

## Exploring Motivational Triggers for Impulse Buying: A Study of Over the Counter Medicines in Pakistan

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i> Received: 12 Jan, 2023 Revised: 05 May, 2023 Accepted: 08 Jun, 2023 Available Online: 07 Sep, 2023</p> <p>DOI: <a href="https://doi.org/10.56536/ijmres.v13i3.411">https://doi.org/10.56536/ijmres.v13i3.411</a></p> <p><i>Keywords:</i> Impulse buying, Over the counter medicines, good health, pharmaceutical industry, SDG 3</p> <p><i>JEL Classification:</i> M00, M1, M31</p>	<p>This quantitative, hypothesis testing study aims to investigate the motivational factors impacting impulse buying of over-the-counter medicines in Pakistan. The study analyzes the relationship of perceived product quality, store atmosphere and shelf display with impulse buying. This research also introduces a new mediator of 'Consumer urge to buy' to the literature of impulse buying motivation. Data was collected from a sample of 320 over-the-counter customers whereby the sample size was determined on basis of principles set by the item response theory. Data analysis was done in SPSS using Process Macro by Hayes mediation model 4. The results showed that there is a significant positive relationship between perceived product quality, store atmosphere, shelf display and impulse buying of over the counter medicines with the mediation of urge to buy; hence all the study hypotheses were supported. The study provides a novel theoretical contribution by applying Hawkin Sterns impulse buying theory to a new area of research in behavioral sciences. This research will also help the pharmacists and pharmaceutical brand managers to gain a better understanding of impulse triggers of impulse buying and will enable them to develop a better placement strategy. In addition, this research study is in line with the third Sustainable Development Goal of the United Nations i.e., well-being and good health.</p>

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## INTRODUCTION

Over the counter (OTC) medicines are defined as non-prescribed medicines that can be purchased or sold without a prescription from a health care professional (Cooper, 2013). OTC medicines include multivitamins, nutritional supplements, basic pain killers, digestive care products, skin care solutions as well as cough and cold remedies (Cooper, 2013). These products have created a pathway for growth towards basic self-medication, self-care & remedial treatment as a precautionary measure. Particularly, dietary supplements that are used for boosting immunity such as multi-vitamins and minerals are used extensively because of their placement in pharmacies (Yanez et al., 2021)

A highly developed store gives shoppers the impression of good quality products (Baker et al., 2002; Lamis et al., 2022). Research shows that retailers can trigger consumers' impulse buying through store design, product display and its design (Park et al., 2006). Some researchers advocate that impulse buying is critical for retail business' profits; hence efforts must be made to get the customers to buy impulsively (Dawson & Kim, 2009; Ampadu et al., 2022). These investigative areas are under explored for the over the counter sector in the study country. Hence, the proposed framework of our

study analyzes the relationship of impulse buying with store atmosphere, perceived quality, and shelf display with the mediating role of consumer urge for OTC medicines.

During the pandemic, uncertainty and risk factors led to increase in consumption of over-the-counter medicines (Karlsson, 2021; Lamis et al., 2022). However, the determinants of impulse buying in this category are still under investigated in the current literature. In addition, research on the basis of an underpinning theory is also scarce pertaining to this topic. Our study applies Hawkin Sterns Impulse buying theory for the first time to a new sector of social sciences research. Also, a new mediator of consumer urge to buy has been introduced in the framework of impulse buying motivation.

This study will also help decision makers in the medical and pharmaceutical community better design their placement strategy for over the counter products. A well-planned placement strategy will result in better well-being of pharmacy customers as well. Hence, this research has a theoretical, practical as well as social contribution. The research opens new opportunities for further detailed research in particular sub segments including respiratory, digestive, skin care and pain management.

## LITERATURE REVIEW

Taking a view of the contemporary literature in the current era, research scholars have highlighted the affordability and accessibility aspect of medicines (Khurram et al., 2022) while other scholars have focused on variables of service quality, customer trust (Waseem et al., 2018) as well as brand commitment and customer engagement in their research studies on other key sectors (Asim & Ashfaq, 2021). In our study, Hawkins Stern's impulse buying theory has been applied as it predicts the rationale for consumer motivators regarding impulse buying. According to this theory, various external or internal stimuli motivate consumers to experience quick purchase, reminded purchase, suggested impulse or planned purchase. These levels of purchases are formed in the consumers mind, unconsciously and may occur in sequential or no particular order. Subsequent research shows that the consumer behaviour pertaining to the study variables (product quality, store atmosphere and displays) also results in quick, reminded, suggested and planned purchases, as per Stern's theory (Pereira et al., 2022)

### Impulse Buying

Impulse buying is an evolving phenomenon in the field of marketing and has an impact on consumers throughout the world (Zhang et al., 2022). It is worthy to classify the factors that are significant for development of retailing via increasing sales by impulsive buying (Li et al., 2022; Aiolfi et al., 2022). Several factors have an influence on impulse buying of the customers that can be linked to the store atmosphere, consumer's urge, the product placement and the various socio-cultural as well as demographic aspects (Chiu et al., 2022; Ampadu et al., 2022). Research on the occurrence of impulse buying is extensive. An important set of studies have found several setting variables that rise or reduce the chances of impulse buying, especially when it comes to purchase of OTC medicines. It is worthy to classify the factors that are significant for the development of pharmaceutical sector via growing sales volume through impulsive buying. These results of this research correspond with the previous research studies, which indicate that consumer's perception of store's environment, product quality

and product placement have a primarily positive impact on the revenue of the OTC medicines manufacturer (Deshpande et al., 2022; Aiolfi et al., 2022). Impulse buying is well-thought-out to be one of the significant aspects to increase sales volume in the pharmaceutical industry through OTC medicines, by specifying their shelf displays at branded pharmacies (Verhagen, 2011).

### **Perceived Product Quality and Impulse Buying**

Perceived product quality can be defined as the individual's perception of both tangible and intangible components of a certain product including their judgment regarding its superiority & excellence (Wu, Chiu, & Chen, 2020; Goel et al., 2022). Quality can be defined as the value, loss avoidance, conformance to specifications and requirements, fitness for use or meeting and exceeding the customer expectations (Zhang et al., 2022). Perceived quality is the value judgment a consumer may have regarding the quality of the product (Espejel et al., 2007; Chiu et al., 2022). This is because an individual's perception of quality differs depending on a number of factors (Fandos & Flavián, 2006). It can also be stated that perceived quality is the subjective assessment of consumers about the product, performance or the brand (Chiu et al., 2022; Yu et al., 2018; Yang et al., 2022).

Dittmar & Drury, (2000) claim impulse buying to be a prevailing phenomenon of consumer behavior in the retail environment. Impulsive buying occurs when a person makes immediate, unreflective and unplanned purchases (Deshpande et al., 2022; Aiolfi et al., 2022). Such unintended buying emerges when a person urges to buy something while shopping (Jones et al., 2003). Emotionally appealing products are purchased impulsively than non-emotionally appealing (Zhang et al., 2022; Chiu et al., 2022). Nicholes et al., (2001) found in their study that more than half of the mall shoppers were found to make impulse purchases. A highly developed store gives shoppers the impression of good quality products (Li et al., 2022). Some products are more prone to impulsive buying if they symbolize an ideal self of the buyer (Dittmar & Bond, 2010; Deshpande et al., 2022; Goel et al., 2022). The urge to buy impulsively does not let the individual think of other alternatives and leads straight to impulsive buying (Lee et al., 2009).

### **Store Atmosphere and Impulse Buying**

Store atmosphere is the endeavoring design comprising of sensory components like the high or low extravagance colors, lighting, noise, design, and layout of the store, store fragrances, temperature, and scent (Yang et al., 2022; Li & Hung, 2019). The design of the store gives customers a pleasant feeling which is expected to prompt readiness to purchase when customers stop much longer in the shop. It is recognized that the environment brings a positive sense that makes an urge to make impulse buying (Asrinta, 2018). Store environment consists of design factors as layout and assortment; ambient factors such as scent, lightening and music; social factors as salesperson's presence and effectiveness (Baker et al., 2002). Environmental (Deshpande et al., 2022; Li et al., 2022) and marketing literature (Ampadu et al., 2022) has found that individuals are attracted towards pleasant environment and avoid unpleasant environment.

Good lighting entices the shoppers and urges to buy and brings customer's attention key sales points (Ampadu et al., 2022). Store environment makes a utilitarian buyer purchase more by invoking an urge (Pereira et al., 2022). Mohan & Sivakumaran, (2013) found store environment to be of significant value in affecting impulsive buying with layout being on the top. The aesthetic and functional aspects of the store environment directly influence the shopping experience (Seock, 2009; Grewal et al., 2003; Yang et al., 2022). A well-developed store lets the shopper find the items they are looking for easily, sparing them time to navigate through the store for additional purchases (Pan & Zinkhan, 2006; Ailawadi & Keller, 2004; Ampadu et al., 2022). The interior of the store has been seen to evoke emotional responses in individuals or trigger their impulsive buying behavior (Mohan et al., 2013), or invoke an urge to buy spontaneously (Pereira et al., 2022; Goel et al., 2022).

### **Shelf Display and Impulse Buying**

It can be referred to as a visual merchandise display of products, as a special promotion or a presentation to attract and entice customers in a retail store (Chiu et al., 2022; Aiolfi et al., 2022). It can also be considered as the practice of store retailers for placing their products over displays within the stores (Ampadu et al., 2022). It is one of the important resources to attract more customers when it comes to retailing or in store promotions decisions through identifying comprehensive space allocations (Deshpande et al., 2022; Zhang et al., 2022). The placement of certain products tends to create some particular feelings in consumers, especially when they are in a hurry. Studies have shown that the consumers who are exposed to certain brands or products that can bring them self-care or precautionary treatment, generates a need to buy impulsively since they are placed in an effective manner within the store (Aguiar & Hubnar, 2021) .

Research shows that businesses are trying to escalate the impulse buying purchases through product displays and design of the store (Deshpande et al., 2022). Retailers can trigger consumers' impulse buying through store design, product display and its design (Park et al., 2006). Biyani, (2005) suggest that products that are put in an appropriate manner make the customers feel at ease and get them into buying impulsively. In an experiment, impulsive buying was increased about three percent when the product was displayed at the checkout shelf or at the end of the aisle (Inman et al., 2009). A well-mannered display of products eases and enhances customer's shopping experience (Dabholkar et al., 2007). Akram, (2016) found that product displays directly influence impulsive buying. (Ampadu et al., 2022) claim that a proper design of the store and adequate display of the products account for one-fourth of the sales. Appropriate display of the merchandise is found to have an effect on consumer's shopping experience (Chiu et al., 2022; Spies et al., 1997; Xu, 2007). Bellini et al., (2017) found that during a grocery shopping, external stimuli can be the quality of space and amount of space given to a specific product category can influence impulse buying (Ghani & Kamal, 2010; Goel et al., 2022).

### **Consumer's urge to buy and Impulse Buying**

The consumer's urge can be defined as a state of their desire to purchase, experienced after encountering any object in a certain environment. The individuals then act in a certain way to fulfill that desired state or need by acquiring the offering of interest. When responding to the urge to buy, an

individual makes an impulse purchase by making an instant decision (Jones et al., 2003). Impulsive buying is linked with powerful affective reactions like strong urge to buy something or feeling of pleasure (Goel et al., 2022).

Buying impulsiveness is an individual’s trait to buy spontaneously (Ampadu et al., 2022). Low self-esteem has been found to arouse a negative psychological state which urges the individual to indulge in impulsive buying (Verplanken et al., 2005; Silvera et al., 2008). The urge to buy impulsively can be induced in an individual as a result of depression (Sneath et al., 2009). Li et al., 2022 found bad mood in the respondents as a cause for impulsive buying. Good mood can be a goal to achieve by purchasing impulsively (Verplanken & Sato, 2011; Chiu et al., 2022).

Bellini et al., (2017) claim that a negative effect or a bad mood induce urge to buy in an individual. Some researchers point out that marketers should not just keep in-store factors in mind but the whole shopping cycle to better engage the customers with their products (Ampadu et al., 2022). Urge to buy impulsively is an unplanned emotion which leads to impulsive buying behavior (Song et al., 2015; Yang et al., 2022) as (Goel et al., 2022) claim that emotions play a critical role in impulse buying. People when faced with a sudden urge do not think whether they need the product; they may satisfy the urge by indulging in an impulse purchase (Verhagen & van Dolen, 2011; Parboteeah et al., 2009; Aiolfi et al., 2022).

Our Literature review leads to the following theoretical framework:

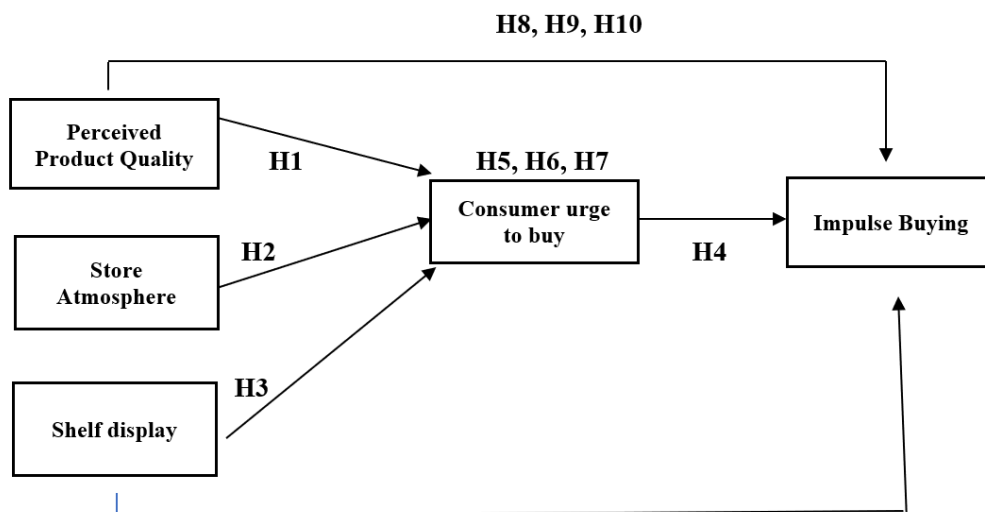


Figure 1. Theoretical Framework

## RESEARCH METHODOLOGY

The study is a quantitative, hypothesis testing study whereby the theoretical framework was empirically tested, leading to acceptance or rejection of the hypotheses. Following are details pertaining to the methodology:

### Sampling technique, size and target respondents

The sample size was determined on the basis of the item response theory (Nunnally, 1978). As our items were 32, the total sample size was calculated to be 320. A total of 400 questionnaires were distributed and we received 320, hence the response rate was 80%. Sampling technique was non probability, convenience sampling. The unit of analysis were individuals. It is pertinent to mention that the target respondents of the study were users of over the counter medicines. This was established through initial screening questions in the first part of the questionnaire asking the respondents about their usage of over the counter medicines.

### Study Setting and interference

The setting for the study was non-contrived where the responses were collected based on a normal and natural setting. For this purpose, there was minimal interference of the researcher. Collected data was used for data analysis purposes without any adjustment in the responses being received.

### Research Instrument

A structured questionnaire was used as a research instrument. The items were acquired through the current study context. The survey questionnaire was divided into sections whereby the first part comprised of respondent demographics and screening. Subsequently, the variables were measured using a Likert scale of 5 points. Following is an overview of items and sources.

**Table I: Item Sources**

Variables	Items	Source
Impulse Buying	8	Chen and Wang (2016)
Perceived Product Quality	3	(LI & Hung, 2019)
Store atmosphere	7	(Mohan et al. (2013) Chang et al. (2013)
Shelf Display	7	(LI & Hung, 2019)
Urge to Buy	7	(LI & Hung, 2019)

## Data Analysis

The software SPSS was used for analyzing the collected data from the respondents. Descriptive statistics, Reliability test, Correlation test and Mediation Model 4 of Process Macro by Hayes was conducted.

## Time Horizon

It was a cross-sectional, one-shot study as the collection of data was completed in one single phase. The research study was completed in a time frame of one year.

# RESULT AND DISCUSSION

## Demographic Characteristics

The demographics of respondents (N=320) for the study are presented in the table below:

**Table II: Demographic Characteristics**

Variables	Category	Frequency	Percentage
Gender	Male	153	47.8
	Female	167	52.2
Age	18-24	58	18.1
	25-34	151	47.2
	35-44	78	34.4
	45-54	28	8.8
	55 and above	5	1.6
Education	Matric	4	1.3
	Intermediate	19	5.9
	Undergraduate	184	57.5
	Post Graduate	113	35.3
Monthly Household income	51k-100k	61	19.1
	101k-200k	108	33.8
	Above 200k	151	47.2

## Descriptive Statistics

The descriptive analysis aids in simplifying, portraying and summarizing the statistical data into a meaningful and understandable form. Following are the tabulated results and interpretation:

**Table III: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Impulse Buying	320	1.86	4.57	3.3563	.69527
Perceived Product Quality	320	1.33	4.67	3.6646	.74184
Store Atmosphere	320	1.86	4.57	3.4438	.64179
Shelf Display	320	2.00	5.00	3.6022	.60778
Urge to Buy	320	1.57	4.86	3.5330	.76822
Valid N (list wise)	320				

### Impulse Buying

The average mean value of impulse buying is 3.3563, while the standard deviation value is .69527. This indicates that most people agree that they get impulsive while making a purchase of over the counter medicines.

### Perceived Product Quality

The average mean value for perceived product quality is 3.6646 and the standard deviation value is .74184. This value highlights the fact that for perceived product quality plays a major role in convincing people to make the OTC medicines purchase

### Store Atmosphere

The average mean value for Store atmosphere is 3.4438 and the standard deviation value is .64179. The relevant values depict that store atmosphere is of greater importance that might influence consumer's impulse buying behavior at pharmacies, when they are exposed to certain over the counter medicines or pharmaceutical products.

### Shelf Display

The average mean value for Shelf display is 3.6022 and the standard deviation value is .60778. The results shows that placement of over the counter products or merchandise impacts individuals to make a certain purchase, for which shelf display of OTC medicines triggers their overall buying behavior.

### Urge to Buy

The average mean value for the Consumer's urge to buy is 3.5330 and the standard deviation value is .76822. The respective values shows that the consumer's inner urge to buy something triggers them to make a purchase and plays a vital role in impacting their overall impulse buying behavior as well.



## Reliability Analysis

Reliability analysis was carried out on the collected data for computing the internal consistency. Results are given in the table below:

**Table IV: Reliability of Data**

Variables	Items	Alpha
Perceived Product Quality	3	.736
Store Atmosphere	7	.775
Shelf Display	7	.885
Urge to Buy	7	.891
Impulse Buying	8	.843

The above table shows the Cronbach alpha's values of all the variables. It can be seen that perceived product quality, store atmosphere, shelf display, urge to buy and impulse buying have Cronbach's alpha values above 0.69 which means all the variables are reliable.

## Correlation Analysis

Correlation results are presented in the table below:

**Table V: Correlation Matrix**

Variables	1	2	3	4	5
Perceived Product Quality	1				
Store Atmosphere	.476**	1			
Shelf Display	.282**	.689**	1		
Urge to Buy	.403**	.667**	.836**	1	
Impulse Buying	.502**	.583**	.589**	.630**	1

The results of the correlation analysis are indicating that there is a moderate positive correlation between perceived product quality and urge to buy ( $r=.403$ ,  $p<0.01$ ). Similarly, there is a moderate positive correlation between perceived product quality and impulse buying ( $r=.503$ ,  $p<0.01$ ). The same result is for store atmosphere with brand urge to buy ( $r=.667$ ,  $p<0.01$ ) as well as store atmosphere and impulse buying ( $r=.583$ ,  $p<0.01$ ).

Correlation analysis results for shelf display shows that it has a strong positive correlation with urge to buy ( $r=.836, p<0.01$ ). Whereas there exists a moderate positive correlation between shelf display and impulse buying ( $r=.589, p<0.01$ ). Lastly there is a moderate positive relationship between Urge to buy and impulse buying, following up the correlation analysis value ( $r=.630, p<0.01$ ).

**Regression Analysis of Hypotheses Statements**

Mediation model 4 of Process Macro (Preacher & Hayes, 2005) was used for data analysis. The bootstrap level was kept at 1000 and the confidence interval at 90%.

**Table VI: Results of Model 4 for Hypotheses 1,4,5,8**

Results of Model 4 for Hypotheses 1,4,5,8							
Y=Impulse Buying X= Perceived Product Quality M=Urge to Buy Sample Size 320							
Outcome:	Urge to Buy						
Model: 1	Summary						
	R	R-Sq	MSE	F	df1	df2	P
	.403	.162	.496	61.56	1.00	318.000	.0000
<b>Model:1</b>							
		Coeff	se	t	P	LLCI	ULCI
Constant		2.005	.199	10.088	.000	1.687	2.333
Perceived Product Quality		.417	.053	7.846	.000	.329	.505
Outcome:	Impulse Buying						
Model: 2	Summary						
	R	R-Sq	MSE	F	df1	df2	P
	.686	.471	.258	140.923	2.000	317.000	.000
Model 2:							
		coeff	se	t	P	LLCI	ULCI
Constant		.705	.165	4.286	.000	.434	.976

Urge to Buy	.462	.040	11.439	.000	.396	.529
Perceived Product Quality	.278	.042	6.642	.000	.209	.347

**Direct effect of X on Y**

Effect	se	t	p	LLCI	ULCI
.278	.042	6.641	.000	.209	.347

**Conditional Indirect Effect(s) of X on Y:**

Perceived Product Quality	Urge To Buy		Impulse Buying	
	Effect	BootSE	BootLLCI	BootULCI
Urge to Buy	.193	.058	.108	.296

The value of R shows that the relationship is 40.3% between perceived product quality and urge to buy. The value of R square is 16.2%, which shows that the amount of variation in urge to buy, due to perceived product quality is 16.2%. The value of f (F=61.56) and p=0.000, shows that the model is good fitted. Results are showing positive relationship between two variables. Since values of Upper & lower quartile i-e ULCI (.505) and LLCI (.329) between perceived product quality and urge to buy, both are positive in nature. Moreover, (p=0.000 < 0.10) and the coefficient value of 0.417 indicates a positive and significant relationship between perceived product quality and urge to buy i.e., one unit change or increase in product perceived quality will result a change in consumer’s urge to buy by 0.417 on the average.

**H1: There is a significant and positive relationship between perceived product quality and consumer urge to buy.**

Hence, the regression analysis proves that the hypothesis 1 is supported

**Model 2 Summary:**

The value of R shows that the relationship between impulse buying and impulse buying is 68.6%. The value of R square is 47.1%, which shows that there is 47.1% variation in impulse buying due to interaction with other variables. The value of F (F=140.923) and p=0.000 show that the model is good fitted. The positive values of Upper and Lower Confidence Intervals ULCI (.529) & LLCI (.396) indicate that there is a significant relationship between urge to buy and impulse buying. The coefficient value (0.462) indicates that, if there is one unit increase in Urge to buy then there is 0.462 units increase in Impulse buying, on the average. The P is less than 0.05 which shows a significant relationship between the variables.

**H4: There is a significant and positive relationship between consumer urge to buy and impulse buying.**

Hence, the regression analysis proves that the hypothesis 4 is supported

Direct Effect of X on Y:

The results shows that upper & lower quartile value ULCI (0.347) and LLCI (0.209), both are positive in nature. Furthermore, p value is less than 0.05 which states that there is positive significant relationship between perceived product quality (X) and impulse buying (Y). The effect value of 0.278 show a that one unit change in perceived product quality results in 0.278-unit change in impulse buying.

**H8: Perceived product quality has a direct and significant relationship with impulse buying.**

Hence, the regression analysis proves that the hypothesis 8 is supported

Indirect Effect of X on Y:

The values of Boot ULCI (0.296) and Boot LLCI (0.108) indicate that the indirect influence of perceived product quality (X) on Impulse Buying (Y) through the mediation of Urge to Buy (M) is positive and significant as both values are positive. This result supports and proves the hypothesis of the study and mediation between independent and dependent variables, according to which, Consumer urge to buy mediates the relationship between Perceived Product Quality and Impulse Buying.

**H5: Consumer urge to buy mediates the relationship between perceived product quality and impulse buying.**

Hence the regression analysis proves that the hypothesis 5 is supported

**Table VII: Results of Model 4 for Hypotheses 2,4,6,9**

Results of Model 4 for Hypotheses 2,4,6,9							
Y=Impulse Buying X= Store Atmosphere M=Urge to Buy Sample Size 320							
Outcome:	Urge to Buy						
Model: 1	Summary						
	R	R-Sq	MSE	F	df1	df2	P
	.667	.445	.329	254.637	1.00	318.000	.0000
Model:1		Coeff	Se	t	P	LLCI	ULCI

Constant	.784	.175	4.476	.000	.495	1.073
Store Atmosphere	.798	.050	15.957	.000	.716	.881
Outcome: Impulse Buying						
Model : Summary						
	R	R-Sq	MSE	F	df1	df2
	.667	.445	.258	140.923	2.000	317.000
Model						
	coeff	Se	t	P	LLCI	ULCI
Constant	.872	.164	5.325	.000	.602	1.142
Urge to Buy	.393	.051	7.730	.000	.309	.478
Store Atmosphere	.319	.061	5.236	.000	.218	.419
<b>Direct effect of X on Y</b>						
	Effect	se	t	p	LLCI	ULCI
	.319	.061	5.236	.000	.219	.419
<b>Conditional Indirect Effect(s) of X on Y:</b>						
Store Atmosphere			Urge To Buy			Impulse Buying
	Effect	BootSE	BootLLCI		BootULCI	
Urge to Buy	.314	.058	.213		.406	

### Model 1 Summary:

The value of R shows that the relationship is 66.7% between Store atmosphere and urge to buy. The value of R square is 44.5%, which shows that the amount of variation in urge to buy, due to perceived product quality is 44.5%. The value of f ( $F=254.637$ ) and  $p=0.000$ , shows that the model is good fitted. Results are showing positive relationship between two variables. Since values of Upper & lower quartile i-e ULCI (.881) and LLCI (.716) between Store atmosphere and urge to buy, both are positive in nature. Moreover, ( $p=0.000 < 0.10$ ) and the coefficient value of 0.798 indicates a positive and significant relationship between Store atmosphere and urge to buy i.e., one unit change or increase in Store atmosphere will result a change in consumer's urge to buy by 0.798, on the average.

**H2: There is a significant and positive relationship between store atmosphere and consumer urge to buy.**

Hence, the regression analysis proves that the hypothesis 2 is supported

### Model 2 Summary:

The value of R shows that the relationship between impulse buying and other variables is 66.7%. The value of R square is 44.5%, which shows that there is 44.5% variation in impulse buying due to interaction with other variables. The value of F ( $F=140.923$ ) and  $p=0.000$  show that the model is good fitted. The positive values of Upper and Lower Confidence Intervals ULCI (.478) & LLCI (.309) indicate that there is a significant relationship between urge to buy and impulse buying. The coefficient value (0.393) indicates that, if there is one unit increase in Urge to buy then there is 0.393 units increase in Impulse buying, on the average. The P is less than 0.05 which shows a significant relationship between the variables.

**H4: There is a significant and positive relationship between consumer urge to buy and impulse buying.**

Hence, the regression analysis proves that the hypothesis 4 is supported

### Direct Effect of X on Y:

The results shows that upper & lower quartile value ULCI (0.419) and LLCI (0.219), both are positive in nature. Furthermore, p value is less than 0.05 which states that there is positive significant relationship between Store atmosphere (X) and impulse buying (Y). The effect value of 0.319 show a that one unit change in Store atmosphere results in 0.319-unit change in impulse buying.

**H9: Store atmosphere has a direct and significant relationship with impulse buying.**

Hence, the regression analysis proves that the hypothesis 9 is supportive

### Indirect Effect of X on Y:

The values of Boot ULCI (0.406) and Boot LLCI (0.213) i-e upper & lower quartile indicate that the indirect influence of Store atmosphere (X) on Impulse Buying (Y) through the mediation of Urge to Buy (M) is positive and significant as both values are positive. This result supports and proves the hypothesis of the study and mediation between independent and dependent variables, according to which, Consumer urge to buy mediates the relationship between Store atmosphere and Impulse Buying.

**H6: Consumer urge to buy mediates the relationship between store atmosphere and impulse buying.**

Hence, the regression analysis proves that the hypothesis 6 is supported

**Table VIII: Results of Model 4 for Hypotheses 3,4,7,10**

Results of Model 4 for Hypotheses 3,4,7,10							
Y=Impulse Buying X= Shelf Display M=Urge to Buy Sample Size 320							
Outcome:	Urge to Buy						
Model: 1	Summary						
	R	R-Sq	MSE	F	df1	df2	P
	.836	.700	.178	739.836	1.00	318.000	.0000
Model:1		Coeff	Se	T	P	LLCI	ULCI
Constant		-.275	.142	-1.935	.000	-.509	-.040
Shelf Display		1.057	.039	27.200	.000	1.001	1.121
Outcome:	Impulse Buying						
Model :	Summary						
	R	R-Sq	MSE	F	df1	df2	P
	.640	.410	.287	109.989	2.000	317.000	.000
Model		Coeff	Se	T	P	LLCI	ULCI
Constant		1.045	.181	5.760	.000	.746	1.344
Urge to Buy		.415	.071	5.825	.000	.297	.533
Shelf Display		.235	.090	2.607	.000	.086	.383
<b>Direct effect of X on Y</b>							
	Effect	se	t	p	LLCI	ULCI	
	.235	.090	2.607	.000	.862	.382	

**Conditional Indirect Effect(s) of X on Y:**

Shelf Display	Urge To Buy		Impulse Buying	
	Effect	BootSE	BootLLCI	BootULCI
Urge to Buy	.439	.104	.235	.593

**Model 1 Summary**

The value of R shows that the relationship is 83.6% between Shelf Display and urge to buy. The value of R square is 70%, which shows that the amount of variation in urge to buy, due to perceived product quality is 70%. The value of f ( $F=739.836$ ) and  $p=0.000$ , shows that the model is good fitted. Results are showing positive relationship between two variables. Since values of Upper & lower quartile i-e ULCI (1.121) and LLCI (1.001) between Shelf Display and urge to buy, both are positive in nature. Moreover, ( $p=0.000 < 0.10$ ) and the coefficient value of 1.057 indicates a positive and significant relationship between Shelf Display and urge to buy i.e., one unit change or increase in Shelf Display will result a change in consumer's urge to buy by 1.057, on the average.

**H3: There is a significant and positive relationship between shelf displays and consumer urge to buy.**

Hence, the regression analysis proves that the hypothesis 3 is supported

**Model 2 Summary**

The value of R shows that the relationship between impulse buying and other variables is 64.0%. The value of R square is 41%, which shows that there is 41% variation in impulse buying due to interaction with other variables. The value of F ( $F=109.989$ ) and  $p=0.000$  show that the model is good fitted. The positive values of Upper and Lower Confidence Intervals ULCI (.533) & LLCI (.297) indicate that there is a significant relationship between urge to buy and impulse buying. The coefficient value (0.415) indicates that, if there is one unit increase in Urge to buy then there is 0.415 units increase in Impulse buying, keeping all the other variables constant. The P value is less than 0.05 which shows a significant relationship between the variables.

**H4: There is a significant and positive relationship between consumer urge to buy and impulse buying.**

Hence, the regression analysis proves that the hypothesis 4 is supported

**Direct Effect of X on Y**

The results shows that upper & lower quartile value ULCI (0.382) and LLCI (0.862), both are positive in nature. Furthermore, p value is less than 0.05 which states that there is positive significant relationship between Shelf Display (X) and impulse buying (Y). The effect value of 0.235 show a that one unit change in perceived product quality results in 0.235-unit change in impulse buying.

**H10: Shelf displays have a direct and significant relationship with impulse buying.**

Hence, the regression analysis proves that the hypothesis 10 is supported



### Indirect Effect of X on Y

The values of Boot ULCI (0.593) and Boot LLCI (0.235) i-e upper & lower quartile indicate that the indirect influence of Shelf Display (X) on Impulse Buying (Y) through the mediation of Urge to Buy (M) is positive and significant as both values are positive. This result supports and proves the hypothesis of the study and mediation between independent and dependent variables, according to which, Consumer urge to buy mediates the relationship between Shelf Display and Impulse Buying.

### **H7: Consumer urge to buy mediated the relationship between shelf display and impulse buying.**

Hence, the regression analysis proves that the hypothesis 7 is supported

We can see from the above analysis that all our Hypotheses statements are supported.

### **Discussion**

The purpose of this research was to test and analyze the proposed framework which has been developed in relation to the previous studies. For empirically examining the relationships, survey questionnaires were distributed for the data collection purposes from the respondents. The study consists of total ten hypotheses statements, which tend to explain what is the influence of perceived product quality, store atmosphere and shelf display over impulse buying with the mediating role of consumer's urge to buy. Furthermore, all the variables proved to be reliable through reliability analysis results.

In the first hypothesis, the relation of consumer's perceptions of product quality with impulse buying behavior was studied through the mediating role of their inner urge to buy over-the-counter medicines. The results of the analysis turned out to be supportive of the claim made by the study. The findings are mostly in line with the past research findings which states that a higher rate of perceived product quality in the mind of consumers will result in higher urge to buy and a higher chance of impulse buying (LI & Hung, 2019). Moreover, regression results also proved that consumer urge to buy mediates the relationship between perceived product quality and impulse buying. Similarly perceived product quality has a direct and significant relationship with impulse buying; according to which the fifth & eighth hypotheses statements of the study are also supported.

The second hypothesis of the study "There is a significant and positive relationship between store atmosphere and consumer urge to buy." was also supported based on data analysis results. Moreover, urge to buy plays a significant and positive role of mediation between store atmosphere and impulse buying of OTC medicines which supports the fifth hypothesis statement as well. Lastly the regression results also signify that store atmosphere tends to influence consumer's impulse buying of OTC medicines at pharmacies which supports the ninth hypothesis statement of the study. Meanwhile the third hypothesis of the study was also supported based on the data analysis results which states that "There is a significant and positive relationship between shelf displays and consumer urge to buy." It can hence be interpreted that effective shelf displays of OTC medicines at medical stores positively influence the consumer's inner urge to buy. The results also explain that their urge to buy plays a significant and positive role of mediation between shelf display and impulse buying; which supports

the seventh hypotheses statement of the study. The tenth hypothesis statement was also supported that depicts the direct impact of shelf display over consumer's impulse buying of OTC medicines. This implies that the placement of OTC products based on their shelf space will increase the chances of consumers to purchase them impulsively.

This study also leads to further avenues of research, as explained below:

- The study has focused on impulse buying of OTC medicines in terms of perceived product quality, store atmosphere and shelf display. Other variables related to impulse buying may also be explored and tested through the literature.
- This research can also be replicated for other pharmaceutical products and therapeutic areas.
- Due to time limitations many aspects of the study and its details were not analyzed. The current study is cross-sectional in nature as the data was collected at a single moment. There might be chances of common bias being present in the responses being collected and responses might be changed over the time.
- Instead of convenience sampling technique, stratified sampling technique can also be used for future research. as OTC medicines also comprise of many different segments.
- Regardless of cultural and other differences, diverse samples can be drawn and analyzed.
- Other mediating variables apart from urge to buy can also be analyzed.
- Research can also be conducted to explore the relationship between factors influencing consumer's impulse buying based on their knowledge & exploratory behavior regarding certain OTC medicines.
- Longitudinal study approach can also be used for future research, in order to carry out studies in a more detailed and evaluative way.
- As a questionnaire was used to gather the data, at times it leads to perplexity as there is no means of knowing whether the respondent is being truthful. Observation method can also be explored.
- It is recommended to conduct qualitative research for a thorough and inclusive analysis of the relevant target population.
- Apart from overall impulse buying behavior, future researchers can also study consumer's unplanned buying behavior at different stages of the decision-making process.

## CONCLUSION AND POLICY IMPLEMENTATION

This research contributes to the current body of knowledge regarding impulse buying behavior of consumers. It also fills the research gap that how certain internal and external stimulants at the point of purchase create a sudden urge to buy certain products resulting in impulse purchases. Furthermore, the proven hypotheses and tested framework also compliments Hawkin Stern's impulse buying theory which is a novelty of our research. The uniqueness of this research also stems from furthering the research on the currently under explored topic of over-the-counter medicines, which is of relevance for both scholars and practitioners. All the hypotheses statements for the study were supported as per data analysis findings & regression results, which ultimately show that perceived product quality, store environment and shelf displays have a positive, significant relationship with impulse buying whereas consumer's urge to buy mediates the relationship between them. The research also supports the third Sustainable Development Goal of the United Nations, i.e., well-being and good health.

This study also has immense implications for academicians and practitioners. Following are the theoretical implications:

The research tends to extend the existing knowledge regarding the sources and various aspects of impulse buying in order to contribute to the existing literature. This study makes a notable theoretical contribution through explaining impulse buying factors in the context of over-the-counter medicines, which is largely lacking in current theory. Our study also applies Hawkin Sterns Impulse buying theory for the first time to a new sector of social sciences research. In addition, a new mediator of consumer urge to buy was introduced in the framework of impulse buying motivation.

This research also opens avenues for future research as it can be replicated for other pharmaceutical products and therapeutic areas. In addition, new variables pertaining to impulse buying motivators can also be tested for over-the-counter medicines using the framework of this study. In addition, the practical implications are given as follows. Firstly, the research has provided new insights that will help retailers, marketers and pharmacists to cater to impulsive buyers. Since store atmospheric cues are driven by store management that tends to influence the customer either positively or negatively, a higher urge to buy will certainly lead to impulse shopping. Hence, requisite store environment strategies should be developed after considering the demographic, psychographic and distinctive relevant factors of store visitors to design a dynamic in-store environment.

Furthermore, the study has also noted the significance of consumer's perception of product quality that impacts their inner feelings for buying a certain product. This emphasizes that there should be greater managerial interest in ensuring product quality of OTC medicines, especially because they are related to consumer health care. Moreover in the current competitive marketing environment, the in store product exhibition and merchandise placement is a key area of managerial interest. The decision makers can use the findings of the study to enhance consumer off take of OTC medicines, which will serve beneficial both for the pharmaceutical faternity and the health of the consumers, in the long term.

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