A Study on changes in Millenials preferences towards fitness apps and wearable's during the Covid -19 pandemic in Urban India using the determinants of Contemporary models of Consumer behavior

Dr. Kabita Kalita

Assistant Professor
Department of Management
Pandit Deendayal Upadhyaya Adarsha
Mahavidyalaya,
Tulungia, Bongaigaon

Abstract

The pandemic has indeed brought a huge change in every aspect of human life. One of the key shifts is the way how we keep ourselves fit. It has limited our gym visits and forced us to resort to other means. This has given rise to the expansion of online fitness programmes and purchasing of fitness wearables to keep track of people's exercise routines. The present study is an attempt to study how much change the pandemic has brought about using the determinants of contemporary models of consumer behavior.

Keywords: pandemic, fitness, apps, wearable, consumer behavior

Introduction

The millenials are one of the generations most concerned about fitness. They are highly concerned about what they eat and how they exercise. Fitness is described as the state of being healthy and fit by practicing any form of physical activity. The use of the term 'Fitness' increased in the western countries during the 1950's coinciding with the Industrial Revolution. With the passage of time, the state of being involved in any form of physical activity became an integral part of people's lives all around the world. It is the need of the hour for children, adolescents and adults to be involved in at least some form of physical activity. The habit of fitness once imbibed in a person stays on with him throughout his life. Engaging in regular physical activities reduces the risk of many chronic diseases in people, increases life expectancy, reduces the risk of injuries and improves the quality of life.

During 2019, the fitness industry generated 94 billion dollar around the world. The global growth rate during the period was 8.7 percent. A large number of gyms and health clubs were opened during the said period. People also became attracted towards fitness wearables. But the emergence of the Covid-19 pandemic has changed the scenario to the largest possible extent. The lockdowns imposed through out the world closed down the gyms for a large amount of time. Though the gyms opened after a few months, people are still apprehensive to visit them due to fear of contracting the virus.

In a developing country like India too the fitness industry has taken a hit. The cascading effect of the pandemic is still felt among the masses. Though the digital fitness industry made its debut in the country a long time ago but the traditional fitness regime still remained the first choice

for fitness enthusiasts. But the pandemic had put everything on hault, though gyms and fitness centers were allowed to open in the country after five months , the inflow of consumers gradually decreased.

This scenario led to the rapid rise of another sector i.e digital fitness. A study conducted by Mindbody, a wellness site showed that there is a huge jump in the number of consumers assessing virtual content since March, 2020. 73 percent of the consumers are using pre-recorded virtual classes when compared to the previous 17 percent in the year 2019.

The Indian Context

The idea of having a healthy body and a healthy mind is not new in the Indian culture. The practice of yoga, meditation, akhadas have been going on in the country since time immemorial. With the advent of globalization, the traditional exercises and practices were replaced by the modern fitness industry. It is also observed that the 'millennials' are more inclined to maintain a healthy body. Before the Covid-19 outbreak the fitness industry in India was expected to grow by 27 percent and was due to touch the US$32 billion by 2022.

The Government of India launching the 'Fit India Movement' on August 2019 was another cherry on top for the fitness industry. The movement inspired the country having a population of around 1.3 billion to engage themselves in some form of fitness activity. It was a boost not only for the fitness coaches but also for the equipments and nutrients industry. The industry that was considered to be at its peak suffered a huge collapse due to the outbreak of Covid -19. The loss it suffered or continues to suffer is unimaginable. The erroneous picture depicted across all

media outlets about gyms being the breeding ground of Covid-19 is another blow to the already vulnerable industry. The announcement by WHO that new outbreaks have occurred in crowded places with aerosol transmission is a nail in the coffin for the industry. The time it will take to revive is equivocal.

In India too the loss of physical workout centres gave rise to people embracing digital fitness. They are reaching out to a large number of people and offering them with the option of working out from home. Brands like Healthify me are offering everything on the plate to the consumers right from setting them up with the desired targets, counting calories and steps, listing out diet charts as per requirements of the individuals. Along with the rising demand of fitness apps, there was also a rise in the sales of fitness wearables. The category has seen year by year increase of 43.3 percent in the first quarter.

The pandemic has given rise to a seismic wave of health awareness which is energizing a new wave of technology. The fear of infection has increased the dependence on apps and wearables as a means to feel better protected. When people have an accurate and immediate feedback about their heart rate, body temperature, blood pressure, calories burned it helps in restoring their sense of control. Users of these gadgets are seeing the benefits of these health gadgets and a shift towards them is expected to persist even after the outbreak subsides.

The present study is thus an attempt towards studying how the pandemic has shifted the preference of consumers specially the millenials towards the fitness apps and gadgets in Urban India using the contemporary models of consumer behavior.

Review of literature

While conducting the study, the researcher has gone through the following literature:

Author	Title	Source	Findings
Gerald Lohse, Steven Bellman, Eric J. Johnson (2000)	Consumer Buying Behavior on the Internet: Findings from Panel Data	Journal of Interactive Marketing	The main objective of the study was to collect a panel of data on consumer buying behavior from the Internet. The data threw light on the advantages and disadvantages of panel data collected from the internet on survey research. It also helps to know about the demographics of online consumers; the amount of dollars consumers are spending online and the total online spending projections.

Wahida Shahan Tinne (2011)	Factors Affect ing Impulse Buying Behavior of Consumers at Superstores in Bangladesh	ASA University Review	The findings of the study indicates that factors like strategies of pricing , store characteristics, situational factors and promotional activities of the brands and firms influence the impulse buying behavior of consumers at stores of Bangladesh. It was also observed that products with reduced prices were brought mostly during impulse buying. The level of income of consumers also comes into play during impulse purchase.
Mr. Mitul M. Deliya, Mr. Bhavesh J. Parmar (2012)	Role of Packaging on Consumer Buying Behavior Patan District	Global Journal of Management and Business	In the study, various p ackaging elements like the colour of packaging, b ackground Image, Packaging Material , the d esign of the wrapper, the p rinted Information on the wrapper are taken as predictors. Due to reliance on self-service the role of package as a tool of sales promotion and stimulator of impulsive buying behavior i s growing increasingly. So package s have an important role to play in marketing communications, especially in the point of sale and could be treated as one of the most important facto rs influencing consumer purchase decision.
Aysel Boztepe (2012)	Green Marketing and Its Impact on Consumer Buying Behavior	European Journal of Economic and Political Studies	The findings of the study indicate that while studying the impact of green marketing on the consumers various factors were taken into consideration like age, psychological factors, gender, income etc all the factors were found to have a positive impact on consumer behavior
N Ramya and Dr. SA Mohamed Ali (2016)	Factors affecting consumer buying behavior	International Journal of Applied Research	The findin gs of the study shows that the behavior of consumers is influenced by various factors like internal or psychological factors, cultural factors, social factors, economical factors etc.

Gap in existing literature

While going through the above literature, the researcher found that though a lot of studies have been conducted on the field of consumer behavior, very few studies have taken into account fitness apps and wearable. The researcher thus tends to study this field and how the behavior of consumers have changed towards these products during the global pandemic using the contemporary models of consumer behavior.

Objective

The study has been conducted with the objective of studying whether the pandemic had an influence on the customers' preferences towards fitness apps and wearables.

Methodology

The present study is exploratory in nature. The data has been collected from both primary and secondary sources. For the purpose of primary data, questionnaires were given to the respondents.

Sample size

The sample size has been arrived at by using the Krejcie and Morgan Model (Small Sample Technique, The NEA Research Bulletin, Vol. 38, December, 1960, pg.99). The sample size arrives at 90 people.

Tools of data collection

For the purpose of collecting data, the researcher has used questionnaire which was prepared using the 3-point likert scale.

The respondents were given a series of statements and were asked to rate them where 3- stood for agree, 2- not sure and 1 – disagree.

The data was than analysed using regression analysis. A reliability test was also conducted to test the reliability of the statements under study.

Contemporary models of consumer behavior

There are four contemporary models of Consumer Behavior (Jisana T.K., 2014) namely:

1) The Howard Sheth Model

2) Engell –Kollat-Blackwell Model

3) Nicosia Model

4) Stimulus-Response-Model

The Howard Sheth Model analyses the combined impact of psychological, social and marketing forces on the buying behavior of the consumers into logical order of information processing.

There are three levels of decision making in the Howard Sheth model:

Extensive problem solving: This is the first stage of decision-making and the buyer is new to the market. They do not have any information about the brands and has no preference for a particular product or service. The consumer seeks information before making a decision.

Limited problem solving: At this level, the buyer has inadequate or incomplete information about the market. They are confused among the various alternatives.

Routinized response behavior: The response behaviour is when the buyer is aware of the products offered by different brands. They are capable of evaluating and comparing the options. The buyer decides in advance, which product is to be purchased. The model is depicted in Fig 1 below.

Fig 1: The Howard Sheth model of consumer behavior.

Source: https://theinvestorsbook.com/howard-sheth-model.html#
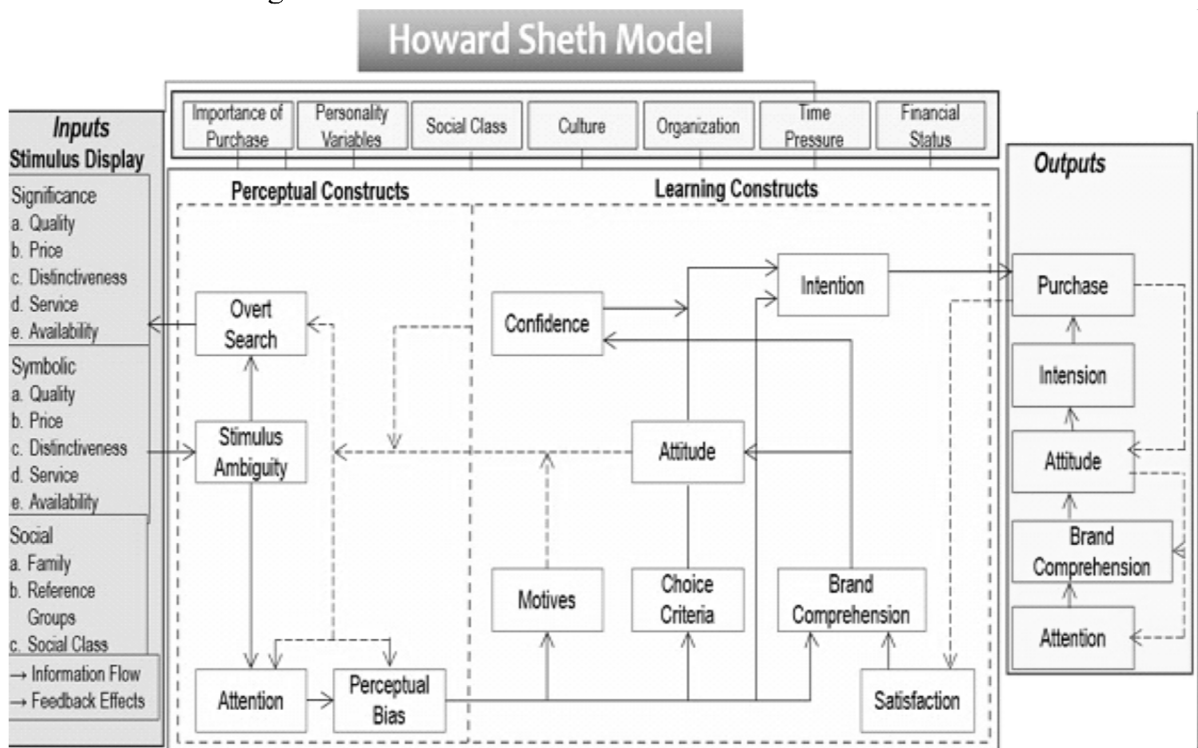
Variables of the Howard Sheth model:

The variables of the model are listed as follows:

The input variables

The stimulus inputs refers to the idea or information clue that the customer has about the brand and its product in terms of product quality, price, service offered and availability.

Hypothetical Constructs

The hypothetical constructs form the central part of the model. It includes all those psychological variables which play an important role in the buyer's decision-making process.

Perceptual Constructs

These components define the consumer's perception of information at the input stage.

Engell –Kollat-Blackwell Model

The Engel Kollat Blackwell Model of Consumer Behavior was created to describe the fast-growing body of knowledge concerning consumer behavior.

The Engel Kollat Blackwell Model of Consumer Behavior has four stages;

Information Input Stage: At this stage the consumer gets information from various sources, which in turn has an influence on the problem recognition stage. If the consumer still fail to arrive on a specific decision, the search for external information is activated in order to arrive on a particular choice.

Information Processing Stage: This stage consists of the consumer's attention, perception, acceptance, and retention of incoming information. The consumer must first be exposed to the message, interpret the stimuli, retain the message by transferring the input to long-term memory.

Decision Process Stage: The model focuses on the five basic decision-process stages: Problem recognition, search for alternatives, alternate evaluation, purchase and outcomes.

Variables Influencing the Decision Process: This stage throws light on individual and environmental influences that affect the decision process. Individual characteristics like motives, values, lifestyle and personality influence the decision making process; the social influencers are culture, reference groups, and family. The situational influencers are consumer's financial condition etc.

Nicosia Model of Consumer Behavior was formulated in 1966, by Professor Francesco M. Nicosia. This model focuses on the relationship between the firm and its potential consumers. The model throws light on the fact that the messages from a particular firm first influences the public. Based on a certain situation, the consumer will develop a certain attitude towards the product, which in turn results in a search for a product. If the above steps results in a favourable attitude towards the consumer, it may result in a decision to buy the product otherwise the reverse may also occur.

The model is divided into four major fields:

The firm's and the consumer's attributes- The first field is further divided into two subfields. The first subfield of the model deals with the firm's marketing environment and communication efforts. The second subfield specifies the characteristics of the consumers i.e. his experience, personality and how he perceives the idea towards the product. Here, the consumer forms his attitude toward the product based on his interpretation of the message.
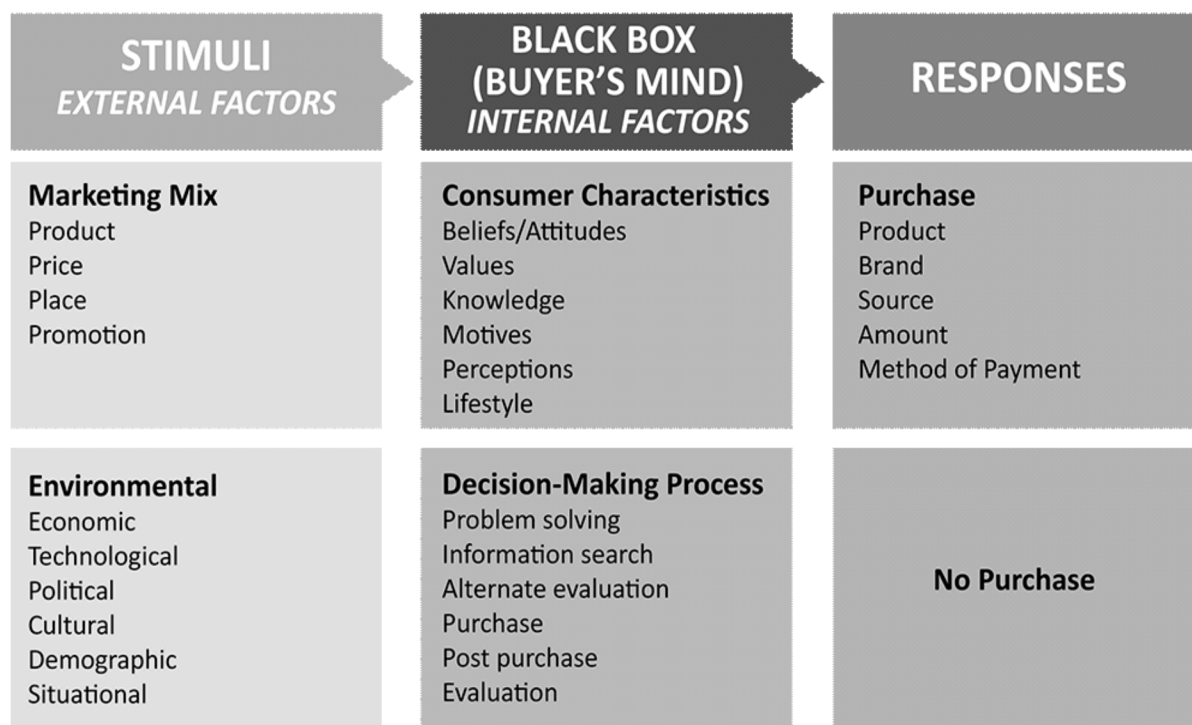
Search and evaluation – Here, the consumer starts to search for products of other brands and evaluates the firm's brand in comparison with the alternate brands.

The act of the purchase- The result of motivation will result when the consumer is convinced to purchase the firm's products.

Feed back of sales results. Here the feedback of both the firm and the consumer are analysed. The firm benefits from its sales data as a feedback, the consumer uses his experience with the product which in turn affects future messages from the firm.

The Stimulus Response model or "black box" model, throws light on the consumer as a problem solver who has to respond to a large number of external and internal factors when deciding whether or not to buy. These factors are shown below in Figure 2.

Fig2: The Black box model

Source: https://courses.lumenlearning.com/clinton-marketing/chapter/reading-the-black-box-of-consumer-behavior/

Consumers respond to external stimuli which include the marketing mix and other environmental factors. The marketing mix are the set of stimuli which are planned and created by the organisation. On the other hand, the environmental stimuli are supplied by the economic, political, and cultural sources. Together all these factors form the external stimuli.

The internal factors which affect the consumer decisions are described as the "black box." This box contains a list of factors that exist inside a person's mind. These include their beliefs, motivation, lifestyle etc. The decision-making process also becomes an integral part of the black box, as consumers recognize that they have a problem which is needed to be solved. As a consumer responds to external stimuli, their minds i.e the "black box" determines the consumer's decision whether to purchase or not to purchase based on internal stimuli. Regardless of what happens inside the black box i.e. the consumer's mind, the response of the consumer is a result of a conscious and rational decision making process. Marketers often consider that the consumers' emotions are the main factors that make them more prone to marketing stimuli in the first place.

Parameters of the study

As the study is based on the contemporary models of consumer behavior, the parameters are selected from the above mentioned models:

1. The pandemic impact on the consumers

2. Decision making

3. Post purchase behavior of the seller

4. Reference group and external factors

5. The message of the brand while selling the products

Reliability testing

A reliability test (Cronbach Alpha) was conducted on the statements of the questionnaire. The results of the test are shown in the following Table 1 below:

Table 1 : Table showing the reliability analysis of the variables under study:

SI. No	Factors	Reliability Score
1.	Consumer Behavior	.89
2.	Pandemic	.79
3.	Decision	.76
4.	Post purchase behavior	.80
5.	Reference group	.85
6.	Brand message	.89

From Table 1 it is seen that as Cronbach Alpha of above .70 is considered to be good, thus, the currently tested variables have met the desired standards.

Table 2 : Table showing the number of persons using fitness apps and wearables

Users/Non users of fitness apps and wearables	No. of respondents	
	Frequency	Percentage
Users Non users	86 04	96 4
Total	90	100

From table 2, it can be seen that out of the 90 respondents, 96 percent responded that they are using fitness apps and wearable and only 4 percent were not using fitness apps and wearable.

Table 3: Table showing age of the respondents

Age of the respondents	No. of respondents	
	Frequency	Percentage
15-21 22-38 39-50	1 89 0	1 99 0
Total	90	100

From Table 3, it can be seen that 99 percent of the people in the survey belonged to the age group of 22-38 years i.e. 99 percent were millenials.

Table 4 : Table showing descriptive statistics of the parameters

	Mean	Std. Deviation	N
Consumer behavior	2.6667	.74953	90
Pandemic	2.4667	.76731	90
Decision	2.1333	.81005	90
Post purchase behavior	2.1000	.87474	90
Reference group	2.1333	.92651	90
Brand message	2.4000	.88432	90

The above Table 4 depicts the descriptive statistics of the variables under study i.e the mean and the standard deviation.

The dependant variable is indicated by Consumer behavior. The independent variables are indicated by pandemic, decision, post purchase behavior, reference group and brand message.

The dependant and independent variables were then analysed through regression to test the hypothesis formulated for the study:

Table 5: Table show ing the model summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.882	.777	.764	.36393

From Table 5, the model summary, it can be seen that the value of R = .882 which indicates that almost 88 percent of the parameters have a high impact i.e a very strong relationship exists between the dependant variable, Consumer behavior and the independent variables.

The value of R2 is the coefficient of determination, which indicates how much variability in the results is caused by the independent variables and its value lies between 0 and 1. In the above table the value of R2 is .777 which means that almost 77 percent of the variance is accounted by the above model.

Table 6 : Table showing the ANOVA of the parameters

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	38.875	5	7.775	58.703	.000
Residual	11.125	84	.132		
Total	50.000	89			

Dependent Variable: Consumer_behaviour

Table 6 shows the regression and residuals, in regression, the value of F, and the significance level of the F-value is an important part of the output of regression. If a statistically significant value of F is obtained i.e (p< .05), it can be concluded that the predictors in the model have a significant relationship with the dependant variable. ANOVA helps in determining if the means of the study are statistically different.

From the above table 6, it can be seen that the value of F is 58.703 which is statistically significant as its significant value is less than .05. Thus, it can be concluded that the independent variables have a strong impact on the dependant variable, Consumer behavior.

Table 7 : Table showing the co-efficients of the parameters

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.506	.133		3.807	.000
Pandemic	.812	.112	.831	7.227	.000
Decision	.130	.196	.140	6.664	.000
Post purchase behavior	.121	.126	.141	5.960	.000
Reference_group	.124	.116	.153	1.071	.000
Brand_message	.186	.116	.219	1.596	.000

Table 7 shows the beta coefficients, After the computation of the F value and the R^2, the evaluation of the beta coefficients unstandardized and standardized is important. The beta coefficients can have both negative and positive values, they also have a t-value and a significant value of t with them. The beta value helps in determining how strongly the predictor or independent variables influence the dependant variable. A high beta value is an indicator of a stronger impact of the predictor variable on the dependant variable. If the coefficient of B is positive, than

that particular variable has a positive relationship with the dependant variable, if the B coefficient is negative than there is negative relationship with the dependant variable and if the coefficient of B is 0 then there is no relationship between them.

From the above Table 7 , it can be seen that the predictors namely pandemic, decision, post purchase behavior, reference group and brand message have beta values in positives and the significant values are also less than 0.05. Thus, the factors have significant impact on the dependant variable.

Findings

After carrying out the data analysis, the study revealed that out of all the parameters selected from the contemporary models of consumer behavior, pandemic had the highest beta value i.e. .812 , thus, it had the most impact on people's decision to use fitness apps and wearable compared to the other factors. Which in turn reveals that the pandemic had indeed made people to rely on technology for their fitness needs.

The other factors i.e decision making, reference groups, post purchase behavior and brand message also have positive beta values which is also clear indicator of the fact that all the factors had an impact on the mind of consumers while selecting fitness apps and wearable with the pandemic having the highest impact.

Conclusion

With the rise of fitness-conscious individuals and also with the increasing product advancements which has enabled home-based workouts and improvement of online fitness content for individuals, more and more people are getting inclined towards these programmes. From the study, we have seen that the global pandemic which is an external factor in the model of consumer behavior has created an impact in the purchasing behavior of consumers.

Along with the global pandemic, the application of the contemporary models of consumer behavior also throws light on the fact that factors such as reference groups, post purchase behavior of the brand, decision making influence and the way in which the brand portrays its image while advertising the products also becomes an issue.

As people were or are still working from home in most of the parts of the world during this global pandemic, they are imbibing more and more fitness habits. Even, certain sections of people who were previously unable to exercise due to time constraints are availing the benefits of these app based fitness programmes to keep themselves fit. Users, insurers and health-care workers and providers have used

and seen the benefits of health gadgets and fitness apps, and how more and more people are reaping benefits from it. It is also expected that this shift will persist long even after the outbreak subsides.

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