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Analysis of User Experience in Health Apps: Focusing on Users of the 20s Step Count App

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ABSTRACT

Introduction: As people's interest in health and life sports increases, health is considered as the main content in various media. This interest has led to the release of hundreds of thousands of mobile health app applications along with the development of health information technology, and health apps that help consumers manage their health through personalized feedback are attracting attention. The trend of managing health data using various smart devices is spreading among young people in their 20s and 30s, and smartphones account for the largest portion as the route for them to receive health services.

Aim and Objective: Therefore, this study aims to describe the phenomenon and identify problems and improvements by comprehensively exploring the user experience of the step count app of users in their 20s. For this purpose, FGI was conducted for users of the step count app.

Result: As a result of the study, it was found that it is necessary to improve the level of the playfulness of the step count app, various additional functions, and reliability. In this study, we conducted an FGI to grasp the empirical data and satisfaction in detail when using the step counting app.

Conclusion: To do this, the research participants in the study tried to use the health app and were free to talk about thinking and feeling. Through the results of this study, it is expected that the academic horizon of the health information service will be broadened and can be actively used as a guideline for future health apps.

Key Words: Step count app, mHealth, FGI, Empirical data, Health apps

INTRODUCTION

Research background and purpose

As people's interest in health and life sports increases, health is considered as the main content in various media. This interest has led to the release of hundreds of thousands of mobile health app applications along with the development of health information technology, and health apps that help consumers manage their health through personalized feedback are attracting attention. In particular, among young people in their 20s and 30s, the trend of managing health data using various smart devices is spreading, and smartphones are the most important route for providing health services.¹

This mobile app-based health management can be said to be the best strategy to curb the rapidly increasing national health care costs in recent years and to promote the public's health effectively.²

Therefore, it can be the best strategy that can efficiently promote the health of the people. For this, it is very important to analyze the user experience level and satisfaction level of the app to understand the needs that the user has for the step count app.³

Nevertheless, research evaluating the user experience for the app's usability and the app's success is insufficient. To promote public health using mobile, it is necessary to comprehensively search the user's perception of experiences through various research methods in the process of using the app to analyze the phenomenon and check for problems and improvements.

There are not many prior studies related to mobile health apps, and the types of health apps vary greatly depending on the purpose and function, and above all, the user's opinions are exchanged freely, and rich experience in using health

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apps to grasp the degree of satisfaction in detail, a qualitative research method was performed. To this end, research participants analyzed the perceptions of college students to deeply understand the emotions of users by using the health app and freely talking about thinking and feeling.

Research scope and method

This study conducted an investigation and analysis of users. To propose guidelines for step count apps that are easily accessible to college students among health-related apps. For analysis evaluation, we selected CashSlides, FreeManboki, and Manbogeas apps. As of the end of November 2019, Play Store ranked 1st to 3rd in the number of step count apps usage as shown in Fig.1.



Figure 1: Various step count apps(CashSlides, FreeManboki, and Manbogeas).

Participants in the experiment were college students in their 20s, who are relatively high in understanding and using the app, and were limited to 4 males and 6 females. This was based on the result of Jacob Nielsen’s experiment, “The number of participants in the usability evaluation is similar to the problem found no matter how many people there are when there are 5 or more members.”

Also, based on the prior study that the majority of the early adopters of smartphones were college students and the high degree of acceptability of health apps by college students, college students in their 20s were selected for the survey. In the future, it is expected that more accurate results will be obtained if the subject is expanded and investigated by various users.

The research method consisted of FGI. Since FGI selects participants related to the selected subject as participants according to the purpose of the study, it has the advantage of proceeding while exchanging perceptions and experiences of specific topics and cases.

The FGI lasted about an hour on December 6, 2019. Five days before Functional Group Interconversion (FGI) began,

participants installed and tried all three-step counting apps. After that, FGI was conducted to the participants, and they were allowed to freely answer the points they felt during use regarding the advantage/disadvantage and the degree of satisfaction in terms of content, interface, and visual aspects. The contents of the interview were summarized and described. The detailed profile of FGI participants is shown in Table 1 below.

Table 1: Detailed profile of FGI participants

Participants	Gender	Age	Participants	Gender	Age
U1	M	24	U6	M	26
U2	W	23	U7	W	23
U3	W	23	U8	W	24
U4	W	23	U9	W	23
U5	M	26	U10	M	26

THEORETICAL BACKGROUND

Health app status and prior research

The main advantage of the app is accessibility. Health-related apps can also be used regardless of time and space, so users can easily be provided with opportunities to promote health. Also, the app enables continuous health management rather than fragmentary health management and thus can improve personal health at a low cost and effort⁴. Also, it can be widely developed in various fields to provide customized functions according to individual characteristics and health conditions. Also, it can be widely developed in various fields to provide customized functions according to individual characteristics and health conditions.

These health apps are categorized into different categories according to the smartphone OS environment, such as the iPhone or Android. In the Android OS-based play market, health/exercise is set as a category name of ‘health care app’, and the Apple iOS-based app store is classified into two categories: health/fitness and medicine. However, if you look at the apps under each category, there are very similar types of things like exercise, weight management, diet control, and medical information. In conclusion, it can be seen that it is a situation in which different types of apps are mixed for the same application⁴.

In the 2010s, when health apps began to spread, analysis of various types of health apps, their characteristics, or usage status was conducted. In the early stages of diffusion, user-oriented research mainly investigated user needs and intention to accept health apps.

According to Hyo-jeong Seo, who studied the current status of usage and continuous use of health apps among college students,

women had more experience in using health apps than men and used them more consistently.⁶ Besides, the continuous users of health apps had a higher degree of knowledge, attitudes, beliefs, and practices than those who stopped using them.⁵

In a study by Yu-jin Kim, in the survey of hospital and medical institution officials, the elderly and chronic patients, and consumers interested in maintaining health, the acceptance of mobile devices for healthcare services was higher than medium, and medical institution officials had the highest level of acceptance.⁷ Besides, It was found that smartphones were the most preferred device type, and device properties differed according to the type of healthcare service. Acceptance of mobile apps was somewhat higher in personal use than in hospital use, and it was found that app privacy is the most important.

Mansour et. al. identified usability, usefulness, information delivery, sharing and accessibility as advantages of a health app, and the addictiveness of the use of the app, the invasion of privacy, the difficulty of medical jargon, and the lack of technical knowledge for the use of the app were analyzed as the disadvantages that hinder the use of the health app.⁸

RESULTS

FGI result of cash slide app users

CONTENT ASPECT: It's not just measuring steps, it's motivating by various factors that make it fun. Excessive advertising makes use uncomfortable.

The app is connected to stores, so I could buy things with steps that I accumulate, which is great. I think this is great not only to have a sense of accomplishment but also to build memory because today's steps can be recorded along with photos. (U2)

Through "Burning Run", a game in the app, I could have fun while gaining cash. There is a menu 'Record Today's Steps' at the top of the app. This menu records the number of steps that I walked today along with calories that I burned, so I felt like I was motivated.(U8)

By using this app, I could receive points that can be used to buy things, which motivates me. I can earn points by inviting friends, and I can share the points with friends. It is good to compare the steps with each other. (U1)

Photos of today's walking record information to keep. The information is recorded in the photos automatically to share on Instagram or gallery, which is very convenient. (U7)

When I set up a target number and reach the target, the gauge becomes full, so that I can try harder to be closer to the target. (U9)

This is cash related app, so it is fun to gather points, giving high feasibility. It might be better if we can turn on and

off advertisements with on-off functions of earning points. (U10)

This app enables users to accumulate cash as they walk. If it shows the points earned each day next to the number of steps, it might show directions more clearly. Access between pedometer and shopping is quite difficult. (U6)

It is difficult to distinguish advertisements from others. The app says we can have benefited by earning cash, but I didn't feel like it benefits because I had to watch too many advertisements. (U3)

As the name of the app 'Cash Slide' indicates, 'Cash' should be more noticeable, but it is marked in small letters on the left top. It might be better if 'Cash' is marked at the bottom in the same size.(U6)

There are too many advertisements. We have to use the earned cash at the stores, but the stores are located too far below, which is inconvenient. It is understandable to see advertisements to earn cash, but it is not convenient to see advertisements popped when I start the app.(U7)

It is difficult to get information that I want. There is no item that shows monthly or weekly steps at a glance, but the main page has such items as 'Invite friends' and 'Potencube' so acquiring desired information needs a few more touches. It also does not provide how much time I walk. Whenever I tried to go back to pedometer after looking at benefits and event information, advertisements popped up, so it was inconvenient. It was also difficult to gain data that I want. (U9)

INTERFACE ASPECT: Navigation is intuitive and easy to use. It is divided into a step measurement screen and a shopping screen, so it is difficult and inconvenient to move.

This is my favourite app among the three. It is easy to watch, and there is no problem in operation or touch. The images of items shown as Gifticon or points that enable to purchase are well organized in high quality. (U1)

It doesn't have separate menu icons, but there are such menus on the main page in the banner form as 'Invite friends', 'Potencube' and 'Immediate saving'. The operation method of the menus is intuitive and easy to see at a glance. The menus are arranged in the order of importance, which makes it easy to use. (U2)

The organization is simple, and its neat design is easy to see, so information search is very simple. Those who use the app for the first time can understand easily. It is processed smoothly without difficulty. In award, it is very neat. (U4)

I had a hard time finding the shopping category at first, but it was easy to notice each item by image. The pedometer shows the target and information at a time, but it might be easier if it is displayed as "Steps/Target steps." (U6)

It was inconvenient to find stores and setting because they are located at the bottom. I could check my steps and cash at the main page, but I didn't figure out how the steps and cash are calculated. It was difficult to find the setting to confirm my account information. The absence of menus on the main page is also inconvenient. (U2)

It sometimes takes a while to load a locked screen. When I entered the app not pressing the notification button, I didn't know where to find the number of steps. (U3)

It is unusual to enter the pedometer and shopping menu. I could enter the pedometer by touching the notification alarm on the smartphone, and for shopping, I had to click the app. When going to the shopping from the pedometer, or vice versa, it is difficult to find easily. It is difficult to express clearly due to my smart phone's dull touch, but it was sometimes recognized with touch if the slide is done quickly.(U6)

It doesn't seem easy for those who use the app for the first time to understand. For example, in the case of 'Potencube', there should be texts explaining the item at the bottom, but there isn't. There are details about distance, calories, time and steps, but there is no item that compares the number of steps of today and another day.(U9)

VISUAL ASPECT: The card UI is generally clean and consistent. Also, the illustrated image is lively and likeable. However, some icons lack intuition, making it difficult to understand the meaning.

The illustrations on the menu are neat and consistent, making them look good. The picture that expressed the menu well helped me understand. It was nice to see the characters drawn as illustrations on the loading page. The main colour, yellow, is well expressed, and the text and icons use only white and black to create a sense of unity. The font is neat Gothic and dark, so it is easy to see and easy to read. The font size should be a little larger.(U2)

The card-shaped menu is very good. Also, the division of the main menu and its description is also well done, and the font is also clean and looks good. It can be easily recognized by using the appropriate emoticon in the main menu, and it is made to recognize what icon it is before writing it by writing the text next to the unfamiliar icon. (U7)

The idea is that the text is simple and well-organized, the graphics are easy to use without breakage, and it is easy to see at a glance. (U1)

There are also cute characters, and it was good that they didn't cause fatigue to the eyes. (U5)

The card form on the main screen is so regular that it feels monotonous and boring, but on the contrary, it also feels neat. It was so easy to recognize at once. "Setting" was different

from the usual and used images, but most of them showed intuitive images, so it was clear. (U6)

The overall image feels cute, and the moving image is put in the main for a vivid feel. The texts to be emphasized were large and darkly applied, and they were arranged to the left overall, making them easy to read. It was easy to see the target steps in a big picture, and it was easy to see the details and was neat and easy to see.

The main colour, yellow, gives an active feeling that goes well with the step count app. When looking at the graph showing the number of steps over time, the effect of the bar going up caught the eye, and the originality is that the pretty illustrations move. (U9)

It is difficult to recognize because the icon to go to the step detail page is small and has a graph shape. Not only that, but I'm also not sure why there is a button, because even if you press the number of steps instead of the icon, you will be taken to the same detail page. It seems to be necessary to make the role of the button clear. (U2)

The pop-up ad comes up first, so the screen is hard to see. At first glance, they all look like advertisements, and there is no interest. When signing up for a membership, the checkmark was too small to show well. It was difficult to know what the icons next to the number of steps in the notification window meant, so I had to click once to realize the meaning.(U3)

It seems that the gaze is scattered even as the meaningless photos move. I wish the pedometer's cache type and target steps were a little larger. (U6)

FGI RESULT OF FREEMANBOKI APP USERS

CONTENT ASPECT: It is an app that is faithful to the simple and clean basics without unnecessary functions. The start button is cumbersome and it is necessary to increase the reliability of the information.

It is composed of simple and useful items. I could check calorie consumption for walking time and step width weekly and monthly. Its capacity of the app isn't that big, and it is easy and simple to use. (U1)

The main page shows today's steps and targeted steps, walking distance and time along with calories consumed. The item 'Statistics' shows my steps on a weekly and monthly basis. The item 'Health' calculates the number of glasses of water, change of weight and Basal metabolic Index (BMI), so I could check my health state. Besides, the walking time for calories consumed could be checked, along with the process of achieving the goal. (U8)

When I touch the menu button, the sharing menu comes up, so I can share my steps with other apps or messages. Since it

is very simple and basic pedometer app without no unnecessary functions, I could concentrate on exercise. The operation methods and procedures are very simple and easy. (U2)

This app is my health partner that provides the amount of water and caffeine along with the calories of my diet, which is very helpful for my health and diet. I like this app because I could get various types of health-related information such as weight, blood pressure, walking time and running time. (U5)

What I like is the establishment of a plan that I could see to make a health plan. The menu is very suitable for the term 'plan' like losing and maintaining weight. It also has only four necessary plans, so it is not that complicated. However, those who want to plan other than those four might feel the lack. In the planning part, "My training plan" is on top in bold, so it is noticeable and gives me information about what I need and what I am sufficient. (U6)

There is 'stage' marked above the emoticon of walking, and I don't know why. I think 'the number of steps' is more appropriate. Besides, 12,000 steps are the maximum on the graph by time, and I don't think steps more than 12,000 will be displayed even though I haven't walked more than that. (U7)

What I like are the graph on the main page that shows the average number of steps for the last seven days and the distant information with walking upstairs, walking and running altogether. There is a function that tells the dB of headphones' volume for seven days and what is the proper level. This is the function that other apps don't have. (U9)

This is the app that is faithful to the basics of the pedometer. The number of steps is on the very main in large letters. It is very easy to see calories and walking time. The system called 'accomplishment' gives fun to walk. (U10)

When I start the pedometer, the advertisement appears on the bottom, which is inconvenient. There is no button. It is ridiculous to pay if I want to remove the advertisement that I don't want to see. The actual number of steps is not checked right away, and the number is not measured evenly. I think it might be better if the current time is displayed. (U1)

Other apps count steps automatically, but in this app, I have to push START button to count. Other apps have charged premium version that I can use with no advertisement, but this pedometer app only has free version. (U2)

It seems nice that it establishes exercise plan for each person's goal as a healthy app, but it might be more reliable if there is information about the trainer like photo or name. (U6)

INTERFACE ASPECT: It is easy and intuitive to use and the contents are properly distributed on the screen. The location of the advertisement is inconvenient, and it is necessary to increase readability.

This app is easy to understand and convenient to use because it is executed as soon as I input age, weight, height and gender. It checks the number of my steps and marks calories consumed while walking, distance and speed per hour, so I could know what to do even when I first used this app. (U1)

I like the main page that shows necessary information like the number of today's steps and the calories, along with time. There is a menu in large letters that shows the records on a weekly and monthly basis, which is very convenient. Another convenient function is that swapping the step number menu to the left and right moves to different dates.

I didn't have inconvenience to scroll from the main page. The app shows calories consumed while walking, time, distance and velocity at a glance, and if I touch the icon, the numbers are displayed in the graph. (U2)

The menus are well organized, and the information is displayed neatly. It has good statistics data, and the simple layout enables me to understand the operation method easily. (U3)

The app shows necessary information moderately not excessively. All the menus are displayed in icons that are easy to understand without explanation, so a lot of information can be on the first page. The app only has details about a pedometer, no operation procedure or operation method. (U7)

When I touch the navigation icon on the main page, I could see how far I reach the goal and how many days I did through the timeline, which is very convenient. The number of daily steps is arranged on the very main as per the function of the pedometer, and the pause button is right below so that the user can control the number of steps. The category called 'sensitivity' enables users to adjust the sensitivity of whether tiny movements can be included in the steps. (U8)

The app is very convenient because it tells everything before searching for information. The information is provided easily by touch on the intuitive interface. (U10)

I could gain detailed information such as stairs that I walked up, walking+running distance and steps when I touched the button of 'All health data' on the main page. It might be more convenient if detailed items of 'All health data' are displayed on the main page instead of items used relatively less frequently such as 'recommendation of other apps'.

Such menus as 'bookmark' and 'highlight' can be displayed as the detailed data of the item. It might be better to show important information more noticeably on the main page by removing less frequently used items like 'app recommendation' and 'viewing reasons why healthy auditory sense is important'. (U9)

Advertisements are attached at the tap below, so I keep touching the advertisements by mistake. How about putting the advertisements on the top instead? (U10)

If it is displayed as “steps/targeted steps” instead of the targeted number of steps in small letters, it might be a lot better to see. (U6)

VISUAL ASPECT: The colour is contrasted, so it is clean and clear. However, since the icon image and colour is somewhat monotonous and flat, various feelings are necessary. Also, the advertisement is inconvenient to use.

The blue screen is less eye-fatigue and easy to see, and overall, it is well organized and well-defined. (U1)

The app’s graphics were clean and there was no clutter, so it was nice to see at a glance. Only essential functions exist and are applied in a large font. Therefore, it would be useful if used by the elderly who can’t see the small print. (U2)

There were many contrasting colours and it was easy to recognize and composed of icons. (U3)

It is easy to recognize because it has intuitive images such as distance and calorie consumption. The font and size that can be seen clearly and not too much, and the font colour that contrasts with the background colour, etc. are okay. (U6)

It is generally composed of a solid and clean image. On the main screen, it was good to see the number of steps as an image of water splashing. The icons were also made of images so that they could be intuitively recognized. Although the main colour is navy and green, the icon seems to give lively energy by using a splashing colour. It is easy to see because the letters are largely arranged, and especially, it is easy to see because it has the largest number of steps. I think it can be used by all generations. (U8)

It’s cute to show the distance you’ve walked with a map icon, calories with a fire icon, and time with a timer icon. It’s fun because the graphic of the water splashing on a large circle tells you how many steps you have. Since everything is on the main screen, it seems convenient because you can see all the basic information at a glance without touching other parts. (U10)

You can only change the background to a solid colour. It would be great if you could set the background with a photo in the gallery. The colour of the font and the icons other than the background are all unified in white, so it is clean, but there is no point colour, and the icons are monotonous, so it may look flat. There is an advertisement on the bottom, and it is attracted to the advertisement. (U2)

As soon as it starts, the current steps shown are proportional to the target steps and the wave starts to rise, so I wonder if it is necessary to add a wave effect. This is because wave images and steps are not well connected. When it comes to the effect of concentration, I think, ‘The number of steps in the middle is written in the big letter...’

It is good to have photos suitable for the class, but in the morning stretching section, it seems to be difficult to find out whether it is morning or afternoon. The overall colour is dark, but the advertisement at the bottom is white, so the advertisement is more noticeable. (U6)

It was displayed in a graph by time zone, and it was convenient to see, and the background was dark, but the text was white, so it was easy to see. It’s very simple, so it’s easy to recognize. (U7)

There is a START sign that confuses whether or not it should be pressed. The design is too simple. In the case of an icon, it would have been okay if I drew it with a little more simplification, and I would like it to respond when the icon is pressed.

If you click on the steps and other fields, the graph changes, but there is no message to press, and I cannot find anything that changes when I press it. You can see that the graph changes only if you look closely. (U7)

The ad was placed at the bottom, so it was inconvenient to click the ad when clicking. It was a bit uncomfortable to not have a back button when I pressed another category. I think it would be better to adjust the ad position. (U8)

I think it would have been nice to use a variety of icons and colours. Because of the nature of the app called ‘Pedometer’, it remains unfortunate that it would have been like to use an active and bright colour. (U9)

FGI RESULT OF MANBOGEA APP USERS

CONTENT ASPECT: Customized features that help users set and achieve their goals stand out, and are easy to use. There are no eye-catching special features, and naming is somewhat unintelligible.

It motivates me by telling me how many steps do I need to reach the goal on the main page. It is interesting that it tells the total number of steps so far and how many steps I need to go around the earth. This is a perfect pedometer app to establish exercise goal alone. (U2)

This app is simple enough to learn operation methods quickly and pretty normal to use. It doesn’t require a difficult operation. It also hides a pause function, which doesn’t seem to be used often. (U3)

It is impressive that this app shows the present number of steps in large font size and the accumulated steps that take big space.(U6)

Its layout is well organized that there is the number of steps in a large font size in the center along with detailed contents located in noticeable space. All the necessary contents are on the main page, and their images seem to be well taken care of. I could check I far I reach the goal in real time because

the goal is shown together. I think this app makes me manage health thoroughly while using pedometer. Although this is a free app, it has a great deal of information and categories. All of the information is not too excessive.

What is impressive is the GPS menu, in which I can set up a route for trekking, walking, running and riding in various ways, and I could share the route with others for safety. At the end of each day, it shows the summary of my record. It analyzes my steps, and gives useful information about various types of race that I can challenge. If I push the photo button without screen shot, I can save and share after choosing themes that I want. It is good that it has various challenges, but it might be better if it recommends challenges that are suitable for me.(U7)

Users can choose programs that they want in the walking plan, and the personal information section enables users to set up gender, step width and weight, so each user can enjoy customized exercise. Users can acquire intuitive information on the main page without needing to go to other menus.(U8)

It is convenient to establish a goal and to check what percentage I accomplish at a glance upon starting the app.(U9)

This app seems to be faithful in the basic of pedometer. It is interesting that it shows the goal to accomplish at the top.(U10)

This app's great features are the overall intuitive interface and the information clearly shown on the main page. The category 'Challenge' stimulates the competitive spirit by enabling users to engage in the challenge with other users or to challenge a race alone. There is a category that analyzes my steps, and the category is divided in card-layout, which is easy to see. In addition, the app analyzes in various ways, so it is very reliable. (U4)

This app is neat and pretty good, but there is no special feature, so it is not that impressive.(U3)

It might be easier to understand if the total distance of travel on the top of the main page is marked in simply km instead of difficult titles such as 'Roman Holiday' and 'Olympus Conquest'.(U6)

The overall organization is not that bad, but there are too many calendar forms. Whatever I touch, calendar pops up. I recommend to insert something else by reducing calendar exposure frequency.(U10)

There are quite many functions that can only be used in the premium version such as removing advertisement, some theme colors and data backup. I think it might be good if some of them can be offered for trial in the free version.(U2)

INTERFACE ASPECT: The information is well classified, and the main screen provides enough information. It has a lot of information, but it is not easy to find.

It shows graphs for each time frame as scrolling down, and at the bottom are menus horizontally. Therefore, it is easy to go to other menus at any pages. All the information necessary for pedometer app is on the main page. The detailed information can be seen at the calendar and report menus. The menu category is well divided with names, so it is easy to gain information that I want.(U2)

The menu organization is neat and simple. The main page shows information that many people want to see, but I didn't know what to do for more detailed information.(U3)

It is convenient to check the number of steps and calories at a glance through 24 hour/weekly/monthly graphs.(U5)

This app has good structure to comprehend accomplishments by showing steps, consumed calories and distance by date through the calendar.(U6)

I had to touch the menus to see their contents, but each menu is easy enough even for beginner users to understand. The category "Program for you" seems helpful for those who exercise alone. The categories are located vertically, and the number of steps and other information are arranged in the middle, which makes it easy to see. Items to be clicked have buttons for easy operation, so it is made easy to see without special operation touch.(U7)

Most information is located in the main page, so I didn't have to search separately. The top of the main page conveniently shows how many steps I need to accomplish the goal, and the center shows today's steps. The right top has "+" that enables to pause, stop and reset the pedometer, which is convenient.(U8)

All necessary information is on the main page, which shows today's steps, travel distance, calories and travel time along with the comparison on a weekly/monthly/yearly basis. Each item is well organized, so it is possible to acquire information I need quickly. On the main page, detailed explanation about today's goal is displayed, and desired data can be obtained quickly as the screen is moved.(U9)

It is a little inconvenient that I had to see graphs for each time frame and the items I input when I scroll on the main page. The items I input are covered by the banner advertisements, which is not convenient.(U2)

On the main page, larger space is for the number of steps I have walked rather than the number of current steps, which seems a little weird for me.(U6)

It is good that there are several categories, but it is difficult to find the categories since I had to click several links.(U7)

VISUAL ASPECT: The color is clean and clear. The icon explains the menu well and is easy to recognize. It seems that the "Manboga" unique identity is needed.

The default color is a theme consisting of a point color on a black background, and can be changed to more than 10 colors in the settings menu. Some colors are only available in the premium version, but 10 are fine. It is easy to recognize with clean fonts and bold and large fonts. Even older users seem to be able to use it enough. The icons in front of the menus explain the menu well and were easy to recognize. (U2)

I liked the color the most. It was good because it was concise and simple. The app has icons with no text, but no difficulty in recognizing. Simple and easy to recognize. (U3)

The sky blue color was neat and visible. It looks like a convenient and stylish app with an intuitive design. (U5)

Since the most ordinary white color is used as the basic background, it seems to have a good effect when the color is included in the part to be emphasized. The font and size were nice to see neatly. The amount was also moderate. (U6)

Designed in white and blue, it is clean and easy to see. The clicked category changes to blue text so you can easily see where I am. Graphics are easily recognized and can be expected to some extent by showing them with icons. (U7)

It was easy to see the difference in importance because it showed the largest number of steps, and the distance between steps, calories, and walking time were marked small. (U8)

It was well classified by item, and a circle showing the goal achievement rate appeared at a glance. As soon as I opened the main screen, the target achievement rate and the effect of filling the circle were captured, and it was also novel that I achieved a firecracker effect in the background when I achieved today's goal. (U9)

The app's splash screen just shows the blurry photo. Of course, I get the feeling of exercise, but what the name of this app is, and even the logo of the app has not been released. In the fitness exercise of "Plan", the morning stretch and the pre-sleep stretch are simple stretching pictures, so it is difficult to distinguish between day and night. It would be nice if the graph on the main screen was made smaller and the number of steps was emphasized a little more. (U6)

There is not much difference from other apps. Originality seems to be needed. (U3)

There was no special image. The icon also felt minimal. There were no remarkable graphics. (U8)

In the main screen, there are many unnecessary spaces between items. I used black and blue as a whole, and it feels out of harmony. Some of the items were inside a rectangle with rounded corners, and some items were inside a rectangle with a right corner, which made them look bad. It would be good to unify it as one. (U9)

It's a pity that the ads are the largest among the three apps compared and the prettiest theme colors are available only at the premium. (U2)

CONCLUSION

This study looked at the usage status of the step count app among health apps and grasped the needs of the user for the step count app on the smartphone. Through the research results, we intend to provide guidelines for improving the satisfaction of use and intention to use continuously. For research purposes, FGI, a qualitative research method, was conducted to share in-depth experiences of users.

As a result of FGI analysis, first, in order to continue and strengthen the use and motivation of the step count app, the level of play of users through the health app must be increased. The competition and reward system, sharing with friends through SNS, and personalized services have been shown to motivate users and motivate them to use the app.

Second, a step count app having various functions should be developed. Most of the currently available step count apps are easy to use, so there is no difficulty in using them, but they are faithful to the unique function of measuring the number of steps and provide only simple and similar functions between apps. Therefore, there is a need to induce interest by developing with differentiation by focusing on the needs of various users.

Finally, it appears that there is a risk of reducing the user's reliability due to inaccurate measurement of the automatic detection function, such as the measurement of the number of steps or exercise distance, so it seems that technical support from developers is necessary. Through this, it is necessary to develop a health app that provides high-quality content and services to induce continuous use.

The result of this study is meaningful in that it provides practical guidelines that can lead to continuous use as well as content development of health apps that reflect users' information needs.

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