Journal of Informatics Education and Research
ISSN: 1526-4726
Vol 5 Issue 1 (2025)

Factors affecting adoption of Smart watch and Fitness Band

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ABSTRACT:
Awareness about health is a current development among the consumers, so is the tendency to make use of wearable healthcare devices. Smartwatch is the most popular wearable healthcare devices. Fitness bands also are popular for monitoring basic parameters of human body at consumer level. Most researches are done with the perspective of the technological or medical side pertaining to this topic. This technology is a part of non-conventional stream, that impact on the acceptance of the technology. Hence, the developers and manufacturers are eager to find out important factors that dominates the consumer's behaviour.

This study aims to understand and find out which are the factors that impacts the adoption of this technology and eventually intending to use it. The findings can be used to refine the marketing strategies, improve product features and enhance consumer experience. For collection of primary data, structured questionnaire will be used to collect responses. For secondary data collection, web sites, Journals and other available material will be used. The research is based on the model UTAUT 2 and some changes as per the requirements will be added. Both Descriptive and inferential statistics is going to be the part of study. This study will give valuable insights to the future researchers and developers.

Key Words: UTAUT2, smartwatch, fitness band, adoption of technology, intention to use.

Introduction:

In recent years' customers have become conscious of their health and have become well informed about the health aspects. That has resulted in the popularity of using consumer healthcare devices. Smartwatches and fitness bands are on the top of the list. With passing time, the technology and innovation in this segment is attracting researcher's attention. It is important to understand the customer's perspective about the smart watch or a fitness band.

Understanding the factors that impacts the adoption intention of smartwatches and fitness bands is essential in today's tech-savvy world. As these wearable devices become part of our day to day life in looking after our health, we must attempt to learn what are the important aspects that impact the adoption of the smartwatch and fitness band. The Technology in this product segment is growing so fast that monitoring one's health parameters and keeping track of the vitals is much easier. The health coach or a medical practitioner may observe and conclude about an individual's health by these readings. In this paper we are trying to explore the factors that impacts the adoption of smartwatches

and fitness bands. We would like to shed light on the complex relationship between personal, social, and technological elements that facilitate or hinder their adoption.

India has been evolving as a successful economy for a few years and continuing to witness the same. Around 65% of India's population is between the age of 15 and 65 years. Among which around 600 million are between the age of 18 and 35 years. That makes India having the largest number of Gen Z population. India crossed the 143 crore population mark recently. This makes India a lucrative market for consumer products. The research in healthcare at precautionary level may help the Government and other concerned bodies to foster the development in the healthcare services.

The widespread acceptance of wearable technology, particularly smartwatches and fitness bands, has experienced a significant uptick in recent times. These gadgets have surpassed their initial novelty to become essential instruments for contemporary individuals aiming to improve their health, track daily activities, and remain connected in our progressively digital society. This introduction will explore the factors shaping the intention to adopt smartwatches and fitness bands, shedding light on the changing dynamics of wearable technology.

Literature Review:

Health and Wellness as a Priority:

In an era where health and fitness have gained paramount importance, healthcare wearables offer a comprehensive solution. They track metrics like heart rate, steps taken, sleep patterns, and more, empowering users to make informed decisions about their well-being. This aligns with the increasing emphasis on proactive health management.

Lifestyle Enhancement:

Smartwatches and fitness bands have transitioned from being mere fitness trackers to sophisticated lifestyle devices. They serve as extensions of our smartphones, allowing users to receive notifications, control music, access navigation, and even make payments. This multi-functionality appeals to those seeking convenience and efficiency in their daily lives.

Fashion with Functionality:

The aesthetics of smartwatches and fitness bands have greatly improved, with a focus on design and customization. Users are no longer forced to compromise on style for the sake of functionality. As a result, fashion-conscious individuals are inclined to adopt these devices as accessories that complement their personal style.

Social Influence and Peer Pressure:

The adoption of smartwatches and fitness bands is often driven by social influence. Friends and family who use these devices can influence others to follow suit. Additionally, the desire to be part of a connected community that shares fitness goals and achievements can be a strong motivator.

Integration with Ecosystems:

Wearable technology often operates within larger ecosystems created by tech giants. The seamless integration of these devices with existing tech ecosystems can be a significant motivator for adoption, as it simplifies the user experience.

Technology Evolution:

The evolution of technology adoption models has been instrumental in understanding how and why individuals, organizations, and societies adopt and embrace new technologies. These models have evolved over time, reflecting changes in technology itself and our understanding of how people adopt and integrate these innovations into their lives.

1. UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY (UTAUT):

Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2003). The unified theory of acceptance and use of technology (UTAUT) is a technology acceptance model formulated by Venkatesh and others in "User acceptance of information technology: Toward a unified view". (Venkatesh et al.,2003). Age, gender, experience and Voluntariness are the moderators identified in UTAUT to enhance its predictive power and make UTAUT different from the other acceptance models.

UTAUT model recognizes the technology acceptance influencing variables under four different constructs that serve as direct determinants of acceptance and usage behaviour of users: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Condition (FC). The key moderators for the constructs are Gender, Age, Voluntariness and Experience. (Venkatesh et al., 2003).

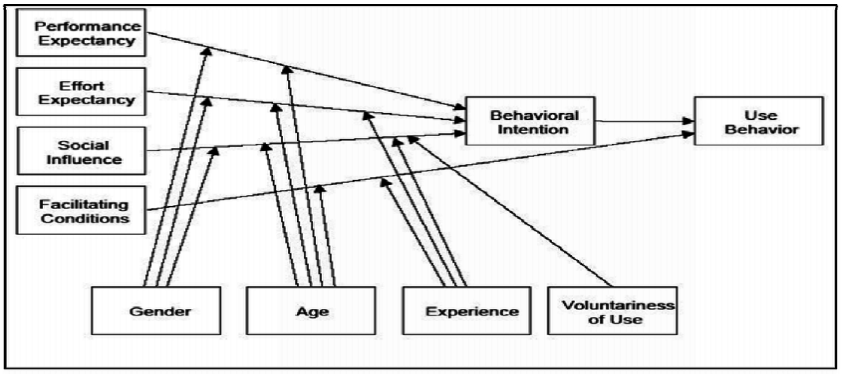
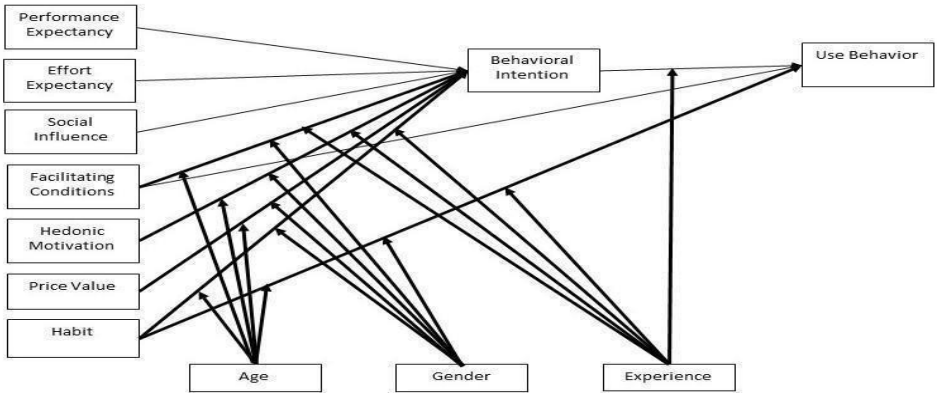


Figure 6: UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY (UTAUT)

2. UNIFIED THEORY OF ACCEPTACE AND USE OF TECHNOLOGY 2 (UTAUT 2):

Developed by Venkatesh et al. (2012) as an extension of the original model Unified Theory of Acceptance and Use of Technology.

Figure 7: UTAUT 2



The UTAUT2 framework includes three additional constructs (hedonic motivation, price value, and habit) as well as four UTAUT model elements (performance expectancy, effort expectancy, social

influence, and facilitating conditions) as antecedents of behavioural intention and use behaviour. (Noor UI-Ain et al., 2015).

Performance Expectancy (PE): This factor reflects the extent to which users believe that using technology will help them perform their tasks more effectively. The PE has been defined as "the degree to which the use of a technology will provide benefits to consumers in carrying out certain activities." (Venkatesh et al., 2003).

Effort Expectancy (EE): This factor assesses the perceived ease or difficulty of using the technology. EE is "the degree of ease associated with using the system." (Venkatesh et al., 2003).

Social Influence (SI): Acknowledging the importance of external influence, SI considers the impact of social norms, peer pressure, and other social factors on adoption decisions. SI is "the extent to which consumers perceive their significant others (like family and friends) believe they should use a particular technology." (Venkatesh et al., 2003).

Facilitating Conditions (FC): FC accounts for the extent to which users believe that organizational and technical support are available to aid in technology use. Facilitating conditions are "consumers' perceptions of the resources and support available to perform a behaviour." (Venkatesh et al., 2003).

UTAUT 2 incorporated several additional constructs and refinements to better capture the complexities of technology adoption:

Hedonic Motivation (HM): This element emphasises the importance of emotions in adoption decisions and deals with the pleasure and delight of utilising technology. "The enjoyable aspect, happiness, or satisfaction derived from using a specific technology without any particular additional benefit." (Venkatesh et al., 2012)

Price Value (PV): PV assesses whether users perceive the technology as a cost-effective investment. PV has been defined as "consumers' cognitive trade-off between the perceived benefits of apps and the cost of using them." (Venkatesh et al., 2012)

Habit (HBT):Technology habit, which has grown over time, is thought to play a major role in UTAUT 2, which measures "the extent to which individuals tend to perform behaviours automatically due to learning." (Venkatesh et al., 2012)

We are using UTAUT2 as base for our study, we will be taking Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Conditions (FC), Hedonic Motivation (HM), Price Value (PV) and Habit (HBT) as variables of the study.

Research Methodology

Need and Scope

The wearable technology is something very old in human use. Smart watches and fitness Bands is in use since last few years. This industry has the great potential with ever increasing demand in the market. The devices those are successful in some region of world may not be able to fetch same market in India. For making these devices successful in Indian market, there may be modification required according to the acceptance standards of the customers. Due to the growing aging population and development of lifestyle deceases the use and implementation of wearable healthcare devices have

exponentially increased. Factors affecting the perception and intention of the customer need to be evaluated. The study aims to find out factors affecting the adoption of smart watches and fitness bands in South Gujarat. It can be extended to the other geographical region as well. There is continuous development, on technical aspect as well as in uses aspect, in this segment of products. Hence, there is scope of future research with specific devices.

Research Questions

- Which of the values, customer perceives is more important, the hedonic value or the Utilitarian value while using Smart watches or fitness Bands?
- Does perceived ease of use be a feature that motivates the customer to keep using the Smart watches or fitness Bands?
- Does adoption intention get affected by the health benefits it provides?

Research Objectives

- To find out the customer's preference over utility value to hedonic value.
- To find out how the consumer evaluates the health benefits it provides.

Research Design

This research is cross section and exploratory study. Primary and secondary data both are included.

Data Collection

Primary data collection: Firstly, pilot study was done. Required and suggested changes were implemented. Primary data collection was done by conducting a survey. A structured questionnaire was provided to respondents and the response was recorded.

Secondary data collection: Books, journals, research papers, articles and websites were used to explain the theoretical framework and to know what was mentioned in previous research on the subjective topic.

Sampling Plan

Target population: Residents of South Gujarat. Age above 18 years.
Sampling Method: This study considers a Non Probabilistic Convenient Sampling Method for the purpose of collecting required data.
Sample Size: 487 samples

Benefits of the Study

The study will contribute to understanding the factors impacting the adoption intention of Smart watches or fitness Bands among the customers.

It opens doors for future researchers to explore about the same in different geographical areas. Hence it has potential for future academic developments.

The study will throw light on the factors that may help in enhancing the feeling of trust among the customers.
The research will contribute to innovation in this segment and create scope for more business opportunities.

Data Analysis

Objective 1: To find out the customer's preference over utility value to hedonic value.

Table: Customer's preference towards Hedonic value and Utility value

Preference		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hedonic Value	283	58.1	58.1	58.1
	Utility Value	204	41.9	41.9	100.0
	Total	487	100.0	100.0	

Interpretation:
A frequency analysis was conducted to examine customer preferences between hedonic value and utility value in the context of smartwatch or fitness band usage. The results indicated that the majority of customers (58.1%) preferred hedonic value, which emphasizes enjoyment, habit formation, and emotional satisfaction, over utility value, which focuses on practical and functional benefits such as affordability and value for money (41.9%). These findings suggest that customers are more inclined toward the experiential and pleasure-oriented aspects of using these devices. The total sample consisted of 487 respondents, providing a comprehensive overview of customer preferences in this domain.

Table: Paired Samples Statistics between customer's preference towards Hedonic Value and Utility Value.

Preference		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Hedonic Value	3.1333	487	1.06150	.04810
	Utility Value	2.9012	487	1.09285	.04952

Interpretation:
A paired samples statistics analysis was conducted to compare customer preferences for hedonic value (HV) and utility value (UV) in the context of smartwatch or fitness band usage. The results revealed that the mean preference score for hedonic value (M = 3.13, SD = 1.06) was higher than the mean preference score for utility value (M = 2.90, SD = 1.09) across 487 participants. This indicates a stronger inclination toward hedonic aspects, such as enjoyment and emotional satisfaction, compared to practical and functional benefits. The standard error of the mean for hedonic and utility values was 0.048 and 0.050, respectively, suggesting precise estimates of the population means. These findings highlight the importance of addressing customers' experiential needs when designing and marketing smartwatches or fitness bands.

Table: Paired Samples Correlations between customer's preference towards Hedonic Value and Utility Value.

Preference		N	Correlation	Sig.
Pair 1	Hedonic Value &Utility Value	487	.833	.000

Interpretation:
A paired samples correlation analysis was conducted to examine the relationship between customer preferences for hedonic value (HV) and utility value (UV) in the context of smartwatch or fitness band

usage. The analysis revealed a strong positive correlation between HV and UV preferences, r = .833, p value < .001, based on a sample of 487 participants. This significant correlation suggests that customers who value the hedonic aspects of smartwatches, such as enjoyment and emotional satisfaction, are also likely to appreciate their utility features, such as practicality and functionality. These findings indicate that the two preference dimensions are closely linked, emphasizing the importance of addressing both aspects in product design and marketing strategies.

Table: Paired Samples Test between customer's preference towards Hedonic Value and Utility Value.

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Hedonic Value - Utility Value	.23211	.62265	.02822	.17668	.28755	8.227	486	.000

Interpretation:
A paired samples t-test was conducted to compare customer preferences for hedonic value (HV) and utility value (UV) in the context of smartwatch or fitness band usage. The results indicated a statistically significant difference between the two preferences, t (486) = 8.23, p < .001. The mean difference between HV and UV was 0.23 (SD = 0.62), with a 95% confidence interval ranging from 0.18 to 0.29. These findings suggest that customers, on average, exhibit a stronger preference for hedonic value over utility value. This underscores the importance of emphasizing experiential and emotional benefits when targeting customers in this market segment.

Table: Reliability Statistics of Perceived Ease of USE (PEOU).

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.955	.955	14

Table: Item-Total Statistics

Perceived Ease of USE (PEOU)	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
1. A Smartwatch or Fitness band is beneficial for my daily life.	40.81	189.566	.769	.679	.952
2. Using a Smartwatch or Fitness band enhances the likelihood of accomplishing things that matter to me.	40.93	191.557	.780	.721	.951

3. Using a Smartwatch or Fitness band boosts my productivity.	40.99	192.078	.754	.647	.952
4. I find it easy to learn how to use a Smartwatch or Fitness band.	40.50	189.950	.774	.722	.952
5. I find interacting with the Smartwatch or Fitness band to be clear and easy to understand.	40.60	189.015	.791	.727	.951
6. For me, a Smartwatch or Fitness band is straightforward to use.	40.47	189.064	.788	.730	.951
7. My family and friends believe that I should use a Smartwatch or Fitness band.	40.90	191.212	.743	.679	.952
8. My family and friends influence my decision to use a Smartwatch or Fitness band.	41.06	193.956	.711	.691	.953
9. My family and friends, whose opinions I value, prefer that I use a Smartwatch or Fitness band.	40.97	192.084	.741	.680	.952
10. I have all the necessary resources to use a Smartwatch or Fitness band.	40.63	191.490	.749	.633	.952
11. I have the knowledge necessary to use the Smartwatch / Fitness Band.]	40.47	190.781	.768	.680	.952
12. The Smartwatch or Fitness band I use is compatible with other technologies, like my mobile phone.	40.57	189.929	.762	.656	.952
13. Using a Smartwatch or Fitness Band is fun.	40.72	194.283	.694	.645	.953
14. Using the Smartwatch or Fitness Band is enjoyable.	40.65	190.183	.790	.729	.951

Interpretation:

The reliability analysis of the Perceived Ease of Use (PEOU) scale demonstrated excellent internal consistency, with a Cronbach's alpha of 0.955 across 14 items, confirming the robustness of the

measurement instrument. The corrected item-total correlations ranged from 0.694 to 0.791, indicating that all items were strongly correlated with the overall scale. The squared multiple correlations (ranging from 0.633 to 0.730) further supported the reliability of each item. Notably, the Cronbach's alpha values did not decrease significantly when individual items were removed, suggesting that all items contributed meaningfully to the construct. This reliability assessment validates the PEOU scale as a dependable tool for evaluating consumers' perceptions of ease of use regarding smartwatches and fitness bands.

Reliability Statistics of Perceived Usefulness (PU):

Cronbach's Alpha	N of Items
.944	9

Item-Total Statistics

Perceived Usefulness (PU)	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. The Smartwatch or Fitness band is affordably priced.	23.13	80.940	.639	.945
2. The Smartwatch or Fitness Band is a good value for money.	23.07	78.888	.740	.939
3. Using a Smartwatch or Fitness band has become a habit for me.	23.31	76.353	.810	.936
4. I am addicted to use the Smartwatch or Fitness Band.	23.59	77.712	.731	.940
5. Using the Smartwatch or Fitness Band has become natural to me.	23.35	75.540	.850	.933
6. I intend to continue using the Smartwatch or Fitness Band in the future.	23.12	75.511	.837	.934
7. I will always try to use the Smartwatch or Fitness Band in my daily life.	23.18	75.368	.842	.934
8. I may continue adding multiple uses associated with a Smartwatch or Fitness band that I am using.	23.18	75.745	.843	.934
9. I may keep using a Smartwatch or Fitness band for monitoring health parameters.	22.97	76.709	.744	.940

Interpretation:
The reliability analysis for perceived usefulness (PU) of smartwatches and fitness bands demonstrates a high level of internal consistency, with a Cronbach's alpha of .944 for the nine items, indicating excellent reliability. The corrected item-total correlations range from .639 to .850, signifying that each

item has a strong and positive correlation with the overall scale. Notably, items such as "Using the Smartwatch or Fitness Band has become natural to me" and "I will always try to use the Smartwatch or Fitness Band in my daily life" exhibit the highest corrected item-total correlations (.850 and .842, respectively), highlighting their significant contribution to the construct. The "Cronbach's Alpha if Item Deleted" values range from .933 to .945, showing that removing any item would not substantially improve the scale's reliability. These findings underscore the robustness of the perceived usefulness construct in capturing consumer sentiments regarding the continued use and value of smartwatches and fitness bands. This reliability affirms the importance of perceived usefulness as a critical factor influencing consumer behaviour.

Objective 2: To find out how the consumer evaluates the health benefits it provides.

Table: Descriptive Statistics of Health and Productivity Benefits

Statements	N	Minimum	Maximum	Mean	Std. Deviation
1. A Smartwatch or Fitness band is beneficial for my daily life.	487	1	5	3.06	1.387
2. Using a Smartwatch or Fitness band enhances the likelihood of accomplishing things that matter to me.	487	1	5	2.93	1.281
3. Using a Smartwatch or Fitness band boosts my productivity.	487	1	5	2.87	1.297
4. I may keep using a Smartwatch or Fitness band for monitoring health parameters.	487	1	5	3.15	1.390

Interpretation:

The descriptive statistics for the factor "Health and Productivity Benefits" indicate that consumers hold moderate perceptions regarding the health and productivity advantages of using smartwatches or fitness bands. On a 5-point Likert scale, the mean scores for the statements ranged from 2.87 to 3.15, with standard deviations between 1.281 and 1.390, suggesting a moderate level of agreement with the statements and a relatively high variability in responses. The statement "I may keep using a Smartwatch or Fitness band for monitoring health parameters" received the highest mean score (M = 3.15, SD = 1.390), indicating that consumers recognize its utility for health monitoring. Meanwhile, the lowest mean score was observed for "Using a Smartwatch or Fitness band boosts my productivity" (M = 2.87, SD = 1.297), reflecting lower perceived productivity benefits. Overall, these findings suggest that while consumers moderately evaluate the health benefits provided by smartwatches or fitness bands, their perceptions vary widely across individuals.

Table: Descriptive Statistics of Health and Productivity Benefits across different Income groups.

Annua Income	Statements	N	Minimum	Maximum	Mean	Std. Deviation

less than 5 lacs	1. A Smartwatch or Fitness band is beneficial for my daily life.	168	1	5	2.98	1.422
	2. Using a Smartwatch or Fitness band enhances the likelihood of accomplishing things that matter to me.	168	1	5	2.88	1.332
	3. Using a Smartwatch or Fitness band boosts my productivity.	168	1	5	2.85	1.334
	4.I may keep using a Smartwatch or Fitness band for monitoring health parameters.	168	1	5	3.03	1.522
	Valid N (listwise)	168				
Between 5 lacs to 10 lacs	1. A Smartwatch or Fitness band is beneficial for my daily life.	99	1	5	3.20	1.421
	2. Using a Smartwatch or Fitness band enhances the likelihood of accomplishing things that matter to me.	99	1	5	3.12	1.280
	3. Using a Smartwatch or Fitness band boosts my productivity.	99	1	5	3.03	1.208
	23. I may keep using a Smartwatch or Fitness band for monitoring health parameters.	99	1	5	3.34	1.356
	Valid N (listwise)	99				
Between 10 lacs to 15 lacs	1. A Smartwatch or Fitness band is beneficial for my daily life.	75	1	5	3.01	1.428
	2. Using a Smartwatch or Fitness band enhances the likelihood of accomplishing things that matter to me.	75	1	5	2.75	1.242

	3. Using a Smartwatch or Fitness band boosts my productivity.	75	1	5	2.72	1.341
	23. I may keep using a Smartwatch or Fitness band for monitoring health parameters.	75	1	5	3.17	1.267
	Valid N (listwise)	75				
15 lacs and above	1. A Smartwatch or Fitness band is beneficial for my daily life.	145	1	5	3.08	1.302
	2. Using a Smartwatch or Fitness band enhances the likelihood of accomplishing things that matter to me.	145	1	5	2.97	1.236
	3. Using a Smartwatch or Fitness band boosts my productivity.	145	1	5	2.88	1.290
	23. I may keep using a Smartwatch or Fitness band for monitoring health parameters.	145	1	5	3.13	1.308

Interpretation:

The descriptive statistics from the table reveal varying perceptions across different income groups regarding the benefits of smartwatches or fitness bands in relation to health and productivity. Among individuals with annual incomes less than 5 lakhs, the mean responses were generally lower, with "A Smartwatch or Fitness band is beneficial for my daily life" (M = 2.98) and "Using a Smartwatch or Fitness band boosts my productivity" (M = 2.85) showing moderate perceptions. In contrast, the group with incomes between 5 and 10 lakhs exhibited slightly higher mean scores, particularly for "I may keep using a Smartwatch or Fitness band for monitoring health parameters" (M = 3.34). The group earning 10 to 15 lakhs had the lowest overall responses, with a significant dip in "Using a Smartwatch or Fitness band enhances the likelihood of accomplishing things that matter to me" (M = 2.75). The highest income group (15 lakhs and above) displayed similar trends to those earning between 5 and 10 lakhs, with slightly higher mean values, especially for "Using a Smartwatch or Fitness band for monitoring health parameters" (M = 3.13). These trends suggest that as income increases, there is a slight increase in the perceived usefulness of smartwatches or fitness bands, although the differences across groups are generally modest, with standard deviations indicating moderate variability within each group.

Table: Descriptive Statistics of User Experience and Continuity

Statements	N	Minimum	Maximum	Mean	Std. Deviation
1. Using a Smartwatch or Fitness Band is fun.	487	1	5	3.14	1.288

2. Using the Smartwatch or Fitness Band is enjoyable.	487	1	5	3.22	1.326
3. Using the Smartwatch or Fitness Band has become natural to me.	487	1	5	2.76	1.318
4. I intend to continue using the Smartwatch or Fitness Band in the future.	487	1	5	2.99	1.337

Interpretation:

The descriptive statistics for the factor "User Experience and Continuity" reveal moderate levels of agreement among respondents regarding their experience with smartwatches or fitness bands. The statement "Using a Smartwatch or Fitness Band is enjoyable" had the highest mean score (M = 3.22, SD = 1.326), indicating that users generally find the experience pleasurable. Similarly, the statement "Using a Smartwatch or Fitness Band is fun" had a mean score of 3.14 (SD = 1.288), reflecting a positive perception of the activity. However, the statement "Using the Smartwatch or Fitness Band has become natural to me" had a lower mean score (M = 2.76, SD = 1.318), suggesting that users may still be in the process of fully integrating these devices into their routines. Finally, the intention to continue using the device in the future was moderately rated (M = 2.99, SD = 1.337), indicating room for improvement in fostering long-term engagement. Overall, these findings highlight the importance of enhancing user experience and encouraging habitual use to sustain consumer satisfaction and continuity.

Table: Descriptive Statistics of User Experience and Continuity.

Annua Income		N	Minimum	Maximum	Mean	Std. Deviation
less than 5 lacs	13. Using a Smartwatch or Fitness Band is fun.	168	1	5	3.05	1.326
	14. Using the Smartwatch or Fitness Band is enjoyable.	168	1	5	3.17	1.367
	19. Using the Smartwatch or Fitness Band has become natural to me.	168	1	5	2.85	1.330
	20. I intend to continue using the Smartwatch or Fitness Band in the future.	168	1	5	2.93	1.356
	Valid N (listwise)	168				
Between 5 lacs to 10 lacs	13. Using a Smartwatch or Fitness Band is fun.	99	1	5	3.14	1.325

	14. Using the Smartwatch or Fitness Band is enjoyable.	99	1	5	3.22	1.329
	19. Using the Smartwatch or Fitness Band has become natural to me.	99	1	5	2.67	1.262
	20. I intend to continue using the Smartwatch or Fitness Band in the future.	99	1	5	3.17	1.325
	Valid N (listwise)	99				
Between 10 lacs to 15 lacs	13. Using a Smartwatch or Fitness Band is fun.	75	1	5	3.21	1.119
	14. Using the Smartwatch or Fitness Band is enjoyable.	75	1	5	3.21	1.211
	19. Using the Smartwatch or Fitness Band has become natural to me.	75	1	5	2.61	1.293
	20. I intend to continue using the Smartwatch or Fitness Band in the future.	75	1	5	2.89	1.410
	Valid N (listwise)	75				
15 lacs and above	13. Using a Smartwatch or Fitness Band is fun.	145	1	5	3.22	1.304
	14. Using the Smartwatch or Fitness Band is enjoyable.	145	1	5	3.27	1.345
	19. Using the Smartwatch or Fitness Band has become natural to me.	145	1	5	2.81	1.356
	20. I intend to continue using the Smartwatch or Fitness Band in the future.	145	1	5	3.00	1.286

Interpretation:

The descriptive statistics for user experience and continuity with smartwatches or fitness bands reveal a general trend of increasing enjoyment and intention to continue using the devices as income rises. For individuals with annual incomes less than 5 lakhs, the mean values for fun (M = 3.05), enjoyment (M = 3.17), and future intention (M = 2.93) were lower compared to other income groups, with "Using

the Smartwatch or Fitness Band has become natural to me" (M = 2.85) showing the least engagement. In contrast, those with incomes between 5 and 10 lakhs reported slightly higher mean scores, particularly for enjoyment (M = 3.22) and future usage intention (M = 3.17), although their "natural" usage score was the lowest across all groups (M = 2.67). The group earning between 10 and 15 lakhs showed a modest increase in fun (M = 3.21) and enjoyment (M = 3.21), but they exhibited a low mean for "natural" usage (M = 2.61), suggesting less habitual use. The highest income group (15 lakhs and above) showed the highest means for fun (M = 3.22) and enjoyment (M = 3.27), and a more moderate score for "natural" use (M = 2.81), with future intention to continue (M = 3.00) also showing an increase. Standard deviations were generally high across all groups, indicating significant variability in experiences, but overall, the data suggest that with higher income, users are more likely to find the devices fun, enjoyable, and more inclined to continue using them.

Table: Reliability Statistics of Health and Productivity Benefits

Cronbach's Alpha	N of Items
.892	4

Interpretation:

The reliability analysis of the four statements assessing health and productivity benefits of smartwatches and fitness bands yielded a Cronbach's alpha of .892, indicating excellent internal consistency among the items. This result suggests that the statements reliably measure the underlying construct of health and productivity benefits, supporting the validity of consumer evaluations of the health advantages provided by these devices.

Table: KMO and Bartlett's Test of Health and Productivity Benefits

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.831
Bartlett's Test of Sphericity	Approx. Chi-Square	1171.003
	df	6
	Sig.	.000

Table: Communalities of Health and Productivity Benefits

Statements	Initial	Extraction
1. A Smartwatch or Fitness band is beneficial for my daily life.	1.000	.798
2. Using a Smartwatch or Fitness band enhances the likelihood of accomplishing things that matter to me.	1.000	.826
3. Using a Smartwatch or Fitness band boosts my productivity.	1.000	.747
23. I may keep using a Smartwatch or Fitness band for monitoring health parameters.	1.000	.662

Extraction Method: Principal Component Analysis.

Table: Total Variance Explained of Health and Productivity Benefits

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% Variance	ofCumulative %	Total	% Variance	ofCumulative %
1	3.034	75.851	75.851	3.034	75.851	75.851
2	.439	10.971	86.822			

3	.315	7.887	94.709
4	.212	5.291	100.000

Extraction Method: Principal Component Analysis.

Table: Component Matrix of Health and Productivity Benefits

Statements	Component 1
1. A Smartwatch or Fitness band is beneficial for my daily life.	.894
2. Using a Smartwatch or Fitness band enhances the likelihood of accomplishing things that matter to me.	.909
3. Using a Smartwatch or Fitness band boosts my productivity.	.864
4. I may keep using a Smartwatch or Fitness band for monitoring health parameters.	.814

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Interpretation:

The results of the factor analysis conducted to evaluate the health benefits of smartwatches and fitness bands indicate robust data adequacy and strong factor loadings. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was .831, suggesting that the sample size is sufficient for factor analysis. Bartlett's Test of Sphericity was significant ($\chi^2 = 1171.003$, $df = 6$, $p < .001$), confirming that the variables are correlated and suitable for dimension reduction. Principal Component Analysis (PCA) revealed one dominant component explaining 75.85% of the total variance, indicating that the selected statements form a coherent factor related to health and productivity benefits. Commonalities ranged from .662 to .826, reflecting strong relationships between individual items and the extracted factor. The Component Matrix showed high loadings for all statements, with values ranging from .814 to .909, emphasizing their contribution to the factor. These findings suggest that consumers positively evaluate the health benefits provided by smartwatches and fitness bands, as the statements strongly align with a single underlying dimension of health and productivity benefits.

Conclusion:

This research sheds light on the factors influencing the adoption of smartwatches and fitness bands, focusing on customer preferences for utility versus hedonic value and the evaluation of health benefits. The findings reveal that consumers prioritize hedonic value over utility value, with enjoyment, habit formation, and emotional satisfaction being more significant drivers of adoption than practical benefits such as affordability and functionality. Additionally, while consumers generally recognize the health and productivity benefits of these devices, their evaluations are moderate and vary across individuals, with health monitoring being the most appreciated feature. Furthermore, income appears to play a role in shaping perceptions, with higher-income groups showing stronger enjoyment and a higher likelihood of continued use. Overall, the results emphasize the importance of addressing both experiential and practical needs in the design and marketing of smartwatches and fitness bands, ensuring they provide both emotional satisfaction and tangible health benefits to encourage widespread and sustained adoption.

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