Family *takāful* purchase intentions in Bangladesh: the mediating role of attitude and saving motives and the moderating role of religiosity

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**Abstract**  
**Purpose** – The purpose of this study is to predict family *takāful* purchase intentions (FTPIs) using an extended theory of planned behavior (TPB) with relevant mediating and moderating factors.  
**Design/methodology/approach** – This study is based on a survey of 384 Muslim employees who work in both government and private organizations. This study used partial least square structural equation model (PLS-SEM) for hypothesis testing, predictive relevance and measuring the effect size of the model.  
**Findings** – The study found that attitude (ATT), subjective norms (SN), perceived behavioral control (PBC), saving motives (SM), promotional campaign (PC) and religiosity (RG) directly contribute to the prediction of FTPIs. Furthermore, ATT and SM partially mediate between PC and FTPI. Moreover, RG significantly moderates the association between ATT, SN, SM and FTPI, while RG insignificantly moderates the link between PBC and FTPI.  
**Practical implications** – This study provides insight into understanding the factors leading to an enhanced understanding of FTPI in a country where the industry is growing very fast. Further, the study suggests informative and persuasive promotions to encourage FTPI in Bangladesh and similar countries.  
**Originality/value** – This study provides insights into previously unaddressed FTPI among Muslim employees in Bangladesh and similar countries. Prior work on determining FTPI has not focused on promotional campaigns and saving motives, and thus, this study has extended TPB to understand the phenomenon.  
**Keywords** Theory of planned behavior (TPB), Saving motives (SM), Promotional campaign (PC), Religiosity (RG), Family *takāful* purchase intentions (FTPIs), Muslim employees  
**Paper type** Research paper

**Introduction**  
*Takāful*, often termed as Islamic insurance, has been growing and become an important subsector of the Islamic finance industry with contribution of US$ 52.5bn in 2020 in the world (Bhatti and Husin, 2019) with 12% growth in premium in Bangladesh (Khan et al., 2016). It indicates that the demand of family *takāful* has been increasing globally may be because of growing awareness on Islamic Shari‘ah laws and inclination to halal consumption (Farhat et al., 2019). Furthermore, the reasons for preferring family *takāful* over conventional one are that the policies and characteristics are based on Islamic principles of economics and...
transactions (Farhat et al., 2019). Islamic insurance is a means of sharing risks between the policyholders (insured) and the insurer instead of transferring risks from the insured to the insurer (Hassan, 2019). It means that takāful is an agreement of mutual assistance under which the takāful insured agrees to contribute to a common fund that helps the takāful insurer on the occurrence of pre-agreed events (Zakariyah et al., 2023). Depending on the contractual agreement of sharing risk, takāful insurance can be categorized as general takāful known as general (or conventional) insurance, and family takāful known as life insurance (Billah, 2019a, b). Family takāful offers financial protection against its clients and their dependents from financial losses because of disability, critical illness and unexpected death (Billah, 2019a, b).

Previous literature mainly focused on family takāful growth (Farhat et al., 2019) and demand (Sherif and Hussnain, 2017). Besides, Husin et al. (2016) examined subjective norms on family takāful purchase intentions (FTPIs) and Aziz et al. (2019) have examined the casual effects of knowledge, perceived usefulness and religiosity on FTPIs. In addition, Farhat et al. (2019) argued that attitude, subjective norms and halal certificate have positive significant influence on FTPIs, and Bhatti and Husin (2019) concluded that attitudes, subjective norms and perceived behavioral control significantly contribute to customers’ FTPIs. Based on these literatures, it may be assumed that customers’ FTPIs might be dependent on several factors (e.g. customers’ attitudes, subjective norms, perceived behavioral control, religiosity, saving motives and promotional campaigns of family takāful).

However, scarce effort has been given to identify how individuals’ saving motives and family takāful’s promotional campaigns contribute to customers’ FTPIs. Besides, family takāful remains underdeveloped and less than 5% of penetration rate in Bangladesh (Khan et al., 2018). This underdevelopment attributes to customers and industry perspectives. Muslim customers are not well understood the misfortune and negative aspects of life, and they have little knowledge, negative notions, low awareness, negative word of mouth influence and budget constraints. From an industry perspective, instead of 90.39% Muslims (BBS, 2011), lack of independent regulatory authority and lack of qualified human resources remain the main reasons for low family takāful penetration in Bangladesh (Khan et al., 2016).

Therefore, the aim of this study is to investigate determinants and its impacts on customers’ FTPIs in Bangladesh for two reasons: (1) the family takāful industry is still embryonic in Bangladesh, despite five full-fledged family takāful operators and thirteen conventional insurance operators having Islamic insurance windows. (2) Bangladesh is a one of the Muslim majority countries in the world with 90.39% of Muslims (BBS, 2011).

This study is based on the theory of planned behavior (TPB) modified by adding promotional campaign, saving motives and religiosity to investigate the both direct and indirect (mediating and moderating) effects on FTPI. Further attempts are made to explore the casual relationships between attitude, subjective norms, perceived behavioral control, saving motives, promotional campaign and religiosity, and FTPIs in Bangladesh. Besides, the current study attempts to investigate the mediating effects of attitude and saving motives between promotional campaign and FTPIs, and the moderating role of religiosity on the strength of association between attitude, subjective norms, perceived behavioral control, saving motives and FTPIs in Bangladesh. Therefore, the study may contribute to the further growth of the family takāful industry in Bangladesh and in similar countries.

Literature review

Takāful

Takāful refers to unconventional Islamic insurance. The word “Takāful” originated from the Arabic word “kafala,” which means responsibility or guarantee. Husin and Ab Rahman (2016) explained that the concept of takāful was first introduced in Sudan in 1979 to understand the need for Islamic Sharī’ah-based insurance. According to English Oxford
Dictionary, *takāful* refers to a structural mechanism that pools members’ resources and reinvests under Islamic Shari’ah laws (Allen et al., 1990). Besides, Noordin et al. (2014) argued that *takāful* came from the *takāful* Act 1984 of Malaysia, which most legislatively defines *takāful* as an agreement construct developed among members based upon solidarity, brotherhood and mutual assistance providing financial aid to indemnify accused one when he/she falls in losses or catastrophes. Similarly, Hassan and Abbas (2019) demonstrated *takāful* mechanism as a pure mutual construct, where policy members and *takāful* operators mutually cooperate and voluntarily contribute to share risk factors among them, while policy members transfer risks to insurance operators in conventional insurance. Conclusively, in *takāful* insurance, all policy members’ contributions are pooled and invested in multiple schemes under Shari’ah compliance; consequently, profits are retained in a pool and later members receive indemnification from the pool, if any loss happens them. *Takāful* is two types: general *takāful* provides short-term policies mostly involved in vehicular insurance, and family *takāful* provides long-term policies involved in long-term savings, life insurance and compensation of dependents in case of policy members’ disability or death (Bhatti and Husin, 2019).

*Takāful* industry in Bangladesh

*Takāful* (Islamic insurance) is first introduced on December 12 in 1999, by Islamic Insurance Bangladesh Ltd. as full-fledged Islamic insurance in Bangladesh (Khan et al., 2018). Consequently, the parliament of Bangladesh passes two insurance laws on March 3, 2010, effective from March 18, 2010, regarded rules for investments of *takāful* (Nomi and Sabbir, 2020; Khan et al., 2016). This way, eight full-fledged *takāful*, including five family *takāful* and 13 conventional insurance companies having Islamic insurance windows, are operating in Bangladesh, contributing 12% of total premiums in the insurance industry (Khan et al., 2016). This shows that the *takāful* industry, especially family *takāful*, is a growing sector that can be more developed by enhancing skilled human resources, sharing the concept of *takāful* among customers and improving government initiatives; and thus, the *takāful* industry of Bangladesh creates window for investors and customer, applying full Shari’ah rules and regulations (Nomi and Sabbir, 2020). However, *takāful* industry in Bangladesh face numerous challenges, including lack of skilled and qualified employees, lack of Shari’ah-compliant deposits and nonexistence of Islamic insurance training institutions and lack of interest among Muslim scholars, lack of knowledge about *takāful* industry among customers, and saving tendency in *takāful* industry (Lubaba et al., 2022). In these situations, Bangladesh has plenty of potentialities for the enhancement of *takāful* industry, especially family *takāful* sector through developing promotional strategies and increasing saving tendencies among general people of Bangladesh.

The theory of planned behavior (TPB)

The TPB, an extension of the theory of reasoned action (TRA), was developed by Ajzen (1985) to predict behavioral intentions in different contexts. Hasan et al. (2020) define behavioral intentions as an individual’s willingness to perform a specific behavior. Besides, Hasan (2022a, b, c) define behavioral intentions as an individual’s readiness to achieve particular behavior to formulating a conscious plan to perform or not perform a specific future behavior. TRA explains that individuals’ behavioral intentions are predicted by attitude and subjective norms, and thus, TRA measure individuals’ behavioral intentions based on volitional control factors (Hasan, 2022a). However, human behaviors are not always been determined by the volitional factors such as attitudes and subjective norms. Consequently, the TPB is developed, incorporating perceived behavioral control (PBC) as an additional determinant of intentions. PBC refers to non-volitional factors such as an individual’s prerequisite resources,
opportunities and specific circumstances to perform a particular behavior. Regarding these attributes of TPB, Hasan et al. (2020) extend TPB to predict domestic tourists’ behavioral intentions in Bangladesh; Qiu et al. (2022) extend TPB in predicting environmentally responsible behavioral intentions; and Adel et al. (2022) apply an extended TPB to investigating consumers’ behavioral intentions towards suboptimal produce. In such situations, the extension and application of TPB would be more appropriate to predict the customers’ FTPIs. Therefore, the study extends TPB, adding other variables (promotional campaign, saving motives and religiosity) as a research framework (Figure 1) that ensures a well-defined structure to investigate the FTPI.

TPB’s prior application to takāful products
The application of TPB in previous studies on takāful products help better understanding of the FTPIs among Muslim employees. Thus, the present study review that TPB has been widely used in takāful industries such as health insurance (takāful) in Nigeria (Kazaure, 2019), takāful in Malaysia (Husin and Ab Rahman, 2016) and family takāful in the United Arab Emirates; and more specifically, Husin and Ab Rahman (2016) and Bhatti and Husin (2019) use TPB to measure the customer’s FTPIs.

Hypotheses development
Attitude and family takāful purchase intentions (FTPIs)
Earlier studies have shown the connection between attitude and intentions differently, where Hasan (2022c) defined attitude as individual’s favorable or unfavorable evaluation of a particular action or behavior. Besides, Farhat et al. (2019) define attitude as one’s silent beliefs or behavioral beliefs, which refers to perceived consequences of the behavior and how a person evaluates the significance of the consequences. Hasan et al. (2021) argued that attitude comes from behavioral beliefs that refer to the probability of behaving in a certain way by which an individual can analyze consequences (costs and benefits), leading to perform a specific behavior. For example, customers could Raza et al. (2019) perceive purchasing family takāful as experiencing a secured lifestyle, getting more profits than other financial institutes, saving money for future generations, being a spiritually satisfied person, etc. In the context of Islamic life insurance (family takāful), Souiden and Jabeur (2015) explained that an individual has a favorable attitude and is likely to engage in FTPI when the outcomes are positively evaluated. Accordingly, Raza et al. (2019) identified that attitude is positively correlated with FTPI. Besides, Husin et al. (2016) study found that attitude as a significant predictor of FTPI.

Figure 1.
Proposed research framework

Source(s): Authors
Similarly, Husin and Ab Rahman (2013) study explained that attitude is positively related to FTPI. Thus, Farhat et al. (2019) have confirmed that an individual’s positive attitude substantially influence consumers’ FTPI. Therefore, it is pertinent to examine the casual relationship between attitude and FTPIs, and the subsequent hypothesis is as follow.

**H1.** Attitude significantly influences FTPIs.

**Subjective norms and family takāful purchase intentions (FTPIs)**
Subjective norms refer to perceived social pressure that influences an individual to perform or not to perform a particular behavior (Sumarliah et al., 2021). It is the second determinant of behavioral intention in the TPB model. Hasan et al. (2022) defined subjective norm as perceived significant opinions of others (e.g. family members, friends, colleagues, business partners, or co-workers) who are close and important to an individual influenced their decision-making process. Thus, subjective norms can be considered the concept that the referents would approve or disapprove of an individual’s behavior regarding family takāful purchase decisions. Previous studies including Hassan and Abbas (2019), Raza et al. (2019), Husin and Ab Rahman (2013) mentioned that subjective norms and takāful purchase intentions are positively correlated and thus can significantly predict FTPIs. Further, Hassan and Abbas (2019) found that social influence (subjective norm) strongly influence FTPIs in Pakistan. Based on these studies, it can be assumed that the investigation of the effect of subjective norms on FTPIs is crucial. Therefore, the current study proposes the following hypotheses.

**H2.** Subjective norms significantly influence FTPIs.

**Perceived behavioral control and family takāful purchase intentions (FTPIs)**
According to TPB model, perceived behavioral control (PBC) is the third determinant of behavioral intention, which regards as a function of control beliefs (Suki and Salleh, 2018). Hasan (2022a) define perceived behavioral control as a function of control beliefs that refer to an individual’s perception of the availability of opportunities or resources needed to perform a particular behavior. Besides, Wahab (2018) explain PBC as an individual’s perception of how well he/she can manage factors that facilitate or constrain an individual’s actions to perform a particular behavior in a specific situation. Earlier studies described that an individual’s self-confidence, resources and opportunities positively influence FTPI (Husin et al., 2016; Husin and Ab Rahman, 2013). A study on the United Arab Emirates suggested that control beliefs (PBC) determine FTPI (Bhatti and Husin, 2019). Similarly, a study on Nigeria identified that when an individual has prerequisite opportunities and resources, he/she posits FTPI (Kazaure, 2019). That is to say, the prospective relationship between PBC and FTPIs can be investigated. Therefore, it was hypothesized that:

**H3.** Perceived behavioral control significantly influence FTPIs.

**Saving motives and family takāful purchase intentions (FTPIs)**
Saving motives refer to a human psychological tendency to preserve something for the uncertain future. Keynes (2018) first investigated motivations for savings and thus identified eight different motivations: precautionary, life-cycle, inter-temporal substitution, improvement, interdependence, enterprise, bequest and avarice motives. Additionally, Browning and Lusardi (1996) added a down payment motive incorporated to the saving motive. Among these motives, precautionary motive refers to the human tendency of reducing future uncertainties in life. To minimize these uncertainties, individuals prefer something ensuring the assurance of reducing losses/damages (Zakaria et al., 2016).
This assurance of indemnification results in family *takāful*. However, bequest motives, another saving motive, defines saving money for next generations directly or indirectly influences an individual’s FTPI (Zakaria et al., 2016).

Recently, researchers have begun to investigate the importance of saving motives, and its influence on FTPI. Zakaria et al. (2016) found that personality of Malaysian matters saving motives and FTPI. In addition, a study on the United Arab Emirates explained that the political environment and unemployment rate increase the importance of precautionary saving motives towards FTPI (Bhatti and Husin, 2019). Moreover, Khan et al. (2020) reviewed that organizational policies strengthen saving motives and FTPI. That is to say, saving motives (precautionary motive, bequest motive and others) significantly influences FTPI. Therefore, it was hypothesized that:

**H4.** Saving motives significantly influence FTPIs

*Promotional campaign, family takāful purchase intentions (FTPIs), attitude and saving motives*

A promotional campaign refers to an accumulated effort of communication integrating a series of communication tools to share consistent messages to customers, increasing public awareness, enhancing corporate image, promoting sales and making personal relationships to acquire new customers and retain existing customers (Brannon, 2007). A few previous studies studied promotional campaigns. Muhammad et al. (2019) explained promotional campaigns as well-planned rational, integrated tactics that marketers develop to sustain in a volatile market or business situation, influencing consumers’ purchase intentions. Abubakar (2009) also suggested a promotional campaign as a planned communication system that may affect an individual’s buying intentions.

In the field of *takāful*, Noordin et al. (2014) demonstrated consumers’ purchase intention as inconsistent. For this reason, salesperson have a direct or indirect influence on an individual’s FTPI. Husin et al. (2016) suggested that innovative promotional campaigns offering educational content and hosting virtual events enhance FTPI. However, a Malaysian study indicated that promotional campaign is positively related to the attitude in Islamic marketing perspective (Shafiq et al., 2017). A study on UAE also identified that promotional campaign significantly impacts attitude towards Islamic banking services (Muhammad et al., 2019). Similarly, a study on Ghana explained that promotional campaign associated with saving motives (normative saving beliefs) (Dadzie et al., 2003). Thus, it was hypothesized that:

**H5.** Promotional campaign significantly influences FTPIs.

**H6.** Promotional campaign significantly influences attitude.

**H7.** Promotional campaign significantly influences saving motives.

*Mediating role of attitude and saving motives*

Attitude and saving motives are well established constructs that influence individual’s behavioral intentions in different contexts, such as Satsios et al. (2020) explain that saving motives has positive impact on intentions towards saving of Bulgarian Pomaks; and Chen et al. (2019) note that cost saving motives of intentions influence to revisit and participate in green hotel practices; Zakaria et al. (2016) mention that saving motives has the strongest impacts on life insurance purchase intentions among staffs in public university; Newaz et al. (2016) identify that customer’ buying attitude influence Islamic financial products; and Phuong and Dat (2017) explain that attitude directly impacts on life insurance purchase intentions. However, limited efforts have been given to explaining the mediating role of attitude and saving motives on *takāful* purchase intentions. In previous studies, Garg and
Joshi (2018) have basically demonstrated that attitude has a full mediating effect on purchase intention; Widyanto and Sitohang (2021) mention that attitude is fully/or partially mediated towards Muslim millennial's purchase intentions; Bucciol and Trucchi (2021) note that internal locus of control is mediated by saving motives; and Mursid (2018) argue that financial incentives, risk-minimization and *riba* (interest) avoidance, influence saving motives through purchasing family *takafül*. Based on these studies, it can be inferred that the investigation of the mediating roles of attitude and saving motives between promotional campaign and FTPIs are crucial in Bangladesh. Thus, the current study proposes the following hypotheses.

**H8.** Attitude mediates the positive relationship between promotional campaign and FTPIs.

**H9.** Saving motives mediates the positive relationship between promotional campaign and FTPIs.

*The moderating role of religiosity*

Religiosity refers to an individual's distinctive beliefs and commitments to a religion's scriptures and teaching (Sarfraz and Mian, 2021). Hoque et al. (2018) define religiosity as an individual's religious affiliation that actively influences his/her intra-psychic factors. In previous studies, Raza et al. (2019) indicate that ATT and SN have a strong positive influence on FTPI; Aziz et al. (2019) confirm that ATT as a significant predictor of FTPI; a study by Husin et al. (2016) conclude that SN is a strong antecedent of FTPI; A study on Nigeria (Kazaure, 2019) notes that PBC substantially affects FTPI; Bhatti and Husin (2019) confirm that PBC as a strong predictor of FTPI; and Zakaria et al. (2016) explain that saving motives (precautionary motivation), which strongly influences FTPI. However, Islamic marketing literature mentioned that Attitude (ATT) (Farhat et al., 2019), subjective norm (SN) (Husin and Ab Rahman, 2016) and PBC (Rehman et al., 2021) formulate an adverse behavioral intention towards FTPI; and Hermansson (2017) reveal that saving motives has a weak effect on behavioral intentions.

Based on these inconsistent relationships stated in previous literatures, Baron and Kenny (1986) suggest that when the relationship between predictors and criterion variables is found inconsistent, a moderating variable is must to be presented. A moderator is the third variable introduced to influence the relationship between a predictive and an outcome variable. Therefore, the study introduced Religiosity as a moderator to investigate the strength of relationship on between ATT, SN, PBC, SM and FTPI. Thus, presenting Religiosity as a moderator between two variables may avoid misleading conclusions related to contingency relationships (Venkatraman, 1989), which contributes to a better understanding of inconsistent findings between ATT, SN, PBC, SM and FTPI. A study on Oman had chosen Religiosity as a moderator and found a moderating effect on purchase intentions (Alzadjal et al., 2021). Similarly, Husin and Ab Rahman (2013) suggest that Religiosity has a significant moderating role between ATT, SN, PBC and FTPI. Thus, previous literatures recommended that Islamic Religiosity has been regarded as an influential moderator between ATT, SN, PBC and FTPI. In line with this, since no other previous study examined the moderating effect of Religiosity on the link between SM and FTPI, the study considers it as crucial to investigating their effects. Therefore, the current study proposes the following hypotheses.

**H10.** Religiosity significantly influences FTPIs.

**H10a.** Religiosity moderates the strength of relationship on between attitude and FTPIs.
H10b. Religiosity moderates the strength of relationship on between subjective norms and FTPIs.

H10c. Religiosity moderates the strength of relationship on between perceived behavioral control and FTPIs.

H10d. Religiosity moderates the strength of relationship on between saving motives and FTPIs.

Methodology

Sampling method and data collection procedures
This study adopted convenience sampling technique to collect data from Muslim employees who work in both government and private organizations of Bangladesh. Bangladesh has a large portion of Muslim population (90.39% are Muslims) (BBS, 2011) and 60.8 million employees BBS (2018), and roughly, Bangladesh has over 54.9 million Muslim employees who are prospective markets for family takaful industry. Keeping in mind the sampling technique, the study purposively sent 800 questionnaires to potential respondents through email (75%) attachments and hard-copy questionnaires (25%) to 20 or older aged Muslim employees within the same time to minimize sampling bias (Nielsen et al., 2017). A total of 800 questionnaires were sent and obtained 468 complete questionnaires from participants with 58.50% of response rate. Out of 468 responses, 384 responses were found valid, indicating 61.45% male and 38.55% female (with 48% of valid response rate) met the criteria for further analysis (Krejcie and Morgan, 1970).

Measures
The study used questionnaires composed of five sections, namely predictor constructs (promotional campaign, subjective norms and perceived behavioral control), mediator constructs (attitude and saving motives), moderator (religiosity), FTPIs measures and demographic information. Among the constructs, the researcher developed measurement items of a promotional campaign with the literature review.

Promotional campaign
An elicitation study and review of literature have developed measurement items for the promotional campaign. Since measurement items for promotional campaigns are hardly found in previous studies, Brannon (2007) suggested that a set of new measurement items for the promotional campaign should be elicited for the new researcher context. Thus, as an elicitation method, the study used a focus group consisting of industry professionals (e.g. Islamic insurance managers), Islamic insurance and risk management academics (e.g. students and faculty members) and life insurance customers. The researcher discussed promotional campaigns among focused group participants and developed an initial questionnaire contained eight items based on their opinions and literature review. This questionnaire was further refined based on experts’ reviews. Subsequently, the pilot test results with 40 among respondents revealed instruments’ reliability and questions’ clarity. Among the eight items, finally, three items with a five-point Likert-type scale were used to measure the promotional campaign, where 1 indicates ‘strongly disagree’ and 5 denotes ‘strongly agree.’

Measure for other constructs
The study adopted existing validated items of subjective norms and FTPI from Husin et al. (2016). The four-item scales of attitude were adopted from Aziz et al. (2019), Schniederjans and Starkey (2014) used established measures for perceived behavioral control, from which four
items were adapted to this research context. The four measurement items suggested by Jonsson et al. (2017) and Fisher and Montalto (2010) were adapted to measure saving motives. Finally, the study adopted the four validated religiosity items from Kashif et al. (2017). It is important to note that, all measurement scales were measured by five point Likert scales, where “1” denotes “strongly disagree” and “5” denotes “strongly agree”.

Data analysis
This study used SMARTPLS 3.3.3 to analyze the data by following the two-step approach suggested by Anderson and Gerbing (1988). First, confirmatory factor analysis (CFAs) was used to estimate the measurement model and assess that model’s adequacy. Second, structural equation modeling (SEM) was used to test causal relationships with the best-fitting model.

Data analysis and results
This study measured sample adequacy by Kaiser-Meyer-Olkin (KMO = 0.810) with Bartlett’s Test of Sphericity (Approx. Chi-Square = 12,561.390, df = 351, p = 0.000). The respondents’ age ranged between 20 and 65 years, and 43.90 years were their average age. Among the respondents, 58.85% indicated their income less than Tk. 50000, and 41.15% reported their income greater than Tk. 50000. Of the respondents, a majority were graduates of higher education (86.97%). Finally, 56.25% of participants indicated that they had a family takāful scheme.

Measurement model, reliability and validity
SEM, a method, is used to measure latent, unobserved variables based on observed indicators (Ullman and Bentler, 2012). Two major statistical approaches are used to estimate SEM, namely, variance-based PLS and covariance-based approaches. Compared with covariance-based SEM, PLS is more appropriate for theory development because this approach having insensitivity to small sample sizes does not have distributional assumptions (Henseler et al., 2012). Due to the relatively small sample size and fewer limiting requirements, the current study used PLS. Assistance with the application of SMARTPLS 3.3.3, PLS-based path modeling was applied to measure the causal model.

The current study examined convergent and discriminant validity and indicators’ composite reliability to evaluate the PLS measurement model (see Figure 2 and Table 1). Convergent validity and composite reliability indicate the high correlation among indicators under the same construct (Carlson and Herdman, 2012). The study evaluated measurement scales based on several criteria: all factor loadings should be significant and exceed 0.5, composite reliability should exceed 0.7 and each construct’s average variance extracted (AVE) should exceed 0.5 (Fornell and Larcker, 1981). The current study’s measurement model revealed that all factor loading values obtained in the CFA exceeded 0.5 and were significant at p = 0.01. The constructs’ composite reliabilities and AVE sequentially ranged from 0.908 to 0.973 and 0.713 to 0.902. Therefore, the convergent validity criteria were met up. Cronbach (1951) suggested 0.7 as a generally accepted lower limit of the Cronbach’s alpha scores, and the studied constructs’ scores ranged from 0.854 to 0.964. Therefore, the constructs indicated strong internal reliability.

Moreover, Henseler et al. (2015) suggested that the discriminant validity tested whether the indicators of different constructs are uncorrelated. The discriminant validity requires a higher square root of AVE than the correlations between two constructs in the model. All studied constructs met this requirement (see Table 2).
Figure 2.
Measurement model
<table>
<thead>
<tr>
<th>Constructs/Items</th>
<th>Factor loadings</th>
<th>Cronbach’s alpha (α)</th>
<th>Composite reliability (CR)</th>
<th>Average variance extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Promotional campaign</strong></td>
<td></td>
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<tr>
<td>I think promotional campaign increases my awareness of the family takāful</td>
<td>0.86</td>
<td>0.854</td>
<td>0.912</td>
<td>0.776</td>
</tr>
<tr>
<td>I think promotional campaign provides me positive information about the family takāful</td>
<td>0.943</td>
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<tr>
<td>I think promotional campaign persuades me about the family takāful</td>
<td>0.836</td>
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<tr>
<td><strong>Attitude</strong></td>
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<tr>
<td>I think purchase of family takāful scheme is a good thing to do</td>
<td>0.903</td>
<td>0.947</td>
<td>0.962</td>
<td>0.863</td>
</tr>
<tr>
<td>I think purchase of family takāful scheme is beneficial</td>
<td>0.957</td>
<td></td>
<td></td>
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<tr>
<td>I think purchase of family takāful scheme is valuable</td>
<td>0.948</td>
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<tr>
<td>I think purchase of family takāful scheme is a wise idea</td>
<td>0.907</td>
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<tr>
<td><strong>Subjective norms</strong></td>
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<tr>
<td>People who influence my decision think that I should purchase a family takāful scheme</td>
<td>0.81</td>
<td>0.864</td>
<td>0.908</td>
<td>0.713</td>
</tr>
<tr>
<td>People who are important to me think that I should purchase a family takāful scheme</td>
<td>0.913</td>
<td></td>
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<tr>
<td>People whose opinions I value think I should purchase a family takāful scheme</td>
<td>0.886</td>
<td></td>
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<tr>
<td>People who are close to me think that I should purchase a family takāful scheme</td>
<td>0.758</td>
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<tr>
<td><strong>Perceived behavioral control</strong></td>
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<tr>
<td>Whether or not I purchase family takāful is completely up to me</td>
<td>0.881</td>
<td>0.935</td>
<td>0.953</td>
<td>0.835</td>
</tr>
<tr>
<td>I have complete control over my purchase of the family takāful</td>
<td>0.959</td>
<td></td>
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<tr>
<td>Whether or not I purchase the family takāful is completely within my control</td>
<td>0.944</td>
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<tr>
<td>If I want to, I can easily buy the family takāful</td>
<td>0.869</td>
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<tr>
<td><strong>Saving Motives</strong></td>
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<tr>
<td>I am saving for retirement</td>
<td>0.939</td>
<td>0.964</td>
<td>0.973</td>
<td>0.902</td>
</tr>
<tr>
<td>I am saving for future generations</td>
<td>0.972</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am saving for child education</td>
<td>0.985</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am saving for giving to my family/estate</td>
<td>0.922</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Religiosity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I regularly pray five times a day</td>
<td>0.844</td>
<td>0.904</td>
<td>0.934</td>
<td>0.779</td>
</tr>
<tr>
<td>I have a great sense of Allah’s presence</td>
<td>0.935</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is important for me to spend more time on religious activities</td>
<td>0.922</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I live my life according to my religious beliefs</td>
<td>0.825</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family takāful purchase intentions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I intend to purchase a family takāful scheme in the near future</td>
<td>0.829</td>
<td>0.890</td>
<td>0.925</td>
<td>0.756</td>
</tr>
<tr>
<td>I am likely to purchase a family takāful scheme in future</td>
<td>0.931</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I expect to purchase a family takāful scheme</td>
<td>0.921</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I want to purchase a family takāful scheme</td>
<td>0.788</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source(s):** Authors

Table 1. Measurement model results
Structural model

After measuring the validation of the measurement model, the present study evaluated the structural model to test the impact of exogenous variables on endogenous variables. Before evaluating the structural model, the study checked the issue of all variables’ collinearity. Table 2 indicated VIF scores of all variables between 1.183 and 1.997, below 3.3 suggested by Kock (2015). Thus, this suggests that the study has no method bias or biasing data. This collinearity is important because ordinary least squares regression estimates path coefficients (Hair et al., 2014). These path coefficient results of constructs are reported in Figure 3 and Table 3.

In line with the theory of this study, results indicate that there is a direct significant positive relationships between (H1) attitude ($\beta = 0.218; t = 4.058; p = 0.000$), (H2) subjective norm ($\beta = 0.131; t = 3.049; p = 0.002$), (H3) perceived behavioral control ($\beta = 0.171; t = 3.343; p = 0.001$), (H4) saving motives ($\beta = 0.220; t = 4.245; p = 0.000$) (H5), promotional campaign ($\beta = 0.160; t = 2.513; p = 0.012$) and FTPIs among Muslim employees in Bangladesh; and thus, these results support H1, H2, H3, H4 and H5. These results are consistent with prior study (Bhatti and Md Husin, 2020) that when an individual’s attitude, subjective norms and perceived behavioral control are strong, his/her positive intentions towards family takaful soar.

Similarly, the strength of relationships between (H6) promotional campaign ($\beta = 0.353; t = 7.247; p = 0.000$) and attitude, and the association between (H7) promotional campaign ($\beta = 0.382; t = 9.010; p = 0.000$) and saving motives are found significant; and thus, it supports H6 and H7. These results indicate that customers’ positive attitude and saving motives towards family takaful improve, when they get promotional information about the family takaful policies; thus, promotional campaign can be a strong predictor of customers’ attitude and saving motives in family takaful context. Interestingly, these results are new compared to findings of previous studies in a similar context of Bangladesh. These results imply that the more positive ATT, SN, PBC and SM, the stronger FTPI. Additionally, the more promotional campaign efforts are from takaful insurance organizations, the stronger ATT, SM and FTPI.

Mediating effects

The study demonstrate the mediating effects (Figure 3 and Table 3) of (H8) attitude ($\beta = 0.077; t = 3.823; p = 0.000$) and (H9) saving motives ($\beta = 0.084; t = 3.756; p = 0.000$) in between promotional campaign (PC) and FTPIs among Muslim employees, which supported hypotheses (H8) to (H9). Whereas the direct effect without a mediator between (H5) PC and FTPI also indicated significant, thus it can be concluded that ATT and SM partially mediate FTCIs.

### Table 2. Results of discriminant validity and collinearity

<table>
<thead>
<tr>
<th></th>
<th>PC</th>
<th>ATT</th>
<th>SN</th>
<th>PBC</th>
<th>SM</th>
<th>RG</th>
<th>FTPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>0.881</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATT</td>
<td>0.353</td>
<td>0.929</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN</td>
<td>0.274</td>
<td>0.257</td>
<td>0.844</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC</td>
<td>0.389</td>
<td>−0.214</td>
<td>0.080</td>
<td>0.914</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SM</td>
<td>0.382</td>
<td>0.140</td>
<td>0.134</td>
<td>0.062</td>
<td>0.950</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RG</td>
<td>0.313</td>
<td>0.373</td>
<td>0.157</td>
<td>0.041</td>
<td>0.385</td>
<td>0.883</td>
<td></td>
</tr>
<tr>
<td>FTPI</td>
<td>0.486</td>
<td>0.337</td>
<td>0.276</td>
<td>0.252</td>
<td>0.354</td>
<td>0.467</td>
<td>0.869</td>
</tr>
<tr>
<td>VIF</td>
<td>1.997</td>
<td>1.661</td>
<td>1.183</td>
<td>1.509</td>
<td>1.695</td>
<td>1.482</td>
<td>1.536</td>
</tr>
</tbody>
</table>

**Note(s):** PC = promotional campaign, ATT = attitude, SN = subjective norms, PBC = perceived behavioral control, SM = saving motives, RG = religiosity, FTPI = family takaful purchase intentions

**Source(s):** Authors
the PC and FTPI (Hayes, 2017). Thus, (H8) and (H9) signify that effects of promotional campaign, including customers’ attitude and saving motives have significant impacts on explaining FTPIs among Muslim employees in Bangladesh; and thus, it concludes that promotional campaign with positive attitude and saving motives has stronger influence than that of merely promotional campaign on FTPIs.

**Moderating effects**

The present study also performed moderation analysis (see Figure 3 and Table 3). Before exploring the moderating effect of religiosity, a hypothesis (H10) has revealed that religiosity has a significant positive effect \( \beta = 0.188; t = 3.743; p = 0.000 \) on FTPIs. According to the results, the intervening effect of religiosity (RG) on the strength of association between attitude and FTPIs is found significant (H10a) \( \beta = 0.179; t = 2.579; p = 0.010 \), supporting H10a. The subsequent result indicates that religiosity moderates the strength of relationship between attitude and FTPIs among Muslim employees in Bangladesh. Align with this finding, Farouk et al. (2018) explain that religiosity plays a significant moderating role on Zakat compliance behavior in Nigeria. Similarly, RG had a significant influence on the strength of association between subjective norms (SN) and FTPI (H10b) \( \beta = -0.145; t = 3.543; p = 0.000 \), supporting H10b. This result indicates that religiosity mediates the strength of relationship between subjective norms (SN) and FTPIs, which is consistent with a study of Farouk et al., (2018). However, result reveals that religiosity has insignificant intervening effect on the association between perceived behavioral control (PBC) and FTPIs (H10c) \( \beta = -0.026; t = 0.510; p = 0.610 \) and t-value is below the standard 1.96 (Hair, 2009), which does not support the H10c. This result implies that customers’ religiosity has nearly no impact on the strength of association between perceived behavioral control (PBC) and FTPIs among employees of Bangladesh. This might be a unique contribution to the takāful literature. Further, religiosity significantly moderates on the strength of relationship between saving motives (SM) and FTPIs (H10d) \( \beta = 0.226; t = 3.679; p = 0.000 \), supporting H10d. Thus, religiosity (RG) moderates on the interaction between saving motives and FTPIs, which may be unique findings to takāful literature.
Model’s predictive relevance
This study has used a blindfolding procedure to evaluate the model’s predictive relevance investigating endogenous latent variable’s reflective nature and cross-validated redundancy measure ($Q^2$) (Hair et al., 2012). The assessment of predictive relevance is recommended for model validation when goodness-of-fit is not appropriate for the model validation since it cannot differentiate between valid and invalid models (Henseler and Sarstedt, 2013). Thus, the model achieves predictive relevance when the $Q^2$ value is found greater than zero (Henseler et al., 2009). The cross-validated redundancy $Q^2$ test results (see Table 4) revealed $Q^2$ values of ATT, SM and FTPI are respectively 0.106, 0.130 and 0.336, which are all greater than zero. Thus, this has predictive relevance.

Effect size assessment
Effect size measures the influence of predictive variables on the outcome variables regarding $R^2$ variation (Cohen, 2013). The present study used a formula suggested by Cohen (2013) to compute the effect size given below.

\[
\text{Effect size } f^2 = \frac{R^2_{\text{Inclusive}} - R^2_{\text{Exclusive}}}{1 - R^2_{\text{Inclusive}}}
\]

Cohen (2013) suggested that the $f^2$ value of 0.02 is small, 0.15 is medium and 0.35 or above is large. The present study revealed $f^2$ value (see Table 5) of the promotional campaign, attitude, subjective norm, perceived behavioral control, saving motives and Religiosity, respectively 0.14, 0.05, 0.02, 0.03, 0.05 and 0.04, reflecting small effect size.

Discussion and conclusion
The knowledge on behavioral intentions can play critical role in moving an industry one step ahead which requires comprehensive understanding on the determinants of consumers’

<table>
<thead>
<tr>
<th>Latent variables</th>
<th>$f^2$</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>0.14</td>
<td>Small</td>
</tr>
<tr>
<td>ATT</td>
<td>0.05</td>
<td>Small</td>
</tr>
<tr>
<td>SN</td>
<td>0.02</td>
<td>Small</td>
</tr>
<tr>
<td>PBC</td>
<td>0.03</td>
<td>Small</td>
</tr>
<tr>
<td>SM</td>
<td>0.05</td>
<td>Small</td>
</tr>
<tr>
<td>RG</td>
<td>0.04</td>
<td>Small</td>
</tr>
</tbody>
</table>

Note(s): PC = promotional campaign, ATT = attitude, SN = subjective norms, PBC = perceived behavioral control, SM = saving motives, RG = religiosity
Source(s): Authors

Table 5. Effect size of latent variables

<table>
<thead>
<tr>
<th>Total</th>
<th>SSO</th>
<th>SSE</th>
<th>$Q^2 (=1 - SSE/SSO)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATT</td>
<td>1,536</td>
<td>1373.154</td>
<td>0.106</td>
</tr>
<tr>
<td>SM</td>
<td>1,536</td>
<td>1336.917</td>
<td>0.130</td>
</tr>
<tr>
<td>FTPI</td>
<td>1,536</td>
<td>1020.305</td>
<td>0.336</td>
</tr>
</tbody>
</table>

Note(s): ATT = attitude, SM = saving motives, FTPI = family takāful purchase intentions
Source(s): Authors

Table 4. Blindfolding results
purchase intentions. Therefore, this study aimed at examining FTPIs based on extended version of TPB using partial least squares regression model.

**Theoretical implications**
The theoretical implications of the study are that consumers purchase intention is not influenced by only attitude, subject norms and perceived behavior but also with the factors like promotional campaign, saving motives and religiosity, which can be used in predicting prospective customers purchase intentions specially in case of Islamic insurance policies. Furthermore, since the demand for family takāful is not sought (i.e. unsought goods), the information on factors influencing explaining purchase behavior may provide higher understanding on consumer behavior in the country where the demand for Islamic product or services are increasing.

**Practical implications**
Earlier literatures on empirical marketing or on finance highlighted the importance of Islamic marketing, in particular, family takāful. Thus, this study may be supportive to industry actors specially operation managers in the life insurance industry in setting future strategies in the market with higher share of Muslim consumers. It will provide more information for multinational companies to operate more effectively and increasing their market share in the market where majority customers prefers Islamic means in their economic transactions.

**Limitations and future research**
Given the empirical insights of this study, it is constrained by several limitations including the sampling procedure and reluctance of companies providing the information on their product and consumers. The purposive sampling technique may result in biased results; however we have tried to minimize it as much it can be by changing models and variables; and data with curation. The future research can be by adding other factors such as perceived hedonic value and trust, which might impact Muslim employees’ purchase intentions.

**References**


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