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# Predicting the Impacts of Religion and Culture on Intention and Behavior towards Preventing Covid-19: Extending Theory of Planned Behavior

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**ABSTRACT: The aim of this research paper is to predict the impacts of religious and culture on intention and behavior towards prevention of covd-19 by Extending Theory of Planned Behavior model. The researchers developed a new model using the five variables from Ajzen's Theory of Planned Behavior (Perceived Behavioral Control, Subjective Norms, Attitude, Behavior and Intention) and two newly introduced factors (Religious and culture). A Theoretical model is established and nine hypotheses were developed and tested. Data were collected by self-administered structured questionnaires from the communities living in five main cities from west Shoa Zone Oromia National Regional State. For the purpose of data collection the researchers prepared the questionnaires in three languages- Amharic, Afan Oromo and English. From the distributed 2215 questionnaires, 1812 were properly filled and returned for analysis resulting in 81.80% response rate. The questionnaires were loaded in SPSS v20 and the results were analyzed by Pearson correlation, ANOVA and regression analysis. The findings of this research paper revealed that culture(CUL), intention towards corona virus (ITCV), perceived behavioral control towards corona virus (PBCTCV) and religion (REL) accounted for 64.1% of the variation in behavior towards corona virus(BTCV) and culture(CUL),** Subjective Norm **towards corona virus** (**SUBNTCV), attitude towards corona virus (ATTCV), perceived behavior control towards corona virus(PBCTCV) and religion(REL) accounted for 41.7% of the variation in intention towards corona virus(ITCV). Four variables have positive, direct and significant impact on intention and three variables have positive, direct and significant impact on behavior to prevent covid-19.**

**Keywords:** Covid-19, Religion, culture, Intention, Behavior, Theory of Planned Behavior.

## I. INTRODUCTION

The pandemic disease COVID-19 is a virus that badly affected the world from November 2019. It is believed to be leaked out from seafood and live-animal markets. Corona virus had derived its name 'corona' from the Latin word corona that means crown in English. Since a similar kind of virus was announced in 2002, this particular virus is termed as original corona virus, the infection originated in Wuhan, China. This pandemic disease has driven humankind and the worldwide economy into an emergency unheard of, since the Great Recession in 2008. At the time of this study, according to world health organization report in the world more than 14 million cases were recorded among them more than 500,000 people were dead. Similarly in Ethiopia where the study is conducted 10500 cases were reported and 180 deaths were recorded.

According to the study result of [1] COVID-19 doesn't have very high death rate. The recovery rate clearly indicates that this virus is curable. To prevent and control this pandemic disease, the community plays a vital role- by wearing mask, by implementing social distancing, by washing their hand and staying at home. And to engage the community in prevention and control of this pandemic disease, the determinant factors affecting their intention and behavior towards the prevention of corona virus should be clearly identified and studied.

This study was intended to predict the factors affecting intention and behavior of the communities towards corona virus by using extending Theory of Planned Behavior Model.

Theory of planned behavior model (TPB) is a psychological model focuses on explaining behavioral intention towards some action. According to [2, 3] TPB has been used to predict and explain a wide range of health behaviors and intentions, and it states that behavioral achievement depends on both intention and behavior.

Different studies extend theory of planned behavior to predict intention and behavior towards some actions.

The effect of Religion and culture on human behavior and behavioral intention widely studied by psychologists and researchers on health behavior and other actions [4, 5], consumer behavior [6, 7], business, ethical and unethical behavior [8], sexual risk behavior [9, 10], HIV risky behavior [11, 12] and risk behavior such as smoking, drinking, speeding and seat-belt use [11, 12, 13 and 14], Religion on purchasing intention [15], religion on employee behavior [16], impact of Religiosity on Intention to Purchase Luxury Products [17], Role of Religiosity towards Consumer Purchase Behavior [18], the influence of religiosity on safety behavior of workers [19] and Influence of Religiosity on Female Muslim Fashion Trend and Purchase Intention [20].

Among the studied literature [4, 5 and 21] are on effects of religiosity and culture on intention and behavior in human health and [11, 12] are on HIV risky behavior

involved to predict the effects of religiosity on behavior. But no studies were conducted to predict the effects of religion and culture on intention and behavior towards corona virus by extending TPB model. So this research paper is intended to fill this gap by predicting the effects of religion and culture towards the prevention of Covid-19 in human behavior and intentions by extending TPB model.

## II. LITERATURE REVIEW

### *A. Theory of Planned Behavior (TPB)*

For the first time IcekAzjen in 1985 introduced the model called Theory of Planned Behavior (TPB) which was a development of Theory of Reason Action (TRA) [22]. TPB has three variables leading to Intention which are Attitude toward the Behavior, Perceived Behavioral Control and Subjective Norms [2, 23]; in addition the third variable Perceived Behavioral Control is leads to Behavior. Based on [22] Attitude denotes to personal evaluations that are beneficial to conduct behavior and it is the level of likes or dislikes of someone to conduct behavior, it is psychological emotions that are directed through once evaluation and if attitude is positive, behavioral intentions tend to be more positive [24]. Also according to [25] Attitudes include evaluating whether the behavior is considered well or bad, and whether the player wants to behave or not. The second determinant of intention is subjective norm. It is individual perceptions of social pressure to do or not to conduct a behavior [26]. According [27] individual perceptions relate to most of the people who are important to the parents, relatives, colleagues or business, etc. expecting individuals to do or not act certain behavior, people who are important to him are then used as a benchmark for directing behavior. [28] Ascertain that a person's behavior is influenced by his observations of the behavior of others in certain settings. The third TPB model variable is Perceived Behavioral control and it is the most important when it comes to behavior under will control. According to [2] the term perceived behavior control is refers to perceived ease or difficulty performing behavior, it reflects past experiences and estimated problems. Human being with a higher level of control tends to have stronger behavioral intentions in selected behaviors [2]. According to [29, 30] Perceived Behavioral Control (PBC denotes to the level of control that an individual perceives for behavior. In other words, PBC is an assessment of the ability or inability to display a person's behavior or judgment about how easy or how difficult it is to display something.

And also it refers to the level of difficulty a person feels when performing certain behaviors where the more opportunities and resources available to a person, the greater the individual's control over the behavior [24, 31].

PBC helps to predict behavior that individuals want to do but cannot be done because of lack of opportunities or resources like time, money and skills.

### *B. Religion*

Based on the definition of World Health Organization [32], religion is defined as a belief in the existence of a mystic ruling power, the creator and controller of the universe, who has given to man a mystical nature which continues to exist after the death of the body. According to [33] Religion is defined as the degree to which individual connect themselves to certain beliefs and formality. It is a component of culture and it refers to the set of beliefs that people holds, the most significant and populated characteristics of a person which impacts his lifestyle and behaviors to move around. There are three major components for understanding religious behavior: cognitive which refers to thinking, culture which refers to feeling and the code which refers to striving [34]. According to [35] religion can make important influence in lives of individuals. It can shape one's life by giving happiness, enjoyment, inner peace, promise and guidance regarding access to social contacts and to engage in interpersonal relationships. It is one of the important factors which are considered as the most universal and influential public organization, which can make a strong impact on people's attitudes, values and behaviors at individual as well as societal levels [36]. Different studies illustrated the effects of religion on intention and behavior by extending TPB model for example [37] found that religiosity was positively related to Internet engagement in online religious activities, [38] showed the link among religion, intentions and employee behavior, [39] also found that religiosity was significantly and positively related to behavioral intention. These studies showed consistency in incorporating religiosity as the determinant of behavioral intention in TPB.

Therefore, this research paper believed that using religion as the key factors affecting intention and behavior to predict covid-19 by extending TPB.

### *C. Culture*

According to [40] culture is the common psychological meanings and collective practices that distinguish one nation from another. The common cultural meanings have been used in various ways, such as cultural values [40-42], self-construal's [43], thinking styles [44] and regulatory focus [45]. According to the study by [46] cultural beliefs played an important role that contributed to the distribution of uncontrolled disease like Ebola. They propose that an identification of the crucial cultural parameters of the wide spread is vital to the development of an efficient control strategy. [47] also consider the essential role of culture in the Ebola epidemic in African countries. Cultural practices by some of the West African communities are also found to have an adverse impact on the outbreak of the diesis. For example, there is a common belief that outbreaks are a consequence of crime against God and for which God hit people with diseases and also some argue that the pandemic diesis like coronavirus out break is God's punishment. For the remedial process of pandemic diesis, most of the community strongly believes that traditional and spiritual medication has a great role for preventing pandemic dieses. The existing cultural beliefs sometimes represent a challenge for healthcare providers in communicating the causes and nature of outbreak to the communities in a meaningful way. In some cultural paradigms implementing effective pandemic prevention mechanism is challenging, cultural ceremonials like washing the dead body with bare hands, spending time with the dead body, covering their bodies with bag and cloth [48]. According to [49] areal cultural structure affects the result of preventing

pandemic. And also certain cultural practices can have an adverse impact by serving as modes of transmission. The review by [50] indicated that the role of cultural values and emotions as predictors of behavior or behavioral intention. The study by [51] concludes that cultural factors influence behavioral

**Theoretical Model:** The researchers developed theoretical model by extending theory of planned behavior models to predict the effects of religion and culture on intention and behavior towards the prevention of corona virus. The developed theoretical models consider the effects of: - independent variables (Religion(REL) and culture (CUL)) on dependent variable (intention towards corona virus(ITCV) and Behavior towards corona virus(BTCV)), independent variables(subjective norms towards corona virus (SUBNTCV), attitude towards corona virus (ATTCV) and perceived behavioral control towards corona virus (PBCTCV)) on dependent variables (intention towards corona virus (ITCV)).

To determine or predict the effects of independent variables on dependent variables structural equation modeling was used

$Y_1 = \beta_O + \beta_1$ ATTCV $+\beta_2$ SUBNTCV $+\beta_3$ PBCTCV $+ \beta_4$ REL $+ \beta_5$ CUL

$Y_2 = \beta_O + \beta_1$ ITCV $+\beta_2$ PBCTCV $+\beta_3$ REL $+ \beta_4$ CUL

Where $Y_1$= ITCV= Intention towards coronavirus

$Y_2$= BTCV= behavior towards coronavirus

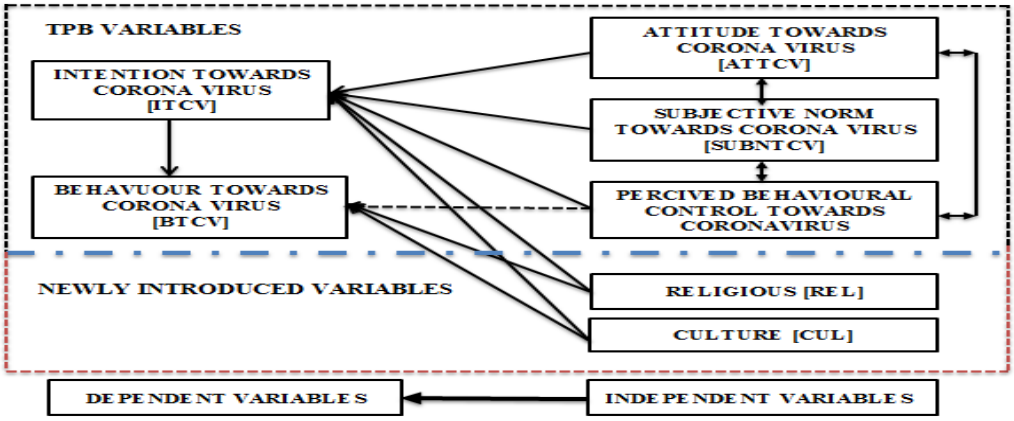


**Fig. 1.** Theoretical Model developed by the researcher by extending TPB.

**Research Hypothesis.** The following nine research hypotheses were hypothesized based on the theoretical model to predict the effects of independent variables on dependent variable.

**HYPOTHESIS-1**:- Subjective Norm has a positive and direct effect on intention towards coronavirus.

**HYPOTHESIS-2**:- Attitude has a positive and direct effect on intention towards coronavirus.

**HYPOTHESIS-3**:-Perceived Behavioral Control has a positive and direct effect onintention towards coronavirus.

**HYPOTHESIS-4**:- Religionhas a positive and direct effect on intention towards coronavirus.

**HYPOTHESIS-5**:- Culture has a positive and direct effect on intention towards coronavirus.

**HYPOTHESIS-6**:- Intention has a positive and direct effect on Behavior towards coronavirus

**HYPOTHESIS-7**:- religion has a positive and direct effect on Behavior towards coronavirus

**HYPOTHESIS-8**:- Culture has a positive and direct effect on Behavior towards coronavirus.

**HYPOTHESIS-9**:- perceived behavioral has a positive and direct effect on Behavior towards coronavirus.

## III. RESEARCH METHODOLOGY

### *A. Research design, Target Population and Response Rate*

This research Paper used inferential statistic for analyzing the data. The researcher was distributed self-administered structured questionnaire to the respondent. The questionnaire was prepared in three languages Amharic, Afan Oromo and English. Totally 2215 questionnaires were prepared and randomly distributed to the communities lived in Oromia National Regional State, West Shoa Zone for 5 Woreda (District) cities ( Ambo, Guder, Ginchii, Holeta, Bako Tibe, Adisalem). From the distributed 2215 papers 81.8% (1812) of the papers were filled and returned.

### *B. Data Collection and Analysis Instrument*

The survey questionnaire was used as the main primary data gathering instrument in this research study. The questionnaire used a 5 point Likert scale representing 1=strongly disagree, 2= disagree, 3=neutral, 4= agree, and 5=strongly agree having 9 items under ITCV and BTCV variables and 43 items under ATTCV, SUBNTCCV, PBCTV, REL and CUL. Correlation Strength Interval was developed for Pearson's Correlation analysis as shown in

Table 1. Data was analyzed using correlation and regression analysis method.

**Table 1: Correlation strength interval.**

| S.No. | Interval | Strength of Relationship |
|---|---|---|
| 1 | 1.0 < r < 0.5 | STRONG |
| 2 | 0.3 < r < 0.5 | MODERATE |
| 3 | 0.1 < r < 0.3 | WEAK |
| 4 | 0.0 < r < 0.1 | VERY WEAK |

## IV. DATA ANALYSIS

*A. Respondents Profile*

The result in Table 2 showed that 687(37.9%) were aged between 31-40 years being the highest frequency. Respondents between 41-50 years were 417(23%), over 51 years of age 374(20.6%) and 20-30 years were 334(18.4%).From the total number of respondent 1146(63.2%) were male and 666(36.8%) were female. And 139(67.5%) of the respondent were married, 60(29.1) were single and 7(3.4) were divorced. As the result in table 2 indicated among 1821 respondents 512(28.3%) were diploma holder, 646(35.7%) were BSC holder, 190(10.5%) were MSc holder, 96(5.3%) were above MSC, holders and 368(20.5) were non-educated. Concerning the religion of the respondent 619(34.2%) were Orthodox, 234(12.9%) were Muslim, 830 (45.8%) were Protestant, 63(3.5%) were Waqefata, 45(2.5%) were other types of religious follower and 21(1.2%) were Non-Religious.

*B. Reliability Analysis*

This research work used reliability analysis to test the consistency and stability of the research questionnaires. The researcher tested the reliability of the questionnaire by using SPSS version 20.Tables 2 shows the reliability result of the questionnaire before and after some of the questionnaires were removed. As per the result of the analysis the value of Cronbach's alpha (α) was fall between 0.702 and 0.897, which indicated higher reliability of the questionnaire.

**Table 2: Respondent Profile.**

| S.No. | Description | | Frequency | % |
|---|---|---|---|---|
| 1. | Age | 20-30 | 334 | 18.4 |
| | | 31-40 | 687 | 37.9 |
| | | 41-50 | 417 | 23.0 |
| | | Over 51 | 374 | 20.6 |
| 2. | Sex | Male | 1146 | 63.2 |
| | | Female | 666 | 36.8 |
| 3. | Education | Diploma | 512 | 28.3 |
| | | Bsc | 646 | 35.7 |
| | | Msc | 190 | 10.5 |
| | | Above MSC | 96 | 5.3 |
| | | Non Educated | 368 | 20.3 |
| 4. | Religion | Orthodox | 619 | 34.2 |
| | | Muslim | 234 | 12.9 |
| | | Protestant | 830 | 45.8 |
| | | Waqefata | 63 | 3.5 |
| | | Other | 45 | 2.5 |
| | | Non-Religious | 21 | 1.2 |
| 5. | Marital Status | married | 139 | 67.5 |
| | | single | 60 | 29.1 |
| | | divorced | 7 | 3.4 |

**Table 3: Reliability Analysis Result.**

| S.No. | Explanation | After {Before } | Cronbach's Alpha (α) | |
|---|---|---|---|---|
| | | | Before element is deleted | After element is deleted |
| 1. | Attitude Towards Coronavirus (ATTCV) | 12{9} | 0.778 | 0.847 |
| 2. | Subjective Norm Towards Coronavirus (SUBNTCV) | 11{7}} | 0.742 | 0.831 |
| 3. | Perceived Behavioral Control Towards Coronavirus (PBCTCV) | 7{6} | 0.695 | 0.727 |
| 4. | Intention Towards Coronavirus (ITCV) | 17{14} | 0.665 | 0.707 |
| 5. | Behavior Towards Coronavirus (BTCV) | 5{5} | 0.709 | 0.702 |
| 6. | Religion (REL) | 17{12} | 0.790 | 0.864 |
| 7 | Culture (CUL) | 9{9} | 0.897 | 0.897 |

*C. Correlation Analysis*

The study used correlation analysis to examine the strength of the relationship between ITCV and (SUBNTCV, PBCTV, REL and CUL), and BTCV and (ITCV, PBCTV, REL and CUL). The result in Table 3 indicated that SUBNTCV, PBCTV, REL and CUL have positive and significant impact on intention towards coronavirus. In addition the result confirmed that ITCV, PBCTV and CUL have positive and significant impact on behavior towards coronavirus. On the other hand the result in Table 3 indicated that REL has negative and insignificant impact on behavior towards coronavirus.

**Table 4: Correlation result (N=1812).**

| Dependent==➔ independent variables | r(p) | Dependent ==➔ independent variables | r(p) |
|---|---|---|---|
| ITCVM==➔ ATTCVM | 0.170**(0.000) | BTCV==➔ ITCVM | 0.608**(0.000) |
| ITCVM==➔ SUBNTCV | 0.262**(0.000) | BTCV==➔ PBCTCVM | 0.004(0.862) |
| ITCVM==➔ PBCTCVM | 0.249**(0.000) | BTCV==➔ RELM | -0.001(0.971) |
| ITCVM==➔ RELM | 0.218**(0.000) | BTCV==➔ CUL | 0.009(0.694) |
| ITCVM==➔ CUL | 0.307**(0.000) | | |

**. Correlation is significant at the 0.01 level (2-tailed). 170** =Pearson Correlation, 000= Sig. (2-tailed)

*D. Regression Analysis*

The Regression analysis was carried out to identify the association between ITCV and (SUBNTCV, PBCTV, REL and CUL), and BTCV and (ITCV, PBCTV, REL and CUL).

The result in Table 6 indicated that four predictors' variables (CUL, ITCVM, PBCTCV and REL) accounted for 64.1% of the variation in behavior towards coronavirus (BTCV) and 35.9% of the variables are unidentified variables by this research. And also the result in this table confirmed that that four predictors' variables (CUL, SUBNTCV, ATTCV, PBCTCV and REL) accounted for 41.7% of the variation in intention towards coronavirus (ITCV) and 58.3% of the variables are unidentified variables by this research.

The result of model 2 indicated in Table 5 and 6 revealed that the importance of the model by the value of *F*-statistics ($p$ = 0.000 and $F$ = 315.108), ($p$ = 0.000, and $F$ = 75.891) which indicated that there were strong relationship between BTCV and (CUL, ITCVM, PBCTCVM, RELM), ITCV and (CUL, SUBNTCVM, ATTCVM, PBCTCVM and RELM) respectively in the case areas.

**Table 5: Model Summery.**

| Model | R | $R^2$ | Adjusted $R^2$ | $R^2$ Change | |
|---|---|---|---|---|---|
| 1 | 0.411 | 0.641 | 0.640 | 0.7042 | Predictors: (Constant), CUL, ITCVM, PBCTCV, REL |
| 2 | 0.174 | 0.417 | 0.414 | 0.414 | Predictors: (Constant), CUL, SUBNTCV, ATTCV, PBCTCV, REL |
| Sig. F Change.000 | | | | | |

**Table 6: Results of ANOVA.**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 320.192 | 4 | 80.048 | 315.108 | .000[b] |
| | Residual | 459.039 | 1807 | .254 | | |
| | Total | 779.232 | 1811 | | | |

a. Dependent Variable: **BTCV**

b. Predictors: (Constant), **CUL, ITCVM, PBCTCVM, RELM**

**Table 7: Results of ANOVA.**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 65.537 | 5 | 13.107 | 75.891 | .000[b] |
| | Residual | 311.918 | 1806 | .173 | | |
| | Total | 377.455 | 1811 | | | |

a. Dependent Variable: ITCVM

b. Independent element: CUL, SUBNTCVM, ATTCVM, PBCTCVM, RELM

**HYPOTHESIS TESTING.** To investigate the impacts of (Religion (REL) and culture (CUL)) on dependent variable (intention (ITCV) and Behavior (BTCV) towards coronavirus), independent variable (subjective norm (SBNTCV), attitude (ATTCV) and perceived behavioral control (PBCTCV)) on dependent variables (intention towards coronavirus) and to test to test the developed hypothesis regression analysis was used.

**HYPOTHESIS-1**:- Subjective Norm has a positive and direct effect on intention towards coronavirus.

Figure 2 below shows a significant contribution of Subjective Norm on intention towards coronavirus with (β= 0.253, p=0.000).Therefore validating (confirming H1).

**HYPOTHESIS-2**:- Attitude has a positive and direct effect on intention towards coronavirus.

Fig. 2 below shows a significant contribution of Attitude on intention towards coronavirus with (β= 0.050, p=0.000).Therefore validating (confirming H2)

**HYPOTHESIS-3**:-Perceived Behavioral control has a positive and direct effect on intention towards coronavirus

Fig. 2 below shows a significant contribution of Perceived Behavioral control on intention towards coronavirus with (β= 0.160, p=0.000).Therefore validating (confirming H3)

**HYPOTHESIS-4**:- Religion has a positive and direct effect (impact) on intention towards coronavirus

As show in figure 2 the coefficient of Religionhas no statistical significant contribution on intention towards coronavirus (β = -0.063, p=0.269). Therefore hypothesis-4 is rejected.

**HYPOTHESIS-5**:- Culture has a positive and direct effect on intention towards coronavirus

Figure 1 below shows a significant contribution of Culture on intention towards coronavirus with (β= 0.238, p=0.000).Therefore validating (confirming H5)

**HYPOTHESIS-6**:- Intention has a positive and direct effect on Behavior towards coronavirus

Fig. 2 below shows a significant contribution of Intention on Behavior towards coronavirus with (β= 0.679, p=0.000). Therefore validating (confirming H6)

**HYPOTHESIS-7**:- Religion has a positive and direct effect on Behavior towards coronavirus

As show in figure 2 the coefficient of Religion has no statistical significant contribution on Behavior towards coronavirus (β = -0.003, p=0.926). This indicates that there was no statistical significant relationship between these variable. Therefore rejecting hypothesis-7

**HYPOTHESIS-8**:- Culture has a positive and direct effect on Behavior towards coronavirus

Figure 2 below shows a significant contribution of Culture on Behavior towards coronavirus with (β= 0.156, p=0.000).Therefore validating (confirming H8)

**HYPOTHESIS-9**: Perceived Behavioral has a positive and direct effect on towards coronavirus

Fig. 2 below shows a significant contribution of Perceived Behavioral on Behavior towards coronavirus with (β= 0.256, p=0.003). Therefore validating (confirming H9).

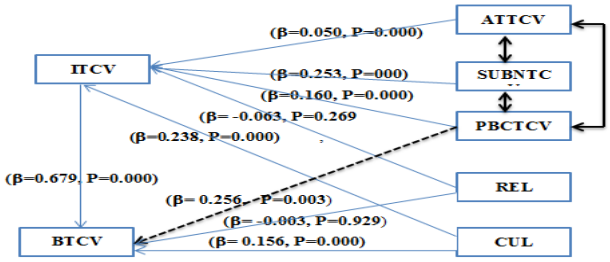


**Fig. 2.** Model's Estimates Consisting of β Path Coefficients with their Probability Values (p).

## V. CONCLUSION

The aim of this research paper was to predict the effects of (CUL, ITCV, PBCTCV, REL) on BTCV and (CUL, SUBNTCV, ATTCV, PBCTCV and REL) on ITCV respectively. The finding of this research paper revealed that CUL, ITCV, PBCTCV and REL accounted for 64.1% of the variation in behavior towards coronavirus (BTCV) and CUL, SUBNTCV, ATTCV, PBCTCV and REL accounted for 41.7% of the variation in intention towards coronavirus (ITCV). The influential factors of intention (ITCV) and behavior (BTCV) were explained by five and four variables that accounted for 41.7% and 64.1% of the variations respectively. Four predictor variables, SUBNTCV, ATTCV, PBCTCV and CUL have positive and significant impact or influence on intention and three variables ITCV, CUL and PBCTCV have positive and significant impact or influence on behavior for the prevention of covid-19. From the two newly introduced variables culture has proved to be the strong and influential determinant factor of intention and behavior in the prevention of covid-19. Regarding TPB variables Subjective Norm, Attitude, Perceived Behavioral Control ant Intention, culture were identified as the strong and influential factors of Intention and Behavior respectively in the prevention of this pandemic diesis. To change the intention and behavior of the community the concerned organization like Regional and Federal Health office, covid-19 command post should give due attention to these key and influential factors.

## REFERENCES


[1]. Raghavendran, C. V., Satish, G. N., Krishna, V. and Basha, S. M. (2020). Predicting Rise and Spread of COVID-19 Epidemic using Time Series Forecasting Models in Machine Learning. *International Journal on Emerging Technologies, 11*(4): 56–61.

[2]. Ajzen I (1991). The Theory of Planned Behavior. Organizational Behavior and Human Decision Processes, *50*:179–211.

[3]. Fishbein M. (2003). Questions raised by a reasoned action approach: Reply to Ogden. Health Psychology.

[4]. Creel, D. B. (2007). Assessing the influence of religion on health behavior. (Doctoral dissertation), Louisiana State University.

[5]. Dodor, B. (2012). The impact of religiosity on health behaviors and obesity among African Americans. *Journal of Human Behavior in the Social Environment, 22*(4): 451–462.

[6]. Mokhlis, S. (2006). The influence of religion on retail patronage behavior in Malaysia. (Doctoral dissertation). University of Sterling.

[7]. Lau, T. C., Choe, K. L., & Tan, L. P. (2011).Ascertaining the roles of money and religiosity in unethical consumer situations. *Australian Journal of Basic and Applied Sciences, 5*(8): 234–239.

[8]. Aydemir, M., &Egilmez, O. (2010). An important antecedent of ethical/unethical behavior: Religiosity. *Eurasian Journal of Business and Economics, 3*(6):71–84.

[9]. Campbell, H. D. (2008). An examination of the relationship between spirituality and religion and selected risk-taking behaviors in college underclassmen. (Doctoral dissertation).Faculty of the Virginia Polytechnic Institute, State University

[10]. Haglund, K., & Fehring, R. (2009).The association of religiosity, sexual education, and parental factors with risky sexual behaviors among adolescents and young adults. *Journal of Religion and Health, 49*(4): 460-472.

[11]. Trinitapoli, J., & Regnerus, M. D. (2006). Religion and HIV risk behaviors among married men: Initial results from a study in rural sub-Saharan Africa. *Journal for the Scientific Study of Religion, 45*(4): 505–528.

[12]. Sanchez, M. (2012). Influence of religious coping on the substance use and HIV risk behaviors of recent Latino immigrants. (Doctoral dissertation).Florida International University.

[13].Cazzell, M. (2009). College student risk behavior: Implications of religiosity and impulsivity. (Doctoral dissertation). The University of Texas at Arlington.

[14]. Sinha, J. W., Cnaan, R. A., & Gelles, R. W. (2007). Adolescent risk behaviors and religion: Findings from a national study. *Journal of Adolescence, 30*(2): 231–249.

[15]. Yuswar Z. B and Fitri K.(2019). Effect of Religiosity and Halal Awareness on Purchase Intention Moderated by Halal Certification.*International Conference on Economics, Management, and Accounting*.

[16]. Arsalan M. G., Naveed R. K. & Omar b. A. K. (2016). Improving Employees Behavior through Extension in Theory of Planned Behavior: A Theoretical Perspective for SMEs. *International Journal of Business and Management, 11*(11).

[17]. Muhammad H. H., Saba A., Asif Y. and Amna H. (2017). Do They Care What They Believe? Exploring the Impact of Religiosity on Intention to Purchase Luxury Products. *Pakistan Journal of Commerce and Social Sciences, 11*(2): 428-447

[18]. Faheem B. Saima H., Rizwan R. A. , Dalia S., Riaz H. S. and Zahid A.C. ( 2020). Motives and Role of Religiosity

towards *Consumer Purchase Behavior in Western Imported Food Products Sustainability, 12*(356).
[19]. Mahmud, M. and Yusof, S. M. (2018). The Influence of Religiosity on Safety Behavior of Workers: A Proposed Framework. *Social Sciences & Humanities, 26* (1): 1 – 20.
[20]. Sulis R., and Harini A. S. (2019). Does Islamic Religiosity Influence Female Muslim Fashion Trend Purchase Intention? An Extended of Theory of Planned Behavior, IQTISHADIA, *12*(1)
[21]. Kutcher, E. J., Bragger, J. D., Srednicki, O. R., & Masco, J. L. (2010). The role of religiosity in stress, job attitudes and organizational citizenship behavior. *Journal of Business Ethics, 95*(2): 319–337
[23] Fishbein, M. (2003). Questions raised by a reasoned action approach: Reply to Ogden. Health Psychology
[22] Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. Reading, MA, Don Mills, Ontario: Addison-Wesley.
[24]. Chen, M, F., and Tung, P, J. (2014). Developing an Extended Theory of Planned Behaviour Model to Predict Consumers' Intention to Visit Green Hotels. *International Journal Hospitality Management, 36*: 221–230.
[25] Leonard, M., Graham, S., and Bonacum., D. (2004). The Human Factor: The Critical Importance of Effective Teamwork and Communication in Providing Safe Care. *Quality Safety Health Care, 13*: 85-90.
[26]. Ajzen, I., &Fishbein, M. (2005).The influence of attitudes on behavior. In D. Albarracin, B. T. Johnson, & M. P. Zanna (Eds.), the handbook of attitudes, 173–221. Mawah, NJ: Erlbaum.
[27]. Baron, R.A and Byrne, D. (2003). Social Psychology. Boston: Allyn & Bacon.
[28]. Bandura, A. (1986).Social Foundations of Thought and Action. Englewood Cliffs.Nj: Prentice-Hall
[29]. Chen, M. (2007). Consumer Attitudes and Purchase Intentions in Relation to Organic Foods in Taiwan: Moderating Effects of Food-Related Personality Traits. *Food Quality and Preference, 18*(7): 1008-1021.
[30]. Kang, H., Hahn, M., Fortin, D., Hyun, Y.J. and Eom, Y. (2006).Effects of Perceived Behavioral Control on the Consumer Usage Intention of e-Coupons. *Psychology & Marketing, 23*(10): 841-64.
[31]. Jain, Sheetal., Mohammed Naved., and Khan Sita Mishra. (2017). Understanding Consumer Behavior Regarding Luxury Fashion Goods in India Based on the Theory of Planned Behavior. *Journal of Asia Business Studies, 11*(1).
[32]. World Health Organization: African traditional medicine day.
[33]. Esso, N., & Dibb, S. (2004). Religious influences on shopping behavior: An exploratory study. *Journal of Marketing Management, 20*(7-8): 683-712.
[34]. Meadow, M. J., & Kahoe, R. D. (1984). Psychology of religion: Religion in individual lives. New York, NY: Harper & Row.
[35]. Rohrbaugh, J., & Jessor, R. (1975). Religiosity in youth: A personal control against deviant behavior1. *Journal of Personality, 43*(1); 136-155.
[36]. Teimourpour, B., & Heidarzadeh Hanzaee, K. (2011).The impact of culture on luxury consumption behaviour among Iranian consumers. *Journal of Islamic Marketing, 2*(3): 309-328.
[37]. Ho, S. S., Lee, W., & Hameed, S. S. (2008). Muslim surfers on the internet: Using the theory of planned behavior to examine the factors influencing engagement in online religious activities. *New Media Society, 10*(1): 93–113.
[38]. Arsalan M. G., Naveed R. K. & Omar B. Abdul K.(2016).Improving Employees Behavior through Extension in Theory of Planned Behavior: A Theoretical Perspective for SMEs. *International Journal of Business and Management, 11*(11).
[39]. Alam, S. S., Janor, H., Zanariah, CheWel, C. A., & Ahsan, M. N. (2012). Is religiosity an important factor in influencing the intention to undertake Islamic home financing in Klang Valley? *World Applied Sciences Journal, 19*(7): 1030–1041.
[40]. Hofstede G. S., Beverly H., C. A. (1980). Culture's consequences: International differences in work-related values.
[41]. Schwartz S.H., Bilsky W (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology, 53*(3): 550–562.
[42]. Triandis H.C. Westview Press; Boulder, CO: (1995). Individualism and collectivism.
[43]. Markus H.R., Kitayama S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*(2): 224–253.
[44]. Spencer-Rodgers J., Williams M.J., Peng K. (2010). Cultural differences in expectations of change and tolerance for contradiction: A decade of empirical research. *Personality and Social Psychology Review, 14*(3): 296–312.
[45]. Higgins E.T., Pierro A. Kruglanski A.W. (2008). Re-thinking culture and personality: How self-regulatory universal create cross-cultural differences. In: Sorrentino R.M., Yamaguchi S., editors. Handbook of motivation and cognition across cultures, Elsevier; New York 161–190.
[46]. Agusto F., Teboh-Ewungkem M., Gumel A. (2015). Mathematical assessment of the effect of traditional beliefs and customs on the transmission dynamics of the 2014 Ebola outbreaks. *BMC Med.13* (1): 96.
[47]. Manguvo A, Mafuvadze B. (2015). The impact of traditional and religious practices on the spread of Ebola in West Africa: time for a strategic shift. *Pan Africa Medical Journal 22*(1).
[48]. Coltart CE, Lindsey B, Ghinai I, Johnson AM, Heymann D. (2013). The Ebola outbreak, 2013–2016: old lessons for new epidemics. *Phil Trans R Social Behavior, 372*(1721).
[40]. Guitellerst, V. Saeed A. (2019). The Importance of Culture in Managing Mental Health Response to Pandemics.
[50]. Christopher J. White (2005). Culture, Emotions and Behavioural Intentions: Implications for Tourism Research and Practice, Current Issues in Tourism, *8*(6).
[51]. Ben Shaw-Ching L., Olivier F. and Sudharshan, D. (2001). The Relationships between Culture and Behavioral Intentions toward Services. *Journal of Service Research, 4*(2): 118-129.

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