

# The interaction among religiosity, moral intensity and moral certainty in predicting ethical consumption: A study of Muslim consumers

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## Abstract

Prior research has paid little attention to the cognitive mechanisms by which religiosity influences ethical consumption. The aim of this study is to explore when and how religiosity might be related to the development of ethical consumption. The study develops an interactionist model describing how religiosity and moral intensity might interact and be linked to the sense of certainty and conviction about the morality of ethical consumption. Data from 333 Muslim participants in Saudi Arabia is analysed using structural equation modelling; it reveals that religiosity and moral intensity are significantly associated with moral certainty which, in turn, predicts ethical consumption intention. Even though religiosity and moral intensity are crucial predictors of moral certainty, the interaction between them has not been proven, indicating that the association between religiosity and moral certainty does not depend on moral intensity. This implies that religiosity is a strong predictor of moral certainty even when recognition of aspects of ethical consumption is minimal.

## KEYWORDS

ethical consumption, moral certainty, moral intensity, religiosity, Saudi Arabia

## 1 | INTRODUCTION

A critique of economic development is that some of its costs have been marginalized. Societal costs for global economic prosperity include abusive labour conditions, economic disparity, social inequality and environmental pollution, to name but a few (Alsaad et al., 2021; Carrington & Neville, 2016; ElHaffar et al., 2020). To counter this omission of societal costs, the ethical consumerism movement has been engaged in communicating the values that environmentally and socially responsible products stand for (Saraiva et al., 2021). Ethical consumption is referred to as “the degree to which consumers prioritize their own ethical concerns when making product choices” (Shaw & Clarke, 1998, p. 163). It also includes human rights, social justice and welfare as well as environmental protection concerns (Kushwah et al., 2019).

Societal awareness of ethical consumption has been increasing in prominence and relevance over time (Andersch et al., 2019; Davies et al., 2012). Attempts to reach out to consumers use available print and online media, special interest groups; and traditional education methods through schools and universities to enlighten students about the high costs being swept under carpet in the name of value and convenience for consumers in their daily purchases. The ethical consumerism movement has not only been revealing costs, but has also been promoting how consumers' behaviour can change the landscape and offer a solution (Carrington & Neville, 2016). These efforts are beginning to have an effect, as producers are incorporating wider societal awareness in their operations to meet the shifting market demand that is expressing an increasing interest in ethical products (Hassan et al., 2016; Saraiva et al., 2021). However, environmental enthusiasts have expressed concern that this shift to ethical products is taking

place too slowly (ElHaffar et al., 2020), as indicated by the trivial market share, below 5%, of sustainable apparel products in many of the biggest European markets (Kaucic & Lu, 2019).

The slow progress in the ethical consumption movement has motivated a series of studies examining ethical purchasing behaviour from the perspective of an evolving cognitive process (Carrington et al., 2010; ElHaffar et al., 2020; Hassan et al., 2016; Minton et al., 2018). In particular, religiosity has been examined as a cognitive process that explains consumers' ethical purchasing patterns (Alsaad et al., 2021; Andersch et al., 2019; Arli, Septianto, et al., 2020; Graafland, 2017; Wenli & Chan, 2019), although conflicting empirical evidence has yet to be explained. Galen (2012) has not only cast doubt on the notion that pro-social acts and religiosity are associated, but also proposes that religiosity's effect is nothing but a mythically constructed concept. Nevertheless, empirical evidence claiming an association between religiosity and pro-social acts continues to be found (Graafland, 2017; McCullough, 2009). These discrepancies have led to calls for empirical investigation to clarify the relationship between religiosity and ethical consumerism (Arli, Septianto, et al., 2020; Graafland, 2017; Mortimer et al., 2020).

A review of the literature shows that many studies investigating the effect of religiosity on ethical consumption were largely grounded on the assumption that religious consumers are likely to consider unethical product purchase as wrong, due to their sensitivity towards ethical issues (Alsaad et al., 2021; Chowdhury, 2018; Graafland, 2017). Another stream of research has suggested that religiosity reduces the materialist values (i.e. love of money and lack of generosity) that hamper ethical and pro-social behaviours (Arli, Gil, et al., 2020; Casabayó et al., 2020; Dávila et al., 2018; Singhapakdi et al., 2013). These studies, while advancing our knowledge of how religiosity affects ethical consumption, ignore the key issues (e.g., magnitude of the consequences) inherent in unethical consumption and how consumers recognize these issues (Anderson & Burchell, 2019; Chen et al., 2009). In many cases, religious consumers may not be aware of certain issue of ethical consumption (Jung et al., 2016), given that they have long used market logic in their consumption behaviour, where quality and price play dominant roles in their purchasing decisions (Carrington & Neville, 2016). Scholars suggest that a consumer who fails to recognize the moral aspects of ethical consumption would not employ moral reasoning (Arthur et al., 2019; Mäkinen & Vainio, 2013), and hence cannot base a decision on religious considerations. Even though some studies have found empirical evidence that religiosity affects consumers' ethical judgement (Alsaad et al., 2021; Graafland, 2017; Singhapakdi et al., 1999, 2013; Witkowski & Reddy, 2010), attitude theorists note that attitude and certainty (i.e. conviction) are two different constructs; each elicits different patterns of decisions and behaviours (Alsaad, 2021; Petrocelli et al., 2007; Tormala & Rucker, 2018). A consumer may make a one-off instant judgement that is largely subject to social desirability, or a clear and accessible ready-made judgement about ethical and unethical products (Costarelli, 2007; Holland et al., 2002; Isock Isock et al., 2019; Rucker et al., 2014).

While it appears from this discussion that the interaction among religiosity, moral intensity and moral certainty is crucial in explaining the

connection between religiosity and ethical consumption, empirical evidence is still lacking in this area. The purpose of this study is therefore to examine whether or not religiosity and moral intensity should interact to develop the sense of moral certainty (conviction), which has strong implications for ethical consumption decisions. We argue that the association between religiosity and ethical consumption might be higher when consumers recognize these aspects of consumption. On one hand, moral intensity would provide the necessary information to build a clear personal judgement (Jones, 1991; Nkamnebe, 2011; Rousselet et al., 2020; Vitell & Patwardhan, 2008b). On the other, consumers' awareness of ethical consumption issues based on personal judgements and religious outlook could add some degree of conviction about ethical consumption as it reflects religious ideals. Unlike personal preferences, religious beliefs carry with them an "ought" or "ought not" that can motivate subsequent behaviour (Skitka, 2010; Skitka et al., 2005). The interaction between religiosity and moral intensity, therefore, could produce a unique combination of factual belief, compelling motive and justification for action: that is, moral certainty (Skitka et al., 2005, 2016).

Examining the interaction among religiosity, moral intensity and moral certainty contributes to the literature in three ways. First, while prior research has implicitly assumed that consumers fully understand the issue of ethical consumption, this study enriches our understanding of an important contingent (moral intensity) under which religiosity may strongly or weakly motivate ethical consumption. Second, it sheds light on the mechanism (moral certainty) through which religiosity and moral intensity exert their effect on ethical consumption. Second, prior research has generally examined the role of religiosity on ethical consumption either directly or through enhancing virtuous values or reducing materialist values. Even so, the contribution of religiosity to ethical decision making is still unexplored. Examining whether moral intensity and religiosity may lead to moral certainty will provide significant insight into this issue. Third, while attitude theorists have examined several antecedents of attitude certainty (Petrocelli et al., 2007; Rucker et al., 2014; Tormala & Rucker, 2018), they have ignored the importance of religion in forming moral certainty. Accordingly, this study adds to the literature on how religiosity contributes to developing moral certainty. These contributions offer a better understanding of the connection between religiosity and ethical consumption and have implications for practice and theory.

The structure of this article is as follows. We first introduce the concepts of moral certainty, religiosity, moral intensity, and then examine how they interact in explaining ethical consumption intention. Next, we describe the methodology, data analysis, and results. The last sections include discussion of results, implications of findings, and limitations and future research.

## 2 | BACKGROUND

### 2.1 | Moral certainty

Ethical decision-making theories have largely emphasized the role of ethical judgement in explaining ethical/unethical consuming

behaviour (Jones, 1991; Schwartz, 2016). Ethical judgement represents one's evaluation of the degree to which an action or behaviour is ethical or unethical. Ethical decision-making theorists noticed that individuals, in many cases, may have similar judgment about certain behaviour but vary in their level of certainty and confidence. The feeling of certainty in the ethical judgement is labelled *Moral Certainty*, reflecting the subjectivity stemming from self-perception (Alsaad, 2021; Jones et al., 1997). Assume that a group of people have the same positive judgement toward local organic produce because organic products are harmless for the environment, but varying degrees of certainty in their attitudes. Such a scenario leads to some of these consumers to be highly confident in judging their choices as ethical, while others are less certain because they take into consideration counter arguments relating to the suitability of land in this area to produce strawberries and the stress on groundwater in producing this fruit. Moral certainty plays a crucial part in the ethical decision-making process, particularly relating to how effective and durable is the ethical judgement. Although an ethical judgement is a crucial element in informing ethical behaviour (Pan & Sparks, 2012; Schwartz, 2016; Wenli & Chan, 2019), attitude studies have shown that ethical judgement's association with intention and behaviour is conditional on the reported level of certainty in that judgement. Work in this area shows that individuals do not usually carry a list of attitudes that they are then able to rate; also, they may not produce any justification for their attitudes (Holland et al., 2002; Tormala & Rucker, 2018). Attitude studies maintain that the ease of retrieving a judgement from memory is positively associated with its effect on subsequent action (Fazio, 1995). As a result, the need for immediate attitude construction diminishes (Krosnick & Schuman, 1988). However, a relatively weak attitude that is inaccessible is not thought to help inform the ethical decision-making process or any subsequent action.

From a theoretical perspective, moral certainty can be operationalized in terms of correctness and clarity (Petrocelli et al., 2007). Correctness reflects the degree to which an individual is confident that his/her judgement is correct, valid, and justified. This includes a position of conviction that demands that others embrace the same judgement as it represents the correct and valid approach (Petrocelli et al., 2007). Judgement correctness arises through cognitive and attribution processes claiming the attributed justification and validity of the judgement (Rucker et al., 2014). Complementarily, judgement clarity reflects the degree to which a judgement is clear in the mind of the holder (Petrocelli et al., 2007). Judgement certainty is reliant upon cognitive processes forming to assess information surrounding a certain attitude.

The judgement assessment process uses both subjective and objective information (Rucker et al., 2014). For instance, a consumer convinced by information praising the judgement is likely to develop positive assessments leading to higher judgement certainty. Alternatively, a consumer who is not convinced by information praising his/her attitude is likely to develop negative assessments leading to lower judgement certainty. A consumer who is neither convinced nor unconvinced will have a neutral appraisal with little effect on

judgement certainty (Rucker et al., 2014). Furthermore, individuals may not engage in judgement appraisal at all and thus nothing will happen to their judgement certainty. Research also shows that judgement appraisal is largely affected by information characteristics relating to questions like: is this information accurate, complete, relevant, legitimate and important? Additionally, information source credibility, direct experience and social consensus affect judgement appraisals (Rucker et al., 2014; Tormala & Rucker, 2015, 2018).

Overall, empirical works have found that moral certainty plays a crucial part in explaining ethical/unethical consumer behaviour and how effective is the judgement on subsequent behaviour. Accordingly, we hypothesize that:

**Hypothesis 1** *Moral certainty is associated with ethical consumption intention (ECI).*

## 2.2 | Religiosity

Religiosity has long been identified as a key determinant in consumers' beliefs, attitudes and behaviours. Religiosity refers to one's belief in God and the magnitude of alignment between one's and God's paths (McCullough, 2009; Singhapakdi et al., 2013). Two main views on religiosity show it to be either extrinsic or intrinsic (Graafland, 2017; Singhapakdi et al., 2013). Intrinsically religious people look for meaning in their lives through a religious lens, while extrinsically religious people look for religion as a means to the attainment of goals. Religion means different things to different people, for example providing a source of security and solace, upholding social position or interacting with others socially (Brown, 1996). Research shows intrinsic religiosity to be the key level of cognitive processing that is better placed to induce behavioural outcomes based on internalizing religious morals; it thus represents the better place to look for associations between ethics and religiosity (Graafland, 2017; Singhapakdi et al., 2013).

Existing associations linking religiosity and pro-social behaviour have been acknowledged (Graafland, 2017; Hwang, 2018; McCullough, 2009; Minton et al., 2019; Montoro-Pons & Cuadrado-García, 2018; Mortimer et al., 2020; Singhapakdi et al., 2013). The theory of planned behaviour implies that religiosity is a crucial element in understanding attitudes and subjective norms (Ajzen & Fishbein, 2005). This effect of religiosity on behaviour can be explained through different mechanisms. For instance, religiosity is thought of as a basis for personal values and virtues (Graafland, 2017; McCullough, 2009; Saroglou et al., 2004) or for restraining materialist values (Casabayó et al., 2020; Dávila et al., 2018). Values that are commonly promoted across different religions include stewardship, clemency, charity and righteousness. From an Islamic perspective, justice's place is highly regarded in trade transactions. The behaviour of devoted Muslims takes into account the needs and rights of others, providing help for those in dire need regardless of economic benefit and offering beneficial service for people and the environment. Overall, Islamic scholars have shown the alignment of Allah's commandments with socially responsible use of natural

resources (Al-Aidaros et al., 2013; Graafland, 2017; Seo et al., 2015; Sharif, 2016).

Another view linking religiosity with behaviour looks at religiosity as affecting personality and temperament, leading to personality characteristics with pro-social inclinations (McCullough, 2009; Saroglou, 2010). Support for this view has empirically shown that religiosity is associated with higher scores of conscientiousness and agreeableness, which implies adapting behaviour to fit with others' expectations (McCullough, 2009; Saroglou, 2010; Souiden et al., 2018). Alternatively, perceiving God's omnipresence encourages conscientiousness through self-censorship, emphasizing one's moral compass in assessing the ethics of behaviour (Baumeister et al., 2010; McCullough, 2009; Singhapakdi et al., 2013). Baumeister et al. (2010) agree and explain that believing in God's presence and oversight stimulates behavioural outcomes. These beliefs make the case for assessing one's actions against religious ideals. For this reason, intrinsically religious individuals tend to be more vulnerable to pursuing an ethical path (Graafland, 2017; Singhapakdi et al., 2013).

In this study, we suggest that religiosity might also contribute to ethical consumption behaviour indirectly through developing moral certainty. Religion provides people with their values. These values, in turn, support a larger system of meaning and worldviews, including people's conception of morality (Skitka et al., 2009). Research indicates that religious people are more likely to believe that morality stems from greater moral purposes motivated by religion. While the morality of some actions/behaviours is open to intense discussions from a moral perspective, it is almost indisputable from a religious perspective because religious authorities determine what is wrong and right. Moreover, based on the belief that God's commands reflect the ideal life, religious people would have moral conviction about what is wrong and right. Accordingly, having clear religious rules about what is wrong and right, religious consumers could be more confident about the morality of unethical products. Shaw et al. (2011) show that religiosity also allows individuals to feel certain about their own moral principles. Accordingly, we hypothesize that:

**Hypothesis 2** *Religiosity is associated with moral certainty.*

As shown above, research presents a picture of religious individuals' awareness of underlying moral issues. However, religious consumers might lack awareness regarding the issue of ethical consumption, as previous buying behaviour has been shaped by considering market factors surrounding value and convenience. Thus, religiosity's role in ethical consumption is better understood by considering consumers' perceptions of the underlying moral issues (moral intensity). The next section explores this concept in detail.

## 2.3 | Moral intensity

Ethical consumption has long been recognized as an ethical decision-making process that tends to vary according to how consumers

perceive the moral aspects and characteristics of ethical consumption (Davies et al., 2012; Wenli & Chan, 2019). Jones (1991) argued that moral intensity which involves the specific aspects and characteristics of a moral issue is an integral part of forming ethical judgements, hence an essential part in investigating a holistic view of making ethical decisions. He identified six elements of moral issues that play a role in one's ability to recognize a situation's morality: (a) magnitude of consequences, (b) social consensus, (c) probability of effect, (d) temporal immediacy, (e) proximity, and (f) concentration of effect (Jones, 1991, p. 371). The magnitude of the consequences pertains to the amount of perceived harmful or beneficial consequences of behaviour. Social consensus relates to a wider societal perspective of certain behaviour, as to whether it is considered ethical or not. Probability of effect considers the prospect of behaviour taking place and the ensuing beneficial or harmful results. Temporal immediacy measures perceived time elapsed between behaviour and consequences. Concentration of effect refers to the perceived number of groups influenced by the behaviour. Proximity is the perceived closeness between the behaviour of an individual and related groups.

Jones (1991) argued that a high level of moral intensity leads to more individuals recognizing underlying moral issues, as this moral problem recognition leads to intentions and behaviours aligned with their ethical compasses. Alternatively, issues with lower moral intensity have less chance of being recognized as moral dilemmas so may not be perceived as involving any moral problems, resulting in inadequate judgements. Thus, moral intensity is viewed as an indicator that promotes ethical intentions and actions, with greater moral intensity yielding more prominent ethical actions. (Musbah et al., 2014; Paolillo & Vitell, 2002; Rousselet et al., 2020; Schwartz, 2016; Shawver & Miller, 2017; Vitell & Patwardhan, 2008a). Accordingly, we postulate that:

**Hypothesis 3** *Moral intensity is associated with moral certainty.*

## 2.4 | The interaction among religiosity, moral intensity and moral certainty

In this study, we claim that religiosity and moral intensity interact to produce a stronger effect on ethical consumption. This interaction produces a sense of certainty or conviction about the morality of ethical consumption. Recognizing the moral issue at hand brings to the fore the decision-making process regarding the morality of the issue. Failure to ascertain moral dimensions in a given situation results in an incomplete moral judgement process (Musbah et al., 2014; Paolillo & Vitell, 2002; Rousselet et al., 2020; Schwartz, 2016; Shawver & Miller, 2017; Vitell & Patwardhan, 2008a). For instance, a decision might be taken based on the issue's dimensions that do not include morality, while being biased towards economic factors (Jones, 1991). Moral intensity will provide an individual with the necessary information to recognize the morality of the issue. Such information is then used by the consumer to build a clear judgement about the

underlying moral issue (Jones, 1991; Rousselet et al., 2020; Vitell & Patwardhan, 2008b). It follows that harsh consumer criticism of morally ambiguous decisions from societal activists is neither feasible nor defensible. This paper takes the perspective that moral intensity plays a central role in consumer behaviour regarding ethical products, and should be promoted as such. Furthermore, this argument supports the belief that religion strengthens ethical consumption recognition, as ethical products stand on high moral ground backed by social justice through lending support to people and perceived environmental grievances.

Additionally, when consumers perceive ethical consumption as an ethical issue, religiosity will increase the certainty of judgement made by religious consumers. Religions encourage followers to live by religious ideals (Al-Aidaros et al., 2013; Baumeister et al., 2010; Raggiotto et al., 2018; Silberman et al., 2005). Solutions from religion to counter social and personal issues are promoted through following God's commands (Al-Aidaros et al., 2013), including requiring followers to embrace ethical acts in the absence of social norms, as they are aligned with religious ideals (Al-Aidaros et al., 2013). This system of beliefs could well be psychologically sufficient for religious consumers to persuade themselves about the correctness of their perception with respect to ethical consumption. The combination of this system of beliefs and recognition of ethical consumption as a moral issue may lead to a unique mixture of factual belief, compelling motive and justification for action. The clarity and correctness of consumers' judgement would be increased accordingly. Consequentially, we predict:

**Hypothesis 4** *The interaction between religiosity and moral intensity is associated with moral certainty.*

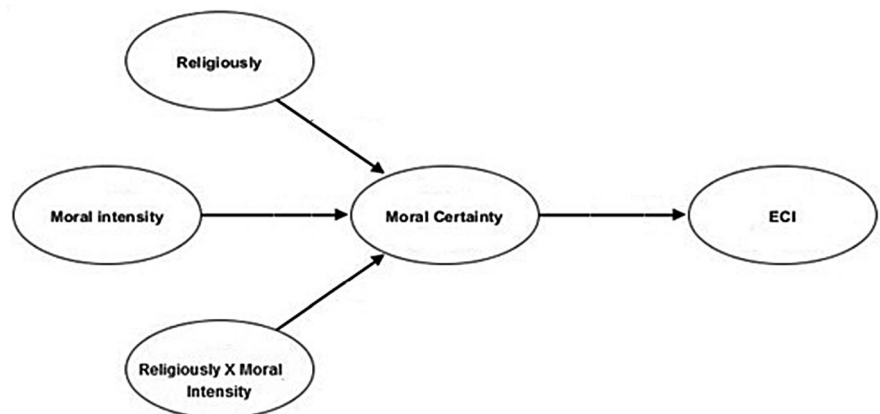
Figure 1 shows the proposed model.

### 3 | METHODOLOGY

This study was conducted during the Covid-19 pandemic. Due to the social distance procedures imposed by government it was difficult to collect data from representative consumers. However, because the

objective of this study is to examine a theoretical model dealing with fundamental human behaviour, university participants do represent a legitimate sample. This study therefore employed a convenience sample of university participants to examine the proposed model. Faculty members and students from a large university in Saudi Arabia were invited via email to participate in the study by completing an online questionnaire. A total of 434 complete responses were returned. However, the study considered only participants who make positive ethical judgements about products, because only for these individuals should increasing certainty produce more positive ethical consumption behaviour. For participants with negative judgements on ethical products, increased moral certainty should be associated with more negative ethical consumption behaviour (Wan et al., 2010). Therefore, only scores above the mid-point of the 7-point scale of our ethical judgement measure indicate positive ethical judgement; eliminating participants with negative ethical judgement of products reduces the valid responses to 333, which were used for testing the model. The descriptive statistics are presented in Table 1. Most of the respondents are female (70.5%), educated to bachelor level (68.76%) and young (79% less than 25 years old). However, we control the suggested model for education level and gender to see whether these characteristics affect the model estimation.

A hypothetical scenario was constructed to measure ethical judgement and moral certainty about the avoidance of sweatshop apparel. The scenario approach is most often used in ethics studies due to the difficulty of examining real unethical/ethical behaviour (Antonetti & Maklan, 2014). It demonstrates a specific case, and the participants are requested to place themselves as an actor in the given situation and respond to specific questions accordingly (Mudrack & Mason, 2016). In this study, the scenario presented to the participants was taken from Antonetti and Maklan (2014) and modified to fit the study context. Specifically, it focuses on purchasing behaviour from an unethical brand to save money; it shows an imaginary purchase by a consumer of sportswear from two brands, one ethical and the other unethical. The scenario contains information about the unethical brand using harmful chemicals in its products, affecting their workers as well as the environment, while the ethical brand presents an option that is socially and environmentally



**FIGURE 1** The suggested model. ECI, ethical consumption intention

TABLE 1 Demographic characteristics

Characteristics	Category	Frequency	percent
Age	Less than 25 years	264	79.279
	between 25 and 35 years	27	8.108
	above 35 years	41	12.31
Education level	Up to Diploma	51	15.31
	Bachelor	229	68.76
	Master	18	5.40
	PhD	35	10.51
Gender	Male	98	29.42
	Female	235	70.57

responsible. As in similar research into ethical consumption, the ethical brand costs 20% more than the unethical brand (Antonetti & Maklan, 2014). The participants were informed about the customer's decision to purchase from the unethical brand to save money; they were then asked to answer questions about the ethics of such behaviour.

### 3.1 | Measures

The dependent variable in this study is ECI, the extent to which a consumer intends to use socially and environmentally friendly products (Kushwah et al., 2019). ECI was measured using three items adopted from Hassan et al. (2016); for example, "How likely are you to purchase an item of socially and environmentally responsible products next time you go shopping?". The mediator variable is moral certainty. It measures the extent to which one is certain about or has confidence in his/her judgement. Based on this definition, moral certainty is an attribute attached to ethical judgement. This implies that we should measure ethical judgement first and then the extent to which participants are certain about their judgement. *Ethical judgement* was measured using four items adopted from Wenli and Chan (2019). The participants were asked to report how they would judge the behaviour of the consumer in the scenario: whether ethical/unethical, acceptable/unacceptable, right/wrong and good/bad. Consistent with Petrocelli et al. (2007), moral certainty was operationalized as a composite construct with two dimensions: correctness and clarity. Moral clarity and correctness were measured using seven items: four for clarity and three for correctness. A sample item of moral clarity was "How certain are you that the judgement you expressed about the consumer's behaviour really reflects your true thoughts and feelings?". A sample of moral correctness was, "To what extent do you think other people should make the same judgement as you about the consumer's behaviour?". Moral certainty is constructed as a reflective second-order construct in this study. However, this study focused only on respondents with positive ethical judgement, because only for these participants would increasing moral certainty produce more positive ethical consumption behaviours; meanwhile

for participants with negative ethical judgement, increased moral certainty would lead to more negative ethical consumption behaviours. *Moral intensity* is derived from several issues related to the moral imperative in a situation: the magnitude of consequences (MI), social consensus (SC), probability of effect (PE) and temporal immediacy (TI). It was measured using four items adopted from Jones (1991), with answers recorded on a 7-point Likert scale. The questionnaire was initially prepared in English and then translated into Arabic using the back-translation technique (Brislin, 1986).

## 4 | DATA ANALYSIS

Variance-based structural equation modelling with partial least square regression (PLS-SEM) was utilized to test the study model. PLS-SEM is appropriate in research settings that involve complex models, some violation of the normality assumption and a relatively small sample size (Hair et al., 2011), which are relevant to this study. Specifically, respondents in ethical studies are expected to overestimate their ethical behaviour to satisfy social expectations and thus most of the responses are expected to be skewed to the positive side of the ethics-related measures. PLS-SEM is very helpful in this regard (Hair et al., 2011, 2018).

The reliability and validity of the measures were examined to ensure the competence of the measurement model before testing the suggested hypotheses. Composite reliability and Cronbach's alpha were used to verify the measures' reliability, in which values above 0.7 indicate an acceptable level of reliability (Jöreskog, 1971; Nunnally, 1978). The average variance extracted (AVE) and items' loadings were employed as a criterion to verify the measures' convergent validity; for each measure, the AVE value should be above the cut-off of 0.5 (Fornell & Larcker, 1981). Each item should load at least 0.5 on its theoretical construct (Hair et al., 2011). Discriminant validity was confirmed by calculating the square root of the AVEs; it is satisfactory when each measure demonstrates an AVE larger than the correlations of this measure to all other measures (Fornell & Larcker, 1981). Table 2 shows the estimated values of these criteria for reliability and convergent validity. The values of composite reliability ranged between 0.828 and 0.909, which are above the suggested threshold of 0.7. The AVE values ranged between 0.603 and 0.729 which are also well above the proposed threshold of 0.5. Item loadings ranged between 0.691 and 0.901 and thus they load sufficiently on their constructs. Table 3 shows the square root of the AVEs. As postulated, the estimation indicated that each measure demonstrated AVEs greater than their correlations to all other measures. Accordingly, the measurement model shows sufficient reliability, convergent validity and discriminant validity.

Figure 2 depicts the structural model. The PLS estimation indicates that the model has moderate explanatory power; it explains about 19.4% and 21.4% of the variance in ECI and moral certainty, respectively. Table 4 shows the PLS estimation including path coefficients, standard errors (SE), t-values, p-values and 95% confidence intervals (CI). The results indicate that moral certainty is associated

TABLE 2 Reliability and convergent validity

Variable	CR	Cronbach's alpha( $\alpha$ )	AVE	Item	Loading
Moral intensity	0.858	0.780	0.602	"There is a very strong likelihood that the consumer's behaviour (as described in the scenario) will actually cause harm to the environment and employees."	0.742
				"The consumer's behaviour (as described in the scenario) will cause significant harm to the environment or employees in the immediate future."	0.828
				"The consumer's behaviour (as described in the scenario) will harm a large number of people."	0.826
				"Most people would agree that the consumer's behaviour (as described in the scenario) is wrong"	0.700
Ethical judgement	0.828	0.690	0.617	"To what extent do you think the consumer's behaviour (as described in the scenario) is morally acceptable/unacceptable?"	0.751
				"To what extent do you think the consumer's behaviour (as described in the scenario) is ethical/unethical?"	0.798
				"To what extent do you think the consumer's behaviour (as described in the scenario) is morally good/bad?"	0.808
				"How certain are you that you know what your true judgement on the consumer's behaviour (as described in the scenario) really is?"	0.818
Moral clarity	0.868	0.798	0.624	"How certain are you that the judgement you expressed toward the consumer's behaviour (as described in the scenario) really reflects your true thoughts and feelings?"	0.837
				"To what extent is your true judgement towards the consumer's behaviour (as described in the scenario) clear in your mind?"	0.691
				"How certain are you that the judgement you just expressed towards the consumer's behaviour (as described in the scenario) is really the judgement you have?"	0.806
				"How certain are you that your ethical judgement towards the consumer's behaviour (as described in the scenario) is the correct judgement to have?"	0.820
Moral correctness	0.890	0.813	0.729	"To what extent do you think other people should make the same judgement as you on the consumer's behaviour (as described in the scenario)?"	0.838
				"How certain are you that of all the possible judgements one might have towards the consumer's behaviour (as described in the scenario), your judgement reflects the right way to think and feel about the issue?"	0.901
				"I enjoy reading about my religion".	0.822
Religiosity	0.908	0.864	0.711	"It is important to me to spend time in private thought and prayer."	0.809
				"I have often had a strong sense of God's presence".	0.854
				"My whole approach to life is based on my religion".	0.885
				"The next time I go shopping I will try to buy from brands that consider environmental safety and the safety of others".	0.887
ECI	0.909	0.865	0.713	"The next time I go shopping I will try to avoid buying from brands that are not respectful of environmental safety and the safety of others"	0.788
				"I am likely to buy from brands that consider environmental safety and the safety of others every time I need a product."	0.884
				"The next time I go shopping I will probably make the effort to buy from brands that respect environmental safety and the safety of others".	0.815

TABLE 3 Discriminant validity—the square root of the AVEs

Construct	Moral intensity	Religiosity	Moral correctness	Moral clarity	ECI	Ethical judgement
Moral Intensity	0.605					
Religiosity	0.032	0.711				
Moral Correctness	0.064	0.121	0.729			
Moral Clarity	0.097	0.119	0.620	0.624		
ECI	0.107	0.406	0.147	0.196	0.714	
Ethical judgement	0.055	0.052	0.049	0.066	0.182	0.618

Note: Squared correlations; AVE in the diagonal.

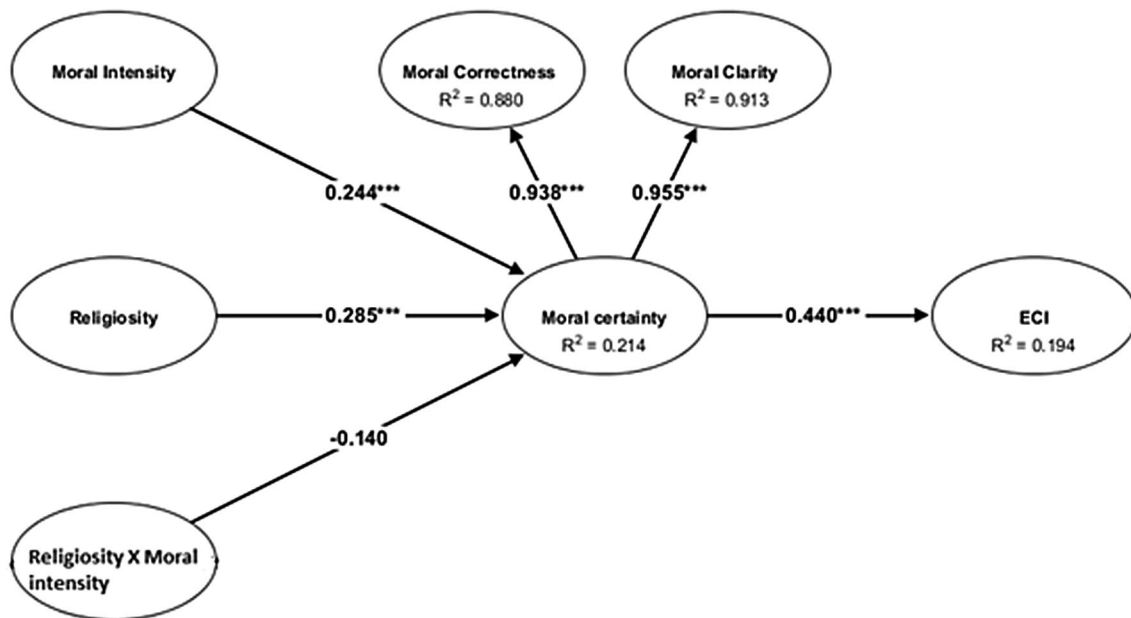


FIGURE 2 The structural model. \*\*\*significant at .001

TABLE 4 PLS estimation of the structural model

Relationship <sup>a</sup>	Coefficient	SE	t-value	p-value	Lower CI 95%	Upper CI 95%	Cohen's f <sup>2</sup>
Moral certainty → ECI	.440	0.059	7.510	.000	.325	.549	0.240
Moral Intensity → Moral certainty	.244	0.046	5.350	.000	.156	.333	0.073
Religiosity → Moral certainty	.285	0.056	5.094	.000	.177	.398	0.093
Religiosity X Moral intensity → Moral certainty	-.140	0.084	-1.663	.097	-.291	.035	0.023

<sup>a</sup>We estimated the model while controlling for demographic characteristics including education level and gender. The control variables do not affect the model's estimation and the results of hypothesis testing. Therefore, we dropped them from the model.

with ECI (coefficient = .44,  $p < .001$ , CI = .325, .549). Religiosity is significantly associated with moral certainty (coefficient = .285,  $p < .001$ , CI = .177, .398) with a small effect size (Cohen's  $f^2 = 0.093$ ). Moral intensity is also significantly associated with moral certainty (coefficient = .244,  $p < .001$ , CI = .156, .333) with a small effect

size (Cohen's  $f^2 = 0.073$ ). Contrary with our expectations, the interaction between religiosity and moral intensity insignificantly affects moral certainty (coefficient =  $-.140$ ,  $p > .05$ , CI =  $-.291$ , .035). These figures provide empirical support for Hypotheses 1–3, but not Hypothesis 4.



## 5 | DISCUSSION

We examined the interaction between religiosity, moral intensity and moral certainty in predicting ethical consumption intention. Our results indicated that religiosity and moral intensity are significantly associated with moral certainty. This implies that evaluating the context and aspects of ethical consumption could offer a basis on which to inform cognitive recognition to build a clear judgement about the morality of ethical consumption. In addition, religion could offer a system of beliefs that would make consumers more certain about the correctness of their judgement. The results also indicate that the association between religiosity and moral certainty does not depend on moral intensity. This implies that religiosity is a strong predictor of moral certainty even with minimal recognition of aspects of ethical consumption. In reality, religion provides people with strong beliefs and values supporting a larger system of meaning and worldviews. Moreover, religious knowledge represents the inculcated doctrine of religious authorities. Accordingly, religious consumers would not need extra information to be clear and confident about the morality of ethical consumption. This finding confirms the “morality as religiosity” hypothesis which predicts that moral conviction is simply an attitude closely associated with an individual's basic religious beliefs (Skitka et al., 2009). Our findings imply that religiosity and moral intensity contribute to the development of ethical consumption by making consumers more confident and convinced about their judgement of ethical consumption. This, in turn, exerts a strong influence on ethical consumption intention. This finding supports the proposition that religiosity and moral intensity influence ethical behavioural decision making through psychological and cognitive mechanisms (Doran & Natale, 2011; McCullough, 2009).

On the other hand, this finding is inconsistent with the literature on ethical decision making, as a consumer who fails to recognize the moral aspects of an issue will fail to form a clear judgement (Rousselet et al., 2020; Shawver & Miller, 2017; Singhapakdi et al., 1996, 1999; Valentine & Godkin, 2019). It is also inconsistent with findings of attitude certainty research which highlights the importance of information and evidence available to produce conviction about an attitude (Rucker et al., 2014; Tormala & Rucker, 2015, 2018).

## 6 | IMPLICATIONS

The association between religiosity and ethical consumption has received much attention in recent years, although conclusions are empirically inconsistent. The purpose of this study was to explore when and how religiosity might contribute to the development of ethical consumption. We contribute to the literature by developing a model describing the interaction between the role of religiosity and moral intensity in developing a unique sense of certainty and conviction about the morality of ethical consumption. Our results indicate that both moral intensity and religiosity are strongly related to a sense

of confidence and conviction concerning the morality of ethical consumption. This is the case even though religiosity does independently predict ethical consumption even when the recognition of the aspects of ethical consumption is at a minimum level. Prior research has largely explored the issue of ethical consumption in a context where many people recognize morality aspects. In this study, we explore the issue of ethical consumption in a context where consumers are relatively unaware of this issue and have long used market logic in their consumption behaviour, which is largely determined by quality and market price contexts. A religious consumer is likely to make a decision based on religious considerations in such a context, rather than on the nature of the ethical consumption issue.

In practice, influential institutions including religious parties, mainstream media, and activity groups should work effectively to demonstrate the aspects and characteristics of ethical consumption. These efforts would increase consumers' awareness of ethical consumption as a moral issue regardless of their religiosity. Religious consumers are more likely to purchase ethically if religious parties determine the immorality of unethical products. In their campaigns, marketers should appeal through religious societies to discourage unethical consumption behaviour. Intervention strategies can be prepared using belief-based messages to increase consumers' desire to act in an environmentally and socially friendly manner. Marketing campaigns could boost religious consumers' confidence about ethical consumption by showing that the ethics of socially and environmentally responsible products are widely shared among influential figures such as religious parties and celebrities. Boosting moral certainty about ethical products should be the main marketing strategy to increase the tendency towards purchasing ethical products, particularly in religious communities. Schools, universities and religious parties should educate youth about the issue of ethical consumption, to increase their awareness and conviction regarding the morality of un/ethical products. This would increase moral obligation among the current and next generation of consumers.

## 7 | LIMITATIONS

Some limitations may affect the findings of this study. First, the suggested model considers only three predictors of moral certainty. Future research could consider other variables such as attitude importance and perceived contrary argument, to enhance the model's realistic predictive power. Second, the study uses a convenience sample, so our findings are applicable only in similar contexts. Examining our model with participants from other religions will increase the generalizability of the study's findings. Third, this study uses self-reporting measures of the underlying variables which may be affected by social desirability bias. Alternative methods that have predictive validity and relevance, such as fuzzy sets, artificial neural networks, Bayesian analysis and the use of longitudinal design will be helpful for future scholars (Abubakar et al., 2019; Podsakoff et al., 2012).

## 8 | DIRECTIONS FOR FUTURE RESEARCH

Investigation of the association between religiosity and ethical consumption is still at an early stage and more research is needed to fully understand this relationship. We propose here some research opportunities that could improve our understanding of this issue. First, while this study has highlighted the role of religiosity in the development of moral certainty, it is still unknown whether or not this effect reduces neutralization (justification) of unethical consumption. It is well-known that neutralization is a serious problem that lets consumers act in ways that contradict their pro-social beliefs and still preserve a positive self-image (Antonetti & Maklan, 2014). Religiosity and moral certainty could play a significant role in reducing neutralization behaviour. Second, most of the prior research has examined the role of religiosity without referring to the religious authorities or institutions. Some suggest that religious authorities define what is accepted or unacceptable for religious individuals (Skitka et al., 2009). Accordingly, it is vital to examine the role of religiosity on ethical consumption in the context of religious authorities' decisions and recommendations about the morality of ethical consumption. Third, the effect of religiosity on ethical consumption could vary according to consumers' age, gender, and income. Some research has showed that these variables may boost or dampen the effect of religiosity on unethical behaviour (Chatzidakis & Maclaran, 2020; Chen & Tang, 2013). It is very important to see how the impact of religiosity on ethical consumption performs under these variables.

## 9 | CONCLUSION

This study explored how religiosity might contribute to the development of ethical consumption. The research model showed how religiosity and moral intensity might interact and be related to moral certainty. The model was tested using data from 333 Muslim participants in Saudi Arabia. The results reveal that religiosity and moral intensity are closely related to moral certainty which, in turn, has strong implications for ethical consumption intention. Nevertheless, the interaction between religiosity and moral intensity was not related to moral certainty, suggesting that the association between religiosity and moral certainty does not depend on moral intensity. This implies that religiosity is a strong predictor of moral certainty even when recognition of aspects of ethical consumption is minimal.

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### CONFLICT OF INTEREST

The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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## APPENDIX 1.

### THE VIGNETTE

“Tariq went to the store next to his house with the intention of buying sports shoes with particular specifications. He found two brands that met his requirements, and had to choose between them immediately. He learned that the manufacturer of the first brand was not committed to environmental safety as it uses dyes and chemicals in the manufacture of shoes which greatly affect the health and safety of workers and the surrounding environment. Meanwhile, the second brand is committed to environmental safety standards. Tariq decided to buy the sports shoes from the first brand as the price was 20% lower than that of the second brand.”