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Assessing Smart Wearable Utilization for Health Monitoring: Insights from Healthcare Professionals in Delhi NCR..

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ABSTRACT
The rapid advancement of computer and mobile technologies has paved the way for the widespread adoption of wearable devices, with healthcare becoming a key application area. Smart wearables, including smartwatches and mobile health applications, now serve as essential, technology-enabled tools that provide real-time medical information and track physical activity, positioning them as highly valuable in modern healthcare practices. The global wearable technology market continues to grow, supported by increasing consumer demand for features such as smartphone connectivity, instant notifications, customizable interfaces, and accurate timekeeping. This study examines the perceptions of healthcare professionals in Delhi NCR regarding the use of smart wearables for both personal health management and professional healthcare needs. The study aims to investigate the extent to which healthcare professionals accept, adopt, and plan to utilize smart wearables as vital tools for health monitoring. A sample size of 278 responses was collected using a structured questionnaire. The analysis was done using SPSS version 20.0. The results indicate that perceived usefulness plays a significant role in shaping healthcare professionals' intentions to adopt smart wearables. However, the study also underscores the importance of data reliability, accuracy, and patient safety, which are crucial factors affecting their willingness to endorse these devices, particularly when recommending them to patients..
Keywords: Smart wearable devices, healthcare practitioners, technology adoption, perceived usefulness, data accuracy, patient safety, cross-disciplinary collaboration
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1. INTRODUCTION:

The technological advancement of computer and mobile technologies has accelerated the emergence and adoption of wearable technologies, particularly in healthcare. Smart wearables such as smartwatches and mobile health applications enable real-time health monitoring, data sharing, and improved patient–provider communication, enhancing healthcare efficiency and outcomes (King & Sarrafzadeh, 2018; Reeder & David, 2016). The integration of IoT and smartphones has further expanded their functionality and acceptance (Niknejad et al., 2020; Talukder et al., 2019). Globally and in India, wearable technology adoption is growing due to rising health consciousness, self-efficacy, and technological innovation, with telehealth gaining momentum during COVID-19 (Nasir & Yurder, 2015; Patil et al., 2022). This study focuses on understanding healthcare professionals' and medical students' perceptions and acceptance of smart wearables in health management.

Literature Review

The literature underscores the transformative role of wearable technology in contemporary healthcare and consumer markets, driven by rapid advancements in mobile computing, biosensors, wireless communication, and artificial intelligence. Wearable technologies, particularly smartwatches, have gained widespread attention among early adopters, prompting substantial investments by technology companies seeking competitive advantage and market penetration (Lu et al., 2016). This global momentum is clearly reflected in the Indian context, where the wearable market recorded a 46.9% year-on-year growth in 2022, with smartwatch shipments increasing by an exceptional 151.3%, positioning India as one of the fastest-growing markets worldwide (Khan, 2023).

Wearable devices are defined as body-worn electronic gadgets seamlessly integrated into clothing or accessories, embedded with advanced biosensors and wireless transmission capabilities that enable continuous, non-invasive monitoring of physiological data (Lu et al., 2016). Among various wearable forms, smartwatches have emerged as the most prominent due to their compact design, unobtrusiveness, and close proximity to the skin, which enhances user compliance and supports long-term health monitoring (O'Donnell, 2015; Zheng et al., 2014). These characteristics make smartwatches particularly suitable for capturing real-time health metrics such as heart rate, activity levels, and other vital parameters.

Recent studies highlight the expanding scope of smartwatches and mobile health applications in

healthcare delivery. Kumar et al. (2021) demonstrated the growing intelligence of smartwatches, noting their ability to support AI- and machine learning-based applications for mental health assessment, including depression detection. Similarly, smartphone-based applications integrated with wearable sensors have shown strong potential in chronic disease management by enabling

continuous symptom monitoring, personalized feedback, and improved communication between patients and healthcare providers (Moses et al., 2021). Ventola (2014) further emphasized the role of mobile medical applications in clinical practice, identifying their use in diagnosis, treatment support, education, administration, and point-of-care decision-making.

The adoption of wearable and mobile health technologies has been extensively examined through the Technology Acceptance Model (TAM). Davis (1989) proposed perceived usefulness (PU) and perceived ease of use (PEOU) as primary determinants of attitudes and behavioral intention toward technology usage, a framework later validated in healthcare and IT contexts (Shroff et al., 2011). Extensions of TAM, grounded in the Theory of Reasoned Action (Fishbein & Ajzen, 1975), have emphasized that users are more likely to adopt technologies they perceive as beneficial, easy to use, and compatible with their existing values and experiences (Liu & Torkar, 2014; Nasir & Yundir, 2015). Research also highlights the critical role of perceived risk—encompassing performance, privacy, financial, psychological, and physical risks—in shaping user acceptance, particularly for health-related wearable technologies that handle sensitive data (Featherman & Pavlou, 2003).

While TAM remains a robust and widely applied framework, prior studies acknowledge its limitations, noting that the strength and direction of relationships may vary across technologies, user groups, and contexts. Consequently, scholars advocate for a nuanced and integrative application of TAM, incorporating additional constructs such as compatibility and perceived risk, to better understand the adoption of wearable technologies in healthcare settings (Liu & Torkar, 2014; Nasir & Yundir, 2015).

Objectives of the Study

The objectives of the study are

To analyze healthcare professionals' views regarding the application of smartwatches and mobile health apps for their own health monitoring and for supporting patient care.

To assess the influence of external constructs—perceived usefulness, perceived ease of use, attitude, and behavioral intention—on the acceptance of wearable technologies among the study participants.

To determine the strength and direction of the association between the independent factors (perceived usefulness and perceived ease of use) and the dependent factor (behavioral intention).

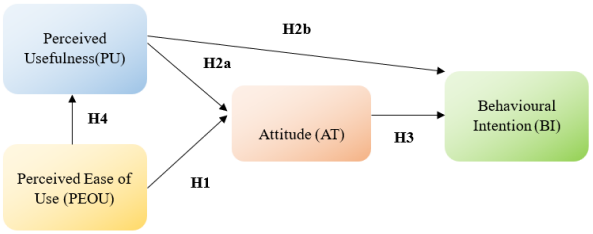

Figure 1 : Conceptual Model of the Study

Hypothesis of the Study

Perceived Ease of Use (PEOU)

H1: The healthcare professionals' perception of ease of use (PEOU) will have a favourable impact on how they feel or their attitude (AT) about using m-health applications and smart watches for health monitoring.

Perceived Usefulness (PU)

H2a: Users' attitudes (AT) toward using m-health apps and smart watches for tracking one's health will be favourably impacted by perceived usefulness (PU).

H2b: Users' behavioural intentions (BI) to utilise m-health applications and smart watches for health monitoring are positively influenced by perceived usefulness (PU).

Attitude(AT) and Behavioural Intention(BI)

H3: Attitude (AT) towards m-health applications and smart watches will positively influence users' behavioural intention (BI) to usage of m-health applications and smart watches for health monitoring.

Perceived Ease of Use (PEOU) and Perceived Usefulness (PU)

H4: Perceived Ease of Use (PEOU) of m-health applications and smart watches for health monitoring positively influences the perceived usefulness (PU).

Research Methodology

An exploratory descriptive study was done among medical professionals to predict, understand and explain the acceptance, adoption and usage intention of smart watches and m-health applications as health monitoring products and services. Both Primary data and secondary data was used in the study. Primary data was collected via google form using structured questionnaire from the medical professionals. The sample size considered for the study was 278 respondents from Delhi NCR. The secondary data was collected through reviewing of literatures, journals and websites.

Analyses

The data collected from the 278 respondents was analysed using the software SPSS version 20.0. Table 1 depicts the demographic features of the respondents.

Table 1 Demographics

Criterion	Factor	Frequency	Percentage
Gender	Female	153	55.0%

	Male	123	44.2%
	Prefer not to say	2	0.7%
Age	20 - 30 years	175	62.9%
	30 - 40 years	42	15.1%
	40 - 50 years	30	10.8%
	50 years and above	31	11.2%
Annual household income	2 - 5 lakh	61	21.9%
	5 - 10 lakh	73	26.3%
	10 - 20 lakh	57	20.5%
	20 lakh +	87	31.3%
Occupation	Doctor	125	45.0%
	Medical Student	64	23.0%
	Pharmacist/Chemist	48	17.3%
	Physiotherapist	28	10.1%
	Pharmacist	5	1.8%
	Psychologist and Psychiatrist	2	0.7%
	Nurses and nurse practitioners	2	0.7%
	Lab technician	2	0.7%
	Psychologist	1	0.4%
	Dietitians and nutritionists	1	0.4%
Practice setting	Private	188	67.6%
	Government	74	26.6%
	Semi-Private	16	5.8%
Area/region of practice	South Delhi	121	43.5%
	West Delhi	84	30.2%
	North Delhi	47	16.9%
	East Delhi	26	9.4%

Source: Primary Data

Statistical analysis was conducted utilizing the Statistical Package for Social Sciences (SPSS) . The analysis encompassed descriptive statistics (including frequencies, percentages, bar graphs, and pie charts), the Chi-square test, Pearson Correlation Analysis, and Regression Analysis.

Instrument Reliability

The purpose of the reliability analysis was to assess the internal validity and consistency of the items utilized for each factor. SPSS was employed as the analytical tool for this examination. Table 2 exhibits the Reliability Analysis of the factors used in the study.

Factors	*Items*	*Cronbach's alpha*
Perceived Usefulness (PU)	4	.85
Perceived Ease of Use (PEOU)	4	.80
Attitude (AT)	4	.72
Behavioral Intention (BI)	4	.84

Table 2: Reliability Analysis of Constructs (Cronbach's Alpha)

Correlation between independent (PU, PEOU) and dependent variables (BI)

Correlation analysis in the study quantifies relationships between variables, assessing their strength and direction. It determines if variables have positive, negative, or no associations. In this study, it explored connections among perceived usefulness (PU), perceived ease of use (PEOU), attitude (AT), and behavioral intention (BI) in healthcare professionals' adoption of smart wearables. This technique revealed significant correlations, offering insights into how these variables affect perceptions and intentions in healthcare settings.

Table 3 Correlation Analysis

Factor	**Attributes**	**PU**	**PEOU**	**AT**	**BI**
Pearson Correlation	Perceived Usefulness (PU)	1	.395**	.080	.495**
Pearson Correlation	Perceived Ease of Use (PEOU)	.395**	1	.009	
Pearson Correlation	Attitude (AT)	.080	.009	1	.112
Pearson Correlation	Behavioural Intention (BI)	.495**		.112	1

Table 3: Correlation Analysis of PU, PEOU, AT, and BI

These correlation results indicate significant positive relationships between Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), as well as between Perceived Usefulness (PU) and Behavioural Intention (BI), suggesting that perceived usefulness is a crucial factor influencing healthcare professionals' perceptions and intentions regarding usage of smart wearables as healthcare products. However, there is no significant correlation between Perceived Ease of Use (PEOU) and Attitude (AT) or between Perceived Usefulness (PU) and Attitude (AT), it indicates that having a positive perspective of the healthcare professionals regarding PEOU and PU does not positively impact their attitude (AT) towards using smart wearables as healthcare products. The correlation between Attitude (AT) and Behavioural Intention (BI) is weak and not statistically significant at the 0.05 level. It signifies that either a positive or negative attitude can impact the behaviour of the healthcare professionals towards using smart wearables as healthcare products up to certain extent. These findings provide insights into the factors that may influence healthcare professionals' acceptance and intentions regarding smart wearables in healthcare contexts.

Hypotheses Testing

To understand the relationship between the different variables, a Chi-square test and regression analysis was conducted to test the hypotheses H1, H2a, H2b, H3, and H4. Table 4 depicts the results of the chi-square test, depending on the p-value.

Table 4 *Chi-Square Test and Significance of one variable with respect to other variable*

S. no.	**Variable 1**	**Variable 2**	**P value**	**Test**	**Significance**	**H_0/ H_1**
1.	Perceived Usefulness (PU)	Perceived Ease of Use (PEOU)	< 0.001	Chi-Square Test	Significant	H_1 accepted
2.	Perceived Ease of Use (PEOU)	Attitude (AT)	0.012	Chi-Square Test	Significant	H_1 accepted
3.	Perceived Usefulness (PU)	Attitude (AT)	0.249	Chi-Square Test	Not Significant	H_0 accepted
4.	Perceived Usefulness (PU)	Behavioural Intention (BI)	< 0.001	Chi-Square Test	Significant	H_1 accepted

5.	Attitude (AT)	Behavioural Intention (BI)	0.023	Chi-Square Test	Significant	H_1 accepted

Primary Source

1. Perceived Usefulness (PU) and Perceived Ease of Use (PEOU):

H4: Perceived Ease of Use (PEOU) of m-health applications and smart watches for health monitoring positively influences the perceived usefulness (PU).

Table5 Chi-Square Tests

	Value	df	Asymptomatic Significance (2-sided)	Exact Sig. (2-Sided)
B Pearson Chi-Square	115.179[a]	4	.000	.000
Likelihood Ratio	63.387	4	.000	.000
Fisher's Exact Test	59.740			.000
Linear-by-Linear Association	43.164[b]	1	.000	.000
N of Valid Cases	278			

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is 65.

b. The standardized statistic is 6.570

Table 38: Test of Significance and Correlation analysis between Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

Pearson Chi-Square: 115.179

Asymptotic Significance (2-sided): < 0.001

Fisher's Exact Test: < 0.001

There is a highly significant relationship between Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) based on both the Pearson Chi-Square test ($p < 0.001$) and Fisher's Exact Test ($p < 0.001$). These tests indicate that the relationship between PU and PEOU is statistically significant, suggesting a strong association between perceived usefulness and perceived ease of use among healthcare professionals. This proves our hypothesis correct that is healthcare professionals' perceived ease of use of smart wearables significantly improves the perceived usefulness of these devices.

2. Perceived Ease of Use (PEOU) and Attitude (AT):

H1: The healthcare professionals' perception of ease of use (PEOU) has a favourable impact on their attitude (AT) toward using m-health applications and smartwatches for health monitoring.

Table 6 *Chi-Square Tests*

	Value	df	Asymptomatic Significance (2-sided)	Exact Sig. (2-Sided)
Pearson Chi-Square	12.925[a]	4	.012	.018
Likelihood Ratio	10.527	4	.032	.033
Fisher's Exact Test	12.347			.010
Linear-by-Linear Association	.021[b]	1	.884	.889
N of Valid Cases	278			

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .32.

b. The standardized statistic is .146

There is a statistically significant relationship between Perceived Ease of Use (PEOU) and Attitude (AT) based on both the Pearson Chi-Square test ($p = 0.012$) and Fisher's Exact Test ($p = 0.010$). These tests indicate that there is an association between PEOU and AT, although the significance level is moderate. This suggests that the perceived ease of use of smart wearables by healthcare professionals have a positive impact on their attitude to use them and recommend them to the patients for healthcare management. However, the association between PEOU and AT is moderate, therefore it can be deduced that healthcare professionals are not very sure with the acceptance of smart wearables during present times.

3. Perceived Usefulness (PU) and Attitude (AT):

H2a: Perceived usefulness (PU) favourably impacts users' attitudes (AT) toward using m-health apps and smartwatches for tracking the health.

Null Hypothesis (H0)	Alternative Hypothesis (H1)
There is no significant impact of perceived usefulness (PU) on users' attitudes (AT) toward using m-health apps and smartwatches for tracking their health.	Perceived usefulness (PU) significantly impacts users' attitudes (AT) toward using m-health apps and smartwatches for tracking their health.

Table 7 Chi-Square Tests

	Value	df	Asymptomatic Significance (2-sided)	Exact Sig. (2-Sided)
Pearson Chi-Square	5.401[a]	4	.249	.240
Likelihood Ratio	4.721	4	.317	.332
Fisher's Exact Test	5.836			.179
Linear-by-Linear Association	1.769[b]	1	.183	.211
N of Valid Cases	278			

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .58.

b. The standardized statistic is 1.330.

There is no statistically significant relationship between Perceived Usefulness (PU) and Attitude (AT) based on both the Pearson Chi-Square test ($p = 0.249$) and Fisher's Exact Test ($p = 0.179$). These tests suggest that the perceived usefulness of smart wearables is not significantly associated with healthcare professionals' attitudes toward these devices. Therefore, it can be said that although healthcare professionals perceive smart wearables to be useful in everyday life, their attitude towards recommending them to the patients for health management is negative. This can be due to many reasons such as accuracy, reliability and data privacy of such devices.

4. Perceived Usefulness (PU) and Behavioural Intention (BI):

H2b: Perceived usefulness (PU) positively influences users' behavioural intentions (BI) to utilize m-health applications and smartwatches for health monitoring.

Null Hypothesis (H0)	Alternative Hypothesis (H1)
Perceived usefulness (PU) has no significant influence on users' behavioural intentions (BI) to utilize m-health applications and smartwatches for health monitoring.	Perceived usefulness (PU) significantly influences users' behavioural intentions (BI) to utilize m-health applications and smartwatches for health monitoring.

Table 8: Chi – Square Tests

Chi-Square Tests

	Value	df	Asymptomatic Significance (2-sided)	Exact Sig. (2-Sided)
Pearson Chi-Square	107.514[a]	4	.000	.000
Likelihood Ratio	79.114	4	.000	.000
Fisher's Exact Test	76.039			.000
Linear-by-Linear Association	67.870[b]	1	.000	.000
N of Valid Cases	278			

a. 2 cells (22.2%) have expected count less than 5. The minimum expected count is .58.

b. The standardized statistic is 8.238.

There is a highly significant relationship between Perceived Usefulness (PU) and Behavioural Intention (BI) based on both the Pearson Chi-Square test ($p < 0.001$) and Fisher's Exact Test ($p < 0.001$). These tests indicate that the relationship between PU and BI is statistically significant, suggesting a strong association between perceived usefulness and the intention to use smart wearables among healthcare professionals. Therefore, it suggests that healthcare professionals find smart wearables useful in health management in everyday life for themselves. Thus, the behavioural intention to use them in everyday life is getting positively impacted. However, it is to be noted that healthcare professionals are ready to use the smart wearables for themselves but are not willing to recommend them to the patients. It also suggests that healthcare professionals believe that smart wearables can be recommended to the patients and that these devices could improve patient engagement, patient satisfaction and overall patient experience.

5. Attitude (AT) and Behavioural Intention (BI):

H3: Attitude (AT) toward m-health applications and smartwatches positively influences users' behavioural intention (BI) to use m-health applications and smartwatches for health monitoring.

Null Hypothesis (H0)	Alternative Hypothesis (H1)

There is no significant positive influence of attitude (AT) toward m-health applications and smartwatches on users' behavioural intention (BI) to use m-health applications and smartwatches for health monitoring.	Attitude (AT) toward m-health applications and smartwatches positively influences users' behavioural intention (BI) to use m-health applications and smartwatches for health monitoring.

Table 9: Chi Square Tests

	Value	df	Asymptomatic Significance (2-sided)	Exact Sig. (2-Sided)
Pearson Chi-Square	11.294[a]	4	.023	.041
Likelihood Ratio	8.635	4	.071	.067
Fisher's Exact Test	8.722			.053
Linear-by-Linear Association	3.485[b]	1	.062	.069
N of Valid Cases	278			

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .29.

b. The standardized statistic is 1.867.

There is a statistically significant relationship between Attitude (AT) and Behavioural Intention (BI) based on the Pearson Chi-Square test (p = 0.023), although the significance level is moderate. Fisher's Exact Test (p = 0.053) also suggests a moderate association. This indicates that healthcare professionals' attitudes toward smart wearables are associated with their behavioural intentions to use these devices, but the relationship is not as strong as in some other comparisons. Therefore, it can be interpreted that, healthcare professionals' attitude towards smart wearables can either positively or negatively impact the behavioural intention to use these devices. The attitude towards these devices is formed from personal experiences, word of mouth etc. and eventually effects the behaviour towards the usage of these devices.

Chi-square tests provide insights into the relationships between the different constructs in the study. The results suggest that perceived usefulness is strongly related to both perceived ease of use and behavioral intention. There is a moderate association between perceived ease of use and attitude, as well as between attitude and behavioral intention. However, perceived usefulness does not significantly correlate with attitude. These findings contribute to a better understanding of the factors influencing healthcare professionals' acceptance and intentions regarding smart wearables in healthcare contexts.

Regression Analysis

The regression analysis was done as shown in Table 10,

Where Predictors: PEOU→ Dependent Variable: PU, the R Square value (0.156) tells us that 15.6% of the variance in PU can be explained by PEOU. This means that PEOU gives us some information about why people perceive smart wearables as useful. The Adjusted R Square (0.153) suggest that predictors significantly improve the model's fit, as it's not essentially zero.

Table 10: R^2 of PEOU (independent variable) and PU (dependent variable)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.395[a]	.156	.153	.520

a. Predictors: (Constant), PEOU

Coefficients

Table 11: Significance of PEOU (independent variable) and PU (dependent variable)

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	1.257	.143		8.807	<.001
	PEOU	.446	.062	.395	7.138	<.001

a. Dependent Variable: PU

The Constant (1.257) is the baseline value of PU when PEOU is zero. It's statistically significant with a very low p-value (< 0.001).

PEOU has a coefficient (B) of 0.446, which suggests a positive relationship with PU. In simpler terms, when PEOU goes up, PU tends to go up as well. This suggest that healthcare professionals' perceived ease of use positively impacts the perceived usefulness of smart wearables in healthcare management. This relationship is statistically significant with a very low p-value (< 0.001).

The predictor Perceived Ease of Use (PEOU) helps us understand why users finds smart wearables useful (PU). When users perceive smart wearables easier to use (higher PEOU), it's more likely to be perceived as useful. This relationship is statistically significant, meaning it's not just a random chance but a real effect that PEOU has on PU.

2. Table 12: Predictors: PU & AT → Dependent Variable: BI

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.500[a]	.250	.245	.472

a. Predictors: (Constant), PU, AT

Table 49:R^2 of PU & AT (independent variables) and BI (dependent variable)

The model summary tells us how well the predictors, Perceived Usefulness (PU) and Attitude (AT), help us understand the dependent variable, Behavioral Intention (BI).

The R Square value (0.250) tells us that 25% of the variance in Behavioural Intention(BI) can be explained by Perceived Usefulness (PU) and Attitude (AT). This means that PU and AT together give us some information about why healthcare professionals have certain behavioral intentions to use smart wearables as healthcare products. Also, the Adjusted R Square (0.245) suggests that adding PU and AT to the model slightly improves the model fit of BI.

Table 13: Significance of PU & AT (independent variables) and BI (dependent variable)

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	1.122	.164		6.829	<.001
	PU	.470	.050	.489	9.339	<.001
	AT	.093	.067	.073	1.395	.164

a. Dependent Variable: BI

1. The Constant (1.122) is the baseline value of BI when PU and AT are both zero. It's statistically significant with a very low p-value (< 0.001).

2. PU has a coefficient (B) of 0.470, which suggests a positive relationship with BI. In other words, when PU goes up, BI tends to go up too. This relationship is statistically significant with a very low p-value (< 0.001).

3. AT has a coefficient (B) of 0.093, indicating a positive relationship with BI, but it's a bit weaker than PU. This relationship is not statistically significant because the p-value is greater than 0.05 (p = 0.164).

The predictors PU and AT help us understand why healthcare professionals have certain behavioral intentions (BI) to use smart wearables as healthcare products for themselves as well as in the patient management. Perceived Usefulness (PU) is a strong predictor, suggesting that when healthcare professionals perceive smart wearables as useful, they tend to have higher behavioral intentions to inculcate them for personal health management as well as patient health management. However, Attitude (AT) is not a significant predictor in this context, meaning it doesn't strongly influence behavioral intentions to use smart wearables in this specific situation.

Table 14: Predictors: PU & PEOU→ Dependent Variable: AT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.084[a]	.007	.000	.425

a. Predictors: (Constant), PEOU, PU

The model summary provides information about how well the predictors (PU and PEOU) explain the variance in the dependent variable (AT). The R Square value of 0.007 indicates that only 0.7% of the variance in Attitude (AT) is explained by the predictors Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). The Adjusted R Square, which considers the number of predictors, suggests that the predictors do not significantly improve the model's fit, as it's essentially 0.

Table 15: Significance of PU & PEOU (independent variables) and AT (dependent variable)

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	1.765	.132		13.351	<.001
	PU	.068	.049	.091	1.385	.167

PEOU	-.023	.056	-.027	-.412	.681

a. Dependent Variable: AT

The coefficients table provides information about the relationship between each predictor and the dependent variable while controlling for the other predictor.

1. The Constant (1.765) represents the estimated AT when both PU and PEOU are zero. It is statistically significant with a very low p-value (< 0.001), indicating that it is a significant predictor of AT on its own.

2. PU has a coefficient (B) of 0.068, which suggests a positive relationship with AT, but it is not statistically significant (p = 0.167).

3. PEOU has a coefficient (B) of -0.023, indicating a negative relationship with AT, and it is also not statistically significant (p = 0.681).

The study employed chi-square tests, revealing both significant and non-significant outcomes, underscoring the intricate relationships among variables. In the regression analysis, perceived ease of use (PEOU) emerged as a noteworthy predictor, explaining 15.6% of the variance in perceived usefulness (PU) and significantly impacting it, emphasizing that user-friendliness enhances perceived value. Moreover, PU and attitude (AT) jointly clarified 25% of the variance in behavioral intention (BI), indicating the pivotal role of PU in influencing healthcare professionals' intentions to use smart wearables, while AT held limited sway in this context. These findings illuminate the generally positive outlook of healthcare professionals toward smart wearables, emphasizing their practicality and ease of use and a willingness to recommend them to patients. The analysis highlights the substantial influence of content richness on perceived usefulness, underlining its role in motivating smartwatch adoption. Furthermore, it elucidates that personal innovativeness, intrinsically tied to personal traits and psychological factors, impacts perceived ease of use and, to a certain extent, perceived usefulness.

The purpose of this study was to determine the acceptance of smart wearables namely mobile phone applications and smart watches by examining the relationship between PEOU, PU, AT and BI to healthcare professionals by using an integrated TAM model. The extensive data analysis provides valuable and multifaceted insights into the perspectives, stances, and future inclinations of healthcare professionals concerning the incorporation of smart wearables into the realm of

Practical Implications in the Healthcare Sector

This research offers crucial insights into how wearable technology can be effectively designed and integrated into healthcare. It highlights that a successful wearable device solution is the one which not only meets the specific needs of the user but also fits well in the healthcare environment. The developers, on the other hand, should be mainly focusing on creating the features which are of direct benefit to healthcare professionals since this, by far, is the greatest factor for the promotion of acceptance and long, term use. Moreover, giving access to accurate and relevant information just in time is recognized as the key factor that leads to users' decision, making and their dependence on wearable devices. The research at hand also points to the significance of giving attention feature selection and functionality issues, which is to say that the presence of content, rich, and medically relevant features is one of the main factors leading to technology adoption. The easy and smooth integration of wearable technology provides technology managers and healthcare organizations with the opportunity to gain a deeper understanding of the individuals' needs, as well as to customize the solutions in order to get the effectiveness and the use to be general and sustained. Hospital administrations, on the other hand, can regard this study as a managerial tool that provides directions on how to integrate wearable technologies efficiently across departments and thus, promoting healthcare services. As for medical practitioners, the use of wearable technology is turning out to be an indispensable clinical tool, which means that the feature development and enhancement have to be on a continuous basis. Good quality medical wearables should have characteristics such as blood glucose monitoring, insulin tracking, carbohydrate management, and physical activity recording, whereby the characteristic that is most emphasized should be user, friendliness.

Limitations of the Study

The study's findings are limited by a small, non-uniform sample from select Delhi hospitals, reliance on survey methods, short data collection duration, and limited doctor participation. Broader, more diverse samples, mixed methods, and longitudinal designs are recommended to improve generalizability and robustness..

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