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RELATING THEORY OF PLANNED BEHAVIOR WITH THE PURCHASE OF OVER THE COUNTER MEDICINES IN KARACHI CITY

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Abstract

Self-Medication and purchase of over-the-counter medicine are common in developing countries. However, very limited research work was found on the purchase of over-the-counter medicine and self-medication in developing countries. Similarly, no study relates the theory of planned behavior with over-the-counter medicine purchases. Hence, to bridge these gaps associated with knowledge, evidence, and theoretical assumptions, this study has been conducted purposely to examine the relationship of the theory of planned behavior with the purchase of over-the-counter medicine. Hence, the significance of this study has multiple folds as the study aids in fulfilling evidence gaps concerning developing and Asian Markets but will also overcome knowledge gaps & theoretical gaps. However, data collection for this study is a challenging task and to achieve the uphill task researchers used the convenience sampling method to collect data from the urban areas of Karachi. Analysis has been made through using SMART-PLS and findings of the study revealed that the use of the theory of planned behavior is a valid action and usage of the theory of planned behavior revealed that external factors used in the study are significant in shaping the customer's attitude towards the purchase of over the counter medicine.

Keywords: *Over the counter Products, Self Medication, Purchase of Over the Counter Products, Theory of Planned Behavior, Customer's Attitude, Intention to purchase & External Factors*

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1. INTRODUCTION

Products offered by pharmaceutical companies can be categorized into two types i.e., medicines that are available without prescription and that cannot be purchased without prescription from physicians. Technically the prior types of drugs are termed over-the-counter medicine while the latter one is termed Rx medicine. Over-the-counter medicines are those that do not require any prescription or administration. Mover, these forms of medicine are not only perceived as safe options for minor health-related issues but are also available for convenience (Cîrstea et al., 2017). The world witnessing an increase in the use of non-prescription medicine for a long time. According to research, the most prevalent form of medical care has been done through using non-prescribed medicines. Since 2008 there has been a continuous inclination in the sales of non-prescription medicine and forecasts revealed that the pattern will continue to continue. Reasons for the surge in sales are multiple but the most common and progressive is the convenience in the use of over-the-counter medicine (OTC) for minor health issues. However, there are also some other reasons for the surge in the use of OTCs as one of the other reasons for this surge is increase in the level of literacy and use of the internet and also the availability of more alternatives in the category of OTC medicines. These practices are even common in under-developed or less-developed economies where most of the health related problems are solved by self-medication through using OTCs in-expensive and easily available products (Temechewu & Gebremedhin, 2020).

According to studies, there is a difference in general consumer behavior and consumer behavior related to the buying of medicine. However, we do not have ample research that may relate consumer buying to the purchase of medicine. Similar is the case related to the consumer buying behavior related to OTC medicine (Habash & Al-Dmour, 2020). Contrary to this previous studies e.g., Temechewu and Gebremedhin (2020) indicated that OTC medicine is purchased most frequently due to an increase in the level of literacy, an increase in the use of the internet, and the availability of multiple options in the market for the treatment of minor health issues. However, according to studies consumer behavior related to the purchase of OTC medicine has been influenced by both internal and external factors. Research about Asian Developing markets indicates an increase in the purchase of OTC medicine and highlights that most of the time OTC medicines are purchased by people who follow healthy lifestyles and most of the time their buying behavior is not based upon consultation with physicians. Other than that these forms of people rely more on their knowledge and understanding related to diseases and their cures (Yousif, 2016).

Similar is the case of Pakistan where ease of access to medicine, lower health care knowledge, excessive marketing, and lack of public health care facilities are causing serge in the self-medication. Studies also evident the surge in sales of OTC medicine in Pakistan (Aziz et al., 2018)

Statement of Problem

Studies termed that consumer behavior related with the purchase of medicine is much different from purchase of other items. However, there is a lack of studies that may substantiate an understanding of consumer behavior related to the purchase of medicine. Especially important to understand the consumer behavior related to non-prescription medicines that are purchased as OTC medicine (Habash & Al-Dmour, 2020). Studies also indicated that there is a severe lack of studies that may associate the purchase of OTC medicine with consumer buying behavior (Temechewu & Gebremedhin, 2020).

Similarly, Habash and Al-Dmour (2020) reflected that studies conducted to assess the impact of factors related to the purchase of OTC medicine haven't related these factors with intention to purchase collectively. That means most of the studies conducted to assess reasons to purchase OTC are either based on demographic factors like age, gender, and income or studies that do not use intention to purchase in the research model. One of the studies from Malaysia i.e., Jinnah et al (2020) uses the theory of planned behavior to relate the purchase of OTC medicine with consumer buying behavior. However, the study didn't relate external or internal factors to customer intention to purchase OTC medicine.

Similar is the case of Pakistan where there is a significant lack of research that may reveal the reason and pattern of the purchase of OTC medicines and self-medication (Aziz et al., 2018), Other than these points few of the studies that examined the reasons to purchase OTC medicine were not directed to relate the purchase of OTC medicine with consumer buying behavior e.g., Aqeel et al (2014); Aziz et al (2018) and Yousif (2016). On the other hand, none of these mentioned studies capitalized on the population from Mega city Karachi. Therefore the major aim of this study is to collect data from Karachi and relate it with consumer buying behavior.

Theoretical Framework

The study by Jinnah et al (2020) used the theory of planned behavior with the purchase of OTC medicine. The theory is an extension of the Theory of Reasoned Action (TRA) that was introduced initially by Ajzen (1991). However, the relation of the theory of planned behavior with the purchase of OTC was mandatory as most of the studies haven't related the purchase and motivating factors with the purchase of OTC to consumer behavior Habash and Al-Dmour (2020). Hence, in connection with Ajzen (1991); Habash and Al-Dmour (2020), and Jinnah et al (2020) the theory used for assessing the relationship between variables is theory of planned behavior.

Research Model

According to the previous studies related to the purchase of OTC medicine the purchase tiger either by internal or external factors. Internal factors include demographic characteristics, experience with the brand, and country of origin. On

the other hand, external factors include recommendations from physicals, recommendations from pharmacists, price and direct-to-consumer advertising, etc (Habash & Al-Dmour, 2020). One of the other studies highlighted the ten most important factors that influence the purchase of OTC medicine and indicated the ten most influential factors that may affect the purchase of OTC medicine (Cîrstea et al., 2017).

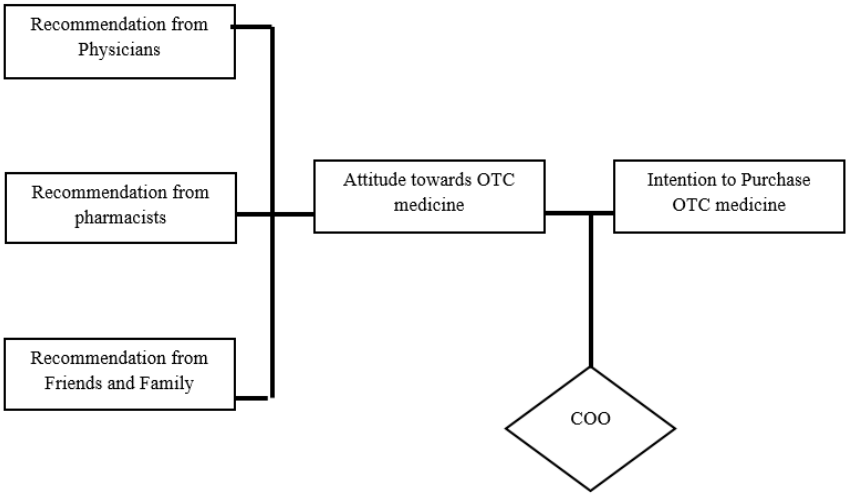

Figure 1: Conceptual Framework and Research Model

However, these factors were not divided into internal and external factors but using the reference of Habash and Al-Dmour (2020) we have identified most influential external factors, from the study of Cîrstea et al., (2017) i.e., recommendation from physician, recommendation from friends and family member, recommendation from pharmacist and Price. However, price is also highlighted as one of the most important moderating variables by Srivastava and Wagh (2017). Thus this study excluded price and used country of origin that is also used as the moderating variable by multiple studies including Srivastava and Wagh (2017). Instead of price this study uses country of origin as the moderating variable through referencing the study of Kevrekidis et al (2021). In addition to these parameters this study also uses Jinnah et al (2020) for finalization of the research model. The major reason to refer to Jinnah et al (2020) is the use of theory of planned behavior and highlight the importance and use of customer's attitude and customer's intention to purchase as the mediating and outcome variable.

Thus combining all these points this study uses customer's attitude and customer's intention to purchase as the mediating and dependent variable. The study also has three independent variables i.e., the recommendation from a physician, the recommendation from the pharmacist, and the recommendation from friends and family members. Hence, the overall purpose of this study is to make readers understand the influence of major external factors on the purchase of OTC medicine. This is one of the unique works that has never been conducted earlier and this study will be one of the major stones in research related to the

purchase of OTC medicine in developing and Asian markets.

Significance of the Study

In light of the above points and discussion, it is legitimate to highlight that the significance of this study has multiple folds as this study does not only address the concern of scholars, students, and academicians. This postulate seems to be true as the detailed theoretical framework and conceptualization related to this study make it consistent with better understanding, conduction of further academic and pragmatic research work, and better policy-making related to the purchase of OTC medicine. Hence, this study is pervasive and tends to provide holistic benefits to communities, society, academia, industry, etc.

2. LITERATURE REVIEW

Recommendation from Physicians:
Doctors indicated the excessive pressure from sales reps of pharmaceutical companies to make recommendations for particular brands of pharmaceutical companies. Studies also mentioned the use of monetary and non-monetary rewards by sales representatives to influence doctors (Adhikari et al., 2021). Therefore, it is important to understand the discussion of physicians and patients about the use of OTC medicine. Some of the studies indicated that these types of discussions are mandatory to make physicians understand the reasons due to why a patient is taking OTC medicine (Sleath et al., 2021).

Contrary to this there are also some of the studies that indicated that physicians must not ask about the use of these products. According to studies, investigation of the use of OTC medicine may assist physicians in taking control of issues and problems that were previously sorted out by patients themselves. Studies related to physician's recommendations indicated that most of the time physicians would not recommend patients to use OTC medicine. Moreover, physicians are also not in support of the mass availability of OTC medicine due to their expensive nature and also due to the loss of control over the patient's medication. The study also indicated that around 60% of the patients discuss their use of OTC medicine with physicians but female physicians are not inclined toward discussing and providing information about OTC medicine (Sleath et al., 2021). However, some studies indicated that recommended OTC medicines by physicians are preferred by educated customers. The indications are found true for young and elderly people and analysis has been made through chi-square to assess the preference of different age groups (Cristea et al., 2017).

H_1: There is an association between recommendations from physicians and customer's attitudes toward the purchase of OTC medicine.

Recommendations from Friends and Family Members:

According to studies, recommendations from friends and family members are termed as one of the most effective sources for self-medication and purchase of OTC medicine. However, according to studies recommendations from friends are perceived to be more authentic than the recommendation of family members. However, most of the studies do not bifurcate recommendations from friends and recommendations from family into different categories (Khan et al., 2014).

Similarly, Yousif et al (2016) indicated that recommendations from friends and family members as one of the most important variables in the purchase of OTC medicine. According to the study, the impact of recommendations from friends and family members is very high with the mean of the variable being 3.8 and the t-statistical value being 20.355. Similar are the indications of Khan et al (2014) which reflected that recommendations from friends and family members are one of the most important predictors of OTC purchase of medicine. All of these indications are also supported by Kevrekidis et al (2021) that interpersonal communication with friends and family members is most effective in the purchase of OTC medicine. According to a study, consumers may also perceive some of the OTC medicine as the family tradition for the cure of minor health issues.

H_2: There is an association between recommendations from friends and family members and customer's attitudes toward the purchase of OTC medicine.

Recommendation from Pharmacist:

The role of pharmacists in recommending OTC medicine has increased in the past few decades. However, if one would survey the significance of pharmacists in the use of medicine then it would receive negative thoughts and comments (Yousif, 2016). A study conducted by Kevrekidis et al (2018) also supported the indications of Yousif (2016) and claimed that recommendation from pharmacists is found to be the most influential factor for the purchase of over-the-counter medicine.One of the recent studies conducted by Kevrekidis et al (2021) reflected more effectively on the recommendation of pharmacists on the purchase of OTC medicine. According to the study, recommendations from pharmacists are a significant factor in the purchase of OTC medicine. However, the impact is not the same for customers who are related to different professions. The use of Anova indicated that homemakers and retired personnel take pharmacist recommendations as a more effective factor for the purchase of OTC medicine. Similar sorts of indications were made previously by Villako et al (2012) where recommendations from pharmacists are perceived as one of the most important indicators for the purchase of OTC medicine. According to the study the association is found true for local as well as international scenarios. However, people aged less than forty years are less inclined toward the purchase of OTC medicine on the recommendation of a pharmacist.

H_3: There is an association between a recommendation from a pharmacist and customer attitude toward the purchase of OTC medicine

Country of Origin:

Several studies indicated the importance of country of origin in the purchase of OTC medicine. Some of the studies mentioned country of origin as one of the leading marketing elements that have a significant impact on consumer evaluation and buying intentions. Hence country of origin is perceived to be a more influential element than advertising and packaging for the purchase of OTC medicine (Temechewu & Gebremedhin, 2020).

According to the study of Kevrekidis et al (2021) country of origin is the variable that is found to be effectively correlated with external factors fostering the purchase of OTC medicine. According to the study, the country of origin along with product packaging and brand name of the company are also found to be potent predictors of OTC medicine. However, there is a rare study conducted by Woo Jun and Won Choi (2007) which indicated that country of origin may not be an effective predictor for the purchase of OTC medicine.

H_4: There is an association between a recommendation from the country of origin and intention to purchase the OTC medicine.

H_5: Country of Origin moderates the relationship between customer's attitude towards the purchase of OTC medicine and intention to purchase OTC medicine.

3. RESEARCH METHODOLOGY

Research Methodology is the part of the research that has two major parts i.e., research design and sampling design (Sekaran & Bougie, 2016). The purpose of these parts is to describe every element or criteria used in the formulation of research along with the reason for preferring the criteria over the others (Kothari, 2004).

Research Design:

This study is one of the correlational designs as indicated by Sekaran and Bougie (2016). The study also uses field experiments, moderate researcher interference, and non-contrived study settings to be connected with the methodological processes followed by previous studies and also to ease the process of data collection. However, the major purpose of this study is to overcome the knowledge gaps and evidence gaps indicated by Aqeel et al (2014); Aziz et al (2018), and Yousif (2016).

Therefore, the philosophy associated with this study is epistemology (Saunders et al., 2007) which is perceived as the philosophy of knowledge, and the philosophical stance related to this study is post-positivism (Saunders et al., 2015) is used mostly for the analysis of quantitative studies. Moreover, the research approach is deductive, the methodological choice is mono-method, the research strategy is a survey and the time horizon is cross-sectional as indicated by Saunders et al (2007) and Saunders et al (2015). However, these points are not only based on the methodological assumptions of any specific authors but most of the prior studies e.g., Aziz et al (2018) and Yousif (2016), etc use similar methodological assumptions to collect data efficiently and effectively.

Sampling Design:

Using the indications of Kothari (2004) the sample size of 384 is sufficient to conduct studies with indefinite sample sizes. However, some of the previous studies related to the purchase of OTC medicine e.g., Cîrstea et al. (2017) were conducted with a sample that is less than 300. However, most of the studies e.g., Cîrstea et al. (2017) and Temechewu and Gebremedhin (2020) are based on non-probability sampling. Thus, considering these indications this study has also been conducted through data collection through multi-stage sampling as Temechewu and Gebremedhin (2020). The data has been collected from all five zones of Karachi City with a total sample size of 384 respondents.

Questionnaire:

Most of the studies e.g., Cîrstea et al. (2017) and Temechewu and Gebremedhin (2020) used the Likert scale for data collection. However, to ease the process of data collection and to reduce related costs and time that has been collected through transforming questionnaires into Google Docs. This is one of the prime delimitations of this study and is consistent with the working of Cîrstea et al. (2017) who collected data electronically to improve the process of data collection.

4. STATISTICAL TESTING & ANALYSIS

Structural Equation Modeling (SEM) is one of the most effective software that is one of the preferred options by researchers to gauge causal as well as temporal effects (Gunzler et al., 2013). Research claims that the use of SEM is much better than the use of regression which becomes significantly high through complying with SMART-PLS. SMART-PLS is one of the well-known and sophisticated software that operates through the outer (measurement) model and inner (structural) model (Wong, 2013).

Table 1: Construct Reliability, Composite Reliability and Convergent Validity

Variable	Outer Loading	Cronabach's Alpha	Goldstein rho	Composite Reliability	AVE
Attitude towards Over-the-counter products	0.807	0.797	0.798	0.868	0.622
	0.800				
	0.764				
	0.782				
Country of Origin	0.729	0.815	0.819	0.879	0.645
	0.822				
	0.843				
	0.813				
Family & Friends Recommendations	0.746	0.823	0.829	0.883	0.653
	0.807				
	0.851				
	0.825				
Intention to use over the counter products	0.796	0.748	0.754	0.841	0.569
	0.754				
	0.769				
	0.695				
Pharmacist's Recommendations	0.848	0.857	0.865	0.894	0.699
	0.795				
	0.865				
	0.834				
Physician's Recommendations	0.781	0.749	0.756	0.841	0.571
	0.760				
	0.777				
	0.701				

Initial analysis of SMART-PLS has been carried out by analyzing the outer model to understand the association between latent variables and their indicators (Ab Hamid et al., 2017). The other model termed the structural (inner) model is used to reflect the association of key research variables (Wong, 2013). Combining inner and outer models the purpose of SMART-PLS is to highlight the entire set of associations and relationships in the model of research (Vijaybanu &

Arunkumar, 2018).

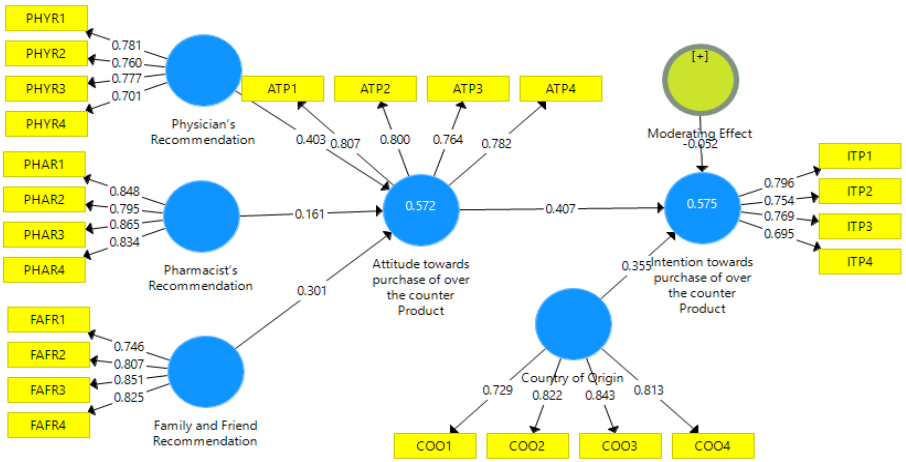

Figure 2: Outer Loading

Table 1 above contains most of the elements of descriptive statistical analysis highlighted by Ab Hamid et al (2017). Observation highlighted that Table 1 indicated elements of construct reliability, composite reliability, and convergent validity. Initially, we have placed outer loading whose purpose is to validate the presence of all the indicators included in the process of research (Afthanorhan, 2013).

Values of outer loading that range between 0 and 1 but values between 0.60 and 0.70 may be deleted to increase the convergent validity. Secondly, we have placed convergent validity that also has values from 0 to 1 although values that may exceed 0.90 are not perceived as optimal (Ab Hamid et al., 2017). Lastly, table 1 also has all the elements of convergent validity, i.e., outer loading, composite reliability, and (AVE) average variance extracted (Adeleke et al., 2015). However, AVE with values of 0.50 or above may solely indicate convergent validity (Ab Hamid et al., 2017). Hence, in line with the indications of Figure 1 and Table 1, it is optimal to indicate that there is not a single indicator that is not aligned with the indications of outer loading Ab Hamid et al (2017) and Afthanorhan (2013) as the least value recorded from outer loading is 0.695 that is optimal to be used as per the indications of Ab Hamid et al (2017). Similarly, no construct in Table 1 has composite reliability lower than 0.70 or higher than 0.90. Lastly, table 1 is also effective in ensuring convergent validity through using AVE as for every construct the values are found to be equal to or greater than 0.50 (Ab Hamid et al., 2017 & Adeleke et al., 2015).

Table 2 below points towards the discriminant validity. The research highlighted that the Heterotrait-Monotrait ratio is one of the prime tools to assess model fitness (Hair et al., 2010). In this study, reflection has been made through the most

popular tool to assess discriminant validity, i.e., Heterotrait-Monotrait Ratio (Iqbal et al., 2021). Studies defined the Heterotrait-Monotrait ratio as the correlation that is used to embed the exclusiveness of variables from each other (Malik et al., 2021). However, to assure the presence of discriminant validity there is a need for values that range lower than the benchmark value of 0.85 (Hair et al., 2019). Hence, table 2 indicates that all the constructs ensure the discriminant validity through the heterotrait-monotrait ratio. The postulate is valid as no value is more than or equal to 0.850. Therefore, table 2 is effectively reflecting discriminant validity.

Table 2: Discriminant Validity through Heterotrait-Monotrait Ratio

	Attitude towards purchase of over the counter Product	**Country of Origin**	**Family & Friend Recomm**	**Intention towards purchase of over the counter Product**	**Mod Effect 1**	**Phar Recomm**	**Physician's Recomm**
Attitude towards purchase of over the counter Product							
Country of Origin	0.701						
Family and Friend Recommendation	0.823	0.811					
Intention towards purchase of over the counter Product	0.862	0.654	0.836				
Moderating Effect 1	0.550	0.577	0.441	0.552			
Pharmacist's Recommendation	0.686	0.611	0.769	0.667	0.274		
Physician's Recommendation	0.501	0.775	0.839	0.517	0.539	0.675	

Table 3: Predictive Accuracy

	R Square	**R Square Adjusted**
Attitude towards purchase of over the counter Product	0.572	0.568
Intention towards purchase of over the counter Product	0.575	0.571

Table 3 above is a measure of the quality criteria of the research model that is formally known as predictive accuracy. The purpose of using this model in the study is to highlight the authenticity of structural and measurement models

(Purwanto et al., 2020). Literature indicates that this model is the indication of the percentage that has been triggered by a 1% chance of the independent variable.

However, the change must result in a significant change in the dependent variable(s) as the lowest acceptable change for the dependent variable is 25% while 50% and 75% are termed as moderate and substantial impacts in the dependent variable (Wong, 2013).

Values indicated that there is moderate predictive accuracy found in the model with respect to mediating and dependent variables. The postulate is right as R-Square for Attitude towards OTC is 0.572 and Intention to purchase OTC is 0575.

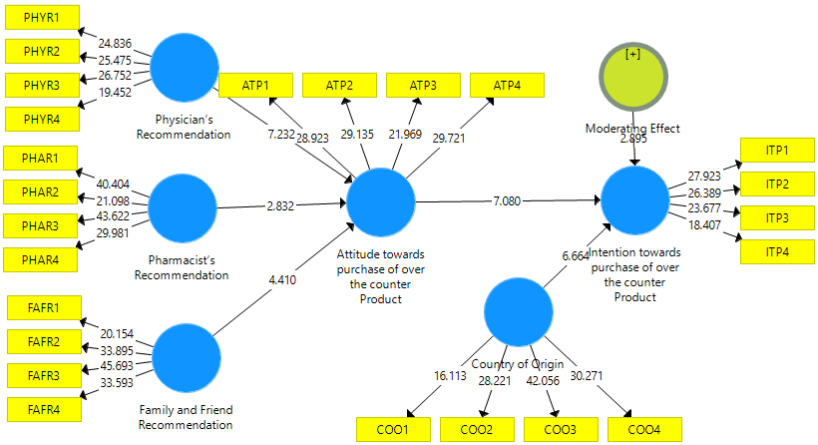

Figure 3: Path Coefficient

Table 4 below indicates the path coefficient which is the tool to assess the association between variables used in the study. This matrix is part of inferential statistics about the inner model of SMART-PLS (Silaparaasetti et al., 2017). However, to make an analysis there is a need for some benchmarks that are t0-statistics and p-values. According to Hair et al (2017), t-statistics values must be greater than or equal to 1.97 and p-values must be lower than or equal to 0.05. Hence, in line with the parameters provided by Hair et al (2017) all the relationships are found true for different constructs and overall research models. Therefore, table 4 assures the acceptance of all the alternative hypotheses i.e.., H1A, H2A, H3A, H4A, H5A & H6A.

Table 4: Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Attitude towards purchase of over the counter Product -> Intention towards purchase of over the counter Product	0.407	0.410	0.057	7.080	0.000
Country of Origin -> Intention towards purchase of over the counter Product	0.355	0.355	0.053	6.664	0.000
Family and Friend Recommendation -> Attitude towards purchase of over the counter Product	0.301	0.300	0.068	4.410	0.000
Moderating Effect 1 -> Intention towards purchase of over the counter Product	-0.052	-0.050	0.018	2.895	0.004
Pharmacist's Recommendation -> Attitude towards purchase of over the counter Product	0.161	0.162	0.057	2.832	0.005
Physician's Recommendation -> Attitude towards purchase of over the counter Product	0.403	0.404	0.056	7.232	0.000

Table 5: Specific Indirect Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Family and Friend Recommendation -> Attitude towards purchase of over the counter Product -> Intention towards purchase of over the counter Product	0.122	0.122	0.029	4.147	0.000
Pharmacist's Recommendation -> Attitude towards purchase of over the counter Product -> Intention towards purchase of over the counter Product	0.066	0.067	0.026	2.531	0.012
Physician's Recommendation -> Attitude towards purchase of over the counter Product -> Intention towards purchase of over the counter Product	0.164	0.168	0.041	3.975	0.000

Above given table 5 is used to indicate the specific indirect effects that are mediation effects in the research model as indicated by Ab Hamid et al (2017); Hair et al (2019) and Silaparaasetti et al., (2017). Hence, the evaluation and analysis are also based upon the criteria given by Hair et al (2017) which is the same as the evaluation criteria of the path coefficient. Therefore, all the mediation effects highlighted in the table are valid and the table is effective in ensuring the acceptance of H7A, H8A & H9A.

5. CONCLUSION & DISCUSSION

Using SMART-PLS detailed statistical testing based on descriptive and inferential measures indicated by Ab Hamid et al (2017); Hair et al (2017) and Hair et al (2019) etc. Analysis indicated that there is a positive association between Physician's recommendation, Pharmacist's recommendation, Customer's Attitude, and F&FM's and Customer's Attitude. Hence, the model was formulated through the association of Cîrstea et al., (2017); Habash and Al-Dmour (2020), and Srivastava and Wagh (2017). Hence, the use of external factors as well as price as a moderator becomes justified. The findings of the study were also found to be positive for the association between the attitude of customers towards the purchase of OTC medicines and Intention towards the purchase of over-the-

counter medicine. These elements indicate the theory of planned behavior has rightly been associated with research and its implications are effective to be indulged in this study. Therefore, the theory postulated by Ajzen (1991) has been verified to be used for the purchase of OTC medicine and usage has been found true as found by Habash and Al-Dmour (2020) and Jinnah et al (2020).

Moving further when it is required to compare and relate the findings of the study associated with the recommendations of physicians and the attitude of customers towards the purchase of OTC medicine. Hence, it is optimal to indicate that the findings of the study are consistent with Cristea et al. (2017) who reflected upon the importance of physician recommendations on the purchase of OTC medicine. The findings of the study also indicated that there is a definite and positive association between the recommendation of fines and family members' and customer's attitudes toward the purchase of OTC medicine. Hence, the findings of this study are also found to be consistent with prior literature highlighted by Kevrekidis et al (2021); Khan et al. (2014) and Yousif et al (2016) etc. Moreover, previous studies e.g., Kevrekidis et al (2018); Kevrekidis et al (2021); Villako et al (2012), and Yousif (2016) all indicated that recommendations of pharmacists are one of the most important recommendations in the purchase of OTC medicine.

Villako et al (2012) in their study termed recommendations from a pharmacist as the most influential recommendation. The findings of this study also indicated that there is a positive association between the recommendation from pharmacists and customer's attitudes toward the purchase of OTC medicine. Therefore the findings of this study are in line with the indication of all the studies that are mentioned in the literature related to the recommendations of pharmacists and purchase of OTC medicine. Last but not least findings of the study also indicated that the country of origin also has a positive association with customers' purchase intention. This point has also been highlighted by previous studies e.g., Kevrekidis et al (2021) and Temechewu and Gebremedhin (2020). Hence, the selection of country of origin as a moderating variable is true and the findings of the study legitimize the selection and indications of Kevrekidis et al (2021) and Jinnah et al (2020) to legitimize the selection of variables and use of TPB as the theory behind the conduction of this study.

Moreover, the findings of the study also confirm the mediating effect of customers towards the purchase of OTC medicines for every association investigated in the study. Therefore, in line with Jinnah et al (2020), it is appropriate to reflect that customer's attitudes towards the purchase of OTC medicines will mediate between all the predictor variables and Intention toward the purchase. Therefore, the inclusion of customers' attitudes towards the purchase of OTC medicine along with intention to purchase OTC medicine is found to be true for every case. Other than normal elements there is one point that is unique as a selection of the country of origin found to be true and it is also creating a significant impact as the moderator between customer's attitude and intention to purchase OTC. However, the statistical values that highlight the relationship between customers' attitudes towards the purchase of OTC medicines and Intention towards the purchase are found to be more than the statistical values

related to moderating effect. Hence, it is appropriate to highlight that moderation of country of origin weakens the relationship of customers towards the purchase of OTC medicines and Intention towards the purchase. This point is not the major issue as moderation does not nullify or create a negative impact on customers' purchase intention of OTC medicine. According to researchers, the points mentioned by Woo Jun and Won Choi (2007) are sufficient to justify the study's claims that country of origin may not always be a strong predictor of the purchase of OTC medicine.

Policy Implications

The findings of the study indicated that the Recommendation of OTC medicine is beneficial to formulate a positive customer attitude towards the purchase of OTC medicine. This positive attitude will ultimately lead to intention towards the purchase of OTC medicine. Findings also indicated that recommendations from F&FM, pharmacists, and Physicians all are valid in this regard. However, the highest weightage is associated with friends and family which means customer satisfaction and word of mouth (WoM) are the true drivers of the use of OTC medicine. Therefore, pharmaceutical companies must try to focus more on quality and customer satisfaction rather than DTA, etc.

Policymaking in this regard is substantial which attracts companies more towards quality optimization rather than the use of DTA for OTC medicine. Second, is the number of physician's recommendations towards the attitude towards the purchase of OTC. Hence, it is appropriate to believe that educated people use OTC medicine mostly after recommendation from doctor (Taybeh et al., 2020). Proper policymaking in this regard is also substantial that physicians must not recommend OTC on the base of incentives etc. Lastly, a recommendation from pharmacists is also found important for creating positive customer attitudes towards OTC. However, the statistical values related to recommendations of pharmacists are lesser than recommendations from F&FM and recommendations from physicians. However, companies and regulatory bodies must also develop effective policies for the purchase of OTC medicine through OTC to reduce self-medication that may create a negative impact on human health as indicated by (Chouhan & Prasad, 2016).

Need of Future Research

This study has been conducted as a co-relational design with a cross-sectional time horizon. Hence, in addition to the use of longitudinal design for conducting research further studies may use a longitudinal time horizon and may also compare different forms of OTC products related to external factors like recommendations, etc.

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