

Design standards and solutions of packages for elder's people

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Summary of Search

The human race reaches old age at one day, where major changes occur in the elders' physical and cognitive abilities. Ageing leads to gradual changes to elder consumers' needs and readiness in regards to their daily usage of packages. The research's problem lies in the difficulty faced by elders with different packages due to age factor, which causes many problems and difficulties such as weakness of muscular ability and visibility and many diseases related to ageing.

This research aims to find design solutions to packages targeted to elders, in a way that achieves easy handling and satisfying this category's needs. To accomplish this goal, the study followed the descriptive analytical approach to conduct an analytical study on some packages used by elders. The study also followed the experimental approach to include some design standards in designing that very package or the tools used for this purpose.

Keywords: Ergonomics – Design – Global Standards for designing packages for elders – Packaging

Introduction

The industry of packaging is considered one of the important pillars of global economy that is key in modern life. This field is developing day by day, with innovative design ideas that help in creating many sub-industries.

The importance of packaging comes in protecting the product from breakage and damage, as well as it is considered a targeted message that helps increase purchase awareness and contributes to the community development and growth, since the development of the packaging materials, production technology, and innovative design leads to societies' growth and prosperity. Packaging is subject to legal and environmental requirements. Several global organizations have been established to cater to all the regulations pertained to packaging starting with raw materials and ending with the product and the safety of the environment.

Few products target elders and most of it are generally directed to a wide variety of consumers to stay in competition away from main considerations needed for this category. Marketing studies rarely consider elders' category to determine the available opportunities to market its products and services to elders. This brings up a problem to designers and producers when it comes to attracting the category of elders without completely changing the product. Growing older affects elders in different ways and through different times, even

though they have many common things that make it difficult to generalize their choices and preferences.

Research Status

The research offers the main principles and solutions to be followed when designing packaging targeted to elders, which assorts the Egyptian society and caters to different variables, taking into considerations achieving the Ergonomics as well as product intactness and appropriate cost.

The research's complications

The difficulty of the research lies within the challenges that face elders when dealing with different packages. It is due to the age factor that causes many problems such as decline in vision and ability to read instructions on the product, also decline in muscular ability that controls and handles different products.

Research Goal

To find design solutions for packages targeted to elders, achieving ease of usage and fulfilling this category's needs.

Research Hypothesis

Understanding and studying the elders' needs and requirements leads to designing and producing a successful package based on the required standards for this category.

Research Approach

The study depends on both the **Analytic Descriptive** approach and studying the case to perform an analytical study on various elders packaging design directions. As well as the **Experimental Approach**, to create innovative design ideas for packages and come up with design solutions for already existing packages, to keep up with the elders' needs and matches the nature of the Egyptian consumer.

The study included the following:

The first part

The theoretical study

It includes where it contains -:

Theoretical Aspect:

- **Definition of Aging:**

Aging is a group of physical and psychological changes that starts at maturity and continues with a decline in functional physical and mental abilities, senses and sexual and body energy in general.

- **Classification of Elders:**

There are many classifications for an old man or woman such as:

- 1- Young elder from 60 to 74 years old.
- 2- Senior elder from 75 to 84 years old.
- 3- Old elder who is over 84 years old.

- **Problems faced by elders**

- 1- Physical problems
- 2- Problems related to vision changes
- 3- Problems related to hearing
- 4- Problems related to changes in smell and tasting senses
- 5- Changes in sense of touch and recognizing heat, motion and balance
- 6- Changes in memory and perception
- 7- Changes related to understanding perception changes

- **Instructions for designing food and beverage packages**

- 1- Easy to grab
- 2- Providing enough space to grab
- 3- Creating a space to grab
- 4- Creating illustrations to show grabbing the product
- 5- Avoiding sharp edges
- 6- Decreasing number of steps required to open the package
- 7- Usage of smart opening systems
- 8- Providing perforated strip or aperture
- 9- Decreasing required force to open the closed package
- 10- Create a different smooth surface at the grabbing point
- 11- Required force to push the strip inwards
- 12- Required twisting force for opening
- 13- Avoiding over tightening of the closures
- 14- The closure removal method is clear
- 15- Display warning and instructions in bullet points
- 16- Developing readability and comprehension of labels (important instructions)

- **Design instructions related to design labels for packages and medication flyers**

- 1- Direct and clear text showing the dosage and time interval
- 2- Include method of usage
- 3- Easy language
- 4- Minimum medical terminology
- 5- Digital numbers and letters
- 6- Large font size
- 7- Easy font type
- 8- Linear font
- 9- Use of symbol system
- 10- Ability to identify things with the help of visual aids (visual recognition)

The Second Part

Practical Study

The theoretical and practical study showed the following results: the key components of packaging a product (container - lid - opening and closing feature - label). In cylindrical products there has to be a non-cylindrical handle shape such as perforations or dents or use a non-cylindrical container to facilitate opening the package. In products that must be held with one hand, the grip surface should not exceed 71 mm in case the product's size is larger than the maximum grip size.

From the theoretical studies and applications, the researcher recommends the product to be appropriate for the user, compatible with their muscular and mental abilities and character, and to consider the anthropometric and physiological factors with suitable usage circumstances. Among these recommendations, understanding and following Ergonomic features and considerations when designing packages for elders, adding designed shapes such as handles or cut outs to facilitate grabbing with minimum effort, and the grabbing area should be suitable for standard grip alternatives in addition to avoiding sharp edges in packages or caps.

The precautions and instructions should be displayed in the form of bullet points by using large symbols with large and bold text font, high contrast, and distinctive frames. To facilitate package opening, it is recommended to create a textured surface at the grabbing point of the opening strip. The package design for elder consumers should be complied by the rules and regulations of The International Organization for Standardization. Designers must pay closer attention to the graphic design strategy targeted to elders, which is suitable enough to achieve their satisfaction regarding a certain product.

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