

ORIGINAL ARTICLE

Consumer Behavior Towards Over-The-Counter Medicine Purchase: The Extended Theory Of Planned Behaviour

SHAFINAZ BINTI ALI JINNAH¹, AHASANUL HAQUE², MOHAMMAD AIZAT JAMALUDIN³^{1,3}*International Institute for Halal Research and Training*²*Kulliyah of Economics and Management Sciences*^{1,2,3}*International Islamic University Malaysia, Kuala Lumpur, Malaysia*Corresponding to *Ahasanul Haque, Email: ahasanul@iiu.edu.my*

ABSTRACT

The global medication scheduling is changing due to the frequent launching of new and generic medicines which bringing about the accessibility of different kind of medicines for customers in pharmacies. The Over-the-Counter medicines market is always under investigation due to its nature of self-medication. In this study, the major psychological factors like attitude, subjective norm, perceived behavioral control and perceived risk are considered in consumers as the determinant of the over-the-counter medicine purchase decision. This study incorporates the extended theory of TPB to effectively measure the research constructs. A non-probabilistic purposive sampling technique has been applied to choose 308 respondents from the metropolitan territory of Kuala Lumpur and Selangor states in Malaysia. The Exploratory Factor Analysis and Structural Equation Modelling technique have been used to analyse the data. The results revealed that customers' attitude, subjective norm and perceived behavioral control towards OTC medicine were of very supportive significance, whereas perceived risk was not significant. It would be fascinating to explore if the results based on the outcomes hold for populaces of other ASEAN nations as there are different social settings, national approach, and healthcare guidelines. Thus, OTC medicine usage and purchase behaviour could be an integrative part of global healthcare frameworks and priorities.

Keywords: Over-the-Counter Medicine, Consumer Behaviour, TPB, Malaysia

INTRODUCTION

There are various factors like cultural, social, personal and psychological aspects which influence consumer behavior (Pujari et al., 2016). The behaviour comes into action when a consumer is engaged in a purchasing process. In this study, the major psychological factors like attitude, subjective norm, perceived behavioral control and perceived risk are considered in consumers as the determinant of over-the-counter medicine purchase decision. A fundamental component of consumer behaviour in purchase of medicine classified by self-care. Self-care is the actions people take for themselves to build up and look after wellbeing, just as to forestall and manage ailment (WHO, 1998). One significant component of self-care is self-prescription. Self-prescription is the treatment of regular medical issues with drugs particularly structured and marked for use without clinical supervision and endorsed as protected and compelling for such use. Drugs for self-medicine are frequently called Over-the-Counter (OTC) medications and can be gotten lawfully without a specialist's remedy through drug stores, supermarkets and different outlets (Haque et al., 2020). In many homes, numerous sicknesses are at first treated with OTC medicines that are effectively possible to ease light health problems, for example, cerebral pains, colds and sore muscles (Cîrstea, Moldovan-Teslios and Iancu, 2017; Albarrán and Zapata, 2008).

OTC medicines market is always under investigation. Globally, OTC medicine's market growth was 24.8% (Euromonitor International, 2018). Besides the launching of new and generic medicines, it is challenged by changes in medication scheduling (Bond and Hannaford, 2003), frequently bringing about the accessibility of medicines in pharmacies. In order to optimise customer loyalty,

medicine specialists and medicine store staff need to provide professional service in their suggestion and sale of OTC medicines. A fundamental step in the improvement of such professional services is an understanding of consumer behaviour in the purchase of these medicines (Dadhich and Dixit, 2017; Emmerton, 2005). Consumer is considered "The king" in today's state of marketing. During the rise of marketing era, manufacturers sold anything to the consumers. But now, it is consumer whose purchasing preferences decide what should be made, in what quantity and what should be the quality of the goods. Thus, a marketer must consider various factors while deciding on marketing goods as consumers have different preferences (Pujari et al., 2016). So, the task of manufacturer and marketer becomes difficult and therefore it is very important to understand the consumer behavior. Understanding consumer behavior is more dangerous in the field of pharmaceuticals as it belongs to health and medication.

This paper was focused on answering the following research questions, (1) what effect does consumer's attitude have on purchase intention of OTC medicine? (2) what effect does consumer's subjective norm have on purchase intention of OTC medicine? (3) what effect does consumer's perceived behavioural control have on purchase intention of OTC medicine? (4) what effect does consumer's perceived risk have on purchase intention of OTC medicine? and (5) what effect does consumer's purchase intention have on purchase behaviour of OTC medicine?

OTC Medicines: Over-the-Counter (OTC) medicines are those which sold directly to a customer without a prescription from a medical professional. It is just opposite to prescription medicines, which can be sold only to customers having a valid prescription. The OTC medicines

market usually covers analgesics, cough/cold/flu, gastrointestinal, dermatological remedies, vitamins and minerals (Pribadi, Pangestuti, and Daniswara, 2020; Woźniak-Holecka et al., 2012). OTC medications are purchased by 81.3% of respondents, generally less than once every month and individuals in need of general healthcare conditions used to purchase OTC medications more frequently than clinical patients (Woźniak-Holecka et al., 2012). Overall, 64.6% of respondents purchase OTC medications for their own utilisation, where a pharmacy is the place of procurement (92.3%) as stated by Woźniak-Holecka et al. (2012). 96% of customers in a pharmacy said that they purchase OTC medicines based on the suggestion from the pharmacy, 73% of customers said that they depends on OTC medicines, 82% and 78% of customers respectively disagreed about time and cost were concerns while purchasing OTC medicines (Chan and Tran, 2016). When asked about where they intend to purchase their future OTC products, 89% said pharmacy instead of a supermarket (Chan and Tran, 2016). Pujari et al. (2016) discovered exceptionally intriguing results as just 61% individuals pick pharmaceutical item's according to counsel of their doctor, the rest depends on self-medication through OTCs. The study by Pujari et al., (2016) uncovered the way that an individual needs medicine according to his/her very own decision and evaluation. The medical doctor's or pharmacist's proposal isn't of as much concern over healthcare issues for these self-medicating customers.

Purchase Behaviour: Purchase behaviour is the action of how people buy, what they buy, when they buy and why they buy (Kotler, 2003). It has been defined as "a process, which through inputs and their use while process and actions leads to satisfaction of needs and wants" (Enis, 1974, p.228). Alternatively, it also "refers to the buying behaviour of final consumers, both individuals and households, who buy goods and services for personal consumption" (Kumar, 2010, p.218). According to Blackwell et al (2006), consumer purchasing behaviour is itself a complex, dynamic subject that cannot be defined easily and universally. Consumer's purchasing behaviour refers to many factors and features which influence the individual's decision-making process, shopping habits, the brands consumers' buy, or the retailer's consumers choose (Ramya and Ali, 2016).

Consumer theories like the theory of reasoned action (the TRA), the technology acceptance model (the TAM) and the theory of planned behaviour (the TPB) manage individual social expectation dependent on customary perspective, and the utilisation of these theories is boundless to link various issues. This study uses the Theory of Planned Behaviour (TPB) developed by Ajzen (1991) in which the model has been extended by adding perceived risk of consumers' while they buy. TPB is a model that is widely used and supported by researchers who studied the attitudes and behaviour to predict consumer behaviour. According to the TPB, there are three major and important components that influence human behaviour to behave. The components are attitude, subjective norm and perceived behavioural control mediated by purchase intention. These components provide a guideline to predict human social behaviour. Conceptualisation of TPB presented by Ajzen (1991)

implies a causal relationship between these four things, namely: beliefs, attitudes, intentions and behaviour.

Consumer's Attitude and Purchase Intention: Attitude is the outcome of the thoughts that are held by an individual and consequently gives rise to a sense of willingness to perform a given behaviour (Cheah and Phau, 2011). Due to such reason, attitude provides the means to favourably or unfavourably evaluate an object based on individuals' cognitive thoughts, beliefs in terms of values as well as emotions that they have toward the given object (Ambad and Damit, 2016). Ajzen and Fishbein characterised theoretical standards for specific view of whether attitudes are vital about purchase intention. The commitment of the conclusions of each given attitude is weighted with the inspiration that an individual must agree to the desires of the intention (Ajzen and Fishbein, 1980). Attitude has a significant relation in the decision-making process to purchase a specific product (Li et al., 2009). It is among the factors which play an important role in predicting intentions of consumers (Haque et al., 2019). Mostafa (2007) stated that the positive relationship between attitude and behavioural intention has been established in many cultures. According to Pujari et al. (2016), pharmaceutical buying behaviour depends on consumer's in many aspects. Chan and Tran (2016) studied OTC medicine purchase behaviour and found consumer's attitude influencing it. An important characteristic of the intention to purchase consumer goods is the attitude toward the product. In the process of forming beliefs about products, an individual acquires an attitude. Therefore, based on the above literature review, it is hypothesised that:

H₁: There is a significant relationship exists between consumer's attitude and purchase intention towards OTC medicines.

Consumer's Subjective Norm and Purchase Intention: The term subjective norm basically results from a person's belief regarding whether the execution of a respective behaviour will be acknowledged or disapproved by others living in the same society (Ajzen and Fishbein, 2005). Thus, individuals' intentions are substantially shaped through subjective norm whereby, there is a higher likelihood of performing the behaviour when it is believed that the performance of that behaviour will be approved by others in the society (Yeon and Chung, 2011). Subjective norm is the opinion of a person that has an influence in the person's decision-making process (Hee, 2000). Previous studies have stated that the subjective norm is an important determinant of intention to purchase a product (Paul, Modi and Patel, 2016). Wiriyaipinit (2007) said that family norm values conveyed by parents and purchase intentions were linked. Zukin and Maguire (2004) found that they have a major influence on spending and are the basis of many concepts and frameworks concerning purchase intention. Accordingly, most consumers consider OTC medicines not as regular consumer goods and rather view them as healthcare medicines (Taylor et al., 2008; Wazaify et al., 2005). Therefore, the consumer's own belief to evaluate products, and in turn, the subjective norm towards OTC medicines has a major role in the purchase behaviour of OTC medicines. Therefore, based on the above literature review, it is hypothesised that:

H₂: There is a significant relationship exists between consumer's subjective norm and purchase intention towards OTC medicines.

Consumer's Perceived Behavioural Control and Purchase Intention: Perceived behavioural control is the extent to which a person can engage in the behaviour (Ajzen, 1991). Several researchers have proved that self-confidence in the ability of a person to control the behaviour explained a positive relationship with purchase intention (Baker, Al-Gahtani and Hubona, 2007; Taylor and Todd, 1995). Li et al. (2002) stated that the perceived affordances were perceptual indication that consumers acquires and use to assess products before purchasing. Olsen (2004) demonstrated that self-efficacy is the most important control factor that influence consumers purchasing decision. Perceived behavioural control has been associated with purchase intention in organic foods (Thøgersen, 2006; Tarkiainen and Sundqvist, 2005), green hotels (Han, Hsu and Sheu, 2010; Chen and Tung, 2014), and green products (Moser, 2015). For OTC medicines, a total of 86 customers from a broad range of demographics were captured in a study conducted by Chan and Tran (2016). The results revealed that when asked about customer's current health state, 41% and 23% respectively indicated that they were stressed and get tensed when they arrive in a pharmacy. Only 38% customers feel better. It means, when a person has more control on making the purchase of OTC medicine, it is more likely he/she will buy it. Pujari et al. (2016) also discovered exceptionally intriguing results as the buying conduct of medications significantly influenced for 38% as recommended by doctor, 14% according to drug specialist, 20% individuals buy marked medication, 16% conventional items, while 5% individuals settle on choice on expense of meds and 7% on simple accessibility. Therefore, based on the above literature review, it is hypothesised that:

H₃: There is a significant relationship exists between consumer's perceived behavioural control and purchase intention towards OTC medicines.

Consumer's Perceived Risk and Purchase Intention:

Perceived risk is the vulnerability a purchaser has when purchasing an item. Each time a consumer thinks about purchasing an item, the person has certain questions about the item, particularly if the item being referred to as valued or specialised. There are many dimensions in perceived risk. In a study conducted by Suplet, Suárez and Martín (2009), the results indicated that both psychological and physical risk has a positive and direct effect on perceived risk. Their Results also proved that psychological risk influences the effects of performance, economic and social risk dimensions on overall risk (Suplet et al., 2009). This role of perceived risk was also found by Klerck and Sweeney (2007) in their research of consumer behaviour for genetically modified food. Unlike most consumer goods, pharmaceuticals involve high risk and are related to the health of consumers (Pahud, Rietbroek and MacLean, 1997). Frequently in consumer behaviour research, the perceived risk acts as a mediator between an attitudinal outcome variable and extrinsic product cues (e.g., Agarwal and Teas, 2001; Semeijn, Van Riel and Ambrosini, 2004). But, the direct role of perceived risk cannot be neglected

and should be tested within the context of OTC medicines. Therefore, understanding the relationship between the factors that determine perceived risk in the OTC medicine market is of great interest. Hence, based on the above literature review, it is hypothesised that:

H₄: There is a significant relationship exists between consumer's perceived risk and purchase intention towards OTC medicines.

Consumer's Purchase Intention and Purchase Behaviour:

Consumers' purchasing decision is very complex in nature. It is the intention which drives the consumers during purchasing a product. Purchase intention is an effective tool in the purchasing process (Armstrong, Morwitz and Kumar, 2000; Chen, Chen and Huang, 2012; Qing, Lobo and Chongguang, 2012; Tsiotsou, 2006). According to the theory of planned behaviour (TPB), intention refers to the appearance of importance towards the product (Ajzen and Fishbein, 1980). The appearance will carry an attitude and belief which will influence the decision-making process. Fishbein and Ajzen (1975) explained intention as a determinant of behaviour, where the intention is influenced by three constructs: attitude, subjective norm and perceived behavioural control. The decision to purchase an OTC medicine differs from objective evaluation of a third-party prescriber in prescription medicine purchase. Specifically, for prescription medicines, the physician acts as a gatekeeper and makes the final decision on which medicine is deemed suitable for the patient (Ding, Eliashberg and Stremersch, 2014). To the contrary, in OTC medicines evaluations, consumers are required to rely more on their own judgment (Wieringa, Reber and Leeflang, 2015). Therefore, the consumer's own ability to evaluate products, and in turn, the intention to purchase towards OTC medicines has a major role in the purchase behaviour. Hence, based on the above literature review, it is hypothesised that:

H₅: There is a significant relationship exists between consumer's purchase intention and purchase behaviour towards OTC medicines.

METHODS

This study incorporates theories in consumer behaviour, relevant to OTC. To effectively measure the research constructs, information from the theoretical and empirical research studies in both consumer behaviour and OTCs were used. Burton et al. (1998) developed a scale for measuring consumer's attitude toward store brand products which is being adapted here. Stone and Grønhaug (1993) measured perceived risk with the use of three items for each risk dimension which has been used here. For subjective norm, this study adapted the measure developed by Flynn and Goldsmith (1999). For perceived behavioural control, this study adapted the measure used by Raju, Lional and Mangold (1995); Park, Mothersbaugh and Feick (1994). For purchase intention and purchasing behaviour, this study adapted the measures used by Haque et al., (2015); Joey and George (2004).

To accomplish targets of this investigation, a self-controlled, close ended, organised survey has been carried-out to accumulate essential information from respondents. The survey questionnaires are comprised of a

five-point Likert type answer scale going from 1 (strongly disagree) to 5 (strongly agree) in printed copies. The target population was pharmacy clients from a population of 1,73,47,900 in the metropolitan territory of Kuala Lumpur and Selangor states of Malaysia. Pharmacies are the primary location where OTC medicines are being purchased by customers. A non-probabilistic purposive sampling technique has been applied to choose respondents. Data collection was undertaken over three months of time from October to December 2019. The respondents were being reviewed on various week-days and week-ends to cover a wide range of customers.

RESULTS

Descriptive Analysis: The questionnaire sets were distributed to 400 walk-in customers in pharmacies among which, 308 customers agreed to participate in the research. So, the response rate was 77 %. Table 1 represents the demographic information of the participants, including gender, age, education level, their marital status and occupation. Figure 1, 2 and 3 represents the respondent's family income, frequency of purchasing OTC medicine and OTC medicine purchased for children/adults/elderly. Among the respondents, 51.6% were male, 41.2% were in their youth age (26 to 35 years old), 58.8% were graduated, 54.5% were married, 36.4% were in active service, 34.4% were having a monthly family income less than 5000 RM, 58.8% purchase OTC medicine monthly and 48.4% purchase OTC medicine for themselves.

Table 1: Demographic Profile

Demographic Variable	Frequency	%age
Gender		
Male	159	51.6
Female	135	43.8
Age		
18-25	78	25.3
26-35	127	41.2
36-45	78	25.3
46-55	8	2.6
56-65	3	1.0
Education		
Higher Secondary	50	16.2
Bachelor	181	58.8
Masters	44	14.3
PhD	9	2.9
Others	9	2.9
Marital Status		
Married	168	54.5
Unmarried	111	36.0
Widowed	8	2.6
Divorced	3	1.0
Others	3	1.0
Occupation		
Service	112	36.4
Business	60	19.5
Student	80	26.0
Housewife	8	2.6
Others	32	10.4

Figure 1: Family income of OTC customers

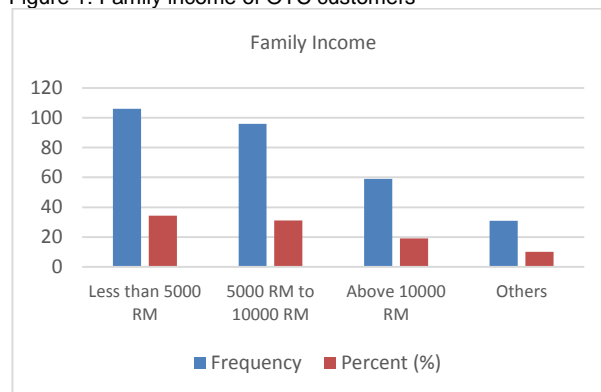


Figure 2. Frequency of purchasing OTC medicine

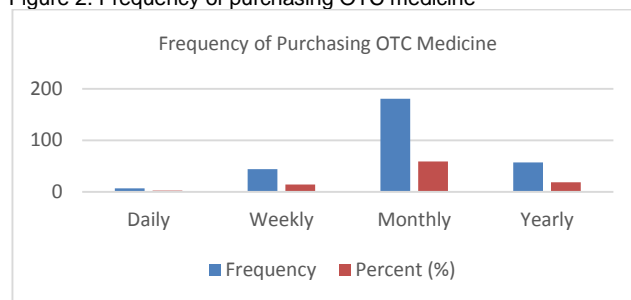
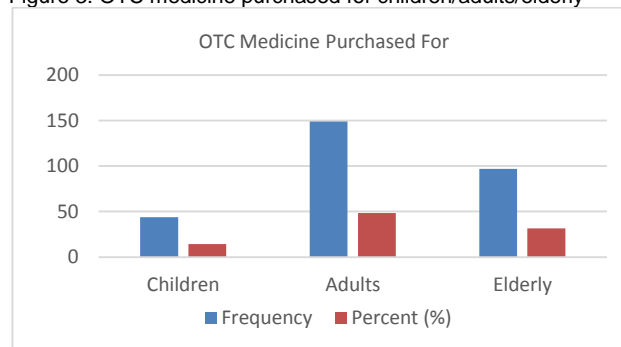


Figure 3: OTC medicine purchased for children/adults/elderly



Reliability Statistics: In IBM SPSS (version 25), Cronbach's alpha is generally used to measure the internal consistency of questionnaires. After running the test and from the output, it is found that for every instrument variable, the Cronbach's alpha value is greater than 0.7 (Table 2) which means that all the instruments used in this research are reliable enough.

Exploratory Factor Analysis (EFA): In SPSS, after running descriptive factor analysis on the data, it is found from the KMO table that, the measure of sampling adequacy is 0.844 which is more than 0.5, means sampling is perfectly adequate. From the data extracted for communalities using principle component analysis extraction method, there is no value which is less than 0.3, means all the variables can be kept. After running EFA in SPSS, from the total variance extraction table, it is found that there are six components out of fort-seven are having eigen value of greater than 1 and the rest components are having eigen value of less than 1. It means six components

has been found which should be retained. After analysing the data again in SPSS through fixed number of factors (six) and removing coefficient value less than 0.5, we can see the component correlation matrix is orthogonal. Then, the varimax method in SPSS for analysing orthogonal matrix has been selected. From the rotated component matrix (Table 3), the final factor loading table has been found.

Confirmatory Factor Analysis (CFA): IBM AMOS (version 25) has been used for confirmatory factor analysis. There are varieties of indicators that tell us how good the model fits through Structured Equation Modeling (SEM) technique. The global model fit can be done in two non-exclusive ways, by using inference statistics, i.e. so-called tests of model fit, or using fit indices, i.e. an assessment of approximate model fit (Hair et al., 2017). Now a day, it has become usual to find out the model fit both for the measurement model and for the structural model. Structural model means where all constructs correlate freely.

Figure 4 represents the default structural equation modelling technique. The model did not fit properly as CFI value is below standard threshold level and hence modifications were done. In AMOS, modification indices cannot be applied if there are any missing data fields. Therefore, estimation maximisation (EM) method in SPSS has been applied to overcome few missing value fields in the data set. There are interchangeable indicators within reflective factors which are intentionally redundant and have been removed from the models. The modified fit models are represented in Figure 5 where the CFI value is adequate. In this research, the Chi-Square and RMSEA values are also used to evaluate the model fit. In AMOS, the chi-square value is called CMIN. From Figure 5, CMIN is 805.849 and RMSEA is 0.056 which also support the standard threshold of fit indices. So, based on the CFI, Chi-Square values and RMSEA, the model fit is found good.

Figure 6 represents the measurement model. Based on the measurement model, the hypothesised path coefficients are presented in Table 4 which shows the critical ratios (CR) obtained for the model. It presents the hypothesized paths, coefficients, CR and the p-values. The critical ratio and significance of path coefficients are used as the basis for supporting or rejecting the proposed hypotheses in this research. Therefore, it can be concluded that hypotheses H₁, H₂, H₃, and H₅ were supported as the CR values are 3.658, 2.560, 3.403 and 6.367 respectively where the threshold is CR ≥ ± 1.96 and the path is significant at the 0.05 level. H₄ was not supported as the CR value is -0.243 (below threshold level).

Table 2: Reliability statistics

Variables	Cronbach's Alpha	N of Items
Attitude	0.816	9
Subjective Norm	0.867	7
Perceived Behavioural Control	0.815	6
Perceived Risk	0.940	11
Purchase Intention	0.817	5
Purchase Behaviour	0.832	9

Figure 4. SEM (Default Model)

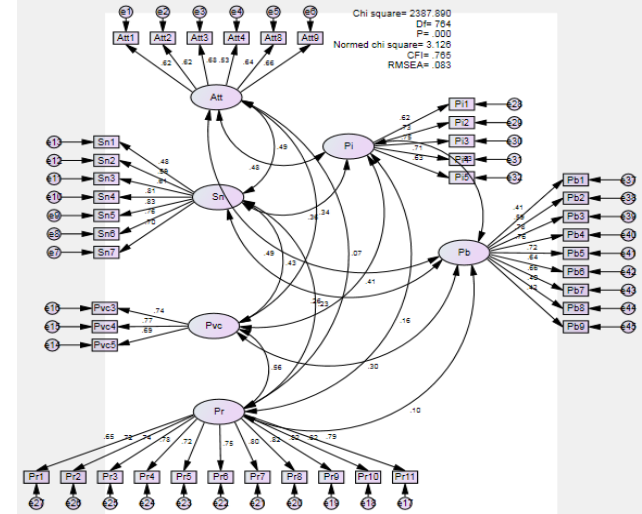


Figure 5. SEM (Modified Model)

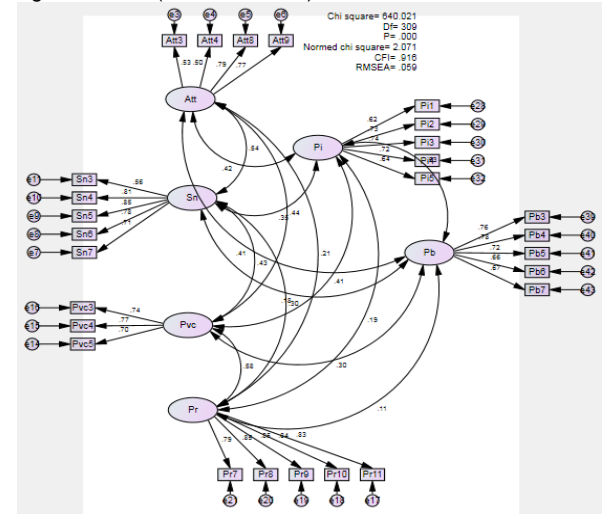


Figure 6: SEM (Measurement Model)

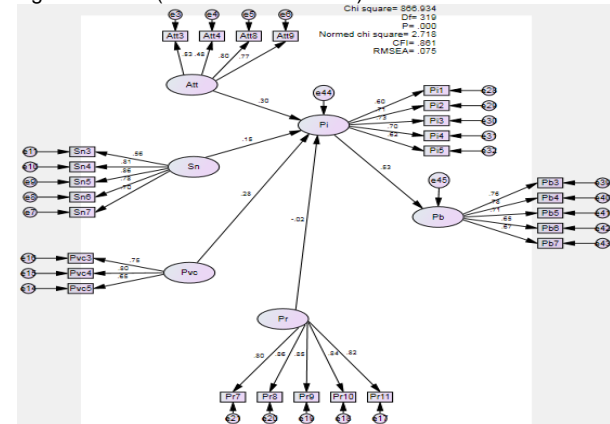


Table 3: Rotated component matrix

Indicators	Variables					
	Attitude	Subjective Norm	Perceived Behavioral Control	Perceived Risk	Purchase Intention	Purchase Behaviour
Att1	0.618					
Att2	0.588					
Att3	0.718					
Att4	0.515					
Att8	0.6					
Att9	0.611					
Sn1		0.659				
Sn2		0.773				
Sn3		0.71				
Sn4		0.717				
Sn5		0.68				
Sn6		0.68				
Sn7		0.654				
Pvc3			0.571			
Pvc4			0.597			
Pvc5			0.585			
Pr1				0.732		
Pr2				0.801		
Pr3				0.808		
Pr4				0.829		
Pr5				0.741		
Pr6				0.732		
Pr7				0.786		
Pr8				0.807		
Pr9				0.795		
Pr10				0.816		
Pr11				0.77		
Pi1					0.689	
Pi2					0.706	
Pi3					0.669	
Pi4					0.743	
Pi5					0.632	
Pb1						0.526
Pb2						0.639
Pb3						0.771
Pb4						0.756
Pb5						0.682
Pb6						0.575
Pb7						0.669
Pb8						0.523
Pb9						0.53

Table 4. Regression Weights (Measurement Model)

			Estimate	S.E.	C.R.	P
Pi	<---	Att	.325	.084	3.883	***
Pi	<---	Sn	.101	.044	2.306	.021
Pi	<---	Pvc	.232	.061	3.828	***
Pi	<---	Pr	-.010	.033	-.311	.756
Pb	<---	Pi	.727	.110	6.632	***

DISCUSSION

Consumers' Attitude towards Purchasing OTC Medicine: From Table 4, the path (Pi <--- Att) is found positively significant (CR value is greater than 1.96). So,

hypothesis (H₁) is supported. Thus, attitude towards OTC medicine purchase by consumers has been found to be of very helpful significance. It was contemplated that such a mentality could be a composite of information, adequacy and a comprehension of the issue of legitimate or ill-advised use. All respondents in this examination had encountered with OTCs and their attitude uncovered that they would not like to rely particularly upon the prescription drugs when they get sick. Reasons incorporated the way that prescriptions were unnatural and that the body can recoup itself after some time. It was likewise uncovered from the criticism that OTC medicines were taken just when truly required. According to the results from this study, a

high level of young people has bought OTC medicines themselves. This finding is reliable with Cheriyan and Tamilarasi, (2019); Sansgiry and Cady (1996) who recorded acquisition of OTCs by youthful grown-ups.

Customers' Subjective Norm towards Purchasing OTC Medicine: From Table 4, the path ($P_i \leftarrow S_n$) is found positively significant (CR value is greater than 1.96). So, hypothesis (H_2) is also supported. Thus, subjective norm towards OTC medicine purchase by consumers has been found to be of very supportive significance. Subjective norms are self-evaluated and aren't just decided on genuine information yet additionally on item related understanding (Dzulkipli et al., 2019; Park et al., 1994). Consumers' with high target information are progressively mindful of natural properties of OTC medications, for example, ingredients. This data is very unpredictable and more elevated levels of abstract information probably won't show higher consciousness of these attributes. Therefore, purchasers with higher subjective information may in any case experience a level of vulnerability about the distinction in the ingredients and related wellbeing dangers of conventional brands and OTCs. This distinction is exceptionally little to nonexistent because both brand types are required to be similarly sheltered. Customers with high target information appear to perceive this.

Consumers' Perceived Behavioral Control towards Purchasing OTC Medicine: From Table 4, the path ($P_i \leftarrow P_{vc}$) is found positively significant (CR value is greater than 1.96). So, hypothesis (H_3) is also supported. The family stores were the most successive wellspring of OTCs. This was as per past research by Dzulkipli et al. (2019); Chambers et al. (1997). Young people will go to their family stores to get drugs when they feel ill. It has been indicated that the characteristics of the pharmacies and their staff are significant drivers for drug store support for customers. More explicitly, polished skill, agreeableness and a supportive nature will impact a client's dynamic procedure of where to shop. A drug specialist's clothing is likewise basic in imparting certainty, trust and demonstrable skill to consumers. Many clients worth and want the individual and centred communication with drug store staff during their visits. Further, building up an individual relationship with their medicinal services proficient was appeared to have the most grounded influence on perceived behavioural control. Customer centric health care is an open door where drug stores and drug specialists can furnish an incredible separation contrasted and different settings, for example, markets for OTC clients. It is pivotal for drug specialists to give care past basically providing a medicine. There are complains that occasionally drug specialists don't give adequate customer consideration while dispensing a medicine due to lack of time.

Customers' Perceived Risk towards Purchasing OTC Medicine: From Table 4, the path ($P_i \leftarrow P_r$) is found insignificant, neither negatively significant ($CR \geq \pm 1.96$). So, hypothesis (H_4) is not supported. Thus, perceived risk towards OTC medicines purchase by consumers has been found to be of insignificant. This is to some degree amazing because particularly for OTC medications one could imagine that the apparent perceived risk would majorly affect the buy expectation toward an OTC medication brand. A potential clarification is that the relative weight of

purchasers joining to apparent perceived risk type is low for OTC medicines. This is predictable with past discoveries in the writing that demonstrate customers know-how on the dangers of analgesics (Palos et al., 2004; Raja et al., 2020). Perceived risk is progressively an impression of inborn hazard, the idle danger of the OTC medicine usage. This natural hazard of a risk a purchaser would see while picking OTC medicine brand and the information written with the packing.

Consumers' Purchase Intention towards OTC Medicine: From Table 4, the path ($P_b \leftarrow P_i$) is found positively significant (CR value is greater than 1.96). So, hypothesis (H_5) is supported. In Malaysia, community pharmacies are accessible for both well and sick customers. The classifications of factors influencing OTC medicine purchase behaviour are not critical from each other, yet the main individual factors are fundamentally contrasted. Different elements to consider in understanding consumers' OTC medicine purchase behaviour are the ideas of industrialism and patient's requirement. Without a doubt, there is a developing comprehension on the "advanced client", who are portrayed as being more requesting, more data solid, more data chasing, and needing to self-manage. These elements would all be able to impact their perspectives and desires on their OTC use and affect the numerous reasons why they might possibly decide to visit a drug store for their OTC buy. This investigation reviewed past literatures that OTC drugs represent self-care which has empowered the development of the OTC market alongside its level venture into new classes (Dzulkipli et al., 2019; Cheriyan and Tamilarasi, 2019; Lowe and Ryan-Wenger, 2000).

Implication for Further Research: In future research, the consideration of other individual factors, for example, socioeconomics, might disclose more knowledge of consumer behaviour inside the populace. It would likewise be fascinating to explore if the ends dependent on the outcomes hold for populaces of other ASEAN nations as the outcomes may be dependent upon social contrasts, national approach, and healthcare guidelines. Another course for future research is to look at the degree of adequate perceived risk in purchase intention by incorporating more dimensions in risk measurements to get a total picture. Future research of OTC medications should concentrate on the self-assurance of purchasers and how this is impacted by association and situational perspectives. Another focal point is how pharmacies and drug manufacturers in a retail domain may impact the information levels, certainty and purchasing choice of customers. Furthermore, it would bear some significance with lead an investigation to straightforwardly contrast and customers in various settings where OTCs are additionally accessible (for instance, super shop, hypermarkets).

CONCLUSION

This present investigation focuses on the significance of consumers' attitude, subjective norm, perceived behavioral control and perceived risk towards purchasing OTC medicines based on the extended model of TPB. Medicines are usually taken during a treatment in certain diseases. As healthcare is the most important aspect of Human life,

knowing OTC medicines is essential to the incitement and advancement of sound conduct under several socio-economic situations, emergencies and behavioral factors. Purchasers can gain benefits by activities to improve healthcare education. In this way, healthcare should be an integrative piece of national instructive frameworks and priorities. The consequences of this present examination additionally show that subjective knowledge has an immediate action on conventional OTC medications. This subjective knowledge can reproduce persuasive and fearlessness among the consumers. Healthcare literacy additionally reflects self-assurance. Constrained healthcare education is particularly common among individuals with low financial status (Van der Heide et al., 2016). The discoveries that are identified in this research gave a premise to understanding consumers' impression of using OTC medications and for their overall wellbeing.

REFERENCES

- Agarwal, S., & Teas, R.K. (2001). Perceived value: mediating role of perceived risk. *Journal of Marketing theory and Practice*, 9(4), 1-14.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2):179-211.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice Hall.
- Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. *The handbook of attitudes*, 173(221):31.
- Albarrán, K.F., & Zapata, L.V. (2008). Analysis and quantification of self-medication patterns of customers in community pharmacies in southern Chile. *Pharmacy World & Science*, 30(6), 863-868.
- Ambad, S.N., & Damit, D.H. (2016). Determinants of entrepreneurial intention among undergraduate students in Malaysia. *Procedia Economics and Finance*, 1(37):108-14.
- Armstrong, J.S., & Morwitz, V.G., & Kumar, V. (2000). Sales forecasts for existing consumer products and services: Do purchase intentions contribute to accuracy? *International Journal of Forecasting*, 16, 383-397.
- Baker, E.W., Al-Gahtani, S.S., & Hubona, G.S. (2007). The effects of gender and age on new technology implementation in a developing country: Testing the theory of planned behavior (TPB). *Inform. Technol. People*, 20, 352-375.
- Blackwell, R., Miniard, P., & Engel, J. (2006). *Consumer behaviour*. Mason: Thompson.
- Bond, C., & Hannaford, P. (2003). Issues related to monitoring the safety of over-the-counter (OTC) medicines. *Drug Safety*, 26(15): 1065-74.
- Burton, S., Lichtenstein, D. R., Netemeyer, R. G., & Garretson, J. A. (1998). A scale for measuring attitude toward private label products and an examination of its psychological and behavioral correlates. *Journal of the Academy of Marketing Science*, 26(4), 293-306.
- Chambers, C.T., Reid, G.J., McGrath, P.J., & Finley, G.A. (1997). Selfadministration of over the counter medication for pain among adolescents. *Arch. Pediatr. Adolesc. Med.* 151, 449-455.
- Chan, V., & Tran, H. (2016). Purchasing Over-the-counter medicines from Australian pharmacy: What do the pharmacy customers value and expect?. *Pharmacy Practice*, Jul-Sep;14(3):782.
- Cheah, I., & Phau, I. (2011). Attitudes towards environmentally friendly products: The influence of eco-literacy, interpersonal influence and value orientation. *Marketing Intelligence & Planning*, 29(5):452-472.
- Chen, C.C., Chen, P.K., & Huang, C.E. (2012). Brands and consumer behavior. *Social Behavior and Personality*, 40(554), 105-114.
- Chen, M.-F., & Tung, P.-J. (2014). Developing an extended theory of planned behavior model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management*, 36, 221-230.
- Cheriyian, A., & Tamilarasi, S. (2019). OTC (Over the Counter) Pharma Products: A Study on the Behavior of Consumers with Special Reference to Chennai. *International Journal of Recent Technology and Engineering*. 8(1), pp.155-158.
- Cîrstea, S.D., Moldovan-Teselios, C., & Iancu, A.I. (2017) *Analysis of Factors that Influence OTC Purchasing Behavior*. In: Vlad S., Roman N. (eds) International Conference on Advancements of Medicine and Health Care through Technology; 12th - 15th October 2016, Cluj-Napoca, Romania. IFMBE Proceedings, vol 59. Springer, Cham.
- Dadhich, A., & Dixit, K. (2017). Consumer Selection and Buying Behaviour Towards Over the Counter (OTC) Medicine in Jaipur City. *Apeejay-Journal of Management Sciences and Technolog*, 4(2), pp.73-82.
- Ding, M., Eliashberg, J., & Stremersch, S. (2014). The pharmaceutical industry: specificity, challenges, and what you can learn from this book. In M. Ding (ed), *Innovation and Marketing in the Pharmaceutical Industry* (pp. 1-18). Springer New York.
- Dzulkipli, M.R., Azizam, N.A., Maon, S.N., Aziz, N.I.S.A., et al. (2019). Application of Theory of Planned Behavior to Predict the Intention to Purchase Complementary and Alternative Medicine. *International Tourism and Hospitality Journal*. 2(3), pp.1-7.
- Emmerton, L. (2005). Purchasing Behaviour for Non-Prescription Medicines. *Australian Pharmacist*, 24(4): 326-30.
- Enis, B.M. (1974). *Marketing Principles: The Management Process*. Goodyear Pub. Co; First Edition.
- Euromonitor International. (various years). [Internet] Retrieved from: a. www.portal.euromonitor.com
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention and Behaviour: The Introduction to Theory and Research*. Addison-Wesley Publishing Company, Inc.
- Flynn, L.R., & Goldsmith, R.E. (1999). A short, reliable measure of subjective knowledge. *Journal of Business Research*, 46(1), 57-66.
- Hair, J.F., Hult, G.T.M., Ringle, C.M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd Ed., Sage: Thousand Oaks.
- Han, H., Hsu, L.-T.J., & Sheu, C. (2010). Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities. *Tour. Manag.* 2010, 31, 325-334.
- Haque, A., Chowdhury, N., Kabir, S.M.H., Yasmin, F., Tarofder, A.K., & Nazmul, M.H.M. (2020). Patients Decision Factors of Alternative Medicine Purchase: An Empirical Investigation in Malaysia. *International Journal of Pharmaceutical Research*, 12(3), 614-622.
- Haque, A., Kabir, S.M.H., Tarofder, A.K., Chowdhury, N., Yasmin, F., Nazmul, M.H.M (2019). Pharmaceutical marketing ethics in healthcare quality for patient satisfaction: an Islamic approach. *International Journal of Pharmaceutical Research*, 11 (1): 1688-1697
- Haque, A., Sarwar, A., Yasmin, F., Tarofder, A.K., & Hossain, M.A. (2015). Non-Muslim consumers' perception toward purchasing Halal food products in Malaysia. *Journal of Islamic Marketing*, Vol 6(1), 133-147.
- Hee, S. (2000). Relationships among attitudes and subjective norm: Testing the theory of reasoned action cultures. *Commun. Stud.* 2000, 51, 162-175.
- Joey, F., & George, J.F. (2004). The theory of planned behavior and Internet purchasing. *Internet Research*, Vol 14(3), 198-212.
- Klerck, D., & Sweeney, J. C. (2007). The effect of knowledge types on consumer-perceived risk and adoption of genetically modified foods. *Psychology & Marketing*, 24(2), 171-193.
- Kotler, P. (2003). *Marketing Management*. International Edition: Eleventh, ISBN: 978-0130497154.
- Kumar, P. (2010) *Marketing of Hospitality & Tourism Services*. Tata McGraw-Hill Education.
- Li, J., Mizerski, D., Lee, A., & Liu, F. (2009). The relationship between attitude and behavior an empirical study in China. *Asia Pacific Journal of Marketing and Logistics*, 21(2), Asia Pacific Journal of Marketing and Logistics.
- Lowe, N., & Ryan-Wenger, N. (2000). Over-the-Counter Medications and Self-Care. *The Nurse practitioner*. 24. 34-44. 10.1097/00006205-199912000-00003.
- Moser, A.K. (2015). Thinking green, buying green? Drivers of pro-environmental purchasing behavior. *J. Consum. Mark.* 32, 167-175.
- Mostafa, M.M. (2007). A hierarchical analysis of the green consciousness of the egyptian consumer. *Psychol. Mark.* 24, 445-473.
- Olsen, S.O. (2004). Antecedents of seafood consumption behavior: An overview. *J. Aquat. Food Prod. Technol.* 13, 79-91.
- Pahud, M.C., Rietbroek, J., & MacLean Johns, C. (1997). Marketing pharmaceuticals in Japan: background and the experience of US firms. *European Journal of Marketing*, 31(8), 561-582.
- Palos, G., Mendoza, T., Cantor, S. Aday, L., & Cleeland, C. (2004). Perceptions of analgesic use and side effects: What the public values in pain management. *Journal of pain and symptom management*. 28. 460-73. 10.1016/j.jpainsymman.2004.02.016.
- Park, C.W., Mothersbaugh, D.L., & Feick, L. (1994). Consumer knowledge assessment. *Journal of Consumer Research*, 21(1), 71-82.

45. Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *J. Retail. Consum. Serv.* 2016, 29, 123–134.
46. Pribadi, P., Pangestuti, R.C.A., & Daniswara, N.J. (2020). Preference of Pharmacies Selection and OTC Medicine Purchase with Customer Segmentation Approach: A Case Study in Magelang. *International Journal of Scientific & Technology Research*, 9(2), pp.2875-2879.
47. Pujari, N., Sachan, A., Kumari, P., & Dubey, P. (2016). Study of Consumer's Pharmaceutical Buying Behavior Towards Prescription and Non-Prescription Drugs. *Journal of Medical and Health Research*. 1. 10-18.
48. Qing, P., Lobo, A., & Chongguang, L. (2012). The impact of lifestyle and ethnocentrism on consumers' purchase intentions of fresh fruit in China. *Journal of Consumer Marketing*, 29(1), 43–51.
49. Raja, M.A.G., Al-Shammari, S.S., Al-Otaibi, N., & Amjad, M.W. (2020). Public Attitude and Perception about Analgesic and their Side Effects. *Journal of Pharmaceutical Research International*, 32(3), 35-52. <https://doi.org/10.9734/jpri/2020/v32i330412>
50. Raju, P.S., Lonial, S.C., & Mangold, W.G. (1995). Differential effects of subjective knowledge, objective knowledge, and usage experience on decision making: An exploratory investigation. *Journal of Consumer Psychology*, 4(2), 153-180.
51. Ramya, N., & Ali, S.A.M. (2016). Factors affecting consumer buying behavior. *International Journal of Applied Research*. 2(10), pp.76-80.
52. Sansgiry, S., & Cady, P. (1996). How the Elderly and Young Adults Differ in the Decision Making Process of Nonprescription Medication Purchases. *Health marketing quarterly*. 14. 3-21. [10.1300/J026v14n01_02](https://doi.org/10.1300/J026v14n01_02).
53. Semeijn, J., Van Riel, A.C., & Ambrosini, A.B. (2004). Consumer evaluations of store brands: effects of store image and product attributes. *Journal of Retailing and Consumer Services*, 11(4), 247-258.
54. Stone, R.N., & Grønhaug, K. (1993). Perceived risk: Further considerations for the marketing discipline. *European Journal of Marketing*, 27(3), 39-50.
55. Suplet, M., & Suárez, M.G., & Martín, A.D. (2009). Customer perceptions of perceived risk in generic drugs: The Spanish market. *Innovar*. 19. 53-64.
56. Tarkiainen, A., & Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *British food journal*, Vol 107(11), 808-822.
57. Taylor, J., Lo, Y. N., Dobson, R., & Suveges, L. (2008). Consumer over-the-counter usage and attitudes: a survey in one Canadian city. *International Journal of Pharmacy Practice*, 16(5), 295-302.
58. Taylor, S., & Todd, P. (1995). Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *Int. J. Res. Mark*, 12, 137–155.
59. Thøgersen, J. (2006). *Consumer decision-making with regard to organic food products: Results from the condor project*. In: Proceedings of the Traditional Food Processing and Technological Innovation Conference, Faro, Portugal, 26 May 2006.
60. Tsiotsou, R. (2006). The Role of Perceived Product Quality and Overall Satisfaction on Purchase Intentions. *International Journal of Consumer Studies*, 30(2), 207–217.
61. Van der Heide, I., Uiters, E., Sørensen, K., Röthlin, F., Pelikan, J., Rademakers, J., Boshuizen, H. et al. (2016). Health literacy in Europe: the development and validation of health literacy prediction models. *European journal of public health*, 26(6), 906–911. <https://doi.org/10.1093/eurpub/ckw078>
62. Wazaify, M., Shields, E., Hughes, C.M., & McElnay, J.C. (2005). Societal perspectives on over-the-counter (OTC) medicines. *Family Practice*, 22(2), 170-176.
63. WHO. (1998). *The role of the pharmacist in self-care and self-medication*. The Hague, The Netherlands: World Health Organization.
64. Wieringa, J. E., Reber, K. C., & Leeftang, P. (2015). Improving pharmacy store performance: the merits of over-the-counter drugs. *European Journal of Marketing*, 49(7/8), 1276-1299.
65. Wiriyapinit, M. (2007). Is thai culture the right culture for knowledge management?: An exploratory case study research. *Chulalongkorn Rev.* 2007, 74, 80–90.
66. Woźniak-Holecka, J., Mateusz, G., Karolina, S., Kamila, M., & Elżbieta, C. (2012). Consumer behavior in otc medicines market. *Przegl epidemiol*, 66: 157 – 160.
67. Yeon, K.H., & Chung, J.E. (2011). Consumer purchase intention for organic personal care products. *Journal of Consumer Marketing*, 28(1):40-7.
68. Zukin, S., & Maguire, J.S. (2004). Consumers and consumption. *Annu. Rev. Sociol*, 30, 173–197.