

**Internship Training
At
India Health Link Pvt. Ltd.**

**“STUDY ON AWARENESS OF CLINICAL VITALS AMONG THE GENERAL
POPULATION AND DESIGN A PROMOTIONAL MIX”**

**By
Dr. Anisha Gadodia
PG/16/006**

**Under Guidance of
Dr. Anandhi Ramachandran**

**Post Graduate Diploma in Hospital and Health Management
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**International Institute of Health Management Research
New Delhi**

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“The single greatest cause of happiness is gratitude.” — Auliq-Ice

As I complete this small contribution to scientific pursuit, it gives me immense pleasure to acknowledge the guidance provided by my mentors. I take this opportunity for acknowledging India Health Link that provided me with this honor.

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Place: New Delhi

India Health Link

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ABBREVIATIONS

IHL	India Health Link
BP	Blood Pressure
ECG	Electrocardiography
BMI	Body Mass Index
BMC	Body Mass Composition
SPO2	Peripheral Capillary Oxygen Saturation
NCD	Non-communicable Diseases

PROJECT TITLE

“STUDY ON AWARENESS OF CLINICAL VITALS AMONG THE GENERAL POPULATION AND DESIGN A PROMOTIONAL MIX”

INTRODUCTION

The basic purpose of health kiosk is to measure the parameters of Human health and clinical vitals using sensors that will not affect the body. Presence of kiosk that helps patients to record their own clinical vitals without any hesitation is way better tool waiting for precious time of the doctors.

Measurement of various physical parameters such as Blood Pressure (BP), Heart rate, Body Temperature etc. are recorded and stored in cloud. Wherever patients need their results which are updated on the server they can collect their reports. It not only analyses the health vitals but helps patient in keeping an eye on his lifestyle. Changing technology and improved knowledge and awareness about their health, kiosk can help the patient keeping in line with his fitness regime.

Challenges such as Shortage of doctors, huge traffic, increased workload on doctors can be overcome using information technology. Health kiosks can be placed anywhere and there are no limits of where these kiosks can be located. They can be used anywhere from large hospital environments to smaller individual physician's home. Risk of spreading off infection is greatly refused as it is a medical procedure where there is no introduction of instruments into the body. One need not take the blood samples to test the health. The design of the kiosk is simple as they are free standing units using computer programs that generate information regarding patients health. Portability of the kiosk reduces the issue of fixing and helps in its easy transferring from one location to another. Interactive and patient friendly user interface make them easy to operate. Kiosk are not new to people of India as they are already being used by individuals from all socio-economic background in the form of ATM machines, air travel check-ins and metro ticket vending machines services.

Easy access and people familiarity makes computer kiosks a preferred choice for disseminating evidence based health information data for successful implementation of public health programs. Gathering health information through kiosk is gaining popularity in the Indian subcontinent as many insurance companies have started implementing this technology for pre

policy health check up. Educating the patient, better communication between the doctor and the patient and presence of transparency are some of the key advantages that kiosk can offer. Thus, this technology could help bridge the gap between people who have access to health information and communication technologies and those that do not have access to improve their health, also known as the digital health. Information technology for educating the patient has been found to be an effective technology for educating the patient and transferring the knowledge.

Interventions based on technology can help bridge the gap between theory, practice and research. As the pressure to provide more cost effective and interactive information resources to patient at lower cost. Therefore, the patient educators are beginning to realize the benefits of using computer technology to support the healthcare learning process. Advances in the field of technology in the past two decades have increased the focus on the use of new technologies to assist in the delivery of health promotion messages. Information technology tools for adherence of health behaviors has shown encouraging results. Touch screen kiosks backed up by information technology continue to emerge as one of the new technologies to deliver health education in both clinical and non-clinical settings. The new concept to develop kiosks in accessible public locations in order to deliver information and services to the general public is ongoing. Various factors influence the use of kiosks, including belief in the accuracy of information content, convenience with regard to both location and time available.

Mission and Vision – To provide Affordable and accurate information about the clinical vitals to Educate, Aware and Facilitate healthy life style practices to Indian population irrespective of social and economic status and providing easy access to vitals screening that can reduce the NCD in India.

PRODUCT & SERVICES

1. IHL has launched a ATM size self-operated health Screening KIOSK, measuring the following vitals

- Weight,
- BMI (Body Mass Index),
- BMC (Body Mass Composition),
- Pulse Rate
- BP (Blood Pressure)
- ECG (Electrocardiography) - 2 lead

2. A web based health portal to store and keep the users engaged to educate them on maintaining healthy lifestyle to reduce NCD risk.



RATIONALE

Rationale behind this project is that the senior management recognized the potential for improvement in designing the health information to be displayed in the kiosk. In order to realize this long-term goal, awareness among the general population about their health status and clinical vitals will be studied for enabling us to understand the target audience and improvement in updating the kiosk.

RESEARCH QUESTION

The organization found it difficult to identify the target audience and the vitals that they need to measure. A market research was conducted to determine the level of awareness among the general population about their health status and clinical vitals for betterment of health Kiosk, to identify the target audience and to design a marketing mix accordingly.

OBJECTIVES

1. To study the level of awareness about the health vitals among the general population
2. To identify the health factors that people are not aware about
3. To give suggestions on how to increase the reach of kiosk

LITERATURE REVIEW

Author	Title	Methodology	Result
Mina Afza(2017)	Data Requirements and the Basis for Designing Health Information Kiosks	Descriptive study was conducted in 2015 on a sample size of 183 participants.	Information requirement, data elements, applications , stakeholders requirements and information on health kiosk should be considered while designing
Judith .T .Mathews (2013)	Evolution of multi user health kiosk for community residing older adults.	Pilot study was done on a sample size of 40 participants and pre and post intervention results were analyzed.	It was concluded that design acceptability is possible only if it is designed keeping stakeholders in mind.
Chi Harold liu (2011)	Health kiosk a connected healthcare system for long term monitoring	A research paper was presented where 2 case studies named stationary health kiosk and mobile health kiosk were presented	They proposed that this solution of health kiosk is patient driven and service oriented
Rqy jones (2009)	Role of health kiosks	Web of knowledge , google scholar and Medline were researched and 200 informants were identified and contacted	Study provided evidence that kiosk can increase accessibility of health information provided it is placed at place with proper access
Kentaro toyama (2008)	Review of research on rural PC kiosk	A descriptive study was done from 2004 to 2007 in India	Rural kiosk are difficult to sustain
Olufunmilola abraham(2007)	Acceptability of health kiosk within African American community settings	Survey regarding the acceptance of health kiosk was conducted using a sample size of 31 participants	Study shows that health kiosk are accepted among African Americans community settings

METHODOLOGY

STUDY SETTING

India Health Link Pvt. Ltd.(IHL) is a company having its registered office at Karnal, Haryana and Development center at Chennai, India. The company is formed with a vision to Educate, Aware and Facilitate healthy life style practices to Indian population irrespective of social and economic status. Providing easy access to vitals screening and educating them on the status of their health and the lifestyle changes that can reduce the NCD in India.

Data Collection method

- Primary data was collected through a sample questionnaire using Google Forms.
- Sample size – 61 respondents
- Inclusion criteria – respondents above 18 years of age.

Data collection tools

Data collection tool includes the following information

- Age
- Gender
- Height
- Weight
- Demographic Details – city and state
- Education
- Employment Status
- Clinical Vitals
- Lifestyle Indicators
- Environment and Social Factors

Study variables

Following variables will be studied:

- BP (Blood Pressure)
- Diabetes
- Heart related problems
- Thyroid levels
- BMI (Body Mass Index),
- BMC(Body Mass Composition),
- Pulse Rate

- Physical Activity
- Alcohol
- Tobacco
- Fried/ Processed Food
- Green Salad
- Fruits
- Breakfast
- Company while taking meal
- Point of reference for health
- Type of family
- Genetic/ Family History

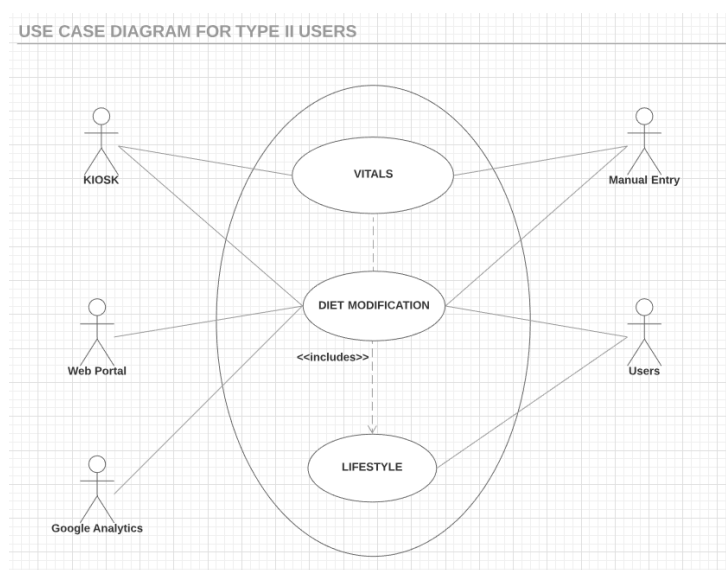
Data collection plan

The Data regarding all the mentioned variables will be collected and arranged in a Excel sheet and analyzed.

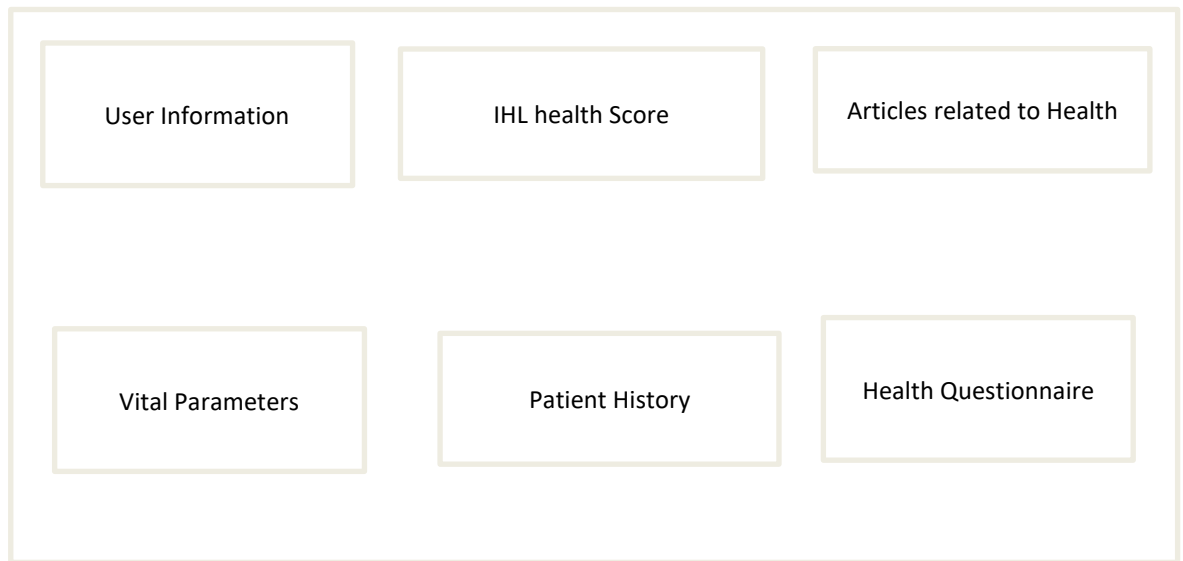
REQUIREMENT GATHERING

It was done to see the scenario which will tell how the user will interact with the system.

USE CASE DIAGRAM



WIREFRAME DIAGRAM

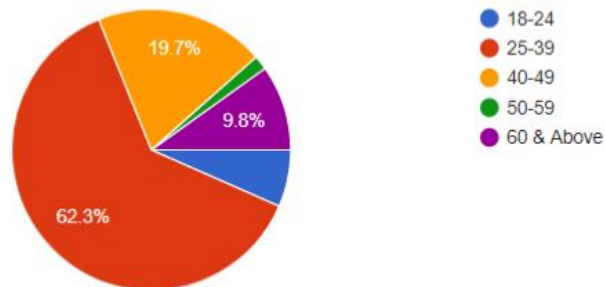


DATA ANALYSIS (n=61)

1. Age

Age

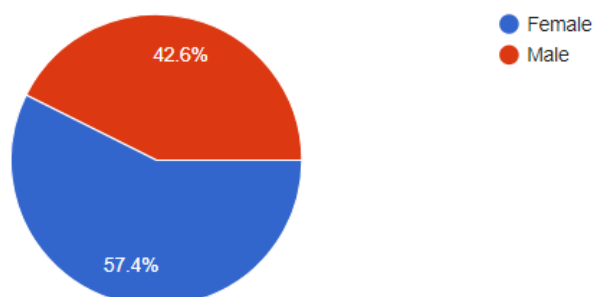
61 responses



2. Gender

Gender

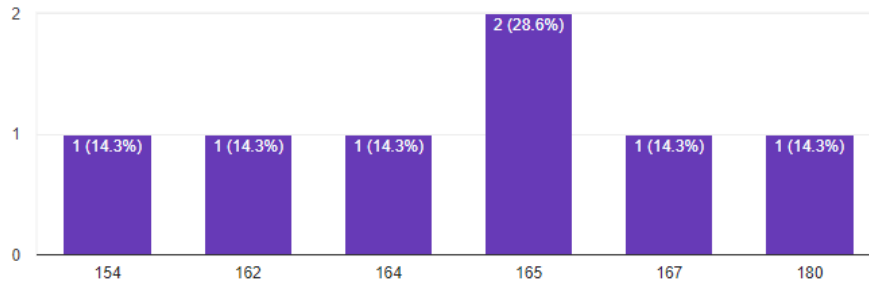
61 responses



3. Height

Height (in cm)

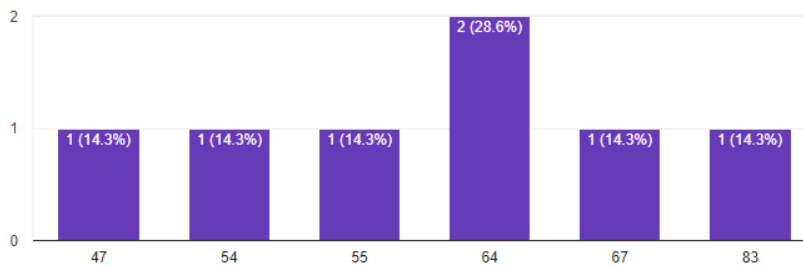
7 responses



4. Weight

Weight (in kg)

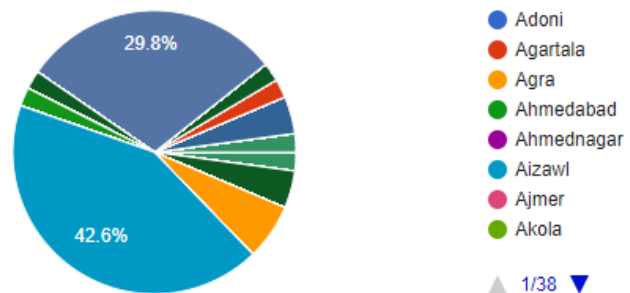
7 responses



5. City

City

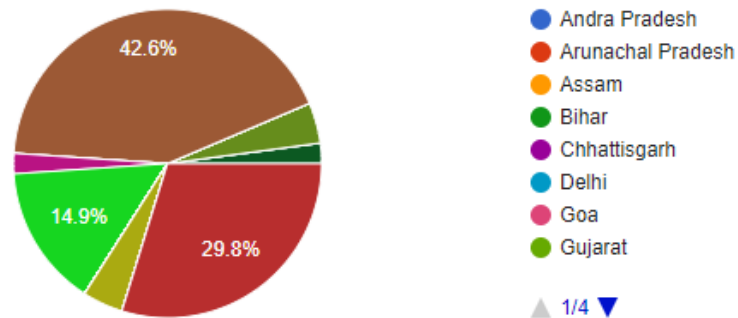
47 responses



6. State

State

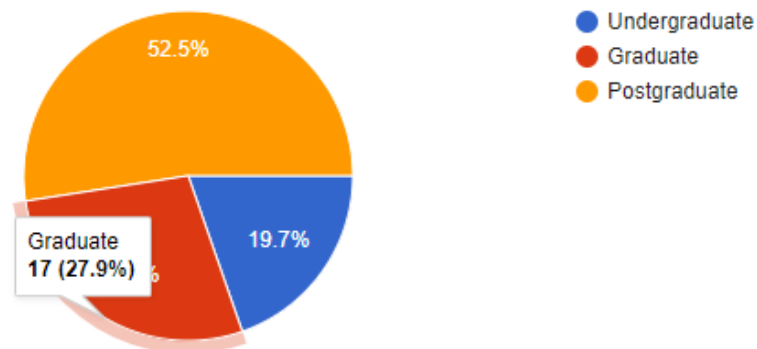
47 responses



7. Education –

Education

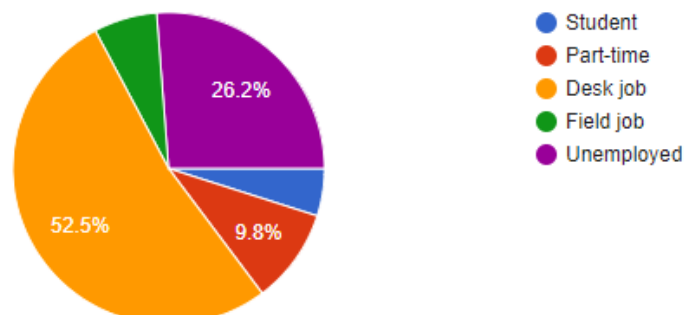
61 responses



8. Employment Status

Employment Status

61 responses

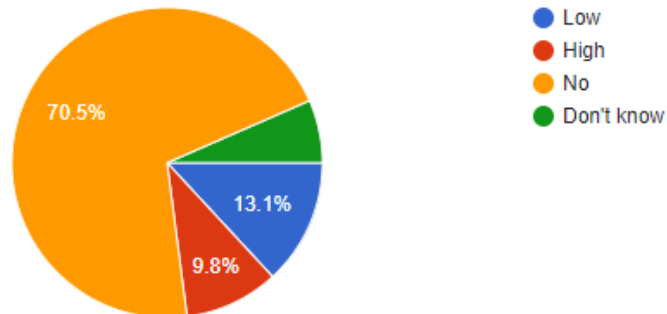


Vitals/Clinical

9. Blood Pressure

1. Do you have high blood pressure?

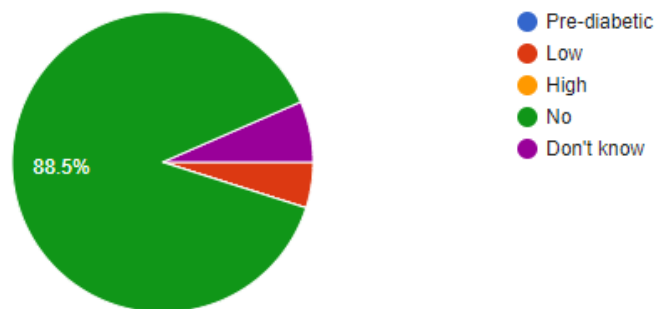
61 responses



10. Diabetes

2. Do you have diabetes?

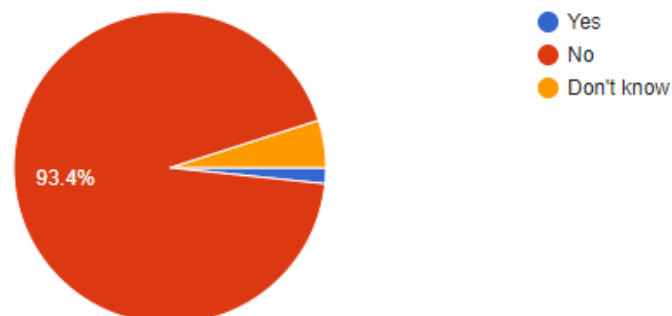
61 responses



11. Heart-related problems

3. Do you have any heart related problems?

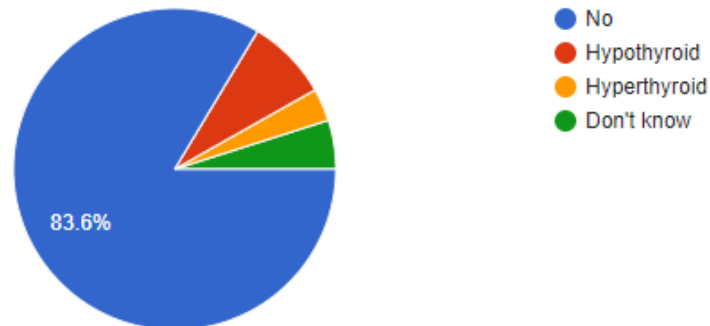
61 responses



12. Thyroid levels

4. Do you have Thyroid Problem?

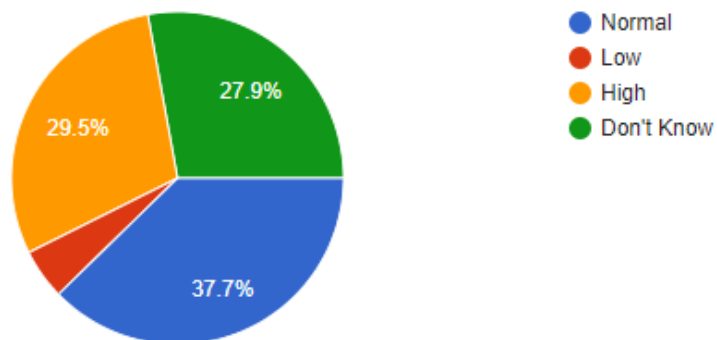
61 responses



13. BMI (Body Mass Index)

5. What is your BMI?

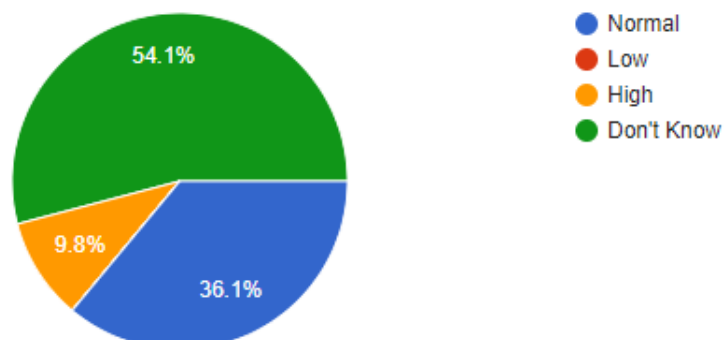
61 responses



14. BMC (Body Mass Composition - Fat)

6. What is your BMC?

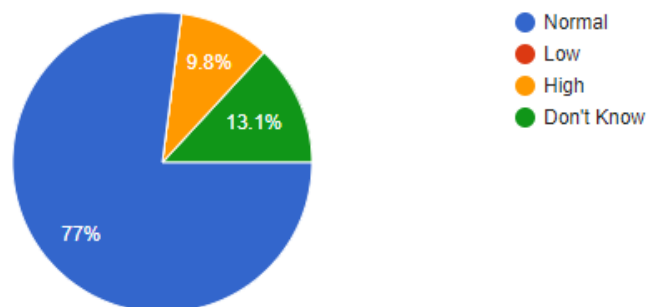
61 responses



15. Pulse Rate

7. What is your Pulse rate?

61 responses

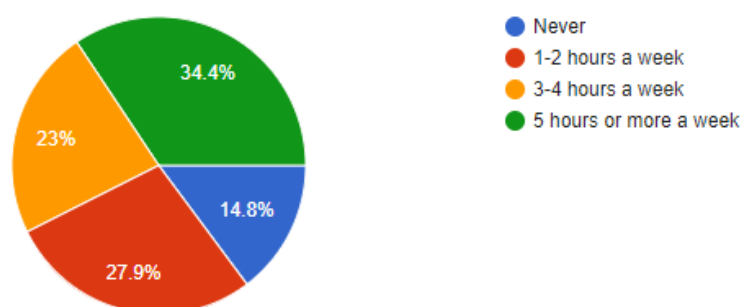


Lifestyle

16. Physical Activity

8. How often do you indulge yourself in physical activity?

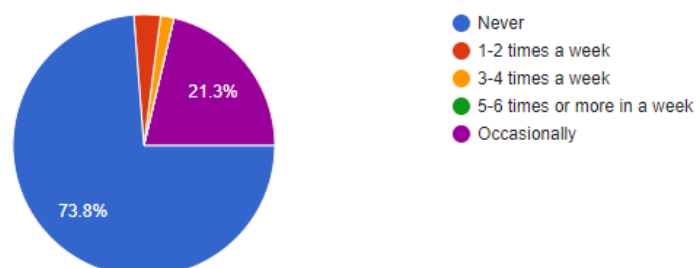
61 responses



17. Alcohol

9. How often do you Consume alcohol?

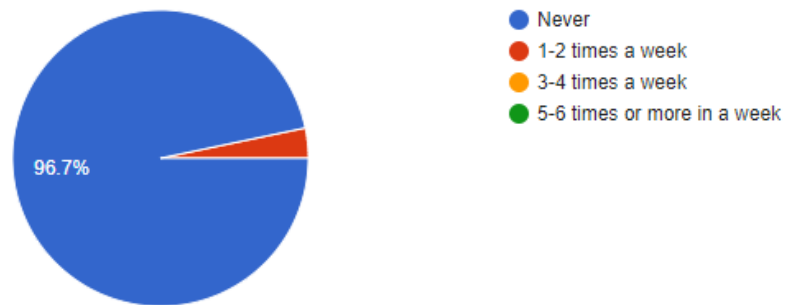
61 responses



18. Tobacco

10. How often do you Consume tobacco?

61 responses

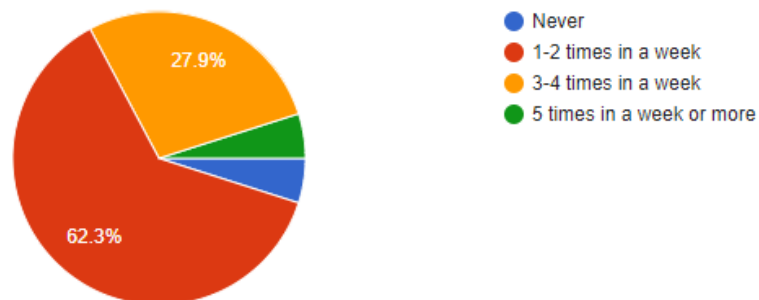


Diet

19. Fried/Processed Food

11. How often do you consume Fried/ Processed Food?

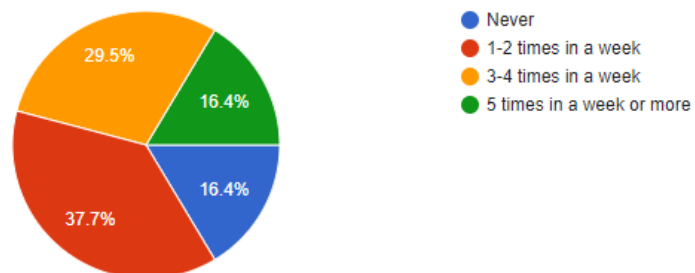
61 responses



20. Green Salad

12. How often do you consume Green salad?

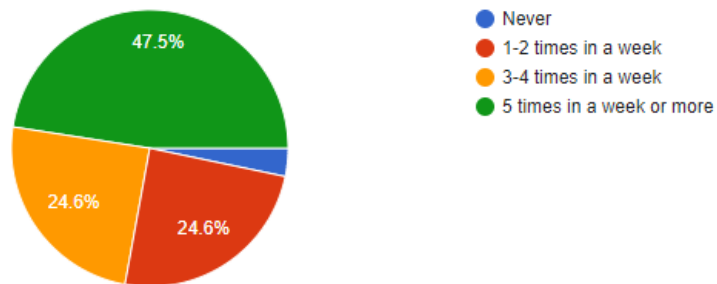
61 responses



21. Fruits

13. How often do you consume Fruits?

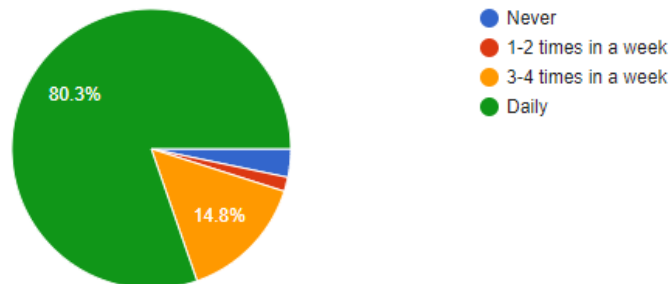
61 responses



22. Breakfast

14. How often do you consume your breakfast?

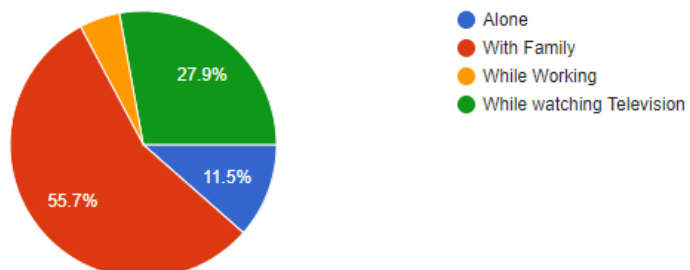
61 responses



23. Company while taking meal

15. How do you enjoy your meal?

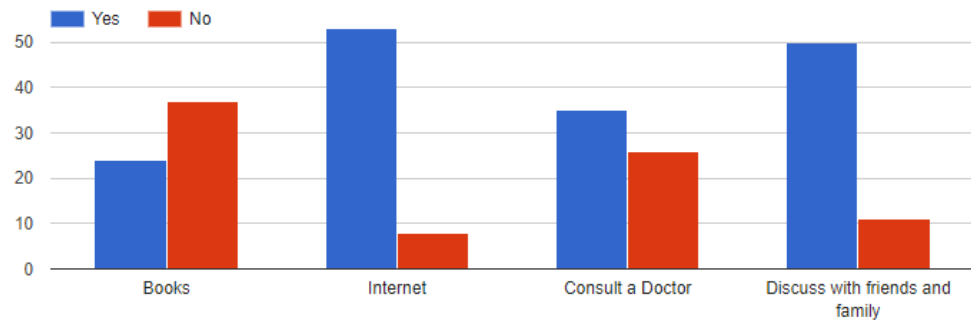
61 responses



Environmental and Social Factors

24. Point of reference for health

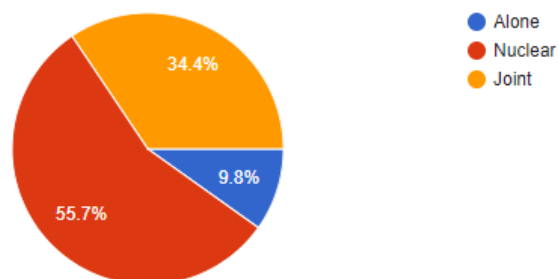
16. What is your point of reference for health?



25. Type of family

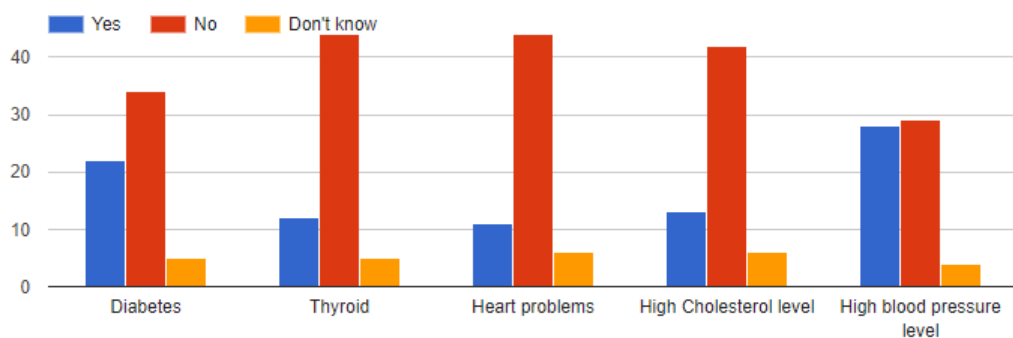
17. What type of family do you live in?

61 responses



26. Genetic/Family History

18. Do you have any genetic/ family history of any of the following diseases?



RESULT

Result from Market Research

- 52% people are post graduate
- 52% in desk job
- 54% are not aware of their BMC
- 34% indulge in physical activities only 1-2 times a week
- 62% consume food out on weekly basis
- 37% don't add salad to their diet
- 55% respondents are staying in nuclear family

DISCUSSION

- Majority of the respondents are educated and are employed in various desk jobs, so as per this our target audience should be people working in corporates.
- Nowadays majority of the users workout on daily basis as per the above shown data , gymnasium and fitness clubs are also a potential area for reaching out to our audience.
- Metropolitan cities having the concept of nuclear families are more prone to health risk as considerable number of people are more inclined towards eating outside showing a greater market size of people requiring regular monitoring of their health statistics.
- Large number of respondents do rely on internet and peer review for gathering health related information both of them are not the authentic sources for the correct information, we will provide them with the correct information backed up by data in order to promote a healthy living.

SWOT ANALYSIS

Strength

- Pioneer in the field – This will offer us the first mover advantage.
- Accurate health statistics.
- Not only restricted to BMI but goes a step further by monitoring ECG.
- Storage of large amount of data at backend.
- Data access remotely at any KIOSK station all over India.
- Multiple users can use one product unlike watches.

Opportunity

- People are health conscious and are becoming more aware about their vitals.

Weakness

- Requires Regular maintenance check on both hardware and software.
- Expensive.

Threats

- Any wireless or compact device having the potential to record the same parameters as the KIOSK can be a huge threat to this product.

SUGGESTIONS

Competitive advantage

- IHL is a Pioneer in this field so will get the first mover advantage in India.
- Accurate health statistics.
- Storage of data at backend for pre and post analysis.
- Test accuracy.
- FDA compliant test measurements with high test accuracy and sensitivity to measure your vitals in the quickest and most efficient way.
- Real time monitoring of vitals.
- Network of easy screening healthcare kiosks all around the Country, log in from anywhere, anytime, and keep control of your health.
- Paperless records.
- No more paper records all over the country. Personal health records and data all in one place.
- Intelligent and curated analysis of data.

Strategy according to the above mentioned market research

- As per the result of the market research it is found that majority of the respondents are educated and are employed in various desk jobs, so as per this our target audience should be people working in corporates.
- Majority of the users workout on daily basis as per the above shown data , gymnasium and fitness clubs are also a potential area for reaching out to our audience
- Metropolitan cities having the concept of nuclear families are more prone to health risk as considerable number of people are more inclined towards eating outside showing a greater market size of people requiring regular monitoring of their health statistics
- Large number of respondents do rely on internet and peer review for gathering health related information both of them are not the authentic sources for the correct information, we will provide them with the correct information backed up by data in order to promote a healthy living.

Marketing activities

- Business development activities via corporate camps.
- Search engine optimization
- Content marketing
- Liaising with doctors in private clinics, gymnasiums, fitness centers , diet and beauty clinics and private hospitals (value addition to them).
- Liaising with government of India for giving them an organic data regarding the health record of patients.
- Tie-ups with health Insurance companies for giving them correct information of health status during pre-policy health check up.
- Luxury resorts and hotels can be targeted in the later phase for providing their clients with correct health records.

Fitness tracker devices our competitors or our partners

Majority of our customers think fitness trackers like fit bit and Garmin watch are our competitors ,they only track our fitness progress whereas we provide the health records of the patient, tie up with such companies can be a great boon for the customer as he can check his health stats prior to using the watch and can keep his fitness regime updated by wearing his watch and can later post check-up to know the improvement in his health stats.

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