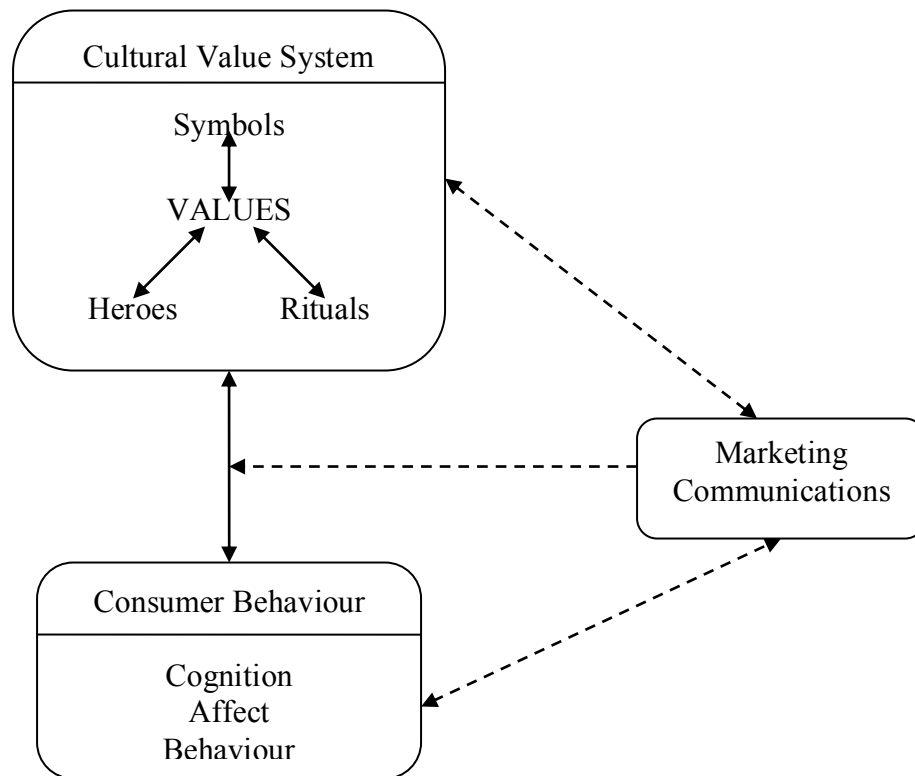


Figure 3: A Model of the Interaction of Culture and Consumer Behaviour

(Luna & Gupta, 2001, p.47)

Consumer behaviour, as defined by the A.M.A., includes three elements: cognition, affect, and behaviour. So, culture affects the elements of consumer behaviour through its manifestations. At the same time, marketer's actions serve as a vehicle to transfer meanings or values from the culturally constituted world to consumer goods. So, marketing communications are represented in the model as a moderator of the effect of culture on consumer behaviour. Finally, the framework of Luna & Gupta (2001) proposes managerial implications by providing a checklist to ensure that all possible sources of variation in consumer behaviour due to cultural differences are taken into account. For example, managers can use the framework as a template to examine how consumers in foreign markets will react to their products or services.

Various empirical studies have explained, analyzed, examined, and explored the relationship between consumer behaviour and culture/religion and have approved the importance of this relationship for marketers. In the following part, some of these studies will highlight the relationship between consumer behaviour and culture in general, and consumer behaviour and religion/religiosity in particular.

#### *Related Studies*

Chang (2005) studied the relationship between subculture and consumer behaviour by empirical research on Taiwanese university students. The study concluded that culture can be viewed as the common value, living hobbies, traditional standards of most people shared in a nation, and it also included the concept of shopping. Therefore, when the consumer is shopping, culture will have certain effects on opinions about many activities and products. Hence, successful product marketing should incorporate the local culture in the marketing strategy.

Xu, Shim, Lotz, & Almeida (2004) designed a study to discover the degree to which ethnic identity and socialization factors influenced the culture-specific consumption behaviour of Asian American young adults. The results of this study indicated that the effect of ethnic identity on an Asian American young adult's food and entertainment consumption behaviour is significant. That is, Asian American young adults who have a strong sense of ethnic identity are more likely to consume ethnic food and attend ethnic entertainment activities. Also, Asian American college students tended to consume more culture-specific products when they were with their ethnic friends than when they were with American-mainstream friends. The reason for this is the influences of socialization factors, in this case the friends, on behavioural outcomes.

Diverse studies have examined religion/religiosity's influence upon people's values, habits, purchase decisions, attitudes, culture, consumption, and consumer behaviour including shopping behaviour. Delener (1990) described religion as one of the most important cultural influences on consumer behaviour. His study was designed to explore the effects of religious factors on perceived risk in purchase decisions. The findings suggested that Catholics were more likely to be sensitive to any potentially negative consequences of their automobile and microwave oven purchase decisions compared with the Jews. In addition, consumers with a pro-religious orientation were more sensitive to price of their purchase decisions compared with nonreligious consumers.

Hirschman (1983) was among the first to investigate the relationship between religiosity and consumption (Smith & Frankenberger, 1991). Hirschman found that Jews are potentially less store and brand loyal than non Jews. Wilkes, Burnett & Howell

(1986) found considerable support for the application of the religiosity construct in consumer research. They explored the lifestyle impacts of religious commitment. When controlling for age, sex, and income, people with a high degree of religiosity tended to be more satisfied with their lives, had a more traditional sex role orientation, were less likely to use credit, and were more likely to prefer national brands of products.

McDaniel and Burnett (1990) investigated the influence of religiosity on consumer evaluation of the importance of the various retail department store attributes. In a national survey of 550 respondents, they found that religious individuals attached a higher level of importance to the friendliness of, and assistance provided by retail employees. McDaniel and Burnett argued that given their findings, religious commitment might be a viable endeavor for future examination.

Smith and Frankenberger (1991) examined the effects of religiosity on selected aspects of consumer behaviour, namely shopping criteria including quality, social risk, price, and brand. Five hypotheses were advanced in this study. The first hypothesis stated that younger consumers will score higher on religiosity than older consumers. The second hypothesis noted that consumers with high religious commitment will prefer products that are high quality. The third hypothesis mentioned that consumers high in religiosity will be more concerned with the social risk involved with their purchases than those low in religiosity. The fourth hypothesis stated that highly religious consumers will be more loyal than less religious consumers. The fifth hypothesis indicated that consumers high in religiosity will be more price sensitive than their less religious counterparts.

The findings indicated that religiosity increases with age. In addition, consumers high in religiosity were found to be more likely to look for product quality, be worried

about the social risk associated with the product bought, and were prone to be more price sensitive. Finally, the effect of religiosity on brand loyalty was not significant. Thus, hypotheses 1 and 4 were rejected and 2, 3, and 5 were accepted. Smith and Frankenberger (1991) stated that marketing managers and advertising managers in particular, may want to use religious commitment as a segmentation variable. This was also supported by McDaniel and Burnett (1990). For example, “if segments high in religiosity can be identified, specific shopping criteria such as product quality could be stressed in advertisements” (Smith and Frankenberger, p. 281).

Lindridge (2005) explored the effect of religiosity, i.e. religious commitment, on culture and consumption by comparing Indians living in Britain, with Asian Indians and British Whites. The analysis indicated that Indians living in Britain and the British Whites sample group were culturally less group- and consumption- oriented than Asian Indians. Declining levels of religiosity produced mixed results for Indians living in Britain, when compared to Asian Indians. Lindridge recommended that marketers should recognize the importance of religion in Eastern cultures, while in Western culture, given the declining level of religiosity, marketers should focus on the centrality and the need to use consumption to maintain the individual’s sense of individuality.

Mokhlis (2006) conducted a study in Malaysia to explore the effect of religiosity on consumers’ shopping orientation. This study included six factors of shopping orientation toward consuming clothes: (a) brand conscious; (b) shopping enjoyment; (c) fashion conscious; (d) quality conscious; (e) impulsive shopping; and, (f) price conscious. The researcher studied how a low or high level of religiosity affected the six factors when purchasing clothes. The outcomes showed that religion, whether working through taboos

and obligation or through its influence on culture and society, is known to affect the behaviour of consumers.

Religion in Malaysia plays an important role in affecting consumers' shopping orientations. Thus, it is critical not to underestimate the importance and potential of religion as an explanatory construct in predicting consumer behaviour. As well, the empirical results indicated that three shopping orientation factors, namely quality conscious, impulsive shopping, and price conscious were consistently related to religiosity (Mokhlis, 2006). For example, religious individuals were most likely to be concerned with price, to look for quality in products when they shop, and less likely to make impulsive purchase decisions compared with not religious individuals. For future research, Mokhlis recommended that religious influences could also be extended to fashion retailing, to consumer buying behaviour for sensitive clothing items such as intimate apparels, or to environmentally influenced products such as fur and leather apparels.

The impact of religion on consumer behaviour can be different from one culture or country to another. Sood and Nasu (1995) accomplished a cross cultural comparison of the effect of religiosity on general purchasing behaviour for a sample of Japanese and American consumers. The results indicated that religion was not an important element in the Japanese culture because no differences appeared in consumer shopping behaviour between devout and casually religious Japanese individuals. However, the American devout Protestants were found to be more economic, bought more products on sale, shopped in stores with lower prices, and believed that there was little relation between price and quality.

A similar study by Essoo and Dibb (2004) was conducted on the island of Mauritius, to explore the religious influences on shopping behaviour, involving Hindu, Muslim, and Catholic consumers by using the purchase of the television as the basis. Seven factors were used as shopping behaviour statements: (a) demanding shopper, refers to the importance of product quality, nutritional value, and quality of service; (b) practical shopper, refers to the importance of in-store price deals, in-store promotion, and in-store credit availability; (c) trendy shopper, refers to the importance of brand name, up-market brands, and availability of up-market brand in-store; (d) traditional shopper, refers to importance of media search, truthfulness of advertising; (e) economic shopper, refers to the important of product prices and in-store prices; (f) thoughtful shopper, refers to the importance of bargains and friends' opinions; and, (g) innovative shopper, refers to trying any product once, sticking to certain brands, and waiting for others to try the product.

The findings of Essoo and Dibb (2004) confirmed that consumers with different levels of religiosity of the same religion differed remarkably in their shopping behaviour; for example, casual Hindus were found to be more demanding (attaching more importance to product quality, nutritional value of product, and the quality of service) in their shopping behaviour than devout Hindus. Regarding the Muslim consumers, casual Muslims were found to be trendier (attaching more importance to brands names, availability of well-known brands in retail stores, and always buying up-market brands) in their shopping behaviour than devout Muslims. Regarding the Catholic consumers, casual Catholics were found to be more innovative (trying any new product once and not favouring a particular brand) in their shopping behaviour than devout Catholics.



In addition, the comparison between the three religions stated that consumers from different religions differ outstandingly in their shopping behaviour. For example, Catholic shoppers tend to attach more importance to bargains and people's opinions before purchasing products than both Muslims and Hindus. Muslim shoppers were found to be more practical and innovative (attributing importance to price deals and promotions, trying new products once, not favouring any specific brand, and not waiting for other consumers to try a product before they did) than both Hindus and Catholics in their shopping behaviour (Essoo and Dibb, 2004).

### *Muslim Culture versus Western Culture*

Entering foreign markets, such as the Muslim market, has become quite important for Western companies, including businesses in the sport industry (e.g., Luna & Gupta, 2001; Salzman, 2008). In order to tap into the Muslim market, it is vital to understand the Muslim Culture, the role of Islam in their life, as well as Muslim consumers' values. Cross-cultural differences force international marketers to explore the variation in consumer needs, wants, preferences, attitudes, and values, as well as in shopping, purchasing, and consumption behaviours, including sports consumption. Marketing strategies need to be modified to fit the specific values and behaviours of the culture (e.g., Peter & Olson, 2008; Luna & Gupta).

### *Muslim Culture*

The population of Muslim consumers is larger than 1.2 billion worldwide, and makes up 20% of the world population (Central Intelligence Agency [CIA], 2007). There are a lot of wealthy and oil rich Muslim countries such as: Saudi Arabia, Kuwait, Qatar, United Arab Emirates, and Oman. In the United States, there are 8 million Muslim

consumers, carrying a total income of about \$ 170 billion a year. In the UK, there are two million Muslim consumers (CIA). In Canada, there are 600,000 Muslims; 25,000 of them are living in Windsor (Windsor Islamic Association, 2001). Muslims are numerous and demographically widespread, with high birth rates and a young age profile (CIA; Salzman, 2008). Their numbers and their purchasing power make Muslims an attractive market segment for international sport marketers. To tap into this market, marketers in the sporting goods industry need to explore the consumer behaviour of Muslims towards sports apparel, and find out how this behaviour is influenced by the Muslim culture.

Salzman (2008) stated that there are two types of Muslim markets: one where the Muslim population is the majority (e.g., countries such as Pakistan and Turkey), and one where the Muslim population is the minority (e.g., in non Muslim countries such as in the United States, Canada, and England). For the purpose of Salzman's study, both Muslim markets were taken into account.

According to the religion of Islam, Allah is the name of the one God. Muhammad, peace be upon him (pbuh), the prophet, was chosen by God to deliver his message of peace. The Qur'an, the revealed book of God, was sent to his messenger Muhammad as guidance for Muslims in all walks of life to follow. The Qur'an includes the social, economic, political, moral, and spiritual aspects of life. The Hadith refers to all speeches and traditions of the Prophet Muhammad (pbuh). For Muslims, there is a strong connection between religion and secular aspects of life. They see life as an integrated whole and they aim to live out Islam in all areas of their life. Indeed, values and practices in Muslim life have the most important influence on the Muslim culture. Thus, the two main legislative recourses for Muslim culture, which state the halal (lawful) and the

haram (forbidden) matters, are the Qur'an and the Hadith (About.com: Islam, 2009; Khan, 2003). Further information about the Origin, belief, and teaching of Islam can be found in Appendix A.

### *Islam and Sport*

Islam attaches much importance to sports in order to create a physically powerful generation capable of resisting diseases and maintaining security of their homeland. Muslims are commanded to be of sound bodies and sound minds in addition to having sound morals. Prophet Mohammad (pbuh) says "A strong believer is better and more beloved to Allah than a weak one". A sound strong body is capable of fulfilling both the religious and the worldly duties. Therefore, Islam advises Muslims to teach their children shooting, swimming, and horsemanship. Prophet Mohammad (pbuh) also adds "Teach thy children shooting and train them on horsemanship till they excel" and since these were the only sports known at the Prophet's time, then, Islam encourages all the sports known to us in the time being (About.com: Islam, 2009; Khan, 2003).

Islam does not oppose women having a strong body via practicing sports. Islam encourages both men and women to participate in sport. It was reported that Prophet Mohammad (pbuh) raced his wife "Aisha" and she outran him. Then they had another race where he outran her, whereupon he said "This time makes up for the other." Among the sports that early Muslims played are the following: running, horsemanship and horse racing, archery, fencing, wrestling, weight lifting, high jumping, stone tossing, and swimming. Finally, the only aspect of sport that Islam prohibited is gambling activities (About.com: Islam, 2009; Khan, 2003).

This study aims to explore the Muslim market toward the consumption of sport clothing. It is important to recognize the Islamic requirements relating to the wearing of clothes since they apply to sport clothing too. What should Muslims wear? What are acceptable (lawful) and unacceptable (forbidden) clothes according to Islam? The first requirement in Islam describes the parts of the body which must be covered in public. For women, generally, standards of modesty call for a woman to cover her body, particularly her chest. The Qur'an calls for women to "draw their coverings over their chests," and the Prophet Muhammad instructed believing women to cover their bodies except for their face and hands. Most Muslims interpret this to require head coverings for women. For men, the minimum amount to be covered is between the navel and the knee.

The second requirement is that clothes must be loose enough so as not to outline or distinguish the shape of the body. The third requirement is that clothes must be thick enough so that the color of the skin it covers is not visible, nor the shape of the body underneath. Finally, clothes should be clean and decent, neither excessively fancy nor ragged (About. com: Islam, 2009).

Consequently, Muslims with a high level of religiosity are looking for clothes that match the Islamic requirements. By doing so, Muslims follow the orders of Allah to obtain his reward and avoid his punishment. However, it is not necessary for Muslims with a low level of religiosity to follow the religious obligation. Thus, to explore the degree of religious influences on Muslim behaviour, it is important to measure the level of religiosity. For the purpose of this study, a measurement of religiosity will be conducted to help the researcher investigate the relevance of religious influences on Muslim consumers when buying sport clothing.

### *Muslim Culture versus Western Culture*

Before the 1900s, Americans attended religious institutions and believed in “God” or a “higher power”. Judo-Christian religious institutions at that time played an important role in shaping the values of Western culture. In recent years, the role of Christian religious institutions in American society has declined significantly due to many reasons: (a) the decline of institutionalized religion accelerated after Second World War, with the alternative spiritual seekers among the baby boomers; (b) religious groups declining in membership currently include moderate and liberal groups such as Lutherans, Methodists, and Presbyterians; (c) an increase in non-Christian religions, such as the increasing number of practicing Buddhists, Hindus, and Muslims; and (d) many Americans, especially aging baby boomers, are searching for experiential faith and spirituality rather than traditional religion, so they shifted from traditional religion to spirituality (Blackwell et al., 2001).

Regarding the religious requirements toward clothes in Western culture, there is no explicit religious obligation role that would affect the consumer behaviour towards clothes consumption (Valor, 2007). Besides, Mokhlis’ (2006) study is the only empirical study, to our knowledge, that examined the influence of Christian religion on the consumption of clothes. The outcomes stated that Christian consumers were most likely to look for deals, look for quality clothes, and less likely to make impulsive purchase decision.

According to cross-cultural researchers, one of the major differences between Western culture and Muslim culture is the religion’s role in culture and subsequently consumer behaviour. In Muslim culture, religion appears to be a central tenet of culture

and societal behaviour manifesting through a need to engage with “in-groups” through consumption encounters. Thus, the cross-cultural marketers should acknowledge the centrality of the group in the Muslim market. However, in Western culture, as religiosity declined, the emphasis on the individual became more important. Hence, the cross-cultural marketers should focus on the centrality of the individual’s needs and how subsequent consumption will enhance and reinforce this individuality (Lindridge, 2005).

Moreover, cross-cultural researchers categorize Western consumer behaviour as individualism and the Muslim consumer behaviour as collectivism (Lee, 2002). Collectivism may be initially defined as “a social pattern that consists of closely linked individuals who see themselves as parts of one or more collectives such as family, co-workers, tribe, nation” (Triandis, 1995, p.2). This implies that Muslim consumers are motivated by norms of those collectives and willing to give priority to the goals of these collectives over their own personal goals. A preliminary definition of individualism is “a social pattern that consists of loosely linked individuals who view themselves as independent of collectives” (Triandis, p.2). In other words, Western consumers are primarily motivated by their own preferences, needs, and rights. They are willing to give priority to their personal goals over the goals of others. Subsequently, the motivations and priorities for sports apparel consumption differ between Muslims and Westerns consumers.

### *International Marketing Strategies*

Cross-cultural differences provide difficult challenges for international marketers. Even something as simple as translating a brand or model name into another language, can cause problems. Peter & Olson (2008) provided two examples to illustrate these

problems. First, when Coca-Cola was introduced in China in the 1920s, the sales were not good because the translated meaning of the brand name was “bite the wax tadpole”. Second, Ford motor company changed the name of the Caliente to Comet when it introduced this car in Mexico. The marketers realized that Caliente is slang for “streetwalker” and that explained why the sales level were low. Marketers do not have a unified opinion when dealing with cross-cultural differences. According to Peter & Olson, there are three international marketing strategy approaches that explain these differences.

The first approach is “adapting strategy to culture”. This is the traditional vision of international marketing. Each local culture should be carefully researched for important differences from the domestic market. Differences in consumer needs, wants, preferences, attitudes, and values should be carefully examined. The marketing strategy should be adapted to fit the specific values and behaviour of the culture by customizing the product or promotion. For example, Black and Decker Company had to modify its hand tools because electrical outlets and voltages vary in different parts of the world (Peter & Olson, 2008). In addition, McDonald’s, for religious reasons, does not offer pork in Muslim Markets and beef in India as Muslims are forbidden to eat pork and Indians are prohibited from consuming beef.

Furthermore, when McDonald’s was introduced in Saudi Arabia, the sales levels were much higher via the drive through as compared to sales over the counter. Marketers found out that due to norms and traditions in Saudi, single men are not allowed to sit with single women in the same section area. Accordingly, McDonald’s had to adapt its store layout inside the building. To solve this problem, McDonald’s designed a special section

for single men only and a special section for families only (Hawkins et al., 2007). The adapting strategy approach has disadvantages, such as: the price of the customized products and promotions is costly, and it requires more effort from marketers. This makes this approach more expensive than others (Mooij, 2004).

The second approach according to Peter & Olson (2008) is “standardizing strategy across cultures”. This approach is often called global marketing. It means marketing a product essentially the same everywhere in the world and across a variety of cultures. Many marketers are beginning to treat the standardized approach more seriously. One of its major advocates is Professor Theodore Levitt of the Harvard Business School. Levitt (1983) in his article “The Globalization of Markets” argued that new technology, increased world travel, and worldwide telecommunications capabilities would lead to the homogenization of consumer wants, tastes, preferences, motivations, and needs. For example, Coca-Cola, for forty years, has used the same approach, called “one sight, one sound, one sell”. Also, Kodak, Gillette, and Timex, have marketed standard products basically the same way for long time (Peter & Olson, 2008). Thus, there are an increasing number of consumers from every corner of the globe who are able to eat the same foods, listen to the same music, wear the same fashions, and watch the same television programs and films (Mooij, 2004).

Levitt (1983) stated that consumers would prefer standard products of high quality and low price to more customized high-price products. One advantage of this approach is that it can be less expensive because there is no need to customize products or to differentiate advertisements. Nevertheless, many marketers have severely criticized the global marketing approach. This approach can work well for some products but not



all kinds of products (Peter & Olson, 2008). In addition, no empirical evidence has been provided to show homogenization of tastes, wants, needs, or the appearance of universal price-minded consumer segments (Mooij, 2004).

The third approach is “changing the culture”. It suggests that marketing strategies can be developed to influence the culture directly. For example, until recently, people in East Asia rarely paid much attention to birthdays. Because of McDonald’s promotional efforts that include cakes, gifts, and exclusive use of the special Ronald Room for celebration, birthdays are now a significant event. Besides, in China, kids almost never ate out and when they did eat out, they certainly did not order their own food. Today, Chinese children routinely march up to the McDonald’s counter and place their orders (Peter & Olson, 2008).

Apparently, marketers do not agree on one approach towards international marketing strategies because each one of those strategic approaches has advantages and disadvantages. For the purpose of this study, the researcher utilizes the adapting strategy approach as a marketing strategy toward sports apparel consumption for the following reasons: (a) consumers from different cultures, collectivism or individualism, do not have the same motivations and priorities when they are buying sports apparel; (b) cross-cultural empirical studies have not shown that needs, preferences, styles, and tastes are homogeneous for all consumers when they purchase sports apparel; and, (c) religious obligation of sports apparel consumption differs from culture to culture; what is lawful to wear in Western culture, might be forbidden in Muslim culture.

The current study focuses on sports apparel consumption. According to Shank’s (2009) hierarchical relationship (see figure 4), sports apparel is considered a part of

sporting goods, which in turn belong under the denomination of sport products. Sport products are a component of the sport industry. The next section will therefore elaborate on the definition, structure, and elements of the sport industry as a whole, and on sporting goods and sports apparel in particular.

### *The Sport Industry and the Consumption of Sport Clothing*

#### *Sport Industry*

The sport business industry is “the market in which the products offered to its buyers are sport, fitness, recreation, or leisure related and may be activities, goods, services, people, places, or ideas”(Pitts & Stotlar, 2007, p.4). In fact, the sport, leisure, recreation, and entertainment industry is economically the third largest legal industry in the world behind oil and automobiles; illegal drugs and guns are the largest (Westerbeek & Smith, 2003). Pitts & Stotlar stated that the sport business industry consists of numerous segments, some of which include sports tourism, sporting goods (manufacturing and retail), sport apparel, amateur participant sports, professional sports, semi-professional sports, recreation, high school and college sports, outdoor sports, sports service businesses such as sport marketing firms, sport sponsorship management companies, and sport governing bodies.

There are many ways to discuss the structure of the sports industry based on different perspectives. While Pitts and Stotlar categorized the sport industry from a marketing perspective, Li, Hofacre and Mahony (2001) provided a two-sector model of the sport industry based on an organizational perspective; the two sectors are the sport activity-producing sector and the sport-supporting sector. The sport-supporting sector includes six sub-sectors, of which one is “Sporting Goods Manufacturers, Wholesalers

and Retailers” (p.7). Shank (2009) analyses the sports industry based on a consumer perspective, to help sports marketers understand the complexity and challenges of this industry. According to Shank’s model the sports industry consists of three major elements: (a) consumers of sport; (b) the sports products that they consume; and (c) the suppliers of the sports product (see figure 4).

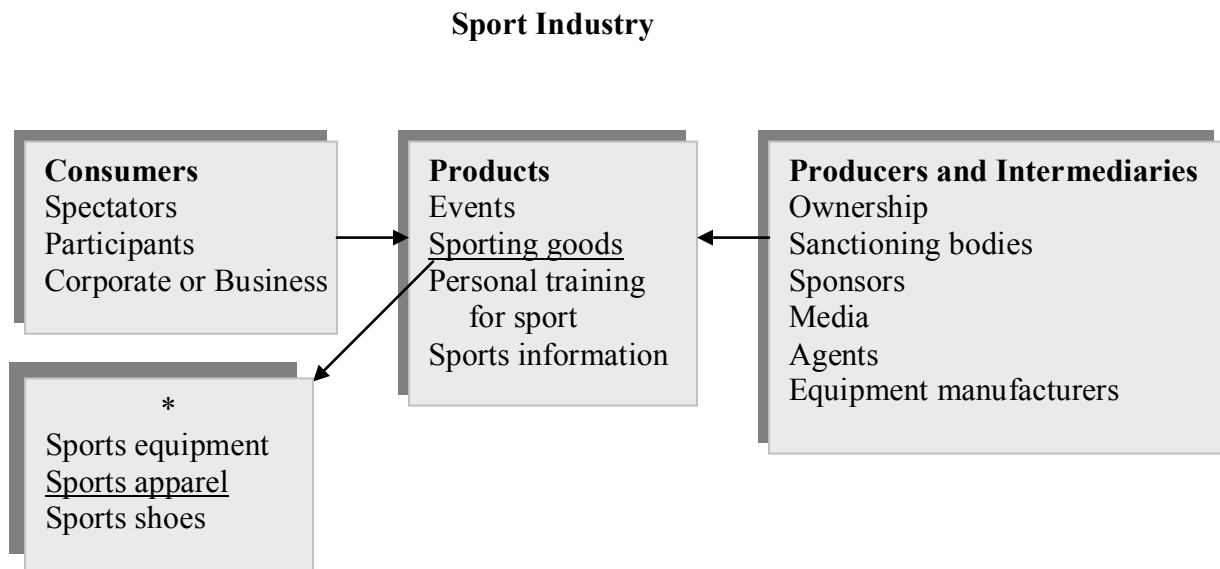


Figure 4: Model of the Consumer-Supplier Relationship in the Sport Industry

(Shank, 2009, p. 11). \* Note: personal addition

### *The Consumers of Sport*

There are three types of sport consumers: spectators, participants, and sponsors. Spectators are consumers who derive their benefit from the observation of the events. Without spectators, the sports industry would not exist. Spectators attend the event, or they experience the event via several sport media. Participants are people actively involved in one or more sports, at a variety of competitive levels. Participants can engage

in unorganized (fitness runners and joggers) and in organized sports (amateur sporting events and professional sports). Sponsors, usually companies, act as consumers by exchanging money or product for the right to associate their name or product with a sporting event (Shank, 2009).

### *The Sports Products*

A sport product is “a good, a service, or any combination of the two that is designed to provide benefits to a sports spectator, participant, or sponsor” (Shank, 2009, p. 16). Sporting goods refer to tangible and physical products that offer benefits to consumers and include equipment, apparel, and shoes. However, sporting services refer to intangible and nonphysical products such as a competitive sporting event or a swimming lesson. Sports products can be classified into four types. The first type is sporting events which are the primary product of the sport industry. Athletes’ performances in competition or exhibitions can also be thought of as sports products, such as Michael Jordan and David Beckham. An arena, the site of the event, is also a sports product that is associated with sporting events. The second type of sports products are sporting goods, which refer to tangible products that are manufactured, distributed, and marketed within the sports industry (Shank).

USA, Japan, UK, and Germany lead the world in terms of retail sales and retail outlets for sporting goods and apparel. The sporting goods industry was arguably born in the United States. The US sporting economy overall was worth US \$ 194 billion in 2001. Sports clothing and equipment each account for about 40 per cent of the total sales of sports goods. Footwear sales account for the other 20 per cent. The US market for sports clothing was worth an estimated \$32 billion, ten times the UK market and nearly half of

the entire worldwide market of \$70 billion in 1999 (Horne, 2006). Within the European community in 2001, the leading countries by economic turnover of sporting goods and equipment were Germany, France, the UK, Italy, and Spain. Together these countries represented 35 per cent of global sales of sports clothing and shoes, whilst the USA had 42 per cent, Asia 16 per cent and the rest of world 7 per cent (Ohl & Tribou as cited in Horne, 2006).

According to Shank (2009), the sporting goods and recreation industry was nearly \$57.6 billion in 2006, including sports equipment (\$19 billion), sports apparel (\$26.6 billion), and athletic footwear (\$12 billion). Estimating the value of the sport industry differs from one study to another due to different classifications. For example, some studies include entertainment, recreation, or tourism as components of the sport industry, while these are not taken into account in other studies. In all cases, the value of the sport industry is considered to be high and is predicted to grow in the future.

Most sales of sporting goods companies, such as Nike Inc, Reebok International, Adidas-Salomon, K-Swiss Inc., and the Pentland Group, occur in the developed world, yet the bulk of the manufacturing of them is carried out in the poorer and less-developed countries. For example, Nike products were made in 68 factories worldwide, but 57 of them were in Asian countries and only eight were in the Americas where the Nike headquarters are located. More than half a million people were employed in these factories and over half of these were in China or Indonesia (Horne, 2006).

Sports apparel is sometimes licensed merchandise. Licensing refers to a practice whereby a sport marketer contracts with other companies to use a brand name, logo, symbol, or characters. A brand name could be a professional or college sports franchise.

Licensed sports products usually are some form of apparel such as team hats, jackets, or jerseys and it accounts for 60 percent of all licensed sports products sales. Sales of all licensed sports products reached \$19.3 billion in 2006 and it is expected to increase in future (Shank, 2009).

The third type of sports product is personal training. These products are produced to benefit participants in sports at all levels and include fitness centers, health services, and sports camps. The fourth and final type is sports information. It provides consumers with news, statistics, schedules, and stories about sports. In addition, specific newspapers, magazines, internet sites, television, and radio can be considered sports information products (Shank, 2009).

While Shank (2009) classified sports products into four types, mentioned above, Chelladurai (2001) identified six different categories of sport products: (a) participant products; (b) spectator products; (c) sponsorship products; (d) donor products; (e) social ideas; and, (f) sporting goods. Chelladurai stated that sales and manufacturing of sporting goods is self-explanatory and can be considered out of the domain of sport management.

#### *Producers and Intermediaries*

Both of Producers and Intermediaries represent the manufacturers of sports products or the organizations that perform some function in the marketing of sports products. Producers and intermediaries include: (a) sport labor which are the owners of professional sport franchises, partnerships that own sporting events, and the universities that own their athletic teams; (b) media, which are considered the most powerful force in sports today and getting stronger; (c) agents, which are intermediaries whose primary responsibility is leveraging athletes' worth or determining their bargaining power; and (d)

sports equipment manufacturers, who are responsible for producing and sometimes marketing sports equipment used by consumers who are participating in sports at all different levels of competition (Shank, 2009).

### *Sport Consumption*

There are increasing numbers of consumers involved in sports as spectators, participants, and sponsors. According to Lera-Lopez & Rapun-Garate (2007) this increase is due to the following reasons: (a) the increasing attention for well-being and awareness of the aging population; (b) the change in concept of sport from an organized and competitive practice to a much broader concept involving unorganized, noncompetitive, and recreational sporting activity; (c) sport has become more important to a variety of social groups and has therefore become a growing economic sector; (d) the large numbers of new sport facilities in many countries; and, (e) the increasing consideration of the private sector for sport (e.g., private clubs, companies, and franchises) instead of the public sector (e.g., government and nonprofit organizations). The increasing numbers of sport consumers subsequently raises the demand of sport consumption in general, and the consumption of sports apparel in particular.

The definition of sport consumption depends on how the researchers classify the sport products. Thus, there is no unified definition for sport consumption. Baba (2003), for example, defined sport consumption as “the personal and social process through which individuals consume sport products/services through attendance at sport events, participation in sport activities, or consumption of sports through the electronic and print media ( e.g., newspapers, sports magazines, internet sport news, and television sport)”( p. 27). This definition includes only three types of sports consumption (attending sport

events, participating in sport activities, and learning about sport through electronic and print media); it does not refer to sponsors or donors as consumers of sport products/services.

Sports apparel refers to sporting goods (equipments and apparel) and/or shoes. Some individuals interested in buying sports apparel for fashion purposes only and never use in it the context of sport. Furthermore, consumption of sport can be categorized into direct and indirect consumption; attending sport events, participating in sport activities, and consuming sport products/services are forms of direct consumption, while following sport through mass media and consuming sport newspapers/magazines are considered indirect consumption (Mehus, 2005).

In short, it is clear that mainstream sport marketing literature distinguishes three types of sport consumers (participants, spectators, and sponsors). To some extent, each type of sport consumer may be in need of, or show interest in purchasing sports apparel. Participants purchase sports apparel to feel comfortable when they participate in sports. The spectators purchase sports apparel as a form of team identification and/or to show loyalty for their teams. The sponsors purchase sports apparel to show the commercial relationship between their products/services and the sponsored teams, events, or players. However, consumers not interested in being affiliated with sport may also purchase sports apparel, just for fashion reasons. Thus, sports apparel can be purchased for different reasons, but other factors also play a role.

#### *Factors Affecting Sports Consumption*

The influence of sport participation and demographic variables such as income, gender, age, occupation, and race on sport consumption has been well documented in the



literature (e.g., Armstrong & Stratta, 2004; Pan & Gabert, 1997; Taks & Mason, 2004). The majority of the empirical studies in sport marketing literature about the factors that affect sport consumption were related to sports consumers as participants or spectators, thus excluding sponsors, and non-sport consumers. The following related studies about the factors that affect sports consumption focus on three parts: factors affecting sport participation, factors affecting spectatorship in sport, and factors affecting the consumption of sports apparel.

#### *Factors Affecting Sport Participation*

A study by Taks, Renson & Vanreusel (1995) refuted the common belief that sport has become more egalitarian and democratic. The results indicated that social stratification of participants in sport still exists. For example, golf and tennis were upper class sports, table tennis and jogging middle class sports, gliding and swimming lower middle class sports, cycle touring and body building lower class sports, and soccer appeared in the democratic stratum. According to Lera-Lopez & Rapun-Garate (2007) there is no obvious positive or negative relationship between sport consumption, either as participants or as spectators, and occupation, education, and age.

#### *Factors Affecting Spectatorship in Sport*

Pan & Gabert conducted a study for spectators that identified the factors and differential demographic effects on purchases of season tickets for intercollegiate basketball games in United States. The outcomes identified several constructs of perceived motives influencing the decision to purchase and hold season ticket packages such as economic factors, athletic event, loyalty, and team success. Armstrong and Stratta (2004) examined the manifestations of race on sport consumption. Data were collected at

women's professional basketball games from black and white spectators in two different United States markets. The results implied an influence of race effects on sport consumption. For example, a noteworthy difference regarding ticket purchases was that a greater percentage of the white spectators in both markets were likely to engage in advanced ticket purchases. Therefore, marketing activities related to last-minute promotions and impulse buying may be more effective for the black than the white spectators as the whites tended to engage in planned or advanced purchases.

#### *Factors Affecting Consumption of Sports Apparel*

Taks and Mason (2004) examined the sport culture and material culture of teenagers in Canada. Their survey focused on: (a) the sport culture of teenagers (i.e., sport participation, level of involvement, interest); and (b) the material culture of these teenagers (i.e., the consumption, the usage, and the social meaning of sporting goods). The results indicated that as the amount of weekly activity increased, the respondents possessed a higher number of sporting good items including equipment and apparel items. In addition, the participants possessed more sports items as their level of competition increased. Finally, the results indicated that the average annual expenditure on sporting goods items increased with the number of hours of sport practiced. For the purpose of this study, sport consumption is limited to purchasing sporting goods, and more specifically sports apparel.

#### *Sport Clothing Consumption in the Muslim Markets*

To tap into the Muslim market, marketers in the sporting goods industry need to explore consumer behaviour of Muslims towards sport clothing, and find out how this behaviour is influenced by the Muslim culture. More specifically, sport marketers should

realize the Islamic requirements for sport clothing and respond accordingly. The Australian company, Ahiida, founded by a Muslim female Lebanese immigrant, is a good example of a company that has started to target the Muslim segment in the West. The founder Ahiida said:

...I remember growing up in Australia, posted a lot of challenges for a young Muslim/Arab girl. As an active person who liked to participate in community activities and sport, I found myself restricted due to cultural and religious beliefs. As years went by, I noticed there are younger girls and women that are embracing Islam and obeying their Islamic belief in dressing modestly, in turn, having to miss out on opportunities, and taking part in any sporting activities that Australia has to offer. We at Ahida have found a need to make specialized sportswear suit the Muslim female (Ahiida, 2006).

The company creates a swimsuit, called “Burqini”, which completely covers the body. As the name suggests, the polyester suit is a cross between a “burqa” and a “bikini”, and is designed in accordance with Islamic law requiring women to dress modestly. Since January, 2008 this product has been sold internationally, mainly online (Ahiida).

Thus, Islam imposes a dress code which directly affects the wearing, and consequently, the consumption of sport clothing. Muslim consumers, and specially women, need to obey the rules which, for the purpose of this study, we will call “Islamic obligation consciousness”. This term is derived from Valor’s (2007) study. Valor used the term “ethical obligation” in order to clarify if the consumer ethically should buy clothes that were made by abused employments. The current research will explore the Islam influence on sport clothing consumption. For the purpose of this study, Islamic

obligation refers to what is halal (lawful) and haram (forbidden) to wear regarding sport clothes in accordance with Islamic requirements.

The researcher believes that what applies to clothes in general, would subsequently apply to sport clothes in particular. Therefore, Mokhlis' (2006) model of shopping orientation toward consuming clothes (see page 17) will form the basis to determine sport clothing shopping behaviour. Mokhlis' six factors model, namely price, quality, fashion, brand, shopping enjoyment, and impulsive shopping consciousnesses, will be considered for consumers when shopping and buying sport clothing. Therefore, the six consciousnesses mentioned above, in addition to the Islamic obligation consciousness, will be used to determine the sport clothing shopping behaviour for the current study.

This study explores the influence of Islamic religiosity on sport clothing consumption (main effect). However, variables such as age, sex, and income are also found to affect consumption (Solomon et al., 1999). In addition, sport participation affects the consumption of sport clothing (Taks & Mason, 2004). These variables are, therefore, also included in the analysis as interaction effects.

### Purpose

Unlike religion's role in Western culture, the religion of Islam is a central tenet of Muslim culture and societal behaviour, playing an important role in all aspects of consumption including sport consumption (Lindridge, 2005). This study will explore the shopping behaviour of Muslim consumers towards buying sport clothes. The purpose of the proposed study is to examine the influence of religion on sport clothing consumption; more specifically it intends to explore the influence of Islam religiosity on Muslim

consumers' shopping behaviour towards sport clothing, taking into account age, sex, income, and sport participation as possible interaction effects (see Figure 5).

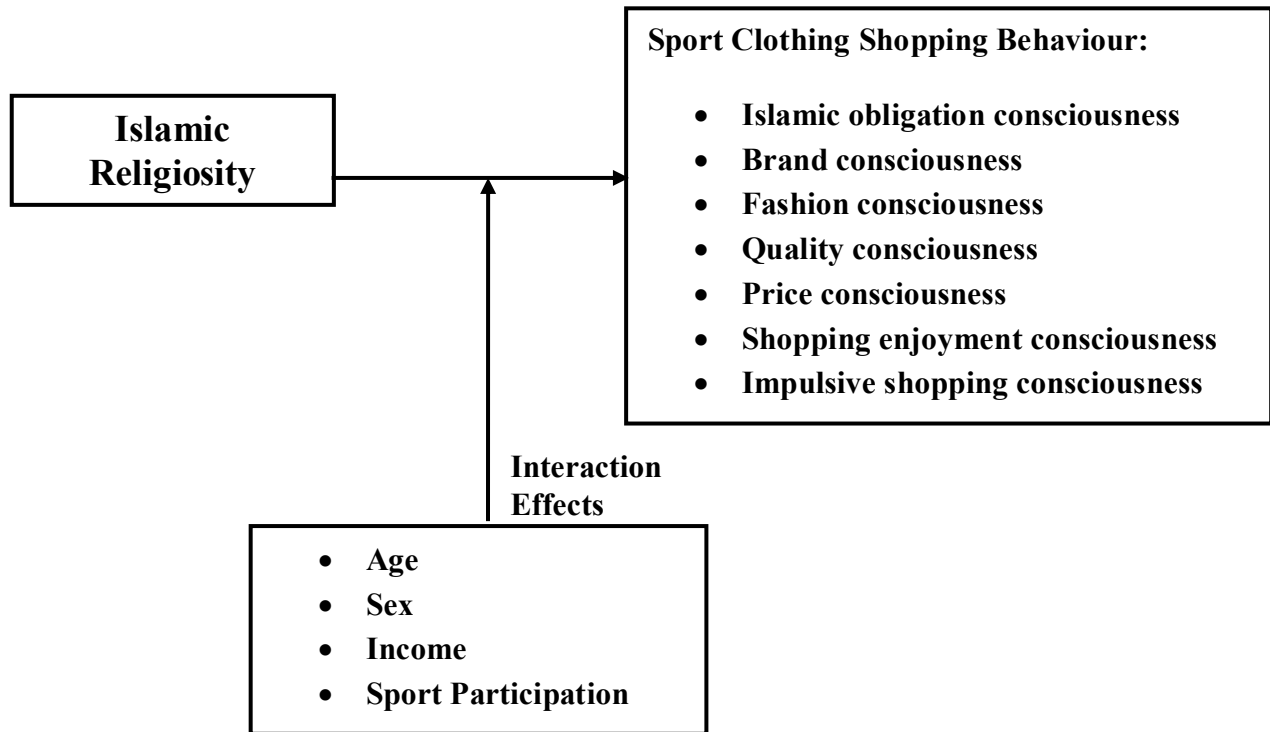


Figure 5: Model to be Tested (Based on Mokhlis, 2006)

### Hypotheses

Based on the previous literature review, 16 hypotheses were advanced for this study (see Table 1). The first hypothesis with its six sub-hypotheses tested the main effect of Islamic religiosity. The remaining nine hypotheses included the interaction effects (age, gender, income, and sport participation) (see table 1). H 1: Muslim consumers with different levels of religiosity differ in their shopping behaviour towards (a) Islamic obligation; (b) price; (c) quality; (d) fashion; (e) brand; (f) shopping enjoyment; or (g)

impulsive shopping consciousnesses (Essoo & Dibb, 2004). Based on this first hypothesis, five sub-hypotheses were advanced. H 1.a: Muslim consumers with a high level of religiosity exhibit a higher level of consideration to Islamic obligation consciousness of sport clothing as compared to Muslim consumers with a low level of religiosity. This sub-hypothesis is based on the fact that Muslims with a high level of religiosity always follow the orders of God (Allah). By wearing the sport clothing with Islamic obligation, they implement these orders into their behaviours (About.com: Islam, 2009; Khan, 2003).

H 1.b: Muslim consumers with a high level of religiosity tend to be more economic (i.e., prone to look for deals) when they shop for sport clothing as compared to Muslim consumers with a low level of religiosity (Smith & Frankenger, 1991; Sood & Nasu, 1995; Essoo & Dibb, 2004; Mokhlis, 2006). H 1.c: Muslim consumers with a high level of religiosity look for quality sport clothing when they shop as compared to Muslim consumers with a low level of religiosity (Smith & Frankenger, 1991; Mokhlis).

H 1.d: Muslim consumers with a high level of religiosity exhibit a lower level of consideration to brand consciousness as compared to Muslim consumers with a low level of religiosity (Mokhlis). H 1.e: Muslim consumers with a high level of religiosity exhibit a lower level of consideration to fashion consciousness as compared to Muslim consumers with a low level of religiosity (Mokhlis). H1.f: Muslim consumers with a high level of religiosity tend to be less impulsive shoppers when they shop for sport clothing as compared to Muslim consumers with a low level of religiosity (Mokhlis).

Based on the age as an interaction effect, the second hypothesis of this study is that younger Muslim consumers exhibit a higher level of consideration to brand

consciousness as compared to older Muslim consumers (Mokhlis, 2006). H 3: younger Muslim consumers exhibit a higher level of consideration to quality consciousness as compared to older Muslim consumers (Mokhlis).

Based on gender as an interaction effect, the fourth hypothesis is that female Muslim consumers exhibit greater consideration of their Islamic obligation consciousness as compared to male Muslim consumers. This hypothesis is based on the fact that the Islamic requirements of clothes for a Muslim female have more restrictions than for a Muslim male. The sport clothes for Muslim women, for example, are required to cover their whole body except for their face and hands, while Muslim men are required to cover between the navel and the knee (About.com: Islam, 2009; Khan, 2003). H 5: female Muslim consumers exhibit a higher level of consideration to fashion consciousness as compared to male Muslim consumers (adapted from Mokhlis, 2006).

Based on income as an interaction effect, the sixth hypothesis is that Muslim consumers with high income exhibit a higher level of consideration to quality consciousness as compared to Muslim consumers with low income (adapted from Mokhlis, 2006).

Table 1: Overview of Hypotheses

Main Effects
<p>H 1</p> <p>Muslim consumers with different levels of religiosity differ in their shopping behaviour towards (a)Islamic obligation; (b) price; (c) quality; (d) fashion; or, (e) brand; (f) shopping enjoyment; or (g) impulsive shopping consciousnesses</p> <p>H 1.a</p> <p>Muslim consumers with a high level of religiosity exhibit a higher level of consideration to Islamic obligation consciousness as compared to Muslim consumers with a low level of religiosity</p>

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#### H 1.b

Muslim consumers with a high level of religiosity tend to be more economic (i.e. prone to look for deals) when they shop for sport clothing as compared to Muslim consumers with a low level of religiosity

#### H 1.c

Muslim consumers with a high level of religiosity look for quality sport clothing when they shop as compared to Muslim consumers with a low level of religiosity

#### H 1.d

Muslim consumers with a high level of religiosity exhibit a lower level of consideration to brand consciousness as compared to Muslim consumers with a low level of religiosity

#### H 1.e

Muslim consumers with a high level of religiosity will exhibit a lower level of consideration to fashion consciousness as compared Muslim consumers with a low level of religiosity

#### H 1.f

Muslim consumers with a high level of religiosity tend to be less impulsive shoppers when they shop for sport clothing as compared to Muslim consumers with a low level of religiosity

### **Interaction Effects**

#### **Age**

##### H 2

Younger Muslim consumers exhibit a higher level of consideration to brand consciousness as compared to older Muslim consumers

##### H 3

Older Muslim consumers exhibit a higher level of consideration to quality consciousness compared to younger Muslim consumers

#### **Gender**

##### H 4

Female Muslim consumers exhibit greater consideration of their Islamic obligation consciousness as compared to male Muslim consumers

##### H 5

Female Muslim consumers exhibit a higher level of consideration to fashion consciousness as compared to male Muslim consumers

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## **Income**

H 6

Muslim consumers with high income exhibit a higher level of consideration to quality consciousness as compared to Muslim consumers with low income

H 7

Muslim consumers with high income exhibit a higher level of consideration to brand consciousness as compared to Muslim consumers with low income

H 8

Muslim consumers with high income tend to be less economic (i.e. prone to look for deals) when they shop for sport clothing as compared to Muslim consumers with low income

## **Sport Participation**

H 9

Muslim consumers with a high level of sport participation exhibit a higher level of consideration to brand consciousness as compared to Muslim consumers with a low level of sport participation

H 10

Muslim consumers with a high level of sport participation exhibit a higher level of consideration to quality consciousness as compared to Muslim consumers with a low level of sport participation

H 7: Muslim consumers with high income exhibit a higher level of consideration to brand consciousness as compared to Muslim consumers with low income (adapted from Mokhlis). H 8: Muslim consumers with high income tend to be less economic (i.e., prone to look for deals) when they shop as compared to Muslim consumers with low income (Mokhlis).

Based on sport participation as interaction effect, the ninth hypothesis is that Muslim consumers with a high level of sport participation exhibit a higher level of consideration to brand consciousness as compared to Muslim consumers with a low level of sport participation (Taks & Mason, 2004). Finally, H 10: Muslim consumers with a high level of sport participation exhibit a higher level of consideration to quality

consciousness as compared to Muslim consumers with a low level of sport participation (Taks & Mason).

## Method

### *Sample and Participants*

Muslim immigrant adults, including first, second, and third generations, residing in the city of Windsor, Ontario, Canada, were invited to complete a written survey. The participants were 18 years of age and older. All respondents were involved in sport. This was a condition to participate in the survey in order to be sure that participants are buying sport clothing.

After receiving the approval from University of Windsor Research Ethics Board (REB) on June 4, 2009 (see Appendix B), respondents were recruited from four Muslim institutions located in Windsor (see appendix C), namely the Windsor Islamic Association (WIA), Muslim Association of Canada (MAC) in Windsor - Rose City Islamic Centre (RCIC), Al-hijra Mosque and School, and Muslim Students Association (MSA) at University of Windsor.

#### *Windsor Islamic Association (WIA)*

The mission of WIA is to abide by the Islamic Shari'ah (legislation) in administering all its assets and in planning and conducting all its activities. WIA was established in 1964 and it is serving a population of over 25,000 Muslims in the Windsor locality. WIA offers sport programs and tournaments in basketball, hockey, soccer, and volleyball. It also organizes swimming for men and women (Windsor Islamic Association, 2001).

*Muslim Association of Canada (MAC) in Windsor - Rose City Islamic Centre (RCIC)*

The vision of the Muslim Association of Canada (MAC) is to establish an Islamic presence in Canada that is balanced, constructive and integrated, though distinct, within the social fabric and culture of Canada. MAC is a religious, educational, social, charitable, and non-profit organization. MAC provides religious and educational social services and programs designed to assist in the comprehensive educational and spiritual development of Muslims at the individual, family, and community level. Rose City Islamic Center (RCIC), which is run by MAC, organizes sport programs such as soccer, volleyball, basketball, and aerobics (for women only). The RCIC has an 8000 ft gym and this gym can be rented for sport activities such as indoor soccer, indoor hockey, basketball, volleyball, or any other practical sport activities (Rose City Islamic Center, 2007).

*Al-Hijra Mosque and School*

The mission of the Al-Hijra School Board is to create unique learning opportunities based upon the understanding and practice of Islamic principles that empower all students to achieve their highest level of personal potential and to participate actively in their communities. Al-Hijra Mosque and School organizes weekly sport events such as soccer, basketball, volleyball, table tennis, and badminton for adult men and women. In the summer, it organizes sport tournaments for the youth including camping (Al-Hijra Mosque and School, 2006).

*Muslim Students Association (MSA) at University of Windsor*

The Muslim Students Association (MSA) is based on Islamic ideals of a united effort and brotherhood. This unity is based on common objectives and transcends little

differences in order to have a community that every Muslim feels a part of. MSA strives to unite the Muslims on campus by putting on events and activities that abide by the Islamic Shari'ah. Conducting social, cultural, religious and other activities in the best traditions of Islam is one of the main focuses of the organization (Muslim Students Association, 2007). According to the president of MSA, Muhammad Inam, MSA offers soccer practice every Friday and organizes a cricket tournament each term for male students. It also offered swimming in the summer of 2009 and aerobics practices for female students once every two weeks (personal communication, February 15, 2009).

Surveys were handed out to participants before or after sport practices and/or events which were organized by the Muslim institutions. According to the sport coordinator in Al-Hijra Mosque and School, Hamami Nasser, the estimated number of Muslim participants in sport events in the four institutions, based on his participation experiences in the previous years, is around 350 participants. The number of male/female participants 18 years of age and older was estimated to be about 240, approximately 60 participants in each institution (personal communication, February 10, 2009). The target number of this study was therefore 240 surveys, 60 surveys in each institution.

As most sport programs and events held by these institutions were organized from April through the end of the summer, the period of the survey's distribution took place in June and July, 2009. During that period of data collection, the numbers of sports programs and events for all institutions were 12 programs per two weeks. In order to collect data from participants, the researcher personally visited each institution during their sports programs twice, one visit to men's practices and another visit to women's practices. Muslim women's sports events were for women only and men were not

allowed to attend these events including the researcher, thus the researcher coordinated the distribution and collection of the surveys with the assistance of women in each institution. In addition, the researcher was available, standing outside, during the women's sport programs and/or events to answer any questions. The researcher tried to obtain equal numbers of male and female participants.

In total, 330 surveys were distributed at four Islamic institutions, 277 of them were returned (response rate = 84%; surpassing the target number of 240). Of these, 265 surveys were deemed usable for data analysis.

### *Survey Instrument*

The survey instrument was a written questionnaire consisting of four sections: (a) Islamic religiosity; (b) sport clothing shopping behaviour; (c) sport participation; and (d) demographic information (see appendix D). The questionnaire was in English and needed about 20 minutes to be completed. A pilot study was conducted to test the wording and clarity of the survey for the main study and to make the changes needed to ensure better results. After receiving the clearance for the pilot study from the University of Windsor Research Ethics Board (REB) on May 5, 2009 (see Appendix E), a pilot study was administered at the researcher's house in Windsor, Ontario on May 15, 2009. Six Muslim adults, three women and three men, were invited to fill out the survey for their feedback and suggestions about its wording and clarity.

The six participants were Muslim friends of the researcher, and they were aware of the nature of the study. The pilot study group was not part of the main study. Overall, feedback was positive; only minor changes were suggested. These changes were as follows:

- Question one, all statements: “*religion*” was changed to: “*Islam*”
- Question one, fourth and sixth statements: “*mosque*” was added
- Question one, eighth statement: “*of my religious affiliation*” was changed to: “*Muslims*”
- Question two: “*in public*” was added
- Question two, 16<sup>th</sup> statement: “*self-concept*” was changed to: “*identity*”
- Question two, 22<sup>nd</sup> statement: “*splurge*” was changed to: “*indulge*”
- Question 11: “other” was added

Appendix F and Appendix D contain a copy of the survey before and after the pilot study.

Prior to completing the survey, the participants were given a letter of information which explained the nature of the study (see Appendix G). Once the participants read the letter of information, the researcher asked the participants to complete the survey on location before and/or after a sports practice and/or event organized by these institutions. This allowed the researcher to be available to address any questions.

### *Measurements*

All variables of the survey were coded in order to be analyzed. Basic coding of all variables is provided in Appendix H. New variables were created for the purpose of further analyses. They are presented hereafter.

#### *Islamic Religiosity (IR)*

IR was measured through the Religious Commitment Inventory (RCI-10) (developed by Worthington et al., 2003). The RCI-10 measures cognitive and behavioural commitment to a religious value system. The cognitive dimension focuses on the individual’s belief or personal religious experience while the behavioural dimension

concerns the level of activity in organized religions. This scale consisted of ten items, stated on a 5-point Likert statements rating as 1 = not at all true of me, 2 = not true of me, 3 = neutral, 4 = true of me, or 5 = totally true of me, with six statements expressing intrapersonal religiosity (cognitive) and four expressing interpersonal religiosity (behavioural) (see Table 2). This scale is relatively shorter than other measures, for example McCullough, Worthington, Maxie, & Rachal (as cited in Worthington et al.) used a 17 items scale.

The acceptable coefficient alpha scores of constructs must be .70 or higher (Thomas, Nelson, & Silverman, 2005). Worthington et al. (2003) tested the reliability of RCI-10 scores in a religiously diverse sample of American college students, including Muslim students. An estimate of reliabilities (Cronbach's alpha coefficients) for the RCI-10 in the overall sample was .95 and ranged from .92 to .98 for the specific religious groups. For the interpersonal factor, the overall sample reliability estimate was .88 and ranged from .68 to .90 for the specific religious groups. For the intrapersonal factor, alphas were .92 for the overall sample, and ranged from .86 to .96 for the religious groups. Mokhlis (2006) also tested the reliability of RCI-10 scores for Muslim, Buddhist, Hindus, and Christianity consumers in Malaysia. The coefficient alpha for the Mokhlis test was .85 for the intrapersonal religiosity and .68 for the interpersonal religiosity. In this study, alpha coefficients for each factor were calculated to examine internal consistencies of the measures. Intrapersonal and interpersonal measurement factors of Islamic religiosity had a very high reliability alpha at 0.93 and 0.90 (see Table 2).

### *Sport Clothing Shopping Behaviour*

People take many different approaches to the act of shopping based on their past experiences and personal value system. Mokhlis (2006) labeled these different approaches to the act of shopping as “shopping orientation”. Sood and Nasu (1995), and Essoo and Dibb (2004) labeled them as “shopping behaviour”. Smith and Frankenberger (1991) labeled them as “shopping criteria”. For the purpose of this study, the term of shopping behaviour will be used to determine the different approaches to the act of shopping.

Table 2: Dimensions of the Religious Commitment Inventory (RCI-10)

Religious Commitment Inventory (RCI-10)
<p>Intrapersonal Islamic religiosity (coefficient alpha = 0.93)</p> <ul style="list-style-type: none"> <li>• Islam is especially important to me because it answers many questions about the meaning of life</li> <li>• It is important to me to spend a period of time in private religious thought and prayer</li> <li>• My religious beliefs lie behind my whole approach to life</li> <li>• Religious beliefs influence all my dealings in life</li> <li>• I spend time trying to grow in understanding of Islam</li> <li>• I often read Qur'an and Islamic books/magazines about Islam</li> </ul> <p>Interpersonal Islamic religiosity (coefficient alpha = 0.90)</p> <ul style="list-style-type: none"> <li>• I keep well informed about my local religious group and have influence in its decisions</li> <li>• I enjoy participating in the activities of my Islamic organization or mosque</li> <li>• I support fundraising activities of my Islamic organization or mosque</li> <li>• I enjoy spending time with other Muslims</li> </ul>



Seven different types of consciousnesses related to sport clothing shopping behaviour were measured through 29 items. Six consciousnesses were adapted from Mokhlis (2006) and one is self developed. In line with Mokhlis, a 5-point Likert scale was used to measure the sport clothing shopping behaviour, rating as 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, or 5 = strongly agree.

The six consciousnesses adapted from Mokhlis' (2006) study are: (a) price; (b) quality; (c) brand; (d) fashion; (e) shopping enjoyment; and, (f) impulsive shopping. Mokhlis tested the reliability of price, quality, brand, fashion, shopping enjoyment, and impulsive shopping consciousnesses, and alphas were 0.65 for price, 0.73 for quality, 0.82 for brand, 0.80 for fashion, 0.79 for shopping enjoyment, and 0.66 for impulsive shopping consciousness.

Regarding sport clothing shopping behaviour in this study, alpha coefficient for the three items of impulsive shopping consciousness had an alpha of 0.61 (less than 0.70). The "I think I am impulsive buyer of sport clothing" did not correlate significantly with "I often buy sport clothing which I never intended to buy" and "I often feel guilty for buying so many unnecessary sports clothes" items, whereas the last two items did correlate significantly. Therefore, the first item was excluded for further analyses which significantly increased the internal consistency of impulsive shopping consciousness (alpha = 0.73). Alpha coefficient for the three items of price consciousness had an alpha of 0.68; we tried to eliminate the items of price consciousness but this did not increase the level of alpha. In addition, Mokhlis (2006) alpha's for price consciousness was only 0.65. We, therefore, kept the three items to measure the price consciousness. The remaining alpha coefficients of shopping behaviour consciousnesses were adequate,

ranging between 0.72 for shopping enjoyment to 0.87 for brand consciousness. All alphas are presented in Table 3 which shows an overview of these constructs.

Table 3: Interreliability of Sport Clothing Shopping Behaviour Consciousnesses

Sport clothing shopping behaviour consciousnesses
<p>Price consciousness (coefficient alpha = 0.68)</p> <ul style="list-style-type: none"> <li>• I prefer to buy sport clothing on sale</li> <li>• I usually watch the advertisement for announcement of sales for sport clothing</li> <li>• I can save a lot of money by shopping around for bargains for sport clothing</li> </ul>
<p>Quality consciousness (coefficient alpha = 0.81)</p> <ul style="list-style-type: none"> <li>• I look for quality in sport clothing and am willing to pay extra for it</li> <li>• It is generally worth it to pay more for quality of sport clothing</li> <li>• The quality of sport clothing I buy is more important to me than the prices I have to pay</li> </ul>
<p>Brand consciousness (coefficient alpha = 0.87)</p> <ul style="list-style-type: none"> <li>• Owning branded sport clothing can enhance one's status and prestige</li> <li>• I am concerned about brand names when making purchases of sport clothing</li> <li>• I am willing to splurge on status symbols like branded sport clothing, watches, wallets, clothing, etc.</li> <li>• I generally try to buy branded sport clothing</li> </ul>
<p>Fashion consciousness (coefficient alpha = 0.83)</p> <ul style="list-style-type: none"> <li>• I usually have outfits that are of the very latest design of sport clothing</li> <li>• I read fashion news regularly to see what is new in fashion of sport clothing</li> <li>• It is important to me that my sport clothing is of the latest style</li> <li>• I consider myself to be trendy with regard to my sport clothing</li> </ul>
<p>Shopping Enjoyment consciousness (coefficient alpha = 0.72)</p> <ul style="list-style-type: none"> <li>• I view shopping for sport clothing as a social activity</li> <li>• I like to go shopping for sport clothing</li> <li>• I usually continue shopping around even after making purchases of sport clothing</li> </ul>
<p>Impulsive Shopping consciousness (coefficient alpha = 0.73)</p> <ul style="list-style-type: none"> <li>• I often buy sport clothing which I never intended to buy</li> <li>• I often feel guilty for buying so many unnecessary sports clothes</li> <li>• I think I am impulsive buyer of sport clothing(excluded)</li> </ul>

The seventh consciousness of sport clothing shopping behaviour is “Islamic obligation” consciousness. This construct was developed from Valor’s (2007) concept of “ethical obligation”. Islamic obligation consciousness can be defined as “what is halal (lawful) and haram (forbidden) to wear regarding the sport clothing within the Islamic requirements” (self developed). Nine items were developed by the researcher to measure the Islamic obligation consciousness (see Table 4).

#### *Factor Analysis for Islamic Obligation Consciousness*

As a preliminary analysis for the self developed statements of Islamic obligation consciousness items were factor analyzed to reduce the nine variables to a manageable number of components. Thus, the responses to Islamic obligation consciousness statements were studied by factor analysis in order to identify the interrelationships among these independent variables and to summarize the information in a smaller set of variables. Factor analysis was deemed appropriate for this construct because the Keiser-Meyer-Olkin measure of sampling adequacy test index equaled 0.933, (for which higher than .70 is good and higher than 0.9 is super), and Bartlett’s test was significant at  $p < 0.001$ , (sample size  $< 300$ ) (Field, 2001).

Based on the principal components factor analysis, factors with latent roots or eigenvalues greater than 1.0 and items with rotated factor loadings of 0.40 or greater were retained (Field, 2001). Results of the factor analysis yielded one factor, which explained more than half of the variance observed in the variables (68.1 %). Table 4 summarizes the results of factor analysis on Islamic obligation consciousness statements. In addition, the new factor of Islamic obligation of sport clothing shopping behaviour had a very high reliability alpha at 0.94 (see Table 4).

Table 4: Factor Structure of Islamic Obligation Consciousness Statements

Factor and variables	Factor loadings
Factor 1: Islamic obligation consciousness (eigenvalues: 6.129, variance explained: 68.1%, alpha = 0.94)	
I wear sport clothing with Islamic obligation	0.789
I am concerned about sports clothing with Islamic obligation when making purchase of sports clothing	0.839
Owning sports clothing with Islamic obligation shows commitment to religion	0.834
I look for sport stores that sell sports clothing with Islamic obligation	0.773
Owning sports clothing with Islamic obligation enhances a Muslim's identity	0.870
To me, the level of Islamic obligation of sports clothing is more important than the price	0.791
To me, the level of Islamic obligation of sports clothing is more important than the quality	0.843
To me, the level of Islamic obligation of sports clothing is more important than the brand	0.806
To me, the level of Islamic obligation of sports clothing is more important than the fashion	0.875

### *Sport Participation*

Six questions were asked related to participation in sport: five questions determined the level of sport involvement; and one question enquired if sport clothing ever prohibited the participants from participating in sport:

- 1- Sport preference: respondents were asked to indicate in which sports and/ or sport related physical activities they participated at the time of the survey and to rank the first three sports in order of importance (Ohl and Taks, 2007).

- 2- Hours of participation: respondents were asked how many hours of sport per week they participated in a particular season (fall, winter, spring, and summer). For each season, these numbers of hours were multiplied by 13 weeks; the total numbers of hours per season were then added to obtain the total number of hours of sport per year. For further analyses “sport hours” was measured in two categories: 200 hours and less per year versus more than 200 hours per year.
- 3- Level of participation: respondents were asked whether they participated in sport at the recreational level only, mostly recreational/some competition, mostly competition/some recreational, or competition only (Ohl and Taks, 2007). For further analyses sport level was measured in two categories: recreation level only versus some competition.
- 4- Sport context: respondents were asked whether they participated in sport non-organized only, mainly non-organized, mainly organized, or organized only (Ohl and Taks, 2007). For further analyses sports context was measured in two categories: non-organized only versus some organized.
- 5- Sport expenditure: respondents were asked how much money they spent on sport clothing (excluding shoes and equipment) per year. For further analyses sport expenditure was measured in two categories: \$100 and less per year versus more than \$100 per year.
- 6- Sport clothing prohibition: respondents were asked to indicate if they felt that sport clothing ever prohibited them from participating in sport or sport related physical activities by choosing yes or no. If the answer was yes, they were asked to mention in which sport and explain the reasons (self-developed).

### *Demographic Information*

Seven questions collected the participants' demographic information:

*Gender:* male or female

*Age:* participants were asked to indicate their age in years. For further analyses age was measured in two categories: 30 years or younger versus older than 30 years of age.

*Generation of immigrant:* participants were asked to determine their generation of immigrant by choosing one of the four following options: first, second, third, or other. The fourth option, other, referred to individuals who converted from other religions and became Muslims.

*Marital status:* participants were asked to determine their marital status by choosing one of the four following options: single including (divorced, widowed) without children, single including (divorced, widowed) with children, married/partner without children, or married/partner with children (Snelgrove, 2006).

*Annual household income status:* participants were asked to determine their annual household income by choosing one of the following: less than 24,000 CDN\$/yr, 24,001-40,000 CDN\$/yr, 40,001-55,000 CDN\$/yr, 55,001-77,500 CDN\$/yr, or more than 77,500 CDN\$/yr (Ohl and Taks, 2007). For further analyses income was measured in two categories: \$40,000 or less versus more than \$40,000.

*Education level:* Participants were asked to determine their highest level of education by choosing one of the following: elementary school, some high school, high school graduate, some university or higher education, university or higher education graduate, or graduate school (Snelgrove, 2006). For further analyses education was

measured in four categories: high school or less, some university or higher, university or higher education, and master or PhD.

*Professional status:* participants were asked to determine their occupation by choosing one of the following: unemployed, clerical/technician, salesperson/middle management, corporate (manager), professional, or other (also student). An overview of the measurements of all variables used for further analyses is provided in Appendix I

### *Data Analysis*

Variables from the surveys were coded prior to entering the data in two independent excel data sets. Comparison was conducted between the two sets to avoid the data from any potential typing errors by using Science Analysis System (SAS, version 9.1). After that, all statistical analyses were performed using the Statistical Package for Social Sciences (SPSS, version 17.0). Prior to conducting analysis, data were examined for errors and missing values by running frequencies. Missing data were calculated using regressions. Outliers for continues variables were also corrected (see Appendix J).

Categorical variables are described using frequencies and percentages. Significant differences between groups are tested using chi-square analyses. For discrete variables means, standard deviation, minimum, and maximum are provided. Significant differences between groups are tested using ANOVA analyses.

Factorial ANOVA was conducted to test the influence of Islamic religiosity on sport clothing shopping behaviour. Factorial ANOVA allowed for testing main and interaction effects (Vincent, 2005; Thomas, Nelson, & Silverman, 2005). Thus, factorial ANOVA tested the influence of Islamic religiosity (main effect), including intrapersonal and interpersonal, on Islamic obligation, price, quality, fashion, brand, shopping

enjoyment, and impulsive shopping consciousnesses of sport clothing shopping behaviour and tested for possible interaction effects, namely age, gender, income, and sport participation. This examination was deemed necessary because previous studies have indicated a link between religion and these demographic variables (Smith & Frankenberger, 1991; Mookherjee, 2001; Mokhlis, 2006) and between sports apparel consumption and sport participation (Taks and Mason, 2004). To examine paired comparisons of the categorical means resulting from the variance analyses, post hoc multiple comparison tests (Tukey test) was employed (Vincent, 2005; Thomas, Nelson, & Silverman, 2005). Plots are being presented representing the estimated marginal means for each dimension of sport clothing shopping behaviour for the each category of intrapersonal or interpersonal Islamic religiosity, while at the same time representing interaction effects (age, sex, income, and sport participation) (Field, 2000). The estimated marginal means in SPSS (General Linear Model [GLM]) are the means of each factor or interaction that was specified, adjusted for any other variables in the model (Statchat, 2009), in our case, age, sex, income, and sport participation. Data analysis, mentioned above, will help the researcher to test the final model and the hypotheses which were advanced in this study.

## Results

### *General Characteristics of Respondents*

#### *Demographic Information*

The general characteristics of the respondents are described in Table 5. The sample consisted of slightly more male respondents (51.7%). For the total sample the age ranged from 18 to 58 years ( $M_{age} = 31$ ;  $SD = 9.5$ ). The sample was divided with respect



to generation of immigration: 61% were first generation, 25% were second generation, 5% were third generation, and 9% were other. In terms of marital status: 36% were single without children (including widow and divorced), 3% were single with children (including widow and divorced), 17% were married/partner without children, and 45% were married/partner with children. With respect of the annual household income: 52% earned \$40,000 or less and 48% earned more than \$40,000(see Table 5).

With respect to education: 19% obtained a high school degree or less, 28% had some university or higher education, 32% had university or higher education, and 22% were master and PhD holders. In terms of occupation: 24% were unemployed, 3% were clerical/technician, 11% were salespersons/middle management, 4% were corporate/manager, 23% were professionals, and 34% had jobs or were students. Overall, the sample appeared to be young, educated, middle income earners, and a large proportion of them were married and first generation immigrants, but more than half (58%) were not professionally active.

Sex differences for demographic variables were tested with chi-square analyses (see Table 5). No significant differences were found except for education (chi-square =18.93, df=3,  $p < .001$ ). Male respondents had proportionally a higher level of education especially at the master and PhD while many of the female respondents had a lower educational level (see Table 5).

### *Sport participation*

The most preferred sports of the respondents were soccer, basketball, fitness, running, and walking for males and walking, fitness, swimming, basketball, and soccer for females. Table 6 summarizes the results of the top five sports based on sex (based on

the respondent's indication of first, second, and third preferred sports or sport related physical activities).

Table 5: Demographic Information for Respondents by Sex (in %)

	Female (n=123)	Male (n=137)	Total (N= 265)
Age of respondents <sup>(1)</sup>			
30 years and younger	53	57	55
Older than 30 years	47	43	45
Generation of immigrant <sup>(1)</sup>			
First generation	56	66	61
Second generation	27	23	25
Third generation	9	2	5
Other	9	9	9
Marital Status <sup>(1)</sup>			
Single without children	30	41	36
(including widow/divorced)			
Single with children	5	1	3
(including widow/divorced)			
Married without children	16	17	17
Married with children	49	42	45
Annual household income <sup>(1)</sup>			
\$ 40,000 and less (low)	47.7	56.2	52.1
More than \$40,000 (high)	52.3	43.8	47.9

	Female (n=123)	Male (n=137)	Total (N= 265)
Education <sup>(2)</sup>			
High school degree or less	27	12	19
Some university or higher	31	24	28
University or higher educ.	31	34	32
Master or PhD	13	31	22
Occupation <sup>(1)</sup>			
Unemployed	31	17	24
Clerical, technician	3	4	3
Sales, middle management	10	12	11
Corporate (manager)	4	4	4
Professional	18	28	23
Other (also student)	37	35	34

<sup>(1)</sup>= chi-square not significant. <sup>(2)</sup>= chi-square =18.93, df=3, p< .001

With respect to the sport hours: 50.9% participated 200 hours or less in sport per year and 49.1% spent more than 200 hours per year (see Table 7). The average of the hours of participation in sport was 228 hours (SD= 163; min= 13; max= 725). In the final model, only the numbers of sport hours will be included as the indication for sport participation, using the two categories: low active (200 hours and less per year) versus active (more than 200 hour per year).

With respect to the level of sport participation: 60% participated at the recreational level only and 40% were involved in at least some competition. The different

between men and women was significant (chi-square =4.234, df=1,  $p < .05$ ). More female respondents participated in sport at the recreational level only (see Table 7). In terms of sport context: 51% participated in sport in a non-organized way only and 49% participated in some form of organized sport

Table 6: The Top Five Sports of Respondents by Sex (in %)  
(based on the three most preferred sport; multiple response question)

The Top Five Sport	Male (n= 123)	The Top Five Sport	Female (n= 137)
	Total numbers of responses = 400		Total numbers of responses = 387
Soccer	21	Walking	14.2
Basketball	12	Fitness	11.8
Fitness	6.75	Swimming	7.5
Running	6.5	Basketball	6.2
Walking	5.5	Soccer	6.2

The different between men and women was significant (chi-square =9.895, df=1,  $p < .01$ ). More women practiced sport in a non-organized form only as compared to the male respondents. In terms of sport expenditure: 52.7% of respondents spent \$100 or less per year and 48.3 % spent more than \$100 per year. The average amount of money spent on sport was \$ 191 per year (SD= 197; min= 10; max= 1000) (see Table 7).

With respect to sport clothing prohibition, 27% of respondents felt that sport clothing had at some point prohibited them from practicing sport, while 73% of them did not. Of these 27%, 24% were male and 76% were female. Also 70 % of them mentioned

that swimming as the most problematic sport. According to their explanation, no appropriate swimming suits were in the markets that meet their Islamic beliefs and needs. The following are some quotations of these explanations; “because I was never able to find a Halal swim suit”, “most running clothes are tight material”, and “ didn’t have the proper Islamic wear for swimming”.

Table 7: Sport Participation for Respondents by Sex (in %)

	Female (n=123)	Male (n= 137)	Total (N= 265)
Hours of Sport <sup>(1)</sup>			
200 hours and less	53	49	51
More than 200 hours	47	51	49
Sport Level <sup>(2)</sup>			
Recreation only	66	54	60
Some Competition	34	46	40
Sport Context <sup>(3)</sup>			
Non-organized only	61	42	51
Some organized	39	58	49
Spend Money in Sport <sup>(1)</sup>			
\$ 100 and less	52	52	52
More than \$ 100	48	48	48

<sup>(1)</sup> = chi-square not significant.

<sup>(2)</sup> = chi-square =4.234, df=1, p< .05

<sup>(3)</sup> = chi-square =9.895, df=1, p< .01

### *Islamic Religiosity (IR)*

The average scores for Islamic religiosity, including both intrapersonal and interpersonal, are presented by sex, age group (30 years or younger and older than 30 years of age), income group (\$ 40,000 or less and more than \$ 40,000), and sport hours (200 hours or less and more than 200 hours). Significant differences were calculated using ANOVA (see Table 8). Intrapersonal Islamic religiosity was significantly different for sex ( $F= 14.84$ ,  $p< 0.001$ ), income ( $F= 5.79$ ,  $p< 0.05$ ), and sport hours ( $F= 5.95$ ,  $p< 0.05$ ). Male respondents had a significantly higher level of intrapersonal Islamic religiosity than female respondents, respondents with low income had a higher level of intrapersonal Islamic religiosity than respondents with high income, and less active respondents (with fewer sport hours) had a higher level of intrapersonal Islamic religiosity than active respondents (with higher sport hours). Although intrapersonal Islamic religiosity was significantly different for income and sport hours, the difference is relatively small and not very meaningful.

Interpersonal Islamic religiosity was significantly different for sex ( $F= 12.28$ ,  $p< 0.01$ ) and age ( $F= 4.90$ ,  $p<0.05$ ). Male respondents had a higher level of interpersonal Islamic religiosity than female respondents and older respondents had a higher level of Interpersonal Islamic religiosity than younger respondents (see Table 8).

Table 8: Average Scores of Islamic Religiosity of Respondents by Sex, Age, Income, and Sport Hours

	Intrapersonal Religiosity	Interpersonal Religiosity
Sex		
Male	4.4	4.20
Female	3.98	3.76
F (sex)	14.84***	12.28**
p	.000	.001
Income		
Low	4.32	4.05
High	4.06	3.92
F (income)	5.79*	1.10
p	.017	.294
Age		
Younger	4.1	3.86
Older	4.3	4.14
F (age)	2.98	4.90*
p	.86	.028
Sport Hours		
Low	4.33	4.09
High	4.06	3.88
F (sport hours)	5.95*	2.71
p	.015	.101

\*p< .05, \*\* p< .01, \*\*\* p< .001, two-tailed

### *Sport Clothing Shopping Behaviour*

The average scores of all seven sport clothing shopping behaviours were presented in table 9 by sex, age group (30 years or younger and older than 30 years of age), income group (\$ 40,000 or less and more than \$ 40,000), and sport hours (200 hours or less and more than 200 hours). Significant differences were calculated using ANOVA (see Table 9). Overall, Islamic obligation consciousness showed the highest average score (3.52), followed by quality (3.49), price (3.31), and shopping enjoyment consciousness (3.02). Brand, fashion, and impulsive shopping behaviour consciousnesses seem less important to the Muslims: all averages were below 3.

Sport clothing shopping behaviour was significantly different by sex on fashion ( $F = 7.15, p < 0.05$ ), shopping enjoyment ( $F = 14.08, p < 0.001$ ), and impulsive shopping consciousness ( $F = 5.40, p < 0.05$ ). Female respondents were more conscious about fashion, shopping enjoyment, and impulsive shopping than their male counterparts. Although sport clothing shopping behaviour was significantly different by sex on fashion and impulsive shopping consciousness, the difference is relatively small and not very meaningful. Sport clothing shopping behaviour was significantly different by age on quality ( $F = 7.73, p < 0.01$ ) and Islamic obligation consciousness ( $F = 24.76, p < 0.001$ ). Older respondents were more conscious about quality and displayed a higher level of Islamic obligation consciousness than younger respondents. The difference is relatively small and not very meaningful for quality consciousness.

Regarding the annual household income, five significant differences were found, namely quality ( $F = 16.08, p < 0.001$ ), brand ( $F = 14.25, p < 0.001$ ), fashion ( $F = 8.69, p < 0.01$ ), shopping enjoyment ( $F = 3.95, p < 0.05$ ), and impulsive shopping consciousness ( $F$



= 9.26,  $p < 0.05$ ). Respondents with high incomes were more conscious about quality, brand, fashion, shopping enjoyment, and impulsive shopping as compared to respondents with low incomes. The difference is relatively small and not very meaningful for fashion consciousness. Finally, active participants scored significantly higher on quality ( $F = 19.88$ ,  $p < 0.001$ ), brand ( $F = 14.08$ ,  $p < 0.001$ ), fashion ( $F = 19.29$ ,  $p < 0.001$ ), shopping enjoyment ( $F = 17.07$ ,  $p < 0.001$ ), and impulsive shopping consciousness ( $F = 11.99$ ,  $p < 0.01$ ) as compared to less active participants (see Table 9).

Table 9: Average Scores for Sport Clothing Shopping Behaviour by Sex, Age, Income, and Sport Hours

	Sport Clothing Shopping Behaviour						
	Price	Quality	Brand	Fashion	Enjoyment	Impulsive	Islamic Obligation
Average (N=265)	3.31	3.49	2.97	2.78	3.02	2.51	3.52
Sex							
Male	3.08	3.23	2.72	2.63	2.67	2.20	3.51
Female	3.22	3.43	2.86	2.93	3.08	2.47	3.52
F (sex)	2.00	3.36	1.07	7.15*	14.08***	5.40*	.001
P	.158	.068	.301	.008	.000	.021	.970
Age							
Younger	3.23	3.34	2.94	2.82	3.01	2.51	3.23
Older	3.41	3.67	3.01	2.72	3.03	2.52	3.86

Sport Clothing Shopping Behaviour							
	Price	Quality	Brand	Fashion	Enjoyment	Impulsive	Islamic Obligation
F (age)	2.48	7.73**	0.27	0.72	0.31	0.006	24.76***
P	.117	.006	.607	.398	.861	.940	.000
Income							
Low	3.22	3.28	2.74	2.61	2.92	2.32	3.57
High	3.41	3.73	3.22	2.96	3.14	2.72	3.46
F (income)	2.53	16.08***	14.25***	8.69**	3.95*	9.26**	0.74
P	.113	.000	.000	.003	.48	.003	.389
Sport Hours							
Low	3.30	3.24	2.73	2.53	2.80	2.23	3.56
High	3.33	3.75	3.21	3.03	3.25	2.74	3.47
F (sport hours)	0.10	19.88***	14.08***	19.29***	17.07***	11.99**	0.43
P	.748	.000	.000	.000	.000	.001	.512

\*p< .05, \*\* p< .01, \*\*\* p< .001, two-tailed

### *Testing the Final Model*

Factorial ANOVA was used to test the influence of Islamic religiosity, including intrapersonal and interpersonal, on price, quality, fashion, brand, shopping enjoyment, impulsive shopping, and Islamic obligation consciousnesses of sport clothing shopping behaviour. First, the main effects were tested, followed by testing for possible interaction effects of sex, age, income, and sport participation. Based on Mokhlis' (2006) scales, the

respondents were classified as participants with a low, medium, or high level of intrapersonal Islamic religiosity, and as participants with a low, medium, or high level of interpersonal Islamic religiosity. A general rule of 33% (low), 33% (medium), and 33% (high) split was used to classify the scores of both scales into three levels. According to the frequency distribution, intrapersonal Islamic religiosity was classified into low ( $n=87$ , 32.8 %), medium ( $n=89$ , 33.6%), and high ( $n=89$ , 33.6%). By applying the same procedure, interpersonal Islamic religiosity was classified into low ( $n=85$ , 32.1 %), medium ( $n=93$ , 35.1%), and high ( $n=87$ , 32.8%).

### *Main Effects*

Table 10 displays the ANOVA tests involving the main effect of both intrapersonal and interpersonal Islamic religiosity on sport clothing shopping behaviour. When only main effects were considered ( $F_{\text{intra}}$ ), intrapersonal Islamic religiosity produced four statistically significant relationships, namely brand ( $F=8.68$ ,  $p<0.001$ ), fashion ( $F=3.36$ ,  $p<0.05$ ), impulsive shopping ( $F=4.02$ ,  $p<0.05$ ), and Islamic obligation consciousness ( $F=46.30$ ,  $p<0.001$ ). Respondents with a high level of intrapersonal Islamic religiosity were more concerned about Islamic obligation and fashion and less concerned about brand and impulsive shopping as compared with respondents with low level of intrapersonal Islamic religiosity. When controlling for age, sex, income, and sport participation ( $F_{\text{intra/age, sex, inc, hr}}$ ) intrapersonal Islamic religiosity was significantly related to two sport clothing shopping behaviours, namely brand ( $F=4.49$ ,  $p<0.05$ ) and Islamic obligation consciousness ( $F=44.86$ ,  $p<0.001$ ) (see Table 10).

Table 10: Main Effects of Intrapersonal and Interpersonal Islamic Religiosity on  
Sport Clothing Shopping Behaviour.

	Sport Clothing Shopping Behaviour Consciousnesses						
	Price	Quality	Brand	Fashion	Enjoyment	Impulsive	Islamic Obligation
Intrapersonal Religiosity							
Low (mean)	3.08	3.54	3.34	2.10	3.13	2.76	2.75
Medium(mean)	3.05	3.49	2.90	2.76	3.03	2.45	3.79
High (mean)	3.22	3.45	2.71	2.60	2.91	2.33	4.00
F intra	0.80	0.21	8.68***	3.36*	1.31	4.02*	46.30***
P	.450	.807	.000	.036	.271	.019	.000
Post-hoc (p< 0.05)	-	-	H,M<L	L,H<H,M	-	H,M<M,L	L<M, H
F intra/age, sex, inc, hr	0.52	0.30	4.49*	0.73	0.30	1.31	44.86***
P	.596	.740	.012	.481	.740	.273	.000
Interpersonal Religiosity							
Low (mean)	3.24	3.42	3.19	2.87	3.08	2.63	2.71
Medium(mean)	3.18	3.51	2.83	2.73	2.94	2.41	3.74
High (mean)	3.52	3.54	2.90	2.73	3.06	2.51	4.07
F inter	3.52*	0.38	2.68	0.66	0.66	0.95	52.85***
P	.031	.685	.071	.517	.520	.389	.000
Post-hoc (p< 0.05)	L,M<H	-	-	-	-	-	L<M<H
F inter/age, sex, inc, hr	3.70*	1.30	1.30	0.002	0.67	0.25	46.77***
P	.026	.275	.274	.998	.515	.777	.000

\*P< .05, \*\* p< .01, \*\*\* p< .001, two-tailed

The tests for main effects ( $F_{\text{inter}}$ ) of interpersonal Islamic religiosity produced two statistically significant relationship, namely price ( $F = 3.52, p < 0.05$ ) and Islamic obligation consciousness ( $F = 52.85, p < 0.001$ ). Respondents with a high level of interpersonal Islamic religiosity were more concerned about Islamic obligation and price of sport clothing as compared with respondents with low level of interpersonal Islamic religiosity.

These relationship persist even after the effects of age, sex, income, and sport hours ( $F_{\text{inter/age, sex, inc, hr}}$ ) were explicitly controlled. Effects of interpersonal Islamic religiosity ( $F_{\text{inter/age, sex, inc, hr}}$ ) were significant for price ( $F = 3.70, p < 0.05$ ) and Islamic obligation consciousness ( $F = 46.77, p < 0.001$ ) (see Table 10).

#### *Interaction Effects*

Table 11a and Table 11b display the ANOVA tests involving the interaction effects of both intrapersonal and interpersonal Islamic religiosity on sport clothing shopping behaviour.

#### *Age*

Effects of age for intrapersonal Islamic religiosity ( $F_{\text{age/intra, sex, inc, hr}}$ ) were found to be significant for two shopping behaviour consciousnesses, namely quality ( $F = 5.43, p < 0.05$ ) and Islamic obligation consciousness ( $F = 30.54, p < 0.001$ ). Also, effects of age for interpersonal Islamic religiosity ( $F_{\text{age/inter, sex, inc, hr}}$ ) were found to be significant for quality ( $F = 6.76, p < 0.05$ ) and Islamic obligation consciousness ( $F = 24.8, p < 0.001$ ) (see Table 11). For both intrapersonal and interpersonal Islamic religiosity, older respondents were more conscious about quality sport clothing as compared to younger respondents, especially if they have a higher level of Islamic religiosity (see Appendix K).

Table 11a: Interaction Effects of Intrapersonal Islamic Religiosity on Sport

## Clothing Shopping Behaviour

	Sport Clothing Shopping Behaviour Consciousnesses						
	Price	Quality	Brand	Fashion	Enjoyment	Impulsive	Islamic Obligation
F intra/age, sex, inc, hr	0.52	0.30	4.49*	0.73	0.30	1.31	44.86***
P	.596	.740	.012	.481	.740	.273	.000
F age/intra, sex, inc, hr	1.52	5.43*	0.05	1.48	0.002	0.04	30.54***
P	.218	.021	.817	.226	.963	.845	.000
F sex/intra, age, inc, hr	2.88	1.96	0.03	5.60*	14.10***	3.57	1.38
P	.092	.163	.854	.019	.000	.060	.242
F inc/intra, age, sex, hr	1.01	10.96**	9.72**	6.45*	1.27	5.27*	0.54
P	.296	.001	.002	.012	.261	.023	.465
F hr/intra, age, sex, inc	0.75	21.57***	10.22**	17.07***	19.24***	10.55**	1.19
P	.386	.000	.002	.000	.000	.001	.277
F intra*age	0.14	1.15	2.38	1.70	3.04*	1.79	0.38
P	.872	.317	.095	.184	.050	.170	.690
F intra*sex	0.17	0.04	0.73	1.46	4.98**	2.26	7.57**
P	.844	.957	.481	.235	.008	.107	.001
F intra*inc	2.94	3.00	1.84	0.62	0.51	0.65	0.27
P	.091	.051	.160	.541	.601	.525	.762
F intra*hr	0.31	1.00	1.70	0.30	1.20	1.64	0.24
P	.732	.354	.186	.748	.303	.195	.791

\*p&lt; .05, \*\* p&lt; .01, \*\*\* p&lt; .001, two-tailed

Table 11b: Interaction Effects of Interpersonal Islamic Religiosity on Sport

## Clothing Shopping Behaviour

	Sport Clothing Shopping Behaviour Consciousnesses						
	Price	Quality	Brand	Fashion	Enjoyment	Impulsive	Islamic Obligation
F inter/age, sex, inc, hr	3.70*	1.30	1.30	0.002	0.67	0.25	46.77***
P	.026	.275	.274	.998	.515	.777	.000
F age/inter, sex, inc, hr	1.34	6.76*	0.20	1.05	0.07	0.02	24.80***
P	.248	.010	.659	.307	.786	.891	.000
F sex/inter, age, inc, hr	2.87	2.47	0.09	5.82*	13.83***	3.64	2.15
P	.092	.118	.770	.017	.000	.058	.144
F inc/inter, age, sex, hr	0.73	9.19**	7.67**	5.01*	0.71	5.03*	1.57
P	.394	.003	.006	.025	.399	.026	.212
F hr/inter, age, sex, inc	0.56	24.68***	14.75***	19.73***	19.50***	11.55**	0.91
P	.455	.000	.000	.000	.000	.001	.763
F inter*age	2.40	2.07	3.13*	2.71	1.78	0.59	0.85
P	.097	.129	.046	.068	.170	.558	.430
F inter*sex	2.42	1.06	2.86	4.36*	7.61**	3.05*	0.90
P	.91	.347	.059	.014	.001	.049	.409
F inter*inc	1.66	3.70*	3.40*	3.65*	2.83	2.56	0.90
P	.192	.026	.036	.027	.061	.080	.408
F inter*hr	1.47	0.85	1.77	1.33	0.93	1.36	0.074
P	.233	.430	.172	.265	.396	.260	.929

\*p&lt; .05, \*\* p&lt; .01, \*\*\* p&lt; .001, two-tailed

Moreover, for both intrapersonal and interpersonal Islamic religiosity, older respondents were more conscious about Islamic obligation consciousness as compared to younger respondents (see Appendix L).

### *Sex*

Effects of sex for intrapersonal Islamic religiosity ( $F_{\text{sex/intra, age, inc, hr}}$ ) were present for fashion ( $F= 5.60, p< 0.05$ ) and shopping enjoyment consciousness ( $F= 14.01, p< 0.001$ ). Also, effects of interpersonal Islamic religiosity ( $F_{\text{sex/inter, age, inc, hr}}$ ) were significant for fashion ( $F= 5.82, p< 0.05$ ) and shopping enjoyment consciousness ( $F= 13.83, p< 0.001$ ) (see Table 11). For both intrapersonal and interpersonal Islamic religiosity, female respondents showed higher levels of conscious towards fashion sport clothing and experienced more enjoyment shopping as compared to male respondents, especially when they were in the lower categories of religiosity, because these sex differences tend to disappear with higher level of religiosity (see Appendix M and N).

### *Income*

Effects of income for intrapersonal Islamic religiosity ( $F_{\text{inc/intra, age, sex, hr}}$ ) were found to be significant for four sport clothing shopping behaviour, namely quality ( $F= 10.96, p < 0.01$ ), brand ( $F= 9.72, p< 0.01$ ), fashion ( $F= 6.45, p < 0.05$ ), and impulsive shopping consciousness ( $F= 5.27, p < 0.05$ ). Also, effects of income for interpersonal Islamic religiosity ( $F_{\text{inc/inter, age, sex, hr}}$ ) were significant for quality ( $F= 9.19, p< 0.01$ ), brand ( $F= 7.67, p< 0.01$ ), fashion ( $F= 5.01, p< 0.05$ ), and impulsive shopping consciousness ( $F= 5.03, p< 0.05$ ) (see Table 11). For both, intrapersonal and interpersonal Islamic religiosity, respondents with high incomes were more conscious towards quality, brand, fashion sport clothing and experienced impulsive purchases of sport clothing as



compared with respondents with low income. Again, this seems true for low categories of religiosity, but fades in the medium, and especially in the high category of religiosity (see Appendix O, P, Q, and R).

### *Sport Participation*

Effects of sport participation for intrapersonal Islamic religiosity ( $F_{hr/intra}$ , age, sex, inc) were found to be significant for five sport clothing shopping behaviour, namely quality ( $F=21.57$ ,  $p< 0.001$ ), brand ( $F= 10.22$ ,  $p< 0.01$ ), fashion ( $F= 17.07$ ,  $p < 0.001$ ), shopping enjoyment ( $F= 19.24$ ,  $p< 0.001$ ), and impulsive shopping consciousness ( $F= 10.55$ ,  $p < 0.01$ ). Also, effects of sport participation for interpersonal Islamic religiosity ( $F_{hr/inter}$ , age, sex, inc ) were significant for quality( $F= 24.68$ ,  $p< 0.001$ ), brand (  $F= 14.75$ ,  $p< 0.001$ ), fashion (  $F= 19.73$ ,  $p< 0.001$ ), shopping enjoyment (  $F= 19.50$ ,  $p< 0.001$ ), and impulsive shopping consciousness (  $F= 11.55$ ,  $p< 0.01$ ) (see Table11). For both, intrapersonal and interpersonal Islamic religiosity, active respondents were more conscious towards quality, brand, fashion sport clothing, experienced impulsive purchases of sport clothing, and experienced more enjoyment shopping as compared to less active respondents. Again, this difference was more pronounced for respondents with lower levels of religiosity, but the difference remained for respondents with medium and high levels of religiosity (see Appendix S, T, U, V, and W).

Analyses of interaction effects showed that age, sex, income, and sport participation were generally uncorrelated with intrapersonal Islamic religiosity. The only significant interaction effects observed in this analysis were between intrapersonal Islamic religiosity and age ( $F_{intra*age}$ ) on shopping enjoyment consciousness ( $F= 3.04$ ,  $p< 0.05$ ), and between intrapersonal Islamic religiosity and sex ( $F_{intra*sex}$ ) on shopping

enjoyment ( $F= 8.98, p<0.01$ ) and Islamic obligation consciousness ( $F= 7.57, p< 0.01$ ) (see Table 11).

Analyses of interaction effects showed that age, sex, income, and sport participation were generally correlated with interpersonal Islamic religiosity. The significant interaction effects were observed between interpersonal Islamic religiosity and age ( $F_{\text{inter*age}}$ ) on brand ( $F= 3.13, p< 0.05$ ), also between interpersonal Islamic religiosity and sex ( $F_{\text{inter*sex}}$ ) on fashion ( $F= 4.36, p< 0.05$ ), shopping enjoyment ( $F= 7.61, p<0.01$ ) and impulsive shopping ( $F= 3.05, p< 0.05$ ), and between interpersonal Islamic religiosity and income ( $F_{\text{inter*inc}}$ ) on quality ( $F= 3.70, p< 0.05$ ), brand ( $F= 3.40, p< 0.05$ ), and fashion consciousness ( $F= 3.65, p< 0.05$ ) (see Table 11).

### Discussion

The purpose of this study was to examine the influence of Islam on sport clothing shopping behaviour, taking into account sex, age, income, and sport participation. The hypotheses of this study were advanced based on two dimensions: the influence of Islamic religiosity (main effect) on sport clothing shopping behaviour and the possible influences of sex, age, income, and sport participation (interaction effects). I will now discuss the findings of this study accordingly.

#### *The Influence of Islamic Religiosity on Sport Clothing Shopping Behaviour (Main Effect)*

Religion is an important cultural influence on consumer behaviour including shopping behaviour (Delener, 1990; Smith & Frankenberger, 1991; Essoo & Dibb, 2004). Six hypotheses were advanced to test the main effect. Most findings of the main effect

were consistent with expectations derived from literature. However, the expectation of the influence of Islamic religiosity on quality consciousness was not confirmed.

H 1: assumed that Muslim consumers with different levels of religiosity differ in their sport clothing shopping behaviour towards price, quality, brand, fashion, shopping enjoyment, impulsive shopping, and Islamic obligation consciousnesses. The findings partially confirmed this hypothesis as respondents with different levels of religiosity exhibited different levels of consciousness in their sport clothing shopping behaviour, but this difference was only strongly apparent for Islamic obligation, and to some extent for brand and price consciousnesses. The finding is in accordance with Essoo and Dibb (2004), who found evidence that consumers with different levels of religiosity of the same religion differed remarkably in their shopping behaviour.

H 1.a: assumed that Muslims with higher levels of religiosity are more concerned about Islamic obligation consciousness as compared to Muslims with lower levels of religiosity. The findings strongly confirm this hypothesis as highly religious respondents exhibited more consideration towards Islamic obligation consciousness as compared to less religious respondents. This, of course, is a consequence of the fact that Muslims with a high level of religiosity always follow the orders of God (Allah), and by wearing the sport clothing with Islamic requirements, they implement these orders into their behaviours (About.com: Islam, 2009; Khan, 2003).

H 1.b: assumed that Muslim consumers high in religiosity tend to be more economic (i.e. prone to look for deals) when they shop for sport clothing as compared to Muslim consumers low in religiosity. This hypothesis is only confirmed for interpersonal Islamic religiosity as respondents high in interpersonal Islamic religiosity tend to be more

economic when they shop for sport clothing as compared to respondents low in interpersonal Islamic religiosity (see Table 10). The finding is in line with works of Smith and Frankenger (1991), Sood and Nasu (1995), Essoo and Dibb (2004), and Mokhlis (2006) who found evidence that consumers with a high level of religiosity are attracted to buy products when they are on sale, and often shop in stores with lower prices.

H1.c: assumed that Muslim consumers high in religiosity are more prone to look for quality sport clothing when they shop as compared to Muslim consumers low in religiosity. The findings rejected this hypothesis as highly religious respondents did not differ towards quality consciousness as compared to lower religious respondents. The finding is in contrast with the work of Smith and Frankenger (1991) and Mokhlis (2006) who suggested that consumers with high religiosity will prefer products that are of high quality. However, the finding is in line with “the result of Essoo and Dibb (2004) who have found that devout consumers are less demanding in their shopping behaviour than casually religious consumers, in that they attach less importance to product quality, nutritional value of products and quality of service” (as cited by Mokhlis, 2006, p.72).

H 1.d: assumed that Muslim high in religiosity exhibit a lower level of consideration towards brand consciousness as compared to Muslim low in religiosity. The findings confirm this hypothesis only for intrapersonal Islamic religiosity. Respondents with high levels of intrapersonal Islamic religiosity were less conscious to brand sport clothing as compared to respondents low in intrapersonal Islamic religiosity (see Table 10). The finding is consistent with Mokhlis (2006) who found that religious

consumers were less concerned about brand consciousness as compared to non religious consumers.

H 1.e: assumed that Muslim high in religiosity exhibit a lower level of consideration towards fashion consciousness as compared to Muslim low in religiosity. The findings moderately confirmed this hypothesis as respondents high in intrapersonal Islamic religiosity were less conscious about fashion sport clothing as compared to respondents low in intrapersonal Islamic religiosity. However, this effect was no longer significant after controlling for the interaction effects (age, sex, income, and sport participation); it was also not significant for interpersonal Islamic religiosity (see Table 10). The finding only partially supports Mokhlis (2006) who found that religious consumers were less concerned towards fashion as compared to non religious consumers.

H 1.f: assumed that Muslim consumers with a high level of religiosity tend to be less impulsive shoppers when they shop for sport clothing as compared to Muslim consumers with a low level of religiosity. The findings rejected this hypothesis as highly religious respondents did not towards impulsive shopping consciousness as compared to lower religious respondents. The findings is in contrast with the work of Mokhlis (2006)

All in all, four hypotheses were accepted while two hypotheses were not confirmed. Respondents with different levels of Islamic religiosity exhibited different levels of considerations towards the consciousnesses of sport clothing shopping behaviour. Highly religious respondents, as defined by both intrapersonal and interpersonal measures of Islamic religiosity, were most likely to look for sport clothing with Islamic obligation. This effect was found to be significant even after the demographic and sport participation variables of age, sex, income, and sport hours were

controlled. Respondents high in intrapersonal Islamic religiosity preferred brand and fashion sport clothing. However, this effect disappeared for fashion after controlling for interaction effects, while it remained for brand. Respondents high in interpersonal Islamic religiosity tended to be more economic when they shop for sport clothing even after this effect was controlled for interaction effects. There is only slight evidence that Muslims with higher levels of religiosity show a “greater self-restrain from buying on the spur of the moment” (Mokhlis, 2006, p.72). A negligible effect appeared for intrapersonal religiosity on impulsive shopping; an effect which disappeared after controlling for the interaction effects. Finally, no significant difference in behaviour was found for respondents towards quality sport clothing, nor for shopping enjoyment (not hypothesized).

#### *The Influence of Interaction Effects on Sport Clothing Shopping Behaviour*

This study explored the influence of Islamic religiosity on sport clothing consumption (main effect). However, variables such as age, gender, and income are also found to affect consumption (Solomon et al., 1999). In addition, sport participation affects the consumption of sport clothing (Taks & Mason, 2004). These variables were therefore, also included in the analyses as interaction effects. Nine hypotheses were advanced for interaction effects. Most findings were consistent with expectations derived from the literature. However, expectations of the influence of age on brand consciousness, of sex on Islamic obligation consciousness, and of income on price consciousness were not confirmed.

### *Age*

H2: assumed that younger Muslim consumers exhibit a higher level of consideration towards brand consciousness as compared to older Muslim consumers. This hypothesis was not confirmed as no significant difference was found for respondents' age towards branded sport clothing. The finding is in contrast with Mokhlis (2006) who suggested that age was found to be significant for brand consciousness.

H 3: assumed that older Muslim consumers exhibit a higher level of consideration towards quality consciousness as compared to younger Muslim consumers. The findings accepted this hypothesis as older Muslim respondents were looking for quality when they shop for sport clothing as compared to younger Muslim respondents, especially when they were highly religious. The finding is in agreement with Mokhlis (2006) who suggested that age was found to be significant for quality consciousness but he did not mention in which direction. In this study, with low level of religiosity, older respondents were slightly more conscious to quality sport clothing as compared to younger respondents. However, with medium and high level of religiosity, older respondents were clearly more conscious to quality sport clothing as compared to younger respondents. The findings were almost the same for the effect of age for intrapersonal and interpersonal Islamic religiosity on quality consciousness (see Appendix K).

The effect of age for both intrapersonal and interpersonal Islamic religiosity of respondents was also found to be significant with Islamic obligation consciousness. Older respondents, with low, medium, and high level of Islamic religiosity, exhibited greater consideration of their Islamic obligation consciousness as compared to younger

respondents. This difference is consistent for all levels of religiosity, but overall Islamic obligation increases with higher levels of religiosity (see Appendix L).

### *Sex*

H4: assumed that female Muslim consumers exhibit greater consideration of their Islamic obligation consciousness as compared to male Muslim consumers. The findings rejected this hypothesis as no significant difference was found for respondents' sex towards sport clothing with Islamic obligation. The finding is in contrast to the fact that the Islamic requirements of clothes for a Muslim female have more restrictions than for a Muslim male (About.com: Islam, 2009; Khan, 2003).

H 5: assumed that female Muslim consumers exhibit greater consideration towards fashion consciousness as compared to male Muslim consumers. The findings partially confirm this hypothesis for only female Muslim respondents with low levels of religiosity showed higher levels of fashion consciousness, as these women were more concerned about fashion consciousness as compared to male Muslim respondents. The finding is in agreement with Mokhlis (2006) who recommended that sex was found to be significant for fashion consciousness, but again he did not mention in which direction. The findings of this study indicated that female respondents with a low level of religiosity were significantly more conscious about fashion sport clothing as compared with male respondents with a low level of religiosity. But, this consciousness clearly decreased with higher levels of religiosity. The effects of sex for both intrapersonal and interpersonal Islamic religiosity on fashion consciousness were almost the same (see Appendix M).

Sex was also found to be significant with shopping enjoyment consciousness. Female respondents, especially with low level of religiosity, experienced more enjoyment



when they go shopping for sport clothing as compared to male respondents. This finding is in agreement with the reality that women experience more enjoyment when they go shopping as compared to men, but only when they have lower levels of religiosity. The findings of the affect of sex for Intrapersonal and interpersonal Islamic religiosity on shopping enjoyment consciousness were almost the same (see Appendix N).

### *Income*

H 6: assumed that Muslim consumers with high income exhibit a higher level of consideration to quality consciousness as compared to Muslim consumers with low income. The findings partially confirm this hypothesis as respondents in the lower levels of religiosity and with high income were more concerned about quality consciousness as compared to respondents with low income; however, this difference disappears for respondents with medium and high levels of religiosity. Thus, the findings only partially support Mokhlis (2006). The findings of the income effect for intrapersonal and interpersonal Islamic religiosity on quality consciousness were the same (see Appendix O).

H 7: assumed that Muslim consumers with high income exhibit a higher level of consideration to brand consciousness as compared to Muslim consumers with low income. As is the case for quality consciousness, the findings only partially confirm this hypothesis as respondents with lower levels of religiosity and high income, were more concerned towards brand consciousness as compared to their counterparts with low income (supporting Mokhlis, 2006). Again, this difference gradually disappears with increasing levels of religiosity (see Appendix P).

H 8: assumed that Muslim consumers with a high income tend to be less economic (i.e., prone to look for deals) as compared to Muslim consumers with a low income. The findings rejected this hypothesis as no significant difference was found of respondents' income towards price consciousness (supporting Mokhlis, 2006) (see Table 11).

Intrapersonal Islamic religiosity affected the impulsive shopping consciousness of sport clothing shopping behaviour, but not when controlled for age, sex, income, and sport participation (see Table 10). This finding is partially in agreement with Mokhlis (2006) who indicated that those high in religiosity tend to be less impulsive when making purchase decision. However, respondents with low levels of religiosity and high income tend to be more prone to buy impulsively. This difference gradually decreases with increasing levels of religiosity to almost disappear in respondents with high levels of religiosity. The findings of the income effect for intrapersonal and interpersonal Islamic religiosity on impulsive shopping consciousness were the same (see Appendix Q).

Moreover, the effects of income for both intrapersonal and interpersonal Islamic religiosity were significant on fashion consciousness. Respondents with high income, especially in the lower levels of religiosity, were more conscious about fashion sport clothing as compared to respondents with low income. But, the effect of income for interpersonal Islamic religiosity on fashion consciousness was interesting; respondents high in religiosity with high income were less conscious about fashion sport clothing as compared to respondents high in religiosity with low income (see Appendix R).

### *Sport Participation*

H 9: assumed that, regardless of the level of religiosity, Muslim consumers with a high level of sport participation exhibit a higher level of consideration to brand consciousness as compared to Muslim consumers with a low level of sport participation. The findings confirm this hypothesis as respondents with a high level of sport participation were more concerned about brand consciousness as compared to respondents with a low level of sport participation. However, the importance of brand consciousness decreased with the level of religiosity (see Appendix S). The finding is in line with Taks & Mason (2004) who suggested that consumers with a high level of sport participation were in favor of expensive branded sporting goods.

H 10: assumed that, regardless of the level of religiosity, Muslim consumers with a high level of sport participation exhibit a higher level of consideration about quality consciousness as compared to Muslim consumers with a low level of sport participation. This hypothesis was confirmed as respondents with a high level of sport participation were more concerned about quality consciousness as compared to respondents with a low level of sport participation, regardless of their level of religiosity (see Appendix T). The finding is also in agreement with Taks & Mason (2004) who suggested that consumers with a high level of sport participation were in favor of quality of sporting goods.

Interestingly, regardless of the level of religiosity, sport participation was found to be significant with five consciousnesses of sport clothing shopping behaviour, namely brand, quality, fashion, shopping enjoyment, and impulsive shopping consciousnesses. In other words, respondents with a high level of sport participation were looking for brand, quality, and fashion sport clothing (see Appendix U). Also, they experienced more

pleasure when shopping for sport clothing (see Appendix V) and made more impulsive purchases towards sport clothing (see Appendix W), with only small decreases with increasing levels of religiosity.

In summary, similar to Islamic religiosity (main affect), the interaction affects (age, sex, income, and sport participation) did impact some dimensions of sport clothing shopping behaviour. The interaction effects were, however, different for age, as compared to income and sex. For example, differences with regard to income and sex were more apparent for respondents with lower levels of religiosity. For more religious respondents the differences in shopping behaviour quasi disappeared indicating that sex and income are not relevant to predict shopping behaviour for religious Muslims. In contrast, age significantly affected the quality and Islamic obligation consciousnesses for Muslims on the other end of the spectrum; this was true for Muslims with high levels of religiosity. Sport participation stands out, as it significantly affected the quality, brand, fashion, shopping enjoyment, and impulsive shopping consciousnesses for all sport active Muslims, regardless their levels of religiosity.

Finally, the effects of age, sex, income, and sport participation were very similar for both intrapersonal and interpersonal Islamic religiosity for the majority of consciousnesses. The distinction between intrapersonal and interpersonal Islamic religiosity does therefore not seem very important for measuring shopping behaviour outcomes, when taking the interaction effects into account.

#### *Implications for Theory*

Despite the evidence of correlations between religion and consumption patterns, few studies have been conducted within consumer research which directly examines the

role of religion on consumption patterns. Because of this gap in the literature, many calls were suggested to examine the relationship between culture/religion and consumer behaviour including sports consumption behaviour. This study fulfilled the call of consumer culture theory (CCT) to expand the research on marketplace cultures (Arnould & Thompson, 2005). Furthermore, this research met the suggestions of several studies in their encouragement to examine the relationship between religion, as an important element of culture, and sports consumption behavior (Essoo & Dibb, 2004). In the sport industry no studies, to our knowledge, were found examining the relationship between religion and sports consumption patterns. Thus, this study is considered one of the first studies that examines the relationship between religion and sport consumption in general and between Islam and sport clothing shopping behaviour in particular.

For Western consumers, general marketing theory indicated that variables such as age, sex, and income are important predictors to segment the market, since they affect consumption behaviour (e.g. Solomon et al., 1999). This study, indeed confirms age to be an important variable to predict quality and Islamic obligation consciousnesses for sport clothing for high religious Muslims. However, variables such as sex and income do not seem to be relevant predictors of consumer behaviour for highly religious Muslims, as sex and income differences disappeared for these groups. This is an important finding since it indicates that market segmentation needs to be implemented in a different way depending which market is being targeted.

#### *Practical Implications*

This study indicated that, when Muslims buy sport clothing, their level of religiosity strongly impacts their Islamic obligation consciousness, and to a lesser extent

their brand and price consciousnesses. The interaction effects (age, sex, income, and sport participation) differ in their impact on shopping behaviour. While the sport clothing shopping behaviour of Muslims with low levels of religiosity were affected by all interaction effects, Muslim with high levels of religiosity were only affected by age and sport participation. Sport marketing managers should therefore establish marketing strategies based on these findings when targeting Muslim markets. For instance, in Muslim markets with high levels of religiosity, sport marketing managers should recognize that younger consumers and older consumers have different sport clothing shopping behaviour especially when it comes to quality and Islamic obligation. Also, high and low active Muslims showed different patterns of shopping behaviour. However, interestingly enough, sex differences did not appear. Male and female Muslims demonstrated the same sport clothing shopping behaviour. Another example, in Muslim markets with low levels of religiosity, sport marketing managers should understand that Muslim consumers low in religiosity have similar shopping behaviour as Western consumers, when it comes to variations in income level and sex. Sporting good manufactures can therefore apply Western consumers marketing strategies when targeting this market, but need to adapt their strategies when targeting high religiosity Muslim markets.

Sport marketing managers should understand the influence of religion as a key factor of culture on sport consumption and their marketing strategies need to be modified to fit the specific values and behaviors of the culture (e.g., Peter & Olson, 2008; Luna & Gupta, 2001). This leads us to wonder whether religion can be employed as a market segmentation variable. Smith and Frankenger (1991) stated that marketing managers

and advertising managers in particular, may want to use religious commitments as a segmentation variable. This was also supported by McDaniel and Burnett (1990). The findings of this study also supported this suggestion. For example, when targeting older Muslims in a highly religious market, the quality of sport clothing should be emphasized. Muslim consumers are in need for specific sports clothing that meet their Islamic requirements. Understanding these requirements will allow sporting goods manufactures to design new products that meet wants of the Muslim consumers and satisfy their needs. This strategy of diversification by combining product development (i.e., creating new products) and market development (i.e., tapping into new markets) (Ansoff, 1957) allows companies to increase their market shares and become more profitable.

#### *Limitations and delimitations of the Study and Future Research*

To enhance researchers' knowledge and learning, I shall discuss the limitations of this study. Actually, time and financial constraints resulted in having a relatively small sample size in comparison to previous similar studies (e.g. McDaniel and Burnett 1990), which, consequently, introduced some unfairness into the outcome. The weakness of such a small sample fell in the instability of measures and in the consequent decrease in the power of statistical tests. Regardless of this inadequacy, the study does reveal that the sampled consumers' religiosity level, to some extent, has influenced their behaviour towards sport clothing shopping. Nevertheless, sport clothing shopping behaviour is probably influenced due to other factors too such as age, sex, income, and the level of sport participation. After exploring the nature of this study, the sample size has been considered acceptable and reasonable to reach preliminary conclusions regarding the impact of Islamic religiosity on shopping behaviour in Windsor, Canada.

The inherent limitation, which is interrelated to generalizing the findings beyond the sample and its geographic scope, should be recognized. The study sample was distributed on the selected demographic characteristics in the city of Windsor, which does not necessarily apply to the characteristics of Muslims in Canada or in North America. For that, generalizing the research findings to Muslims in North America as a whole and in Muslim countries is believed to be one of the limitations of this study.

Moreover, the survey of this study was somewhat long; it needed 20 minutes to be completed, especially for non-native speakers. Some participants complained about the length of survey mentioning that they came to the sport events to have fun and not to fill out a long survey. As most participants in this study were first generation immigrants and despite the pilot study which was conducted to test the wording and clarity of the survey, a couple of words in the survey remained difficult to understand, such as impulsive and indulge. It is recommended for further research that in order to conduct a pilot study to test the wording and clarity, the potential participants in the pilot study should have different levels of education in order to find out the difficult words and reflect the composition of the targeted sample.

Measuring religiosity for Muslim consumers in a non-Muslim country is another limitation of this study as the level of religion could be affected in non-Muslim countries. And targeting participants in Muslim institutions only is one of the delimitations of this study. Consequently, it is recommended for further research to be conducted for the same study in Muslim countries. Also, it is suggested to conduct comparative studies between Muslims in different Muslim countries or between Muslims in a non-Muslim country with Muslims in a Muslim country. Other delimitations are that the participants are 18



years of age or order to meet the requirements of the research ethics board, and the questionnaire was only developed in English.

While the present study focused on the relationship between Islam and sport clothing shopping behaviour, more research needs to be conducted to examine the relationship between Islam and some kind of sports such as swimming, dance, or beach volleyball. Moreover, more research needs to be conducted to explore the differences between Muslim culture and Western culture with respect to sport consumption, sport participation, and sport competition.

In summary, the present study indicated that Islamic religiosity influenced sport clothing shopping behaviour. More specifically, Muslims were looking for sport clothing with Islamic obligation. Age, sex, and income also impacted the sport clothing shopping behaviour, mainly on brand, fashion, and quality of sport clothing. Muslims, like people in North America and Europe, high in sport participation were looking for brand, fashion, and quality when they shop for sport clothing. They also enjoyed shopping for sport clothing and impulsively purchased sport clothing. Creating sport clothing with Islamic religiosity could increase sport participation rates among Muslims and therefore enhance their overall wellbeing. Finally, the present study, to our knowledge, is one of the first studies that examined the relationship between Islam and sport clothing shopping behaviour.

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## **Appendix A**

### **Origin, Belief, and Teaching of the Islam (About.com: Islam, 2009; Khan, 2003)**

#### ***Origin***

Islam is the youngest of the world's major religions. The root of Islam came out of the word "Silm" and "Salam", which means peace. In 2006, the Muslim population was estimated at more than one billion and increasing by 25 million per year. Islam includes personal faith and piety, a way of life, a code of ethics, a culture, a system of laws – in short, guidelines and rules for life in all its aspects and dimensions.

#### ***Belief and Teaching***

Allah is the name of the One God. Muhammad (peace be upon him), the prophet, was chosen by God to deliver his message of peace. He was entrusted with the power of explaining, interpreting and living the teaching of the Qur'an. Muslims reject the idea of trinity or such a unity of God. Muslims are instructed to practice what they believe. Muslims are restricted from consuming certain items such as pork and its by-products, alcohol and any narcotic or addictive drugs. In Islamic belief, there are five pillars, namely:

1. Creed (Shahada): The verbal commitment and pledge that there is only One God and that Muhammad is the messenger of God is considered to be the Creed of Islam.
2. Prayers (Salat): The performance of the five daily prayers is required of Muslims.
3. Fasting (Saum): Fasting is total abstinence from food, liquids and intimate intercourse (between married couples) from dawn to sunset during the entire month of Ramadan.



4. Purifying Tax (Zakat): This is an annual payment of a certain percentage of a Muslim's property, which is distributed among the poor or other rightful beneficiaries.
5. Pilgrimage (Hajj): The performance of pilgrimage to the Makkah is required once a life time if means are available. Hajj is in part in memory of the trials and tribulations of the Prophet Abraham, his wife and his eldest son.

## Appendix B

### Clearance of Main Study

Office of the Research Ethics Board



Today's Date: June 4, 2009  
 Principal Investigator: Shreim Murad  
 Department/School: Kinesiology  
 REB Number: 09-082  
 Research Project Title: Religion and Sports Apparel Consumption: An Exploratory Study of the Muslim Market  
 Clearance Date: June 4, 2009  
 Project End Date: August 31, 2009  
  
 Progress Report Due:  
 Final Report Due: August 31, 2009

This is to inform you that the University of Windsor Research Ethics Board (REB), which is organized and operated according to the *Tri-Council Policy Statement* and the University of Windsor *Guidelines for Research Involving Human Subjects*, has granted approval to your research project on the date noted above. This approval is valid only until the Project End Date.

A Progress Report or Final Report is due by the date noted above. The REB may ask for monitoring information at some time during the project's approval period.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the REB. Minor change(s) in ongoing studies will be considered when submitted on the Request to Revise form.

Investigators must also report promptly to the REB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

Forms for submissions, notifications, or changes are available on the REB website: [www.uwindsor.ca/reb](http://www.uwindsor.ca/reb). If your data is going to be used for another project, it is necessary to submit another application to the REB.

We wish you every success in your research.

Pierre Boulos, Ph.D.  
 Chair, Research Ethics Board

cc: Dr. Marijke Taks, Kinesiology  
 Mark Curran, Research Ethics Coordinator

This is an official document. Please retain the original in your files.



## Appendix C

### Muslim Institutions in Windsor, Ontario, Canada

- Windsor Islamic Association

Contact Address

1320 Northwood Drive  
Windsor, ON, N9E 1A4  
Canada

- Muslim Students Association at University of Windsor

Contact address

UWSA, CAW Centre  
401 Sunset Avenue  
Windsor, ON, N9B 3P4  
Canada

- Muslim Association of Canada (Windsor)- Rose City Islamic Centre(RCIC)

Contact Address

5420 Empress St.  
Windsor, ON, N8T 1B4  
Canada

- Al-Hijra Mosque and School

Contact Address

5100 Howard Ave.  
Windsor, ON, N9A 6Z6  
Canada

## Appendix D

### Survey (After Pilot Study)

1. People have different levels of religious commitment (religiosity). Using the following scale, rate how much the following statements with regard to your level of religiosity are true for you (circle the appropriate number)

	Not at all true of me	Not true of me	Neutral	True of me	Totally true of me
Islam is especially important to me because it answers many questions about the meaning of life	1	2	3	4	5
I keep well informed about my local religious group and have influence in its decisions	1	2	3	4	5
It is important to me to spend a period of time in private religious thought and prayer	1	2	3	4	5
I enjoy participating in the activities of my Islamic organization or mosque	1	2	3	4	5
My religious beliefs lie behind my whole approach to life	1	2	3	4	5
I support fundraising activities of my Islamic organization or mosque	1	2	3	4	5
Religious beliefs influence all my dealings in life	1	2	3	4	5
I enjoy spending time with other Muslims	1	2	3	4	5
I spend time trying to grow in understanding of Islam	1	2	3	4	5
I often read Qur'an and Islamic books/magazines about Islam	1	2	3	4	5

2. People have different shopping behaviours towards sport clothing. Using the following scale, and based on the type of sport clothing that you buy and wear in public, rate how important each of the following statements is to you when buying sport clothing, (circle the appropriate number)

[Note: Islamic obligation in the table below refers to what is halal (lawful) and haram (forbidden) to wear regarding the sport clothing within the Islamic requirements]

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I wear sport clothing with Islamic obligation	1	2	3	4	5
I prefer to buy sport clothing on sale	1	2	3	4	5
I am concerned about sport clothing with Islamic obligation when making purchase of sport clothing	1	2	3	4	5
I look for quality in sport clothing and I am willing to pay extra for it	1	2	3	4	5
Owning sport clothing with Islamic obligation shows commitment to religion	1	2	3	4	5
I view shopping for sport clothing as a social activity	1	2	3	4	5
Owning branded sport clothing can enhance one's status and prestige	1	2	3	4	5
I often buy sport clothing which I never intended to buy	1	2	3	4	5
I usually have outfits that are of the very latest design of sport clothing	1	2	3	4	5
I usually watch the advertisements for announcement of sales for sport clothing	1	2	3	4	5
I look for sport stores that sell sport clothing with Islamic obligation	1	2	3	4	5
I like to go shopping for sport clothing	1	2	3	4	5
It is generally worth it to pay more for quality sport clothing	1	2	3	4	5

**Continue question 2**

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
I am concerned about brand names when making purchases of sport clothing	1	2	3	4	5
To me, the level of Islamic obligation of sport clothing is more important than fashion	1	2	3	4	5
Owning sport clothing with Islamic obligation enhances a Muslim's identity	1	2	3	4	5
I read fashion news regularly to see what is new in fashion of sport clothing	1	2	3	4	5
I can save a lot of money by shopping around for bargains for sport clothing	1	2	3	4	5
The quality of sport clothing I buy is more important to me than the price I have to pay	1	2	3	4	5
I usually continue shopping around even after making purchases of sport clothing	1	2	3	4	5
To me, the level of Islamic obligation of sport clothing is more important than price	1	2	3	4	5
I am willing to indulge on status symbols like branded sport clothing, watches, wallets, clothing, etc.	1	2	3	4	5
It is important to me that my sport clothing are of the latest style	1	2	3	4	5
I think I am an impulsive buyer of sport clothing	1	2	3	4	5
To me, the level of Islamic obligation of sport clothing is more important than quality	1	2	3	4	5
I generally try to buy branded sport clothing	1	2	3	4	5
I consider myself to be trendy with regard to my sport clothing	1	2	3	4	5
To me, the level of Islamic obligation of sport clothing is more important than brand	1	2	3	4	5
I often feel guilty for buying so many unnecessary sports clothes	1	2	3	4	5

**Please provide the following information with regard to your sport participation and demographic information**

3. In which sports and/or sport related physical activities do you participate at present? (Rank them in order of importance):

- First:-----
- Second:-----
- Third:-----

4. How many hours per week in each season do you on average participate in sport or sport related physical activities?

☐ Fall: .....hrs/per week

☐ Winter: .....hrs/per week

☐ Spring: .....hrs/per week

☐ Summer: .....hrs/per week

5. How would you describe your level of participation?

☐ Recreational level only

☐ Mostly recreational, some competition

☐ Mostly competition, some recreational

☐ Competition

6. In what context do you practice your sport?

☐ Non- organized only

☐ Mainly non-organized

☐ Mainly organized

☐ Organized only

7. How much money do you spend on sports clothing (exclude shoes and equipment) on average per year? ----- (CDN\$).

8. Do you feel that sport clothing ever prohibited you from practicing in sport or sport related physical activities?

☐ Yes

☐ No

If the answer is **yes**:

- Which sport or sport related physical activity? -----

- Please explain why? -----  
-----  
-----  
-----

9. What is your gender?

☐ Female

☐ Male

10. How old are you? .....

11. Which generation of immigrant are you?

☐ First

☐ Second

☐ Third

☐ Other

12. What is your marital status?

☐ Married/partner without children

☐ Single without children (including widow and divorced)

☐ Married/ partner with children

☐ Single with children (including widow and divorced)

13. What is your annual household income?

☐ Less than 24,000 CDN\$/yr

☐ 24,001 - 40,000 CDN\$/yr

☐ 40,001 - 55,000 CDN\$/yr

☐ 55,001 – 77,500 CDN\$/yr

☐ More than 77,500 CDN\$/yr

14. What is your highest level of education?

☐ Elementary school

☐ Some university or higher education

☐ Some high school

☐ University or higher education graduate

☐ High school graduate

☐ Graduate school (Master, PhD)

15. What is your occupation?

☐ Unemployed

☐ Clerical, technician

☐ Salesperson, middle management

☐ Corporate (manager)

☐ Professional

☐ Other (also students)



## Appendix E

## Clearance of Pilot Study

Office of the Research Ethics Board



Today's Date: May 14, 2009  
 Principal Investigator: Shreim Murad  
 Department/School: Kinesiology  
 REB Number: 09-081  
 Research Project Title: Religious Influence on Sports Apparel Consumption: An Exploratory Study of the Muslim Market (Pilot Study)  
 Clearance Date: May 5, 2009  
 Project End Date: July 1, 2009

Progress Report Due:  
 Final Report Due: July 1, 2009

This is to inform you that the University of Windsor Research Ethics Board (REB), which is organized and operated according to the *Tri-Council Policy Statement* and the *University of Windsor Guidelines for Research Involving Human Subjects*, has granted approval to your research project on the date noted above. This approval is valid only until the Project End Date.

A Progress Report or Final Report is due by the date noted above. The REB may ask for monitoring information at some time during the project's approval period.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the REB. Minor change(s) in ongoing studies will be considered when submitted on the Request to Revise form.

Investigators must also report promptly to the REB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

Forms for submissions, notifications, or changes are available on the REB website: [www.uwindsor.ca/reb](http://www.uwindsor.ca/reb). If your data is going to be used for another project, it is necessary to submit another application to the REB.

We wish you every success in your research.

Pierre Boulos, Ph.D.  
 Chair, Research Ethics Board

cc: Dr. Marijke Taks, Kinesiology  
 Mark Curran, Research Ethics Coordinator

This is an official document. Please retain the original in your files.



## Appendix F

### Survey (Before Pilot Study)

1. Muslims can have different levels of religious commitment (religiosity). Using the following scale, rate how much the following statements with regard to your level of religiosity are true for you (circle the appropriate number)

	Not at all true of me	Not true of me	Neutral	True of me	Totally true of me
Religion is especially important to me because it answers many questions about the meaning of life	1	2	3	4	5
I keep well informed about my local religious group and have influence in its decisions	1	2	3	4	5
It is important to me to spend period of time in private religious thought and prayer	1	2	3	4	5
I enjoy participating in the activities of my religious organization	1	2	3	4	5
My religious beliefs lie behind my whole approach to life	1	2	3	4	5
I make financial contributions to my religious organization	1	2	3	4	5
Religious beliefs influence all my dealings of my religion	1	2	3	4	5
I enjoy spending time with others of my religious affiliation	1	2	3	4	5
I spend time trying to grow in understanding of my religion	1	2	3	4	5
I often read books and magazines about my religion	1	2	3	4	5

- 2. Muslims can have different shopping behaviours towards sports apparel. Using the following scale, and based on the type of sports apparel that you buy and wear, rate how important each of the following statements is to you when buying sports apparel, (circle the appropriate number)**

**[Note: Islamic obligation** in the table below refers to what is halal (lawful) and haram (forbidden) to wear regarding the sports apparel within the Islamic requirements]

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I wear sports apparel with Islamic obligation	1	2	3	4	5
I am concerned about sports apparel with Islamic obligation when making purchase of sports apparel	1	2	3	4	5
I prefer to buy sports apparel on sale	1	2	3	4	5
I look for quality in sports apparel and willing to pay extra for it	1	2	3	4	5
Owning sports apparel with Islamic obligation show commitment to religion	1	2	3	4	5
Owning branded sports apparel can enhance one's status and prestige	1	2	3	4	5
I usually have outfits that are of the very latest design of sports apparel	1	2	3	4	5
I usually watch the advertisement for announcement of sales for sports apparel	1	2	3	4	5
I look for sport stores that sell sports apparel with Islamic obligation	1	2	3	4	5
It is generally worth it to pay more for quality sports apparel	1	2	3	4	5
I am concerned about brand names when making purchases of sports apparel	1	2	3	4	5
To me, the level of Islamic obligation of sports apparel is more important than fashion	1	2	3	4	5
Owning sports apparel with Islamic obligation enhance Muslim's self-concept	1	2	3	4	5
I read fashion news regularly to see what is new in fashion of sports apparel	1	2	3	4	5
I can save a lot of money by shopping around for bargains for sports apparel	1	2	3	4	5
The quality of sports apparel I buy is more important to me than the prices I have to pay	1	2	3	4	5
To me, the level of Islamic obligation of sports apparel is more important than prices	1	2	3	4	5
I am willing to splurge on status symbols like branded sports apparel, watches, wallets, clothing, etc.	1	2	3	4	5
It is important to me that my sports apparel are of the latest style	1	2	3	4	5
To me, the level of Islamic obligation of sports apparel is more important than quality	1	2	3	4	5
I generally try to buy branded sports apparel	1	2	3	4	5
I consider myself to be trendy with regard to my sports apparel	1	2	3	4	5
To me, the level of Islamic obligation of sports apparel is more important than brand	1	2	3	4	5

**Please provide the following information with regard to your sport participation and demographic information**

3. In which sports and/or physical activities do you participate at present? (Rank them in order of importance):

- First:-----
- Second:-----
- Third:-----

4. How much time, in average hours per week, do you spend on all sports and/or physical activities?

- |                                      |   |
|--------------------------------------|---|
| 1. <input type="checkbox"/> 0 – 1 hr | 2. <input type="checkbox"/> 1 – 3 hr                    |
| 3. <input type="checkbox"/> 3 – 5 hr | 4. <input type="checkbox"/> 5 – 10 hr                   |
| 5. <input type="checkbox"/> + 15 hr  | 6. <input type="checkbox"/> Seasonal participation only |

5. What is your level of participation?

- ☐ Recreational level only
- ☐ Mostly recreational, some competition
- ☐ Mostly competition, some recreational
- ☐ Competition

6. How much money do you spend on sports apparel on average per year? ----- (CDN\$).

7. What is your gender? ☐ Female ☐ Male

8. The year you were born? 19.....

9. What is your marital status?

- |   |   |
|---|---|
| <input type="checkbox"/> Single without children (including widow and divorced) | <input type="checkbox"/> Married/partner without children |
| <input type="checkbox"/> Single with children (including widow and divorced)    | <input type="checkbox"/> Married/ partner with children   |

10. What is your annual household income?

- |  |   |
|--|---|
| <input type="checkbox"/> Less than 24,000 CDN\$/yr | <input type="checkbox"/> 24,001 - 40,000 CDN\$/yr |
| <input type="checkbox"/> 40,001 - 55,000 CDN\$/yr  | <input type="checkbox"/> 55,001 – 77,500 CDN\$/yr |
| <input type="checkbox"/> More than 77,500 CDN\$/yr |   |

11. What is your highest level of education?

- |   |  |
|---|--|
| <input type="checkbox"/> Elementary school    | <input type="checkbox"/> Some university or higher education     |
| <input type="checkbox"/> Some high school     | <input type="checkbox"/> University or higher education graduate |
| <input type="checkbox"/> High school graduate | <input type="checkbox"/> Graduate school (Master, PhD)           |

12. What is your occupation?

- |   |  |
|---|--|
| <input type="checkbox"/> Student                | <input type="checkbox"/> Nurse/ care giver                           |
| <input type="checkbox"/> Unemployed             | <input type="checkbox"/> Teacher/ professor <sup>56</sup>            |
| <input type="checkbox"/> Retired                | <input type="checkbox"/> Self-employed farmer, cattle breeder,...    |
| <input type="checkbox"/> Housewife/man          | <input type="checkbox"/> Self-employed tradesman or craftsman        |
| <input type="checkbox"/> Unskilled laborer      | <input type="checkbox"/> Low-level management position               |
| <input type="checkbox"/> Semi-skilled laborer   | <input type="checkbox"/> Mid-level management position               |
| <input type="checkbox"/> Skilled laborer        | <input type="checkbox"/> Upper level management/senior executive     |
| <input type="checkbox"/> Clerical/office worker | <input type="checkbox"/> Professional (Medical doctor, lawyer, ect.) |
| <input type="checkbox"/> Other (specify): ----- |  |

## Appendix G



### **LETTER OF INFORMATION FOR CONSENT TO PARTICIPATE IN RESEARCH**

Religion and Sports Apparel Consumption: An Exploratory Study of the Muslim Market

You are asked to participate in a research study conducted by Murad Shreim (student), under the direction of Dr. Marijke Taks (faculty), from the Department of Kinesiology at the University of Windsor. These results will contribute to Murad Shreim master's thesis.

If you have any questions or concerns about the research, please feel free to contact Murad Shreim at (519) 890-6060 (cell) or by e-mail at [shreim@uwindsor.ca](mailto:shreim@uwindsor.ca) or Dr. Marijke Taks at (519) 253-3000 x. 2467 or by e-mail at [mtaks@uwindsor.ca](mailto:mtaks@uwindsor.ca).

#### **PURPOSE OF THE STUDY**

This study is designed to explore the relationship between Islam and sport clothing consumption.

#### **PROCEDURES**

You will be asked to fill out a survey which will take approximately 20 minutes to complete. You will be given: (a) the questionnaire; (b) a pencil; and, (c) an envelope to return the questionnaire.

#### **POTENTIAL RISKS AND DISCOMFORTS**

There are no known physical or psychological risks associated with this research.

#### **POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

By exploring how you behave towards sport clothing consumption, this study may assist sport marketing managers to better meet the wants and needs of Muslim consumers. You are given the opportunity here to express your wants and needs associated with sport clothing consumption.

#### **PAYMENT FOR PARTICIPATION**

You will not be compensated for your involvement in the project.

## **CONFIDENTIALITY**

Any information that is obtained in connection with this study will remain anonymous. You will be asked to return the questionnaire to the researcher sealed in the provided envelope. The questionnaire does not require your name, therefore your identity will not be known. Scores from these questionnaires will be kept in strict confidence. The information obtained from the study may be used for future research purposes. Results may be communicated at conferences. All completed questionnaires will be kept in a locked cabinet in the investigator's home. There is no access to this cabinet by anyone other than the investigator. The questionnaires will be destroyed 7 years after completion of this study.

## **PARTICIPATION AND WITHDRAWAL**

Participation in this study is voluntary. You can choose whether or not to be in this study. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you do not want to answer and still remain in the study. By submitting the completed survey, you indicate your consent to participate in this study. Also, you will retain the letter of information for your records.

## **FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS**

At the end of September, 2009, a summary of the results will be posted on the advertising boards in your Islamic center. Also, they will be made available on the REB website: <http://www.uwindsor.ca/reb>.

## **SUBSEQUENT USE OF DATA**

This data may be used in subsequent studies.

## **RIGHTS OF RESEARCH SUBJECTS**

If you have questions regarding your rights as a research subject, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: [ethics@uwindsor.ca](mailto:ethics@uwindsor.ca)

## **SIGNATURE OF INVESTIGATOR**

---

Signature of Investigator

---

Date

Question Number	Variable Number	Label	Description	Code	Minimum	Maximum
	1	ID	Identification # of respondent	1 = first respondent 2 = 2 <sup>nd</sup> respondent Etc ...	1	265
1	2	Rintra1	Level of Intrapersonal Religiosity Islam is especially important to me because it answers many questions about the meaning of life	. = missing 1= Not at all true of me 2= Not true of me 3= Neutral 4= True of me 5= Totally true of me	1	5
	3	Rinter1	Level of Interpersonal Religiosity I keep well informed about my local religious group and have influence in its decisions	Same as variable #2	1	5
	4	Rintra2	Level of Intrapersonal Religiosity It is important to me to spend a period of time in private religious thought and prayer	Same as variable #2	1	5
	5	Rinter2	Level of Interpersonal Religiosity I enjoy participating in the activities of my Islamic organization or mosque	Same as variable #2	1	5
	6	Rintra3	Level of Intrapersonal Religiosity My religious beliefs lie behind my whole approach to life	Same as variable #2	1	5
	7	Rinter3	Level of Interpersonal Religiosity I support fundraising activities of my Islamic organization or mosque	Same as variable #2	1	5
	8	Rintra4	Level of Intrapersonal Religiosity Religious beliefs influence all my dealings in life	Same as variable #2	1	5
	9	Rinter4	Level of Interpersonal Religiosity I enjoy spending time with other Muslims	Same as variable #2	1	5
	10	Rintra5	Level of Intrapersonal Religiosity I spend time trying to grow in understanding of Islam	Same as variable #2	1	5
	11	Rintra6	Level of Intrapersonal Religiosity I often read Qur'an and Islamic books/magazines about Islam	Same as variable #2	1	5



2	12	ROBL1	Religious Obligation Conscious I wear sport clothing with Islamic obligation	. = missing 1= Strongly disagree 2= Disagree 3= Neutral 4= Agree 5= Strongly agree	1	5
	13	Price1	Price Conscious I prefer to buy sport clothing on sale	Same as variable # 12	1	5
	14	ROBL2	Religious Obligation Conscious I am concerned about sport clothing with Islamic obligation when making purchase of sport clothing	Same as variable # 12	1	5
	15	Quality1	Quality Conscious I look for quality in sport clothing and I am willing to pay extra for it	Same as variable # 12	1	5
	16	ROBL3	Religious Obligation Conscious Owning sport clothing with Islamic obligation shows commitment to religion	Same as variable # 12	1	5
	17	SHNJOY1	Shopping Enjoyment I view shopping for sport clothing as a social activity	Same as variable # 12	1	5
	18	Brand1	Brand Conscious Owning branded sport clothing can enhance one's status and prestige	Same as variable # 12	1	5
	19	IMPUL1	Impulsive Shopping I often buy sport clothing which I never intended to buy	Same as variable # 12	1	5
	20	FASH1	Fashion Conscious I usually have outfits that are of the very latest design of sport clothing	Same as variable # 12	1	5
	21	Price2	Price Conscious I usually watch the advertisements for announcement of sales for sport clothing	Same as variable # 12	1	5
	22	ROBL4	Religious Obligation Conscious I look for sport stores that sell sport clothing with Islamic obligation	Same as variable # 12	1	5
	23	SHNJOY2	Shopping Enjoyment I like to go shopping for sport clothing	Same as variable # 12	1	5
	24	Quality2	Quality Conscious It is generally worth it to pay more for quality sport clothing	Same as variable # 12	1	5
	25	Brand2	Brand Conscious	Same as variable # 12	1	5

			I am concerned about brand names when making purchases of sport clothing			
	26	ROBL5	Religious Obligation Conscious To me, the level of Islamic obligation of sport clothing is more important than fashion	Same as variable # 12	1	5
	27	ROBL6	Religious Obligation Conscious Owning sport clothing with Islamic obligation enhances a Muslim's identity	Same as variable # 12	1	5
	28	FASH2	Fashion Conscious I read fashion news regularly to see what is new in fashion of sport clothing	Same as variable # 12	1	5
	29	Price3	Price Conscious I can save a lot of money by shopping around for bargains for sport clothing	Same as variable # 12	1	5
	30	Quality3	Quality Conscious The quality of sport clothing I buy is more important to me than the price I have to pay	Same as variable # 12	1	5
	31	SHNJOY3	Shopping Enjoyment I usually continue shopping around even after making purchases of sport clothing	Same as variable # 12	1	5
	32	ROBL7	Religious Obligation Conscious To me, the level of Islamic obligation of sport clothing is more important than price	Same as variable # 12	1	5
	33	Brand3	Brand Conscious I am willing to indulge on status symbols like branded sport clothing, watches, wallets, clothing, etc.	Same as variable # 12	1	5
	34	FASH3	Fashion Conscious It is important to me that my sport clothing are of the latest style	Same as variable # 12	1	5
	35	IMPUL2	Impulsive Shopping I think I am an impulsive buyer of sport clothing	Same as variable # 12	1	5
	36	ROBL8	Religious Obligation Conscious To me, the level of Islamic obligation of sport clothing is more important than quality	Same as variable # 12	1	5
	37	Brand4	Brand Conscious I generally try to buy branded sport clothing	Same as variable # 12	1	5
	38	FASH4	Fashion Conscious	Same as variable # 12	1	5

			I consider myself to be trendy with regard to my sport clothing			
	39	ROBL9	Religious Obligation Conscious To me, the level of Islamic obligation of sport clothing is more important than brand	Same as variable # 12	1	5
	40	IMPUL3	Impulsive Shopping I often feel guilty for buying so many unnecessary sports clothes	Same as variable # 12	1	5
3	41	SPORT1	The sport or sport related physical activities	. = missing 0= not applicable 1= Soccer 2= Basketball 3= Volleyball 4= Swimming 5= Fitness 6= walking 7= badminton 8= biking 9= hockey 10= running 11= squash 12= chess 13= chess 14= yoga 15= tennis 16= cricket 17= bowling 18= football 19= table tennis 20= track and field 21= garden and house work 22= snow shovelling 23= body building 24= ice skating 25= horseback riding 26= boxing 27= hunting 28= fishing 29= golf 30= water skating 31= dancing 32= taekwondo 33= baseball 34= dodge ball	1	15

				35= karate 36= climbing 37= handball		
	42	SPORT2	The sport or sport related physical activities	Same as variable # 41	1	15
	43	SPORT3	The sport or sport related physical activities	Same as variable # 41	1	15
4	44	I Fall	Hours per week of sport participation in the fall	Example: . = missing 1= 1 hour per week 2 = 2 hours per week Etc.	1	40
	45	I Winter	Hours per week of sport participation in the Winter	Same as variable # 44	1	40
	46	I Spring	Hours per week of sport participation in the spring	Same as variable # 44	1	40
	47	I Summer	Hours per week of sport participation in the summer	Same as variable # 44	1	40
5	48	SPLEVEL	Level of sport participation	. = missing 1= Recreational level only 2= Mostly recreational, some competition 3= Mostly competition, some recreational 4= Competition only	1	4
6	49	SPCONT	Context of sport participation	. = missing 1= Non-organized 2= Mainly non-organized 3= Mainly organized 4= Organized only	1	4
7	50	SPEND	Money spent on sport clothing	. = missing 0 = 0 \$/yr 1 = 1 \$/yr 20 = 20 \$/yr Etc ...	0	2000
8	51	PROHIB	Does sport clothing prohibit you from practicing in sport or sport related physical activities	. = missing 0= No 1= Yes	0	1
	52	SPPROHIB	Which sport or sport related physical activities prohibited you from participating in sport	. = missing 0= not applicable Same as variable # 41	1	15
9	53	SEX	Sex	. = missing	0	1

				0= male 1= female		
10	54	AGE	Age in number of years	. = missing e.g. 35 = 35 years old	18	65
11	55	GENERA	Generation	. = missing 1= First 2= Second 3= Third 4= Other	1	4
12	56	MSTAT	Marital status	. = missing 1= Single without children( include window and divorced) 2= Single with children( include window and divorced) 3= Married/partner without children 4= Married/partner with children	1	4
13	57	INCOME	Income	. = missing 1= Less than 24,000 CDN\$/yr 2= 24,001- 40,000 CDN\$/yr 3= 40,001- 55,000 CDN\$/yr 4= 55,001- 77,500 CDN\$/yr 5= More than 77,500 CDN\$/yr	1	5
14	58	EDUC	Level of education	. = missing 1= Elementary school 2= Some high school 3= High school graduate 4= Some university or higher education 5= University or higher education 6= Graduate school(Master, PDH)	1	6
15	59	OCCUP	Occupation	. = missing 1= Unemployed 2= Clerical, technician	1	6

				3= Salesperson, middle management 4= Corporate(manager) 5= Professional 6= other (also student)		
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**Appendix I****The Measurements of Variables Used in Analyses**

Variables	Continuous/ Discrete	Categories	Number of categories
Intrapersonal and interpersonal religiosity, 10 items	D	Not at all true, not true, neutral, true, and totally true	5
Sport clothing shopping behaviour, 29 items	D	Strongly disagree, disagree, neutral, agree, and strongly agree	5
Hours of sport	D	200 Hours and less, more than 200	2
Sport level	D	Recreational only, some recreational	2
Sport context	D	Non-organized only, some organized	2
Spend Money in sport	D	\$100 and less, more than \$100	2
Sex	D	Male, female	2
Age	D	30 and younger, older than 30 years	2
Generation of	D	First, second, third	4

immigrant		generation ,or other	
Marital Status	D	Single without, single with, married without, married with children	4
Annual household income	D	\$40,000 and less, more than \$40,000	2
Education	D	High school or less, some university, university, master/PhD	4
Occupation	D	Unemployed, Clerical/technician, sales/middle management, corporate/manager, professional, other/also students	7



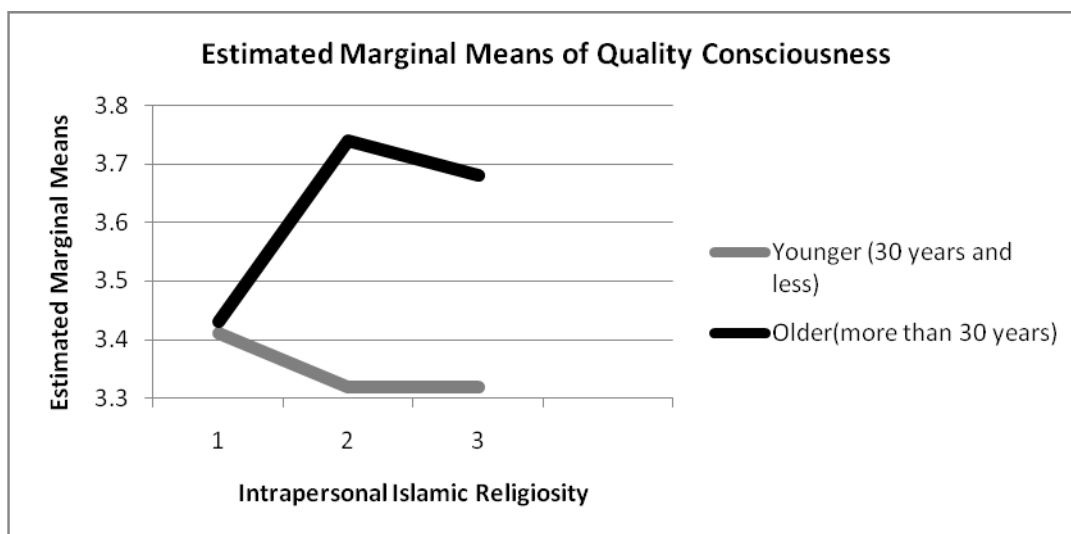
## Appendix J

### Corrections for Outliers in the Data

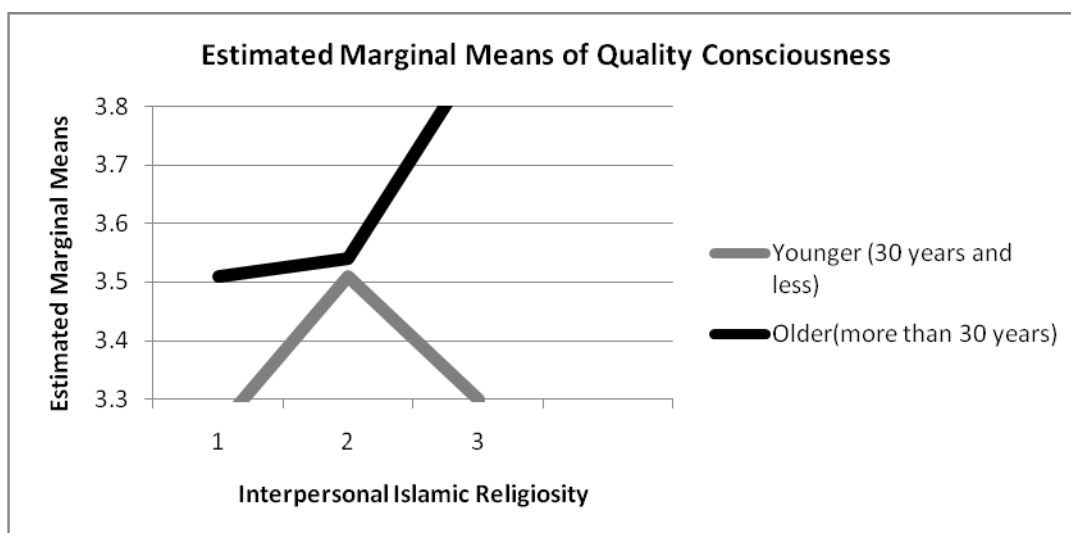
Name of variable	Number of cases	Before correction	The correction	After correction
Hours per week of sport participation in the Fall	4	20 hours	Divide by 13 weeks	1.5 hour
Hours per week of sport participation in the Winter	6	20 hours	Divide by 13 weeks	1.5 hour
Hours per week of sport participation in the Spring	5	20 hours	Divide by 13 weeks	1.5 hour
Hours per week of sport participation in the summer	9	20 hours	Divide by 13 weeks	1.5 hour
Total hours of sport participation in one year	1	778	Changed to the next highest point= 663	663 hours
Money spent on sport clothing	3	\$ 2500 \$ 1500 \$ 1200	Changed to the next highest point= \$ 1000	\$ 1000

## Appendix K

### The Age Effect of Intrapersonal Islamic Religiosity on Quality Consciousness

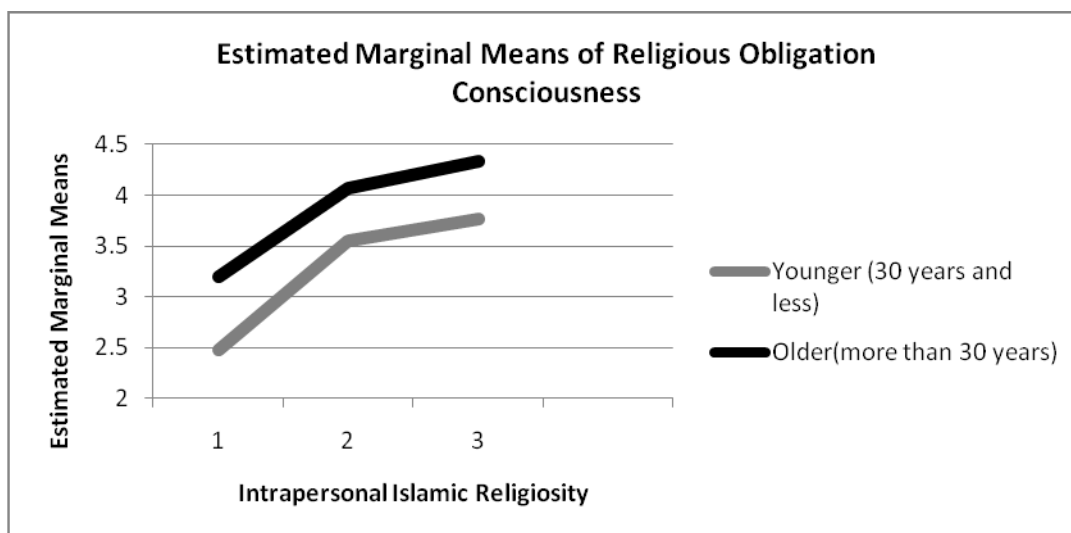


### The Age Effect of Interpersonal Islamic Religiosity on Quality Consciousness

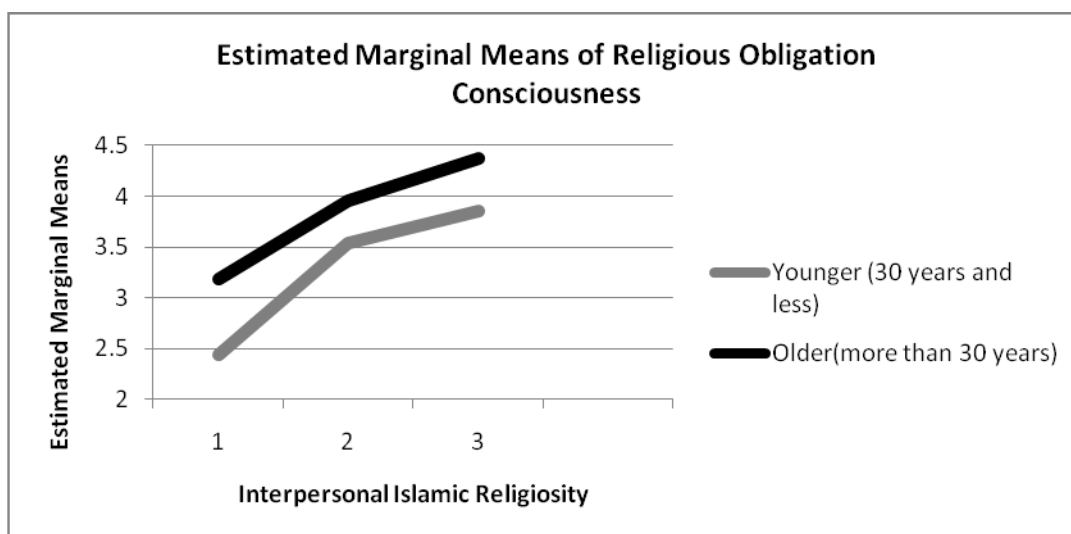


## Appendix L

### The Age Effect of Intrapersonal Islamic Religiosity on Religious Obligation Consciousness

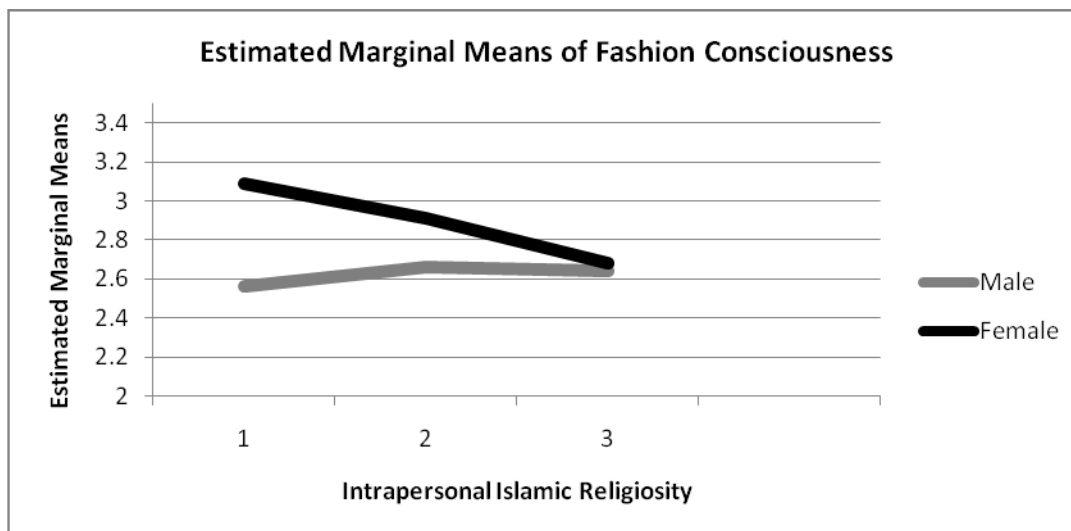


### The Age Effect of Interpersonal Islamic Religiosity on Religious Obligation Consciousness

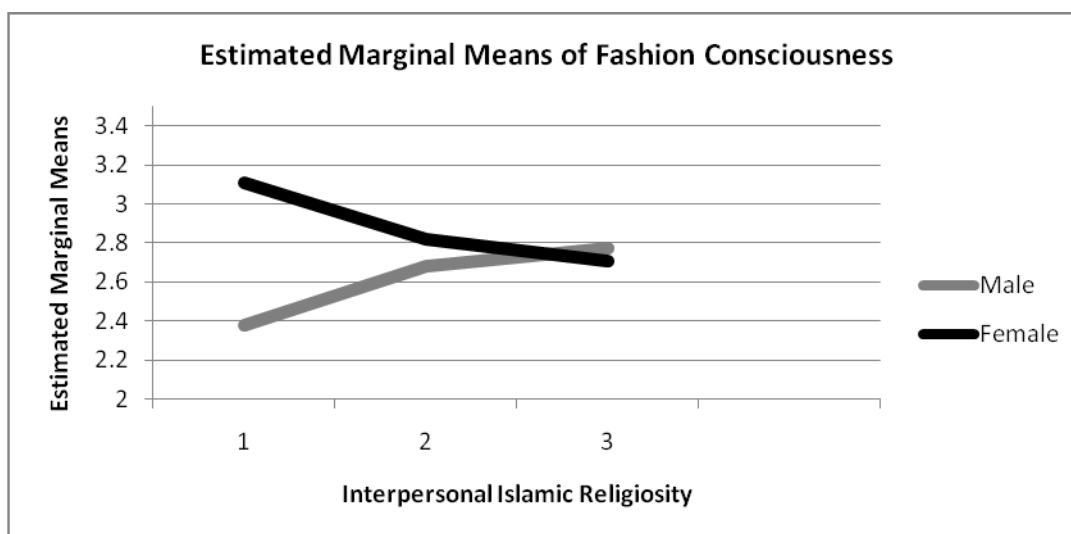


## Appendix M

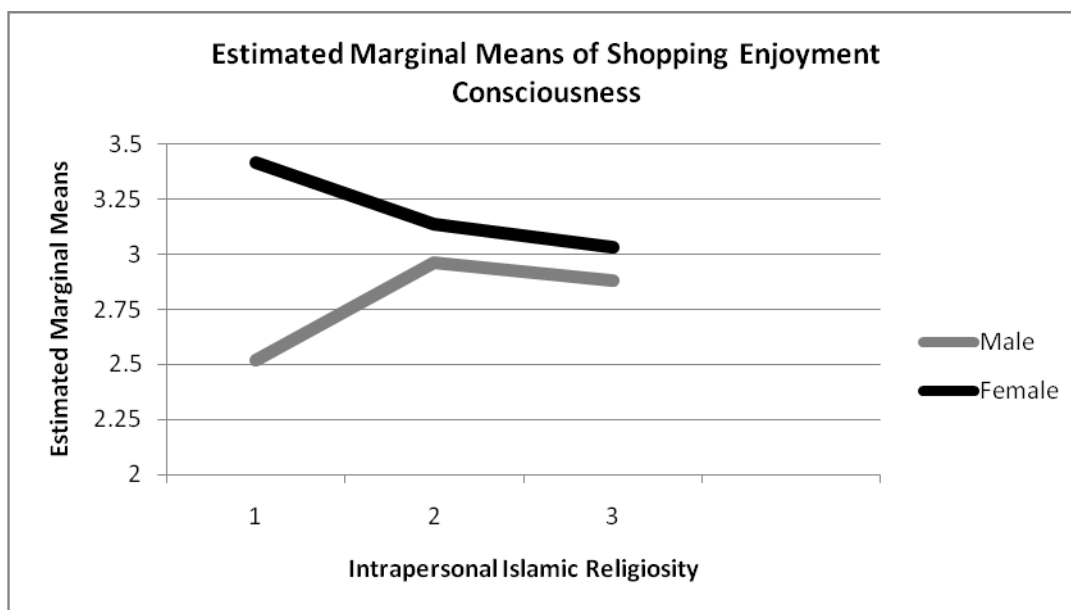
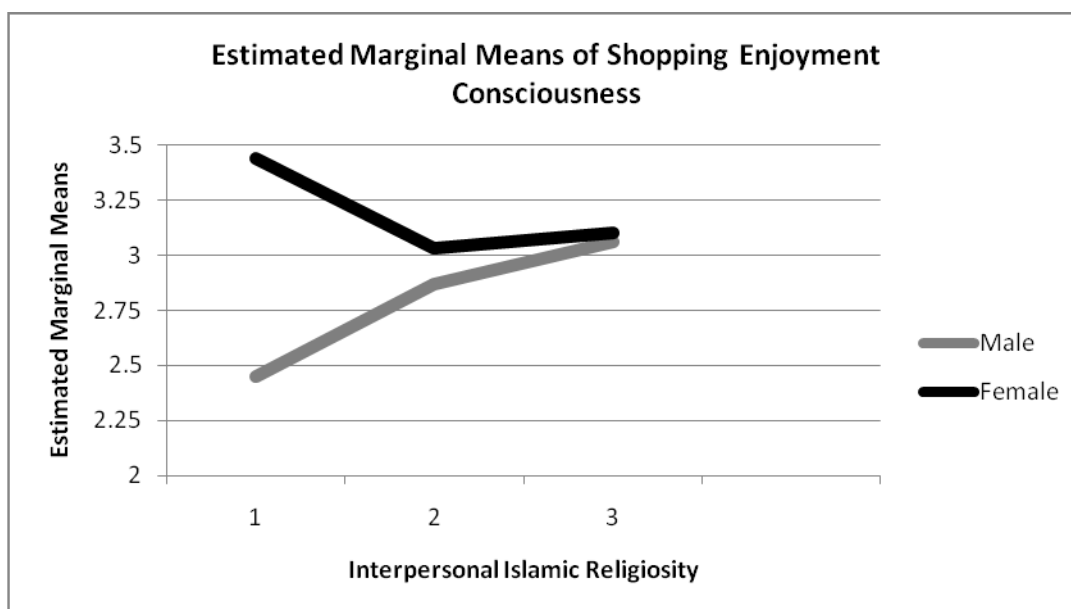
### The Sex Effect of Intrapersonal Islamic Religiosity on Fashion Consciousness



### The Sex Effect of Interpersonal Islamic Religiosity on Fashion Consciousness

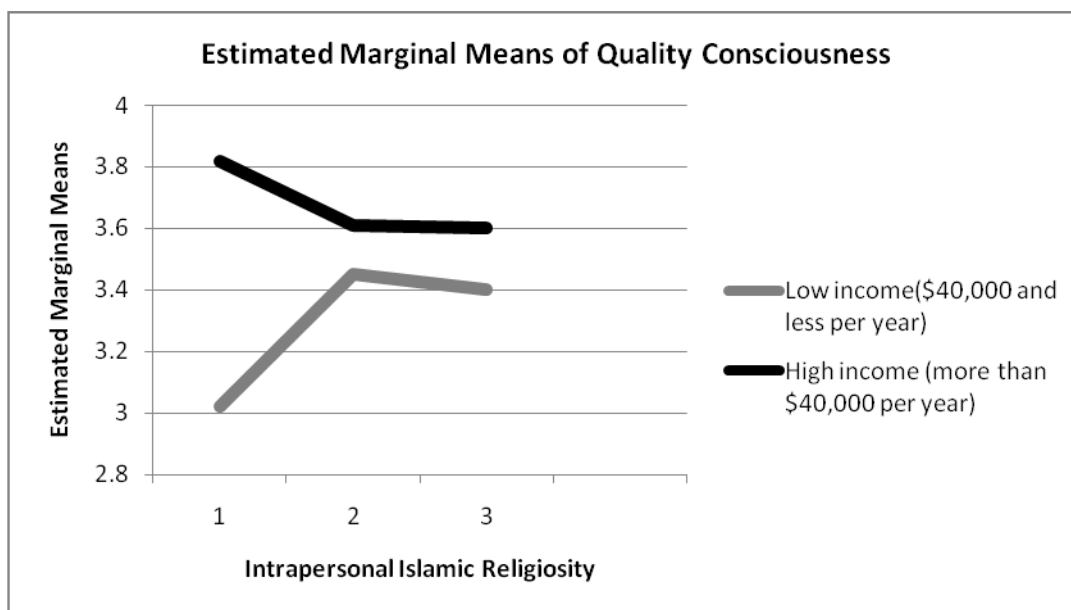


## Appendix N

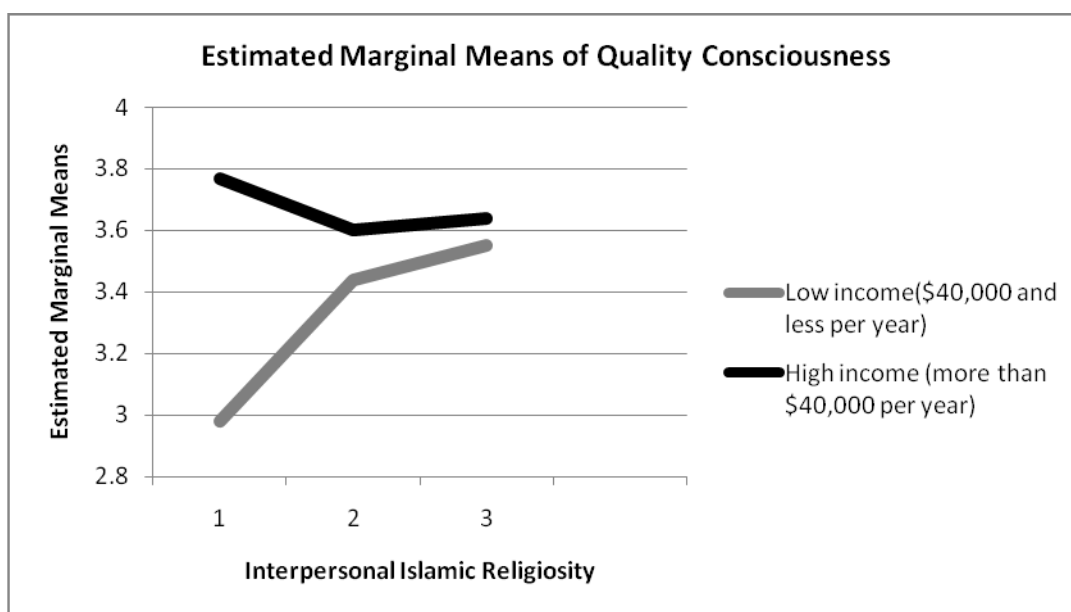
**The Sex Effect of Intrapersonal Islamic Religiosity on Shopping Enjoyment Consciousness****The Sex Effect of Interpersonal Islamic Religiosity on Shopping Enjoyment Consciousness**

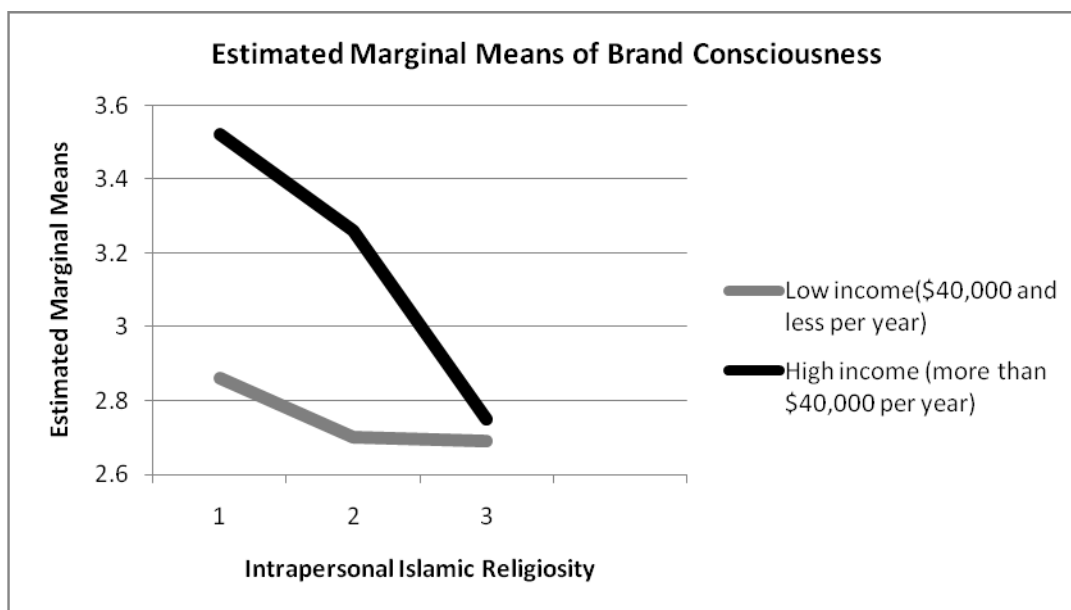
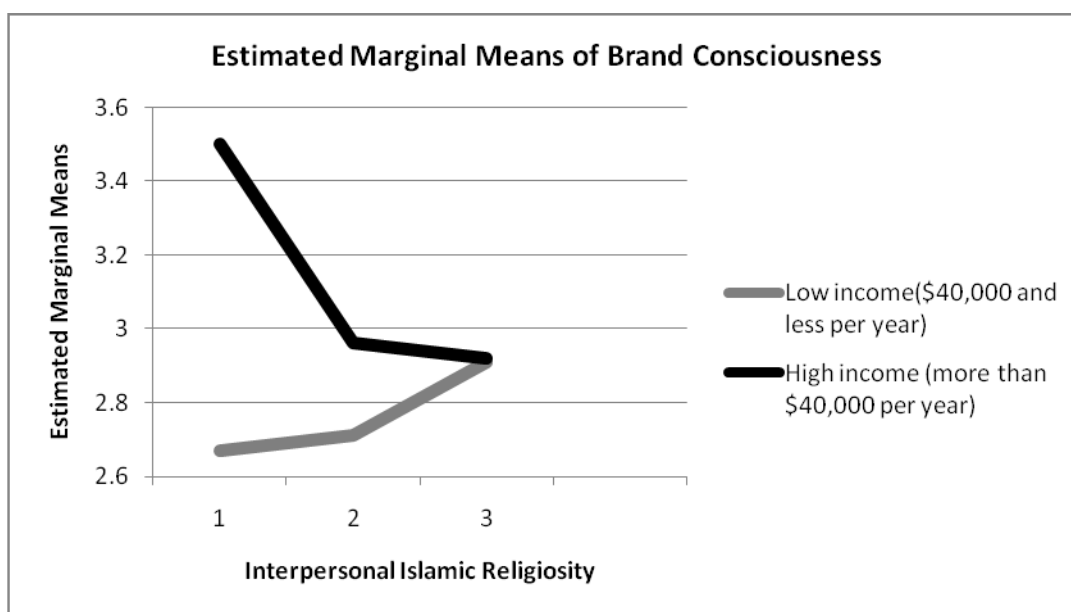
## Appendix O

### The Income Effect of Intrapersonal Islamic Religiosity on Quality Consciousness



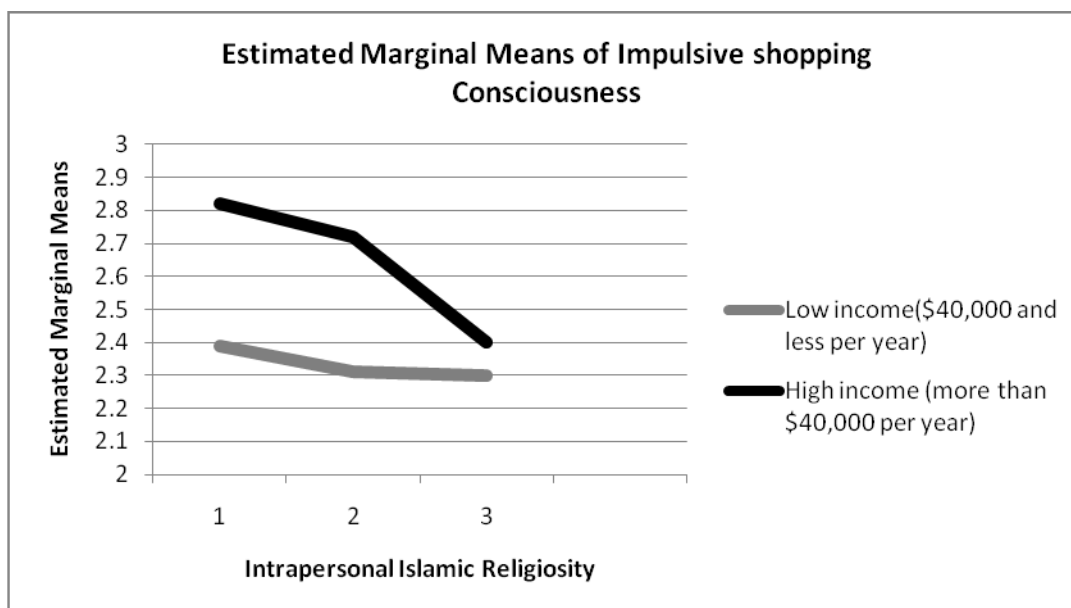
### The Income Effect of Interpersonal Islamic Religiosity on Quality Consciousness



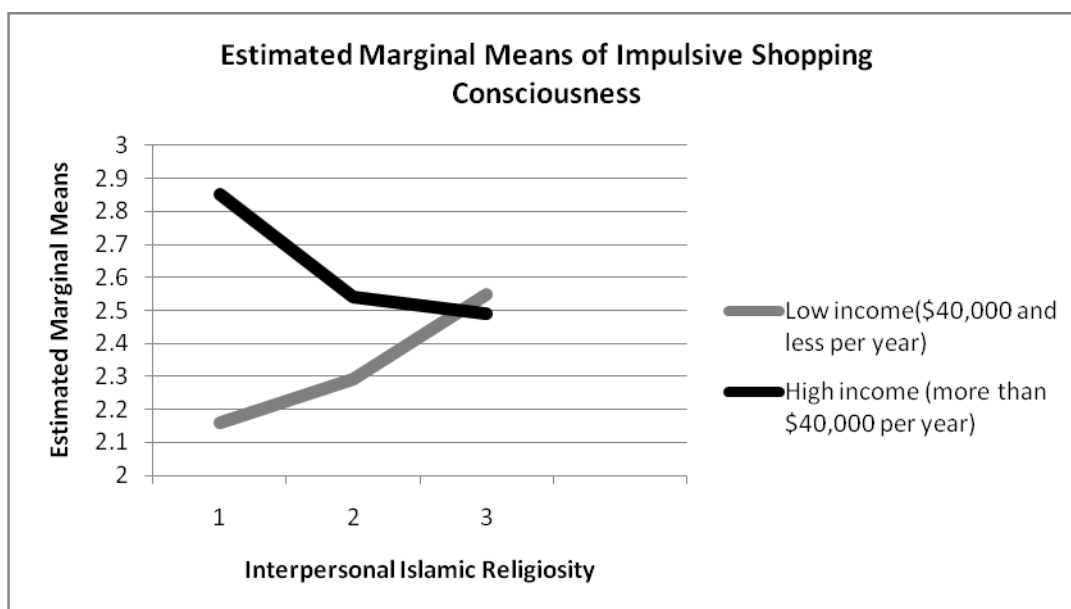
**Appendix P****The Income Effect of Intrapersonal Islamic Religiosity on Brand Consciousness****The Income Effect of Interpersonal Islamic Religiosity on Brand Consciousness**

## Appendix Q

### The Income Effect of Intrapersonal Islamic Religiosity on Impulsive Shopping Consciousness



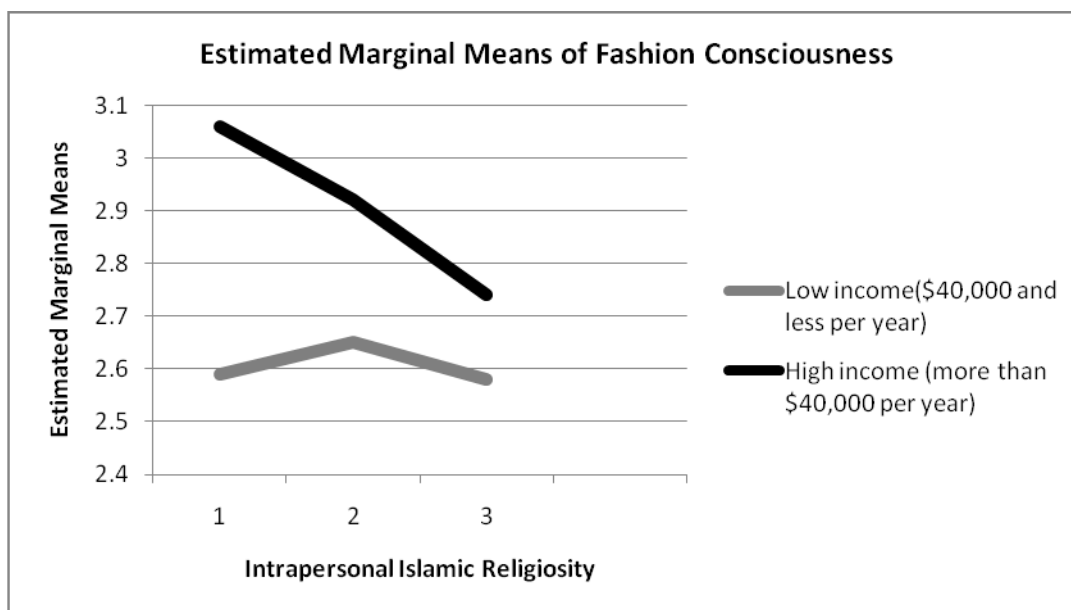
### The Income Effect of Interpersonal Islamic Religiosity on Impulsive Shopping Consciousness



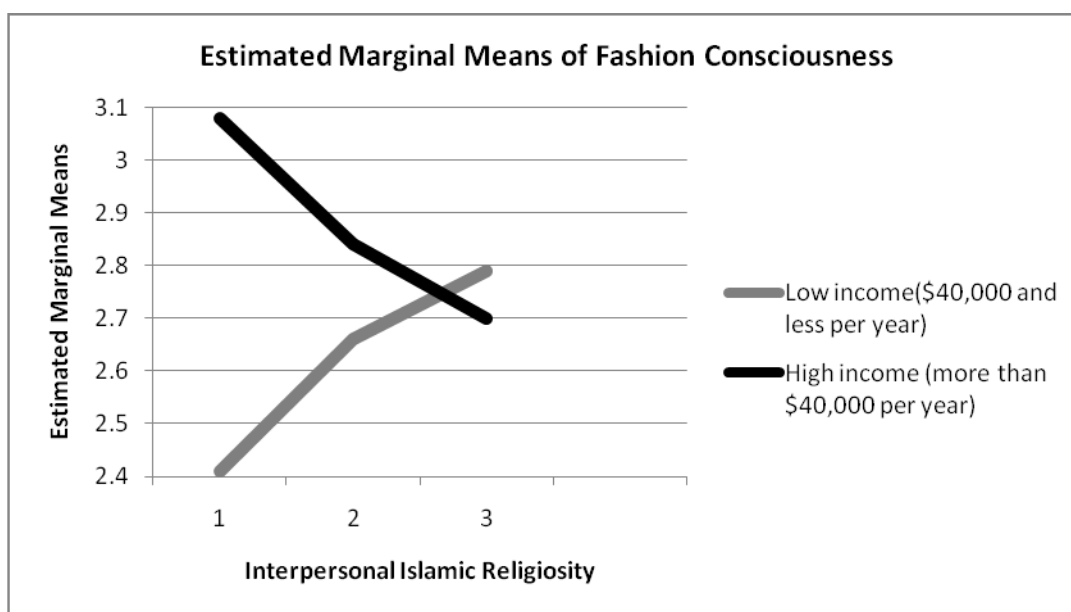


## Appendix R

### The Income Effect of Intrapersonal Islamic Religiosity on Fashion Consciousness

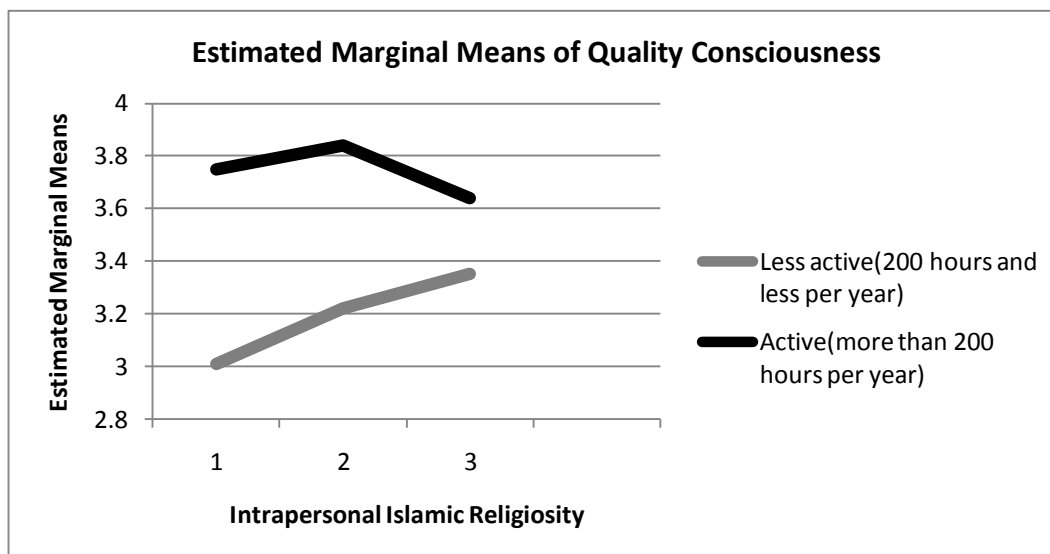


### The Income Effect of Interpersonal Islamic Religiosity on Fashion Consciousness

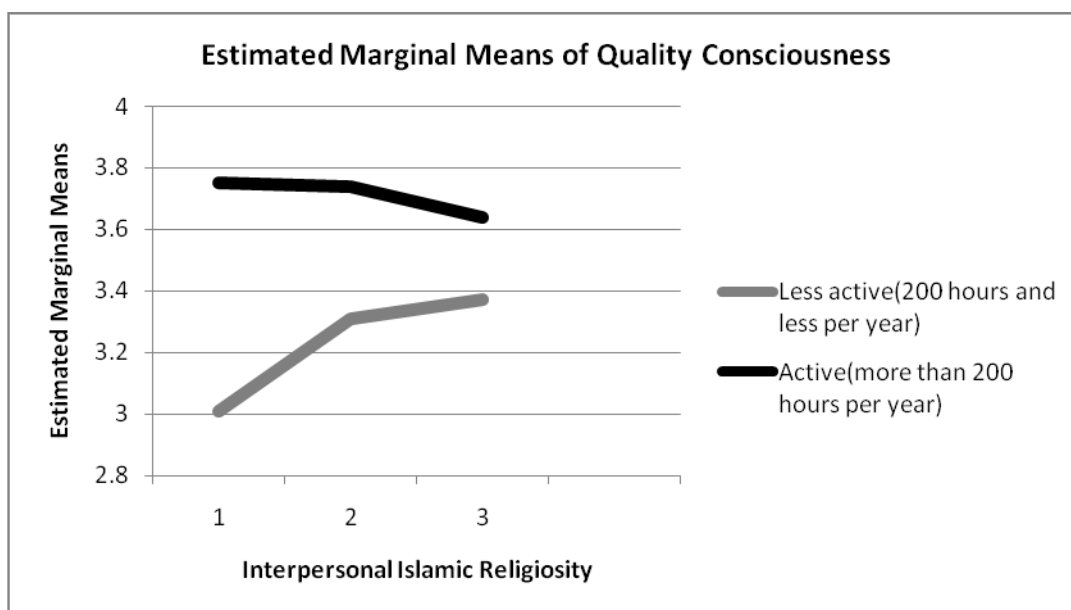


## Appendix S

### The Sport Participation Effect of Intrapersonal Islamic Religiosity on Quality Consciousness

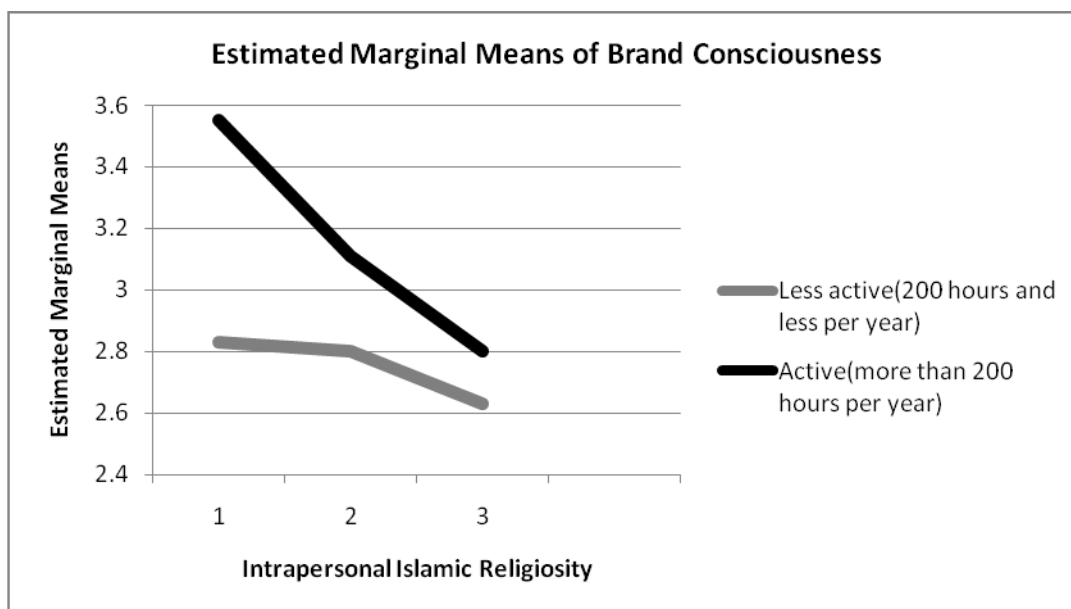


### The Sport Participation Effect of Interpersonal Islamic Religiosity on Quality Consciousness

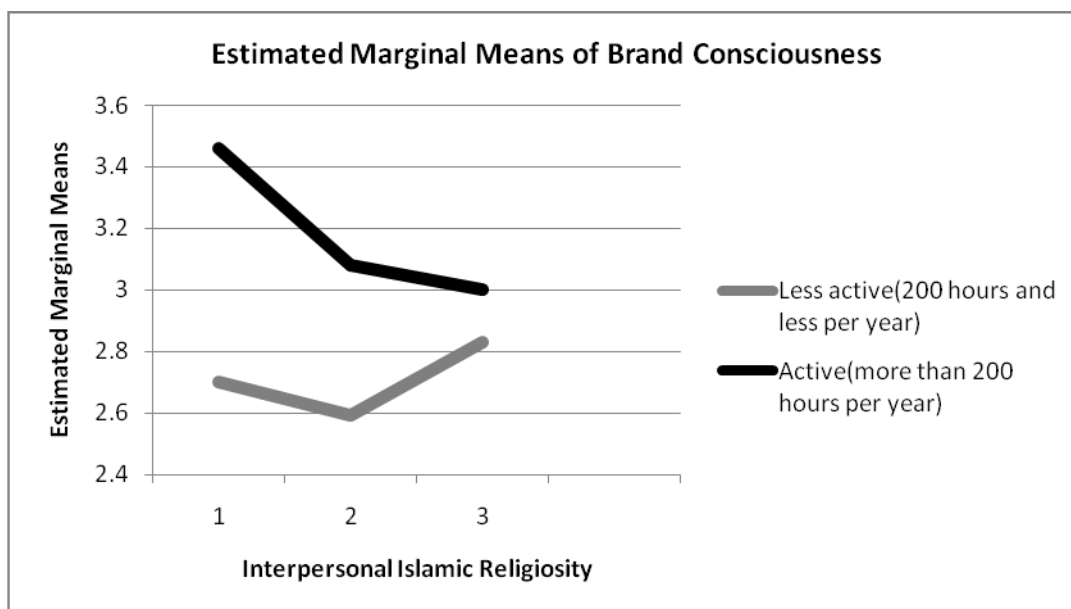


## Appendix T

### The Sport Participation Effect of Intrapersonal Islamic Religiosity on Brand Consciousness

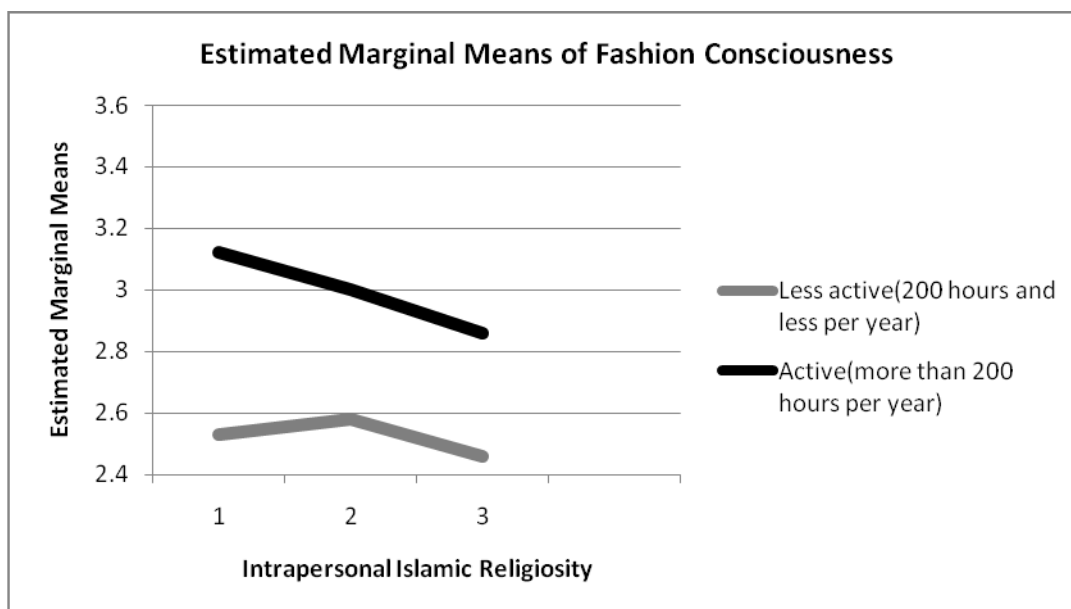


### The Sport Participation Effect of Interpersonal Islamic Religiosity on Brand Consciousness

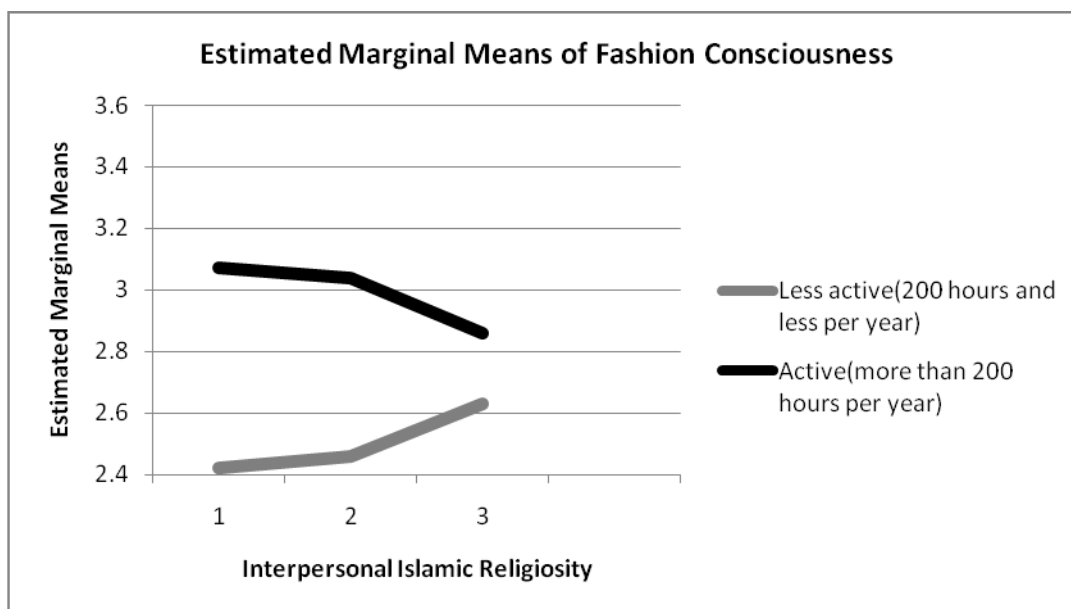


## Appendix U

### The Sport Participation Effect of Intrapersonal Islamic Religiosity on Fashion Consciousness

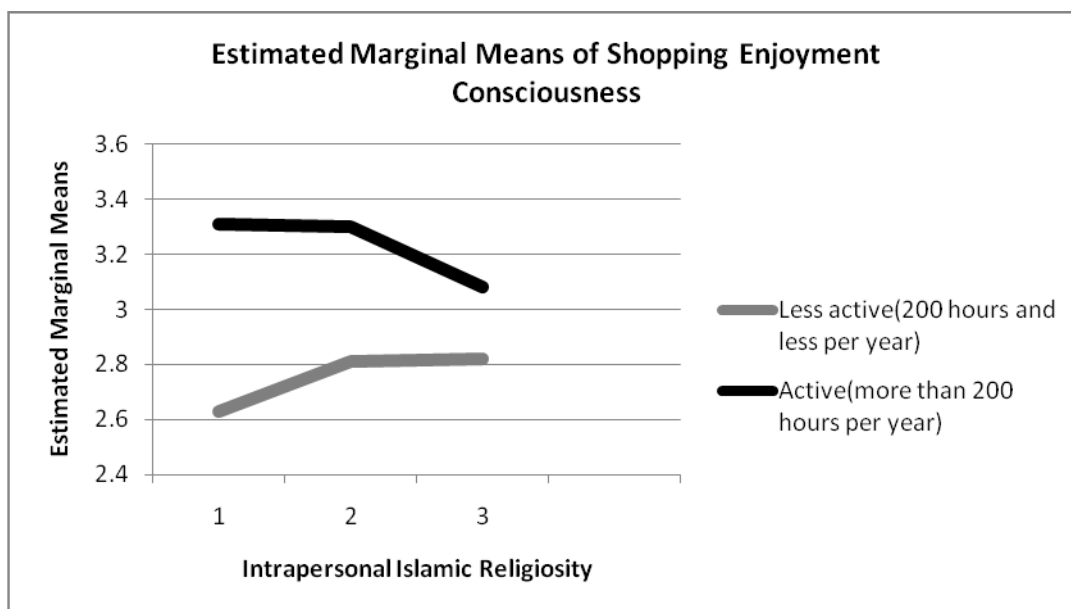


### The Sport Participation Effect of Interpersonal Islamic Religiosity on Fashion Consciousness

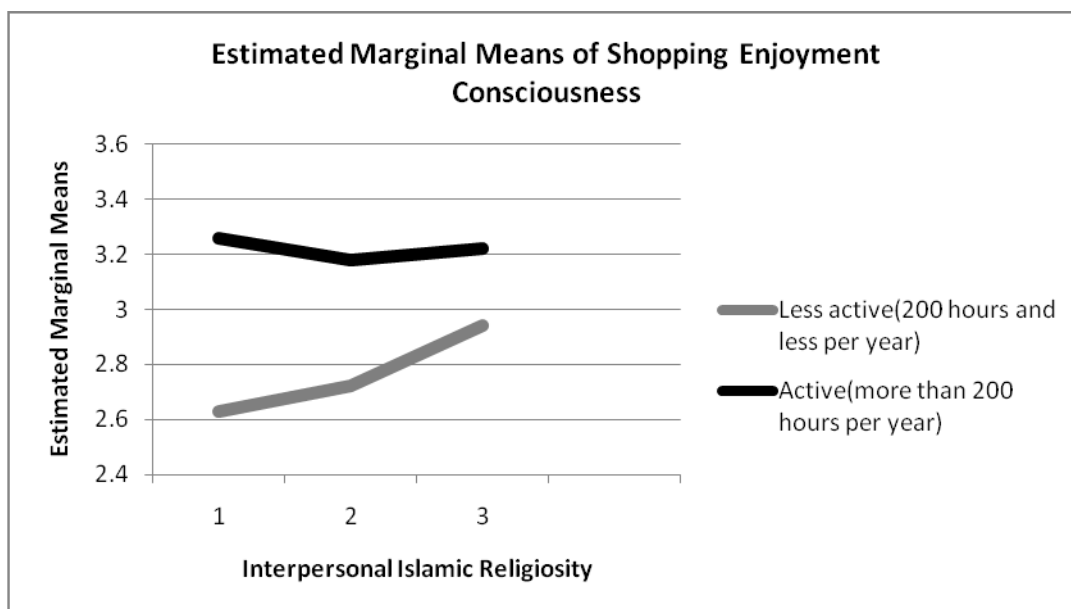


## Appendix V

### The Sport Participation Effect of Intrapersonal Islamic Religiosity on Shopping Enjoyment Consciousness

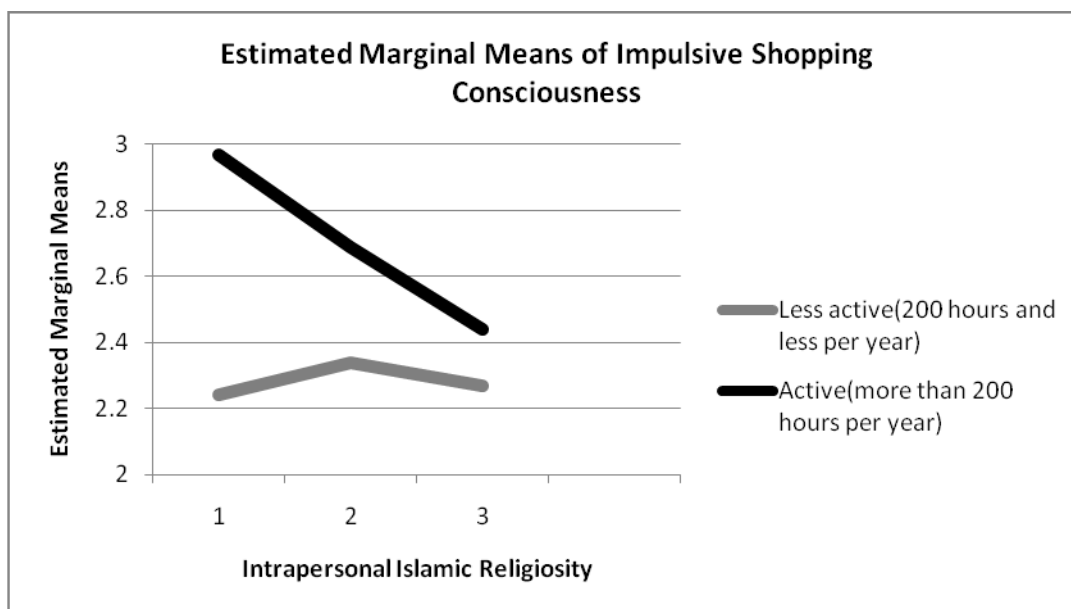


### The Sport Participation Effect of Interpersonal Islamic Religiosity on Shopping Enjoyment Consciousness

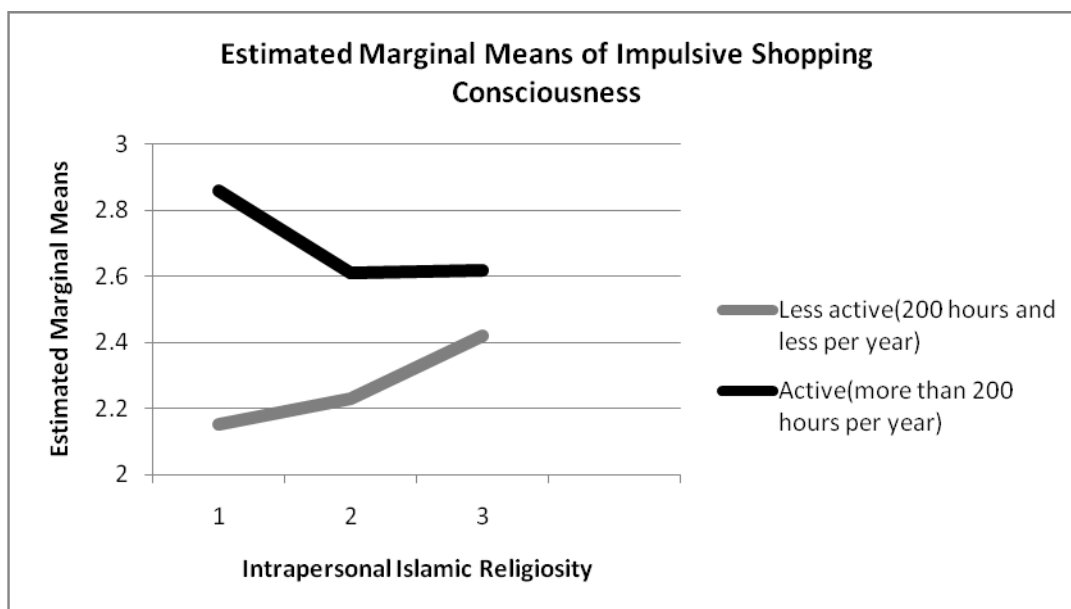


## Appendix W

### The Sport Participation Effect of Intrapersonal Islamic Religiosity on Impulsive Shopping Consciousness



### The Sport Participation Effect of Interpersonal Islamic Religiosity on Impulsive Shopping Consciousness



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