

Display Design Suggestion for Silver Class

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Abstract

This study is a study on Silver Class' percipience on mobile phone's LCD and a research has been conducted for configuration of an effective menu.

First of all, the minimum sizes for Silver Class to perceive LCDs of mobile phones and sizes of icons or fonts within the LCDs were measured, and icons easily perceived by Silver Class were analyzed for configuring menu. These measurements it to understand what kind of display configuration has the highest demand by comparing a general public group in their 25 to 35 and a Silver Class group above 65 and suggest an alternative for that.

1. Introduction

1.1 Background and Purpose of Research

The preparation toward aged society is in progress at various fields and the related businesses are also actively in progress in each subgroups of the society. Moreover, many countries that have entered the aged society an early stage are solving various problems of the aged society through a continuous research on silver industry. On the other hand, the research on silver industry at the field of designing is still not being performed multilaterally or systematically in reality. For these reasons, the purpose of this study is to find out the targets which designers must consider first for the silver industry and to present the service objectives of silver products.

1.2 Research Process

For the purpose of this research, inconveniences of silver class in their daily life are grouped by list and this is used for making evaluation items. Afterwards, the silver products being sold in the market are collected by groups and the survey is performed on

these products by groups with a total of 100 people including 50 people who are general public (age of 20-35) and 50 people who are age of 65 or older. The survey is measured by a 7 point scale to compare general group and silver group. With this, we will search for the differences between these two groups followed by questions and the designing objectives.

2. Experimental

2.1. Extracting the Living Difficulties of Silver Class

TABLE 1. The details on investigating 16 difficulties targeting 1,500 senior citizens who are 55 years of age or older in the entire area of the United States from gallup poll of the United States.

Source: Silver Design for the Elderly

<ul style="list-style-type: none"> - opening package the medical and pharmaceutical, - reading the label , - take down an object. - fasten a button and zip, - cleaning and using vacuum cleaner, - ascend the stairs, descend the stairs, - cleansing bathtub and sink, - wipe with a floorcloth the floor , - make glossy the floor, - put on clothes, - put on the shoes, - wear the socks, - carry luggage by hand, - using tool, - difficult to contact when get problem, - using shower & bathtub, - lace up shoes, - put on the necktie, - to walk around house without slip down.
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TABLE 2. Performing research on 64 senior citizens of Korea (Arrange repeating details as one. Exclude table 1 above and repetitions)(Research of 64 people who are 65 years of age or older)

<ul style="list-style-type: none"> - finding bus line, - lack taste/leisure, - communication with own Family, - look for a job, - health care, - property operating, - difficult to using welfare service, - difficult to using the home
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appliances, - amblyopia, - difficult to using the hospital, - doing the wash (widower), - living in the same house with children's Family.

The Table 1 above are the details on investigating 16 greatest difficulties on 1,500 senior citizens who are 55 years of age or older in the entire area of the United States from Gallup poll of the United States and the Table 2 below are the details on investigating the greatest difficulties of living on 64 senior citizens who are 65 years of age or older living in Jeonju. The repeating details and the details overlapping with Table 1 have been excluded. Combining Table 1 and Table 2 investigated above, similar words have been categorized in their entirety and as a result, we could see that these are combined as declined body functions, declined learning perception ability, problems in social activity and personal relationships and finally, the sanitation and disapproval.



Fig. 1. Evaluation Group(Silver Products Being Sold In the Market)

2.2. Survey on 50 People of General Group and 50 People of Silver Group - 7 Point Scale Method

As shown in the Fig. 1. above, The subjects participating in the experiment were a total of 100 people including 50 general people (20~35 years of age) and 50 men and women who are 65 years of age or older. By selecting the experiment target this way, the difference between general group and silver group can be distinguished

2.3. Analysis of Survey Results

The magnifier result below is One-Sample Statistics gained using SPSS program. First, if we look at the

result of the group who are 65 years of age or older in the Table 3 below, mean value of disapproval were shown 1.68 while being shown as 1.84 in case of the general group

TABLE 3. One-Sample Statistics of Magnifier On the Comparison between the Group of 65 Years of Age or Older and Group of General People

65 years of age or older One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
disapproval	50.00	1.68	1.04	0.15

General People One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
disapproval	50.00	1.84	0.98	0.14

If we compare the mean of 15 product groups that were target of evaluation using this method, it is shown as Table 4 below.

TABLE 4. Comparison of Mean Value between Two Groups

	65 years of age or older disapproval	General People disapproval
Magnifier	1.68	1.84
slip prevention products	1.48	1.36
defecation products	6.70	5.72
baby-walker	3.84	4.60
walking assistance car/silver car	4.36	4.46
adult diapers	6.20	5.04
air mattress	3.84	3.48
bathroom chair and multifunctional chair	5.80	5.14
functional shoes	1.72	1.80
functional bed	5.78	6.22
bathroom supplies	2.68	2.74
electric scooter	4.38	5.22
electric wheelchair	5.52	5.14

cane	3.48	2.96
wheelchair	6.32	5.48

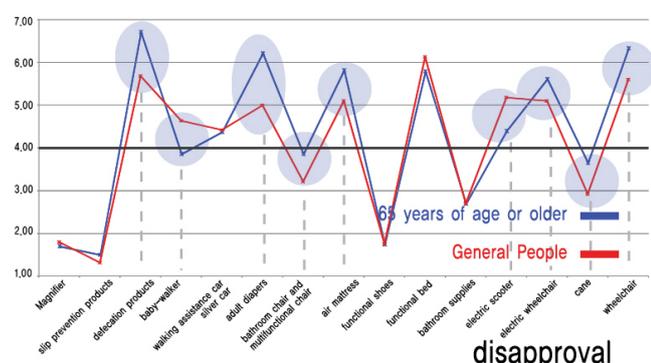


Fig. 2. Comparing the Relationship of Sense of Disapproval between Two Groups

In the Fig.2 above, defecation supplies, adult diapers, air mattress, functional bed, electric wheelchair and wheelchair were investigated as products having sense of disapproval when the mean value of 5 or greater is considered. The baby-walker and electric scooter were investigated as the general group as having more sense of disapproval the group of age of 65 or older while the defecation supplies, adult diapers, bathroom chair and multifunctional chair, air mattress, electric wheelchair, cane and wheelchair were investigated as the group of age of 65 or older having more sense of disapproval than the general group. Thus it shows that there is difference of perception between two groups.

2.4. Research On the Products With Strong Sense of Disapproval

First, the survey by one on one interview has been performed on 53 men and women who are 65 years of age or older for defecation supplies, adult diapers and wheelchair by which the group of 65 years of age or older is showing a strong sense of disapproval. The survey was performed on 50 men and women of general public (20~35 years of age) for functional bed and wheelchair by which the general group was showing a strong sense of disapproval. For the details of survey, it was investigated as to whether the products presented to them are showing a sense of disapproval in the formative aspect or significance aspect.



Fig. 3. Images Used In the Survey

TABLE 5. Details on Sense of Disapproval between Two Groups (Repeating Details are Indicated as One.)

65 years of age or older	defecation products	Formative sense of disapproval	-
		Significant sense of disapproval	<ul style="list-style-type: none"> · Causes sense of shame (because it must be used in front of other people) · Worried about the smell · Recognized as the product used while a person is completely unable to move · Have sense of disapproval because it requires other people's help · Because I have to urinate and defecate laid down
	adult diapers	Formative sense of disapproval	-
		Significant sense of disapproval	<ul style="list-style-type: none"> · Causes sense of shame (worried about other people finding out) · Worried about the smell
	wheelchair	Formative sense of disapproval	-
		Significant	· Causes sense of

		t sense of disapproval	shame (Unable to walk alone) · Do not wish to look like a patient who is not a senior citizen · Have sense of disapproval because it requires other people's help
General People	functional bed	Formative sense of disapproval	· Existence of toilet in the bed · The design that can be seen only in hospitals · Sense of disapproval because wheels are attached · Wooden material which is not luxurious
		Significant sense of disapproval	· Recognized as product used only by old and weak people or patients
	wheelchair	Formative sense of disapproval	· Stifling shape · The form of structure by which an outing is impossible · Cold material
		Significant sense of disapproval	· Recognized as product used only by old and weak people or patients · The product requiring other people's help

If we summarize the details of Table 5 above, causing sense of shame rather than formative causes was shown as the main reason for sense of disapproval in the group of 65 years of age or older. In the group of general people, the sense of disapproval was shown because the product was recognized as being used by old and weak people or patients in terms of significant sense of disapproval and many reasons were shown in the formative sense of disapproval. In summary, the group of 65 years of age or older shows sensitive reaction to many significant sense of disapproval brought by the product rather than the shape of product while the group of general people seems to consider both formative and significant sense of disapproval.

3. Conclusions

If we examine the results of experiment above, while we can see that the overall cognitive difference on the products as whole is almost similar by looking at the fact that they are shown as the same graph shape, we can see that the cognitive difference on products between the group of general people and the group of 65 years of age or older has shown a great difference in several products. Accordingly, the designing of silver products would have to be serviced toward the way of reducing the significant sense of disapproval for the silver class using these products directly while considering the shape to reduce the sense of disapproval for general public and escaping from the significant sense of disapproval that general public has