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A Questionnaire Study about the Experiences of Smart Watches of Different Brands

[1]Shweta A. Panchbudhe, [2]Nandkishor Bankar, [3]Sanika Kalambe, [4]Ujwalla Gawande

[1]Assistant Professor, Dept of Cardio Respiratory sciences ,Datta Meghe college of Physiotherapy ,Nagpur-441110
[2]Associate Professor Dept. of Microbiology Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences Sawangi (Meghe), Wardha
[3]Assistant Professor Dept. of ENT Datta Meghe Medical College, Nagpur-441110.
[4]Associate Professor Dept. of Information Technology, Yeshwantrao Chavan College of Engineering, Nagpur

Abstract

Background: Smart watches, also known as mini computers, are one of the most recent developments in the field of information technology assessment. Every year, new fitness trackers and smart watches are introduced to the consumer market. Sensors (e.g., heart rate, accelerometer, pedometer) are now included in wrist wearables, which provide useful data.

Smart watches are becoming increasingly common because they allow users to access and communicate online information while on the move. Smart watches also offer the user spatial and temporal information and show a map on the screen. It's a modern device that came out a few years ago. Market wearables record vital signs that have historically been used to detect the onset of infectious disease. A smart watch is a modern technology that incorporates smart phone functionality with continuous data monitoring to encourage fitness, such as step tracking, heart rate monitoring, energy consumption, and physical activity levels. It also provides users with input to help them control their health.

Objectives: The aim of the study is about the experiences of smart watches of different brands

Material and Methods: They were given a self-made questionnaire with ten questions about the use of smart watches from various brands by people aged 18 to 50 +years old.

Results: The study's findings indicate that smart watches are becoming more common and useful for people in their daily lives, as they allow users to access information about their environment and body-related conditions.

Keywords: Smart watches of different brands, self-constructed Questionnaire

Introduction-

It is critical for one's health to engage in daily physical activity and maintain a high level of fitness. Some studies have found that engaging in daily physical activity is related to a lower risk of premature death from any cause, including cardiovascular disease.. Activity tracker products include wearable devices such as fitness trackers and smart watches. There are many advantages to wearing the watch, including continuous medical monitoring, real-time physical activity assessment, and baby monitoring. A wearable system can be used to monitor your health in real time. The heart rate monitor is one of its electrodes. One of the most important factors in determining a person's health is their heart rate[1].

The smartwatch is one of several smart wearable devices available.

A wearable computer is an electronic computing device that can be worn, carried, or connected to the body and is embedded in the user's personal space. Many wireless sensors are integrated into smartwatches, allowing them to have value-added functionality. Mobile operating systems are used in smartwatches. Apple Watch OS and Android Wear are the two most common among them. Mobile apps such as schedulers, digital maps, personal organisers, music players, and social media applications can all be run on them. The majority of them have a touch screen and can connect wirelessly such as Bluetooth, GPS, and Wi-Fi, as well as a GSM card, so that the user can connect to the internet without being paired with a smartphone as a standalone smartwatch[2]

A smartwatch's appeal is the ability to easily access timely and location-based information with minimal disruption to the user's current operation.

The smartwatch serves as a small wearable device with a variety of sensors and processors, as well as a chronograph. A smartwatch is a wrist-worn computer with advanced computing capacity that can connect to other devices via short-range wireless connectivity, provides warning alerts, collects and stores personal data via a variety of sensors, and includes an integrated clock.

Smartwatches are gaining a number of stand-alone features, such as internet connectivity, that eliminate the need for users to rely on their smartphones.

Some firms, such as Samsung and Sony, are launching smart watches as a supplement to their mobile devices, while others are launching smart watches as a standalone product Apple, for example, has implemented a hybrid strategy.

The most recent Apple Watch Series 3 and 4 are linked to the cellular network and can run even if the phone isn't close by[3]

Methodology-

1) **Study design**- self constructed questionnaire

2) Study set up- DMCOP college students and staff

3) Selection criteria- Participants who are willing to take part in the research

4) Sample size: 50 subjects between the age group of 18 to 50+

Inclusion criteria- Participants who are using smart watches in their day to day life

Exclusion criteria-Participants who are not using smart watches were excluded from the study

Materials used-structured questionnaire

Procedure-

Permission to carry out the research were taken from the ethical committee of the Datta Meghe college of Physiotherapy, Nagpur.

According to the inclusion criteria the participants who were volountarily willing to participate in the study were selected from Datta meghe college of physiotherapy.

The aim and protocol of the study were described to the participants and their written consent were obtained .On the same day , the questionnaire were handed to the participants by the therapist, and requested then to tick in the appropriate boxes of the questionnaire according to their most suitable

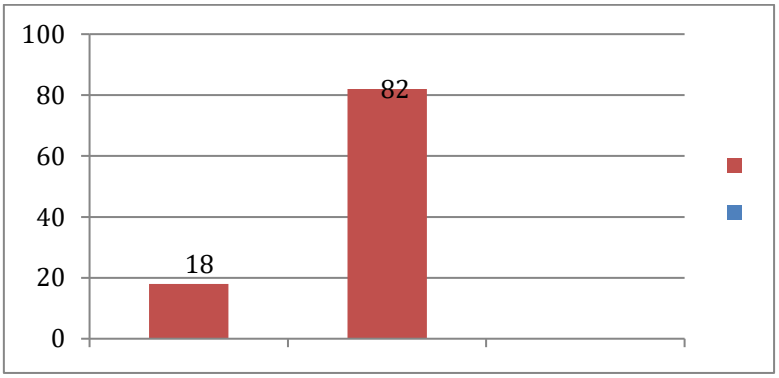
answers.A stipulated time of 10-15 minutes were given to them to fill the questionnaire and were asked to hand over the questionnaire to the therapist within the time limit.The questionnaire was simple but even if the participants face any problem while filling the questionnaire, the therapist was explain it and solve the problem. The questions which were unticked and which contained any other marking other than tick, those questionnaire were not included for data analysis

The following questionnaire is as follows:-

1 what is your gender	A male B female
2.what is your age group	a.under 18 yrs b.18-24 c.25-39 d.40-50 e.50+
3.Do you have smartwatch	a.yes b.no
4how long have been using your watch?	a. Less than half a year b. ½ year to 1 year c. 1-3year d. Over 3 year
5.which brand do you prefer?	a. apple b.Samsung c.Fastrack d.LG e.other
6.please tick the functions that you have used on your smart watch?	a. checking time& date b. health tracker (heart rate & spo2) c make contact with someone d. navigation e. all of the above
7.can you use your smart watch in work place/studying environment?	a.always b.sometimes c.rare d.never
8.can you use your smartwatch in home?	a.always b.sometimes c.rare d.never
9.can you use your smartwatch in outdoor?	a.always b.sometimes c.rare d.never

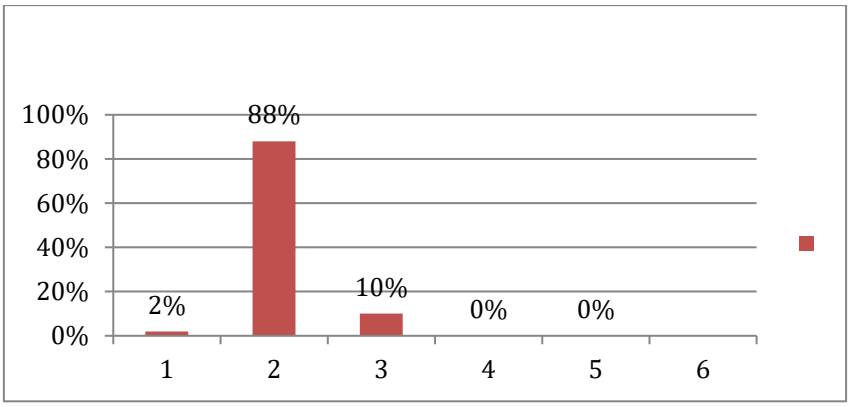
Results

QUE1:What is your gender?



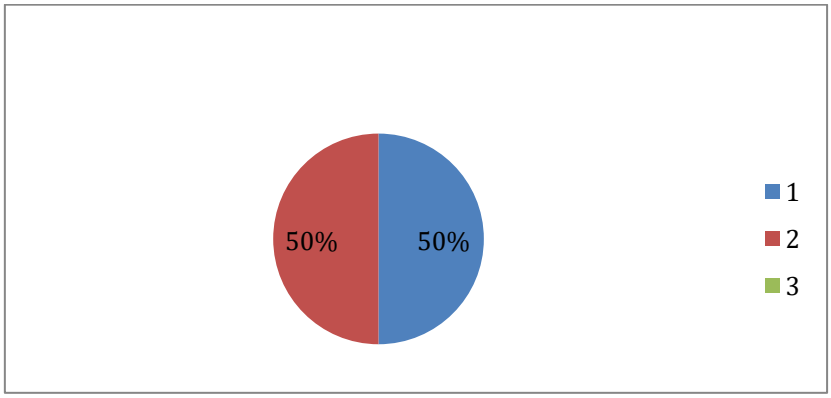
Results: This Graph shows about the distribution of Gender the answer of first questions revealed that, out of 50 participants 82% of the female i.e 41 have used the smart watch whereas 8 % were male i.e 9 have not used it

QUE2: What is your age group?



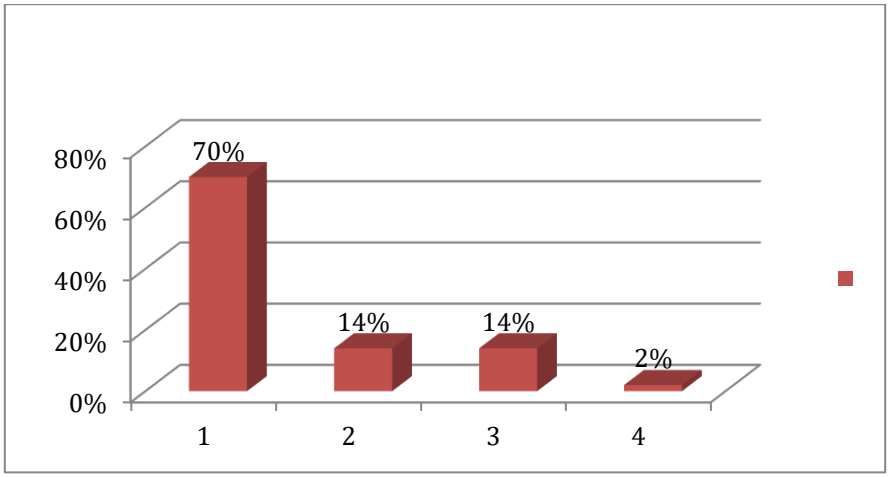
Results: This Graph shows the distribution of age group ,and it revealed that 88% of the participants have use the smart watch who are between the age group of 18-24 years and 10% have used the smart watch between the age group of 25-39 years and 2 % who had been under the age of 18 years, and none had responded between the age group of 40-50 and above 50 years.

QUE3:Do you have smart watch?



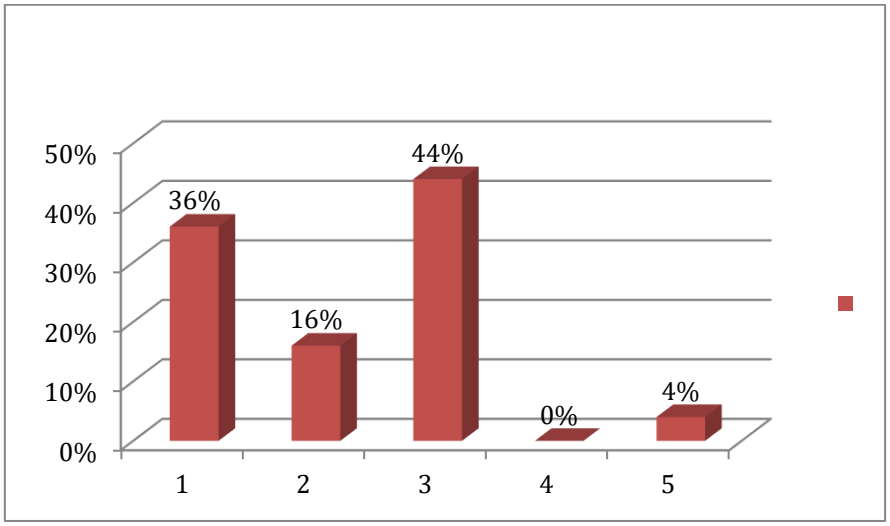
Results: This graph show the answer of third questions which revealed that there were 50% of the participants responded that they have the smart watch whereas 50% of the participants responded that they were not having the smart watch.

QUE4: How long have you been using your watch?



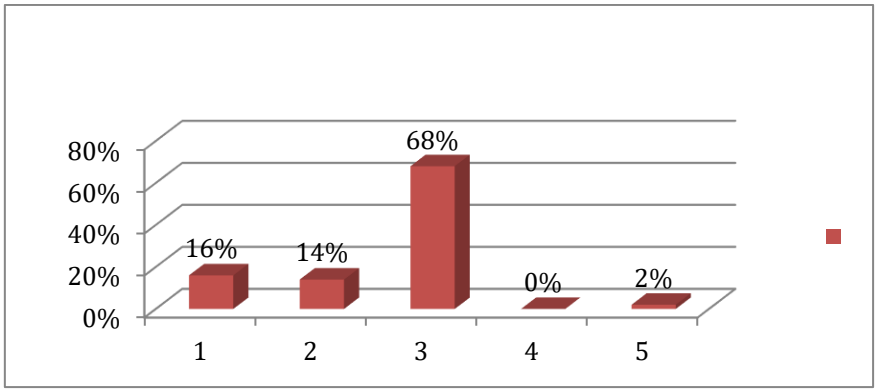
Results: This graph revealed the answer of third questions which suggest that there are 70% of the participants who uses the smart watch less than half a year ,14 % of the participants responded that they are using the smart watch from ½ to 1 years, again 14% are the remaining participants which have been using the smart watch from 1- 3 years and only 2% uses over the 3 years.

Que5: Which brand do you prefer?



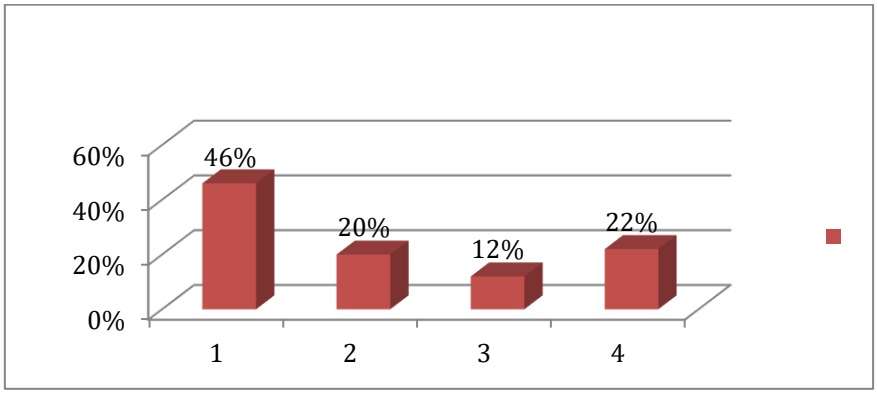
Results: This graph shows the brand wise distribution which shows that there were 36% of the participants who uses apple brand smart watch ,16% of the participants uses fastrack brand smart watch and 4% of the participants uses Samsung brand and there were 44% of the participants who uses other brand which is not in the option of the questionnaire and 0% shows that none of the participants uses the LG brand

QUE6: Please tick the functions that you have used on your smart watch?



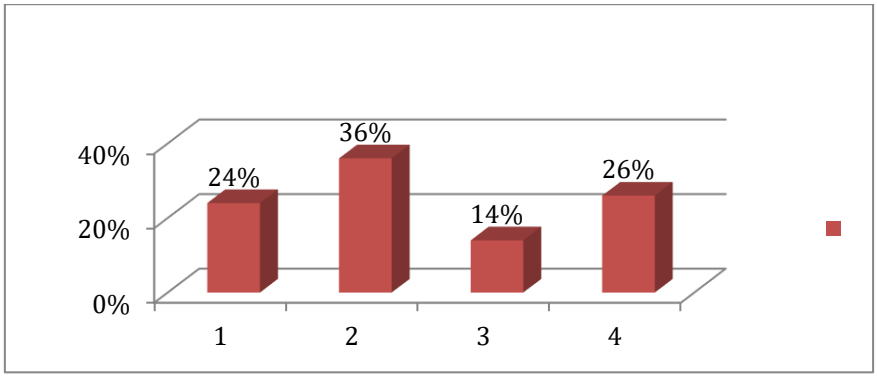
Results :This Graphs shows the response of sixth questions which revealed that 16% of the participants use their smart watch to check time and date , 14% of the participants use the smart watch to track their health status (heart rate and spo2),68% use to check all the functions on their smart watch and remaining only 2% participants said that they use the smart watch to make contact with someone ,0% shows that none of the participants use for navigation only

QUE7: Can you use yours smart watch in workplace/studying environment?



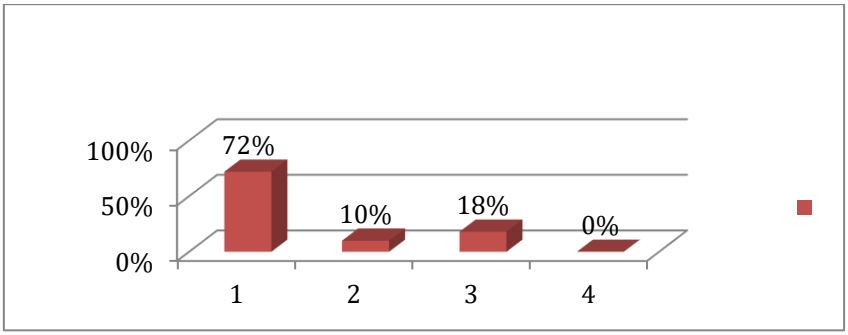
Results : This graph revealed that 46% of the participants always used their smart watch in their work place or studying environment,20% of the participants sometimes used their smart watch on their work place or studying environment,12 % of the participants rarely used it and there were 22% of the participants who never used their smart watch in the work place or studying environment.

QUE8: Can you use your smart watch in home?



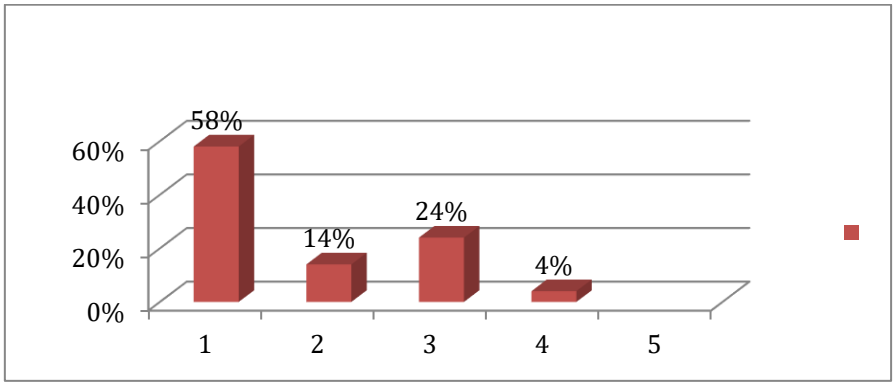
Results: This graph shows that 24% of the participants always used the smart watch at home , 36% of the participants sometimes use the smart watch at home,14% of the participants rarely used there were 26% of the participants who always used the smart watch at home.

Que 9 Can you use your smart watch in outdoor?



Results: This graph revealed that 72% of the participants always used the smart watch in outdoor,10% of the participants sometimes used the smart watch in outdoor and the remaining 18% never had used the smart watch in outdoor ,and there were 0% of the participants who rarely used in outdoor.

Que10 Can you use your smart watch at gym?



Results: This graphs revealed that 58% of the participants always use the smart watch at gym to moniter the health status , 14% of the participants sometimes use the smart watch at gym,24% of the participants never use the smart watch at gym and there were only 4% of the participants who rarely use the smart watch at gym.

DISCUSSION

Keeping in mind the inclusion and exclusion criteria, a self-created questionnaire containing 10 questions about smart watch experiences was distributed to the 50 participants who have been wearing a smart watch on a daily basis.We discovered that 82 percent of the subjects were female and 18 percent were male, with 88 percent being between the ages of 18 and 24, 10 percent being between the ages of 25 and 39, and the remaining being under the age of 18.

Graph 3 depicts how many of our participants preferred the smart watch and how many did not. Our analysis revealed that there was a 50/50 split, with 50 percent preferring the smart watch and 50 percent not, He presented an online survey with DHH participants to investigate interest in sound

awareness and desires for the design of a smart phone or wearable sound awareness technology. This research is sponsored by **Leah Findlater, Bonnie Chinh,** and others , He came to the conclusion that there was a clear preference for both haptic and visual input, with haptic alerts on a smart watch and visual details on a smart phone head mounted display being the most preferred product design. Finally, their results highlight important cultural and social issues that must be addressed in order for mobile or wearable sound awareness technologies to be adopted successfully, such as apprehension about using a sound awareness system around strangers or around deaf friends and relatives.[4]

The brandwise distribution is depicted in graph 4.It was discovered that 36% of the participants used Apple, 16% used Fastrack, 4% used Samsung, and 44% used another brand on the market. It was also discovered that 16% of the participants used a smartwatch to monitor the time and date., 14 percent are used to monitor health problems such as heart rate and spo2 levels, while 68 percent are used for a variety of purposes because they are lightweight, compact, and worn on the wrist all the time**Andre Henriksen, Martin Haugen Mikalsen**, and colleagues investigated the availability of wrist-worn wearables and analysed the availability of relevant fitness sensors. The study was designed to evaluate brand use in research projects by comparing popular brands in terms of developer access to collected health data and features to consider when deciding which brand to use in future research. , He came to the conclusion that the wearable world is constantly changing. Every year, new products and brands are introduced, offering better metrics and user experience, while other brands fade away from the consumer market for different reasons. Improvements in product quality provide new research opportunities.[5]

Smart watches make it simple to use some mobile apps, as well as include sensor data such as heart rate monitoring and sleep tracking that isn't available on smartphones. They also have a range of sensors for fitness and health tracking. It is best suited depending on the conditions, such as when driving a car or riding a bike, it is more convenient to check alerts on your smart watch rather than trying to get the phone from your pocket graph 8,9,10 reveals that 24 percent used the smart watch at home, 72 percent used it at all times while outside, and 58 percent used it at the gym solely to track heart rate and oxygen saturation. **Man Laichung, Ka Yin Chau,** and colleagues examined consumers' 'Adoption of wearable healthcare technology: The role of health' and found this to be true.Healthcare wearable technology systems are supposed to have new ways to deal with health-related problems, according to attributes, combining healthcare wearable technology with mobile health apps that track sports activity will inspire people to exercise more, which can help them reduce the harmful effects of their sedentary lifestyle while still preserving their health and wellness. According to our findings, perceived usefulness and health information accuracy had a major effect on perceived usefulness, which drove adoption intention.[6] This is supported by **Dr.P kishore kumar and V venkateshwarlu,** who conducted a study on customer perception and purchasing intention toward smart watches, found that consumers believe smart watches can be used to complete personal and professional tasks very conveniently. The consumers are thinking that smart watches are reasonably price based on its feature also consumers are likely own a smart watch in future to perform variety of tasks.[7]

Conclusion:

From the discussion above, it is clear that smartwatches of all brands are readily available, and people like them because they can be used anywhere and include all updates, as well as a health status when at the gym, outdoors, or in GPS.

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