



Co-ordination Action: Sixth Framework Programme, Priority 5; Food Quality And Safety

FOOD-CT-2003-506382

NUTRI-SENEX

Improving the quality of life of elderly people by co-ordinating research into malnutrition of the elderly

D12 - Activities and incentives involving improvements towards the use of age-friendly packaging of food products, and food marketing towards purchasers for care homes, nursing providers, carers, etc.



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Approximately 77 million babies were born in the United States during 1946-1964, about 26 million more than during the prior 18-year period (U.S. Department of Health and Human services, 1999). Those 77 million baby-boomers are much more likely than their predecessors to live till old age. Until 1930 life expectancy was under 60 years. By contrast for baby boomers their life expectancy has increased to 83 years of age and many will continue well into their nineties. In the year 2000 there were 34.7 million elderly people in the US but by the year 2050, 78.9 million people will be elderly in the US.

How do these growing numbers affect the marketing world? As baby boomers grow older, the advertising industry will need to continue to reflect their changing needs. The above statistics show the importance of this rapidly growing market. Continuing economic activity among the elderly, personal savings, family support and public programmes may combine to form new markets and changing demand for goods and services (UNFPA, 2002). In general, seniors are demanding more of packagers and marketers in the way of easier opening/closures, innovative readable labelling and smaller re-sealable pack sizes.

Marketing, Ltd., Chicago, IL. (www.seniorsessions.com)

GRF Marketing, Ltd. is a marketing research consultancy based in Chicago, IL. They specialise in pack design and senior marketing, they recognise that the senior market has special requirements and they have developed techniques to be used exclusively in their work with seniors.

The senior market is getting more diverse and more segmented. Not all seniors age alike, think alike or buy alike. According to GRF Marketing, three clusters are found within the senior market. People aged 55 to 65 are the 'young seniors,' those aged 65 to 75 are considered to be 'middle seniors' and the 75+ group are the 'older seniors'. These three groups are often lumped together in marketing studies, but that can prove to be a mistake. Although some of the "younger" and "middle" seniors may be very active and need little assistance, many other seniors, especially those over 80, have some physical disability, which limits their ability to interact with packaging.

Package providers need to keep these physical demands and limitations in mind when packaging items for seniors.

Arthritis afflicts almost half of the senior population, arthritis affects their ability to grab a hold and tear a package open, take a closure off, twist and turn. In the wake of childproof, relatively hard-to-open bottles and other containers, some packagers have begun advertising and labelling their packages as “easy open”. While “easy open” fulfils a definite physical consumer need especially for “older seniors”, it also conflicts with active, younger senior’s fears of failing health and being seen by their friends and families as getting old. According to senior watcher. The senior population is getting larger, but they don't want to be reminded they are getting older.

A US senior research analyst says, “Instead of fighting the consumer’s fears, rephrase “easy open” as adult opening or make the package more attractive. This rephrasing would help seniors accept easy open packaging because it wouldn't make them feel any different to anyone else. Change the focus of the opening. Turn it away from saying this is designed for people with arthritis. Turn it around to say this is designed for adults, not children. It is a perception thing”.

Seniors also have failing eyesight so that if there are instructions on how to open a package, they need their reading glasses, or, if you have severe cataracts; you are as good as blind. Also, as eyes age, seniors perceive colours differently, eyesight yellows, white looks yellow. Legibility is also an issue for seniors losing part of their sight. Regulations require the inclusion of more and more type on labels, yet the labels cannot expand to allow the size of the type to increase. More type means smaller point size and a greater chance seniors cannot read the labels.

Packagers need to pay attention to both aspects of the label, colour and type. Certain colours are easier on the eyes for people who have macular degeneration or glaucoma. Bold labels with a contrasting colour background are easier to read. Seniors are going to pay attention to the colouring, not only the colour of the package itself but also the lettering. So one has to make sure the font size is right, the colouring is right and not to put one colour on top of another.

Seniors tend to eat smaller portions of food, so packagers of all types of foods and beverages need to factor that into packaging equations. Re-sealable packages are extremely important to seniors with decreased appetites, even if it appears that the re-sealable item initially costs more, it can actually be more economical since the odds are the non re-sealable can would be thrown out anyway.

Beyond the physical requirements of packaging for older consumers, there are also emotional differences between seniors and their juniors. Seniors tend to react more strongly to emotional stimuli than to rational appeals. Marketing to the senior is much different than marketing to the teenager or somebody in their 20's, 30's or 40's because older people tend to first react on their emotional response, and then go into their reasoning response. So marketing to the older consumer isn't based as much on the intellect, as touting the price or the benefit, but more on the emotions and building a relationship. This is because older minds tend to rely more on intuition initially and then on the rational. The marketer has to build a relationship with consumers and get their trust. For marketers and packagers this means that they must, take the time to develop a relationship, be an active listener, get to know them, find out what they like as well as what they don't like.

With such a diverse group of consumers, how are marketers and packagers to know whether their products and packages work for the senior population? The GRF Marketing recommends market research, both as the package is being designed and before it ever goes to the shelf. Give older consumers a chance to interact with and comment on packages intended for them. Also, use test subjects throughout the senior age range, from 55 years and up. The active 55-year-old may have a great deal more mobility than the basically homebound 85-year-old.

Ibberson Centre at University of Sheffield Technology Transfer Centre
(www.shef.ac.uk/~ibberson/Package.html)

At the Ibberson Centre at University of Sheffield Technology Transfer Centre, research has been carried out examining both psychological and physical aspects of package design.

The research indicates that glass, tin and plastic packaging cause the most problems, and that the elderly and disabled are particularly vulnerable to these problems. Age brings with it a gradual decline in strength, visual acuity and mobility. However, along with age also comes an increased likelihood to read instructions, the greater use of tools and devices to facilitate a preferred lifestyle and the tendency to really appreciate when others make life easier for you.

In the UK, 67,000 packaging injuries are reported in hospitals each year, costing the National Health Service over £12 million annually. Research has shown that such injuries are increasing, although it is clear that many injuries could be avoided by improving the design of packaging. Packaging design is normally a compromise, due to the number of functions it has to perform (Stewart, 1995). The accidents and problems, which arise from design flaws within the packaging usually come about through this compromise. Design is an important factor in packaging, as it can be used to draw attention to the product in a competitive consumer market (Bloch, 1995). However, designers must be aware of the importance of ergonomic factors, as inadequate attention to user capabilities can lead to dissatisfaction and accidents (Bloch, 1995). Design flaws, leading to difficulties in opening packaging, can also lead to inappropriate tool use (such as knives or any inappropriate tool that may cause injuries). Consumers can feel forced to slash and break their way through packaging, leading inevitably to injuries.

Research detailing psychological factors such as personality and cognitive processes would increase knowledge of consumer's capabilities. This could be used to develop packaging that requires the simplest cognitive processes, and does not tempt consumers to use inappropriate tools. Consumers admit to using a wide variety of inappropriate tools, including pliers, screwdrivers and doorjams (DTI, 1997). This inappropriate use of a tool often comes about through frustration. The potential for accidents through such tool use is obvious. One solution is for manufacturing companies to produce appropriate tools to open specific packs, however, some tools are quite complex and can be expensive (DTI, 1997). The ideal solution is therefore for the companies to produce packaging, which does not require a tool to open. Easy open tear tabs and peelable seals are possible solutions.

The elderly tend to experience particular problems with screw closures, tin cans and flexible packaging (PSC, 1996). The bulk of the problems appear to be centred on hand strength, dexterity and the understanding of how packaging should be opened (PSC, 1996). The Packaging Standards Council (PSC) found that elderly consumers appreciated tear tapes and clear instructions on how to open packaging.

As data from the University of Sheffield, indicated that 60% of consumers ‘never’ or only ‘occasionally’ read instructions, there is therefore a need for research to develop packaging designs which can be intuitively opened without the need for instructions, and which do not allow the consumer the opportunity to open them incorrectly. Further research into the interaction between elderly consumers and packaging may produce more guidelines on making the opening and using of packages easier for the elderly consumer.

The Ibberson Centre at the University of Sheffield also emphasised that elderly consumers are the most useful group to study, as they will tell you what everyone else is thinking or feeling about the packaging (but not saying such as younger and middle-aged). If you want the truth ask the elderly.

Centre for Applied Gerontology at the University of Birmingham
(www.gerontology.bham.ac.uk/)

Applied Gerontology is the study of the interaction between the ageing process and the human-designed environment. The centre researches the strength, skills and feelings of older people, as well as their weaknesses and disabilities. It gathers information on what they think about the products of modern industry, what are their unmet needs, and how industry can best provide these.

The Mission statement says that the centre seeks to promote awareness of the needs of older people amongst designers by conducting research and by disseminating its findings. The centre motto is “Design for the young and you exclude the old; Design for the old and you include the young”. The motto reflects the philosophy of the centre in that it directs attention firstly to a better understanding by designers and manufacturers of the needs of older people and secondly to products and services that

they are as suitable and satisfying for older people as they are for a younger generation.

The “Owl Mark” is a product endorsement given by the University to show that a product has been evaluated by the centre for applied gerontology and found to be suitable for use by older people in general. The recipient of the mark is entitled to be registered at the trademarks registry as a registered user of the mark.

Darfresh

www.sealedair.com/eu/en/products/food/foodservice.html

Darfresh packaging introduced in 2001; is the collaboration between the food-packaging specialist Cryovac and the packaging equipment manufacturer Multivac. Darfresh provides a packaging solution for ready meals for municipal kitchens.

The commune of Kristiansand, in the southern part of Norway, owns and manages a central kitchen, which prepares, chills and packs healthy ready meals for elderly citizens. The meals are either delivered to the individual’s homes or at cafeterias. The objective of the Kristiansand municipality is to reduce the social costs of hospitals and nursing homes by providing the elderly with healthy meals in their preferred environment and improving their quality of life by allowing them to continue to live at home.

Packed in the new pack, the ready meals are safe and well preserved thanks to the high oxygen barrier. The secure seals have eliminated the leakers. Shelf life is guaranteed for longer than required as the meals are distributed on a weekly basis. As an added benefit, logistics have greatly improved, with easier planning and distribution. As a result, menus can be tailored and planned four weeks in advance.

Another important benefit of the Darfresh packaging is the fact that food quality and freshness are fully preserved. When applied to ready meals for an elderly population, food quality is of crucial importance. Studies have shown that the elderly are often lacking appetite. Packed in Darfresh, the meals are fresh and they can be easily heated at any time with no loss of quality. The packs are also easy to open. The packaging concept also allows the staff to work normal hours only, respecting

weekends and holiday rest. Thanks to long shelf life, menus can be planned long in advance. Waste has been reduced to a minimum. For all these reasons, the price for this service dropped from approximately €14.6 to €8 per person per day.

PACKAGE - Provision for improved lifestyles via Access to Consumer packages (www.packageproject.com)

PACKAGE is a European Commission project in Information Society Technology (IST) comprising Dundee University and Strathclyde University, Scotland, Staffordshire University and Rehab Robotics, UK, Lund University, Sweden and Forschungsinstitut Technologie-Behindertenhilfe, Germany. PACKAGE project is unique because it is a user-driven project that includes disabled and elderly people as active participants.

PACKAGE was a three-year project concerned with the problems associated with packaging that affect people with 1) impaired hand function, 2) impaired vision and 3) special dietary needs.

European citizens live in a consumer society in which products, particularly foodstuffs and household detergents are packaged in plastic containers and glass jars for sale in supermarkets and food stores. The packaging industry for these products has provided major benefits for able-bodied people because these packages are convenient, hygienic and safe. Unfortunately however, current trends in packaging design have disadvantaged disabled and elderly members of society.

1) People with Impaired Hand Function

People with impaired hand function have serious difficulty opening packages. The majority of packages have screw caps, which are opened with a grip, and twisting action, which are the same movements that are most difficult for people with weak hands and painful joints. Examples of packages that are difficult to open include, bottles with carbonated fluid and internal gas pressure, jars with vacuum seals to preserve food freshness and containers with potentially dangerous substances (such as medicines and household cleaning detergents), which include childproof caps that have to be pressed down or squeezed before they can be, twisted open.

2) People with Impaired Vision

With the exception of bottles, which contain strong bleaches, packages do not include Braille labels, yet a bottle of lemonade ‘feels’ the same as a bottle of detergent. People with impaired vision have difficulty distinguishing between different packages.

3) People with Special Dietary Needs

Elderly people may require monitoring of their diet, particularly those with diabetes. Unfortunately, elderly people are often confused and forgetful, so they may accidentally consume unsuitable foods, even though their ingredients may be printed on the packaging labels. Others have impaired vision and are unable to read the small lettering on the labels.

People with hemiplegia, typically caused by the effects of a stroke, are disadvantaged because packages must be secured with two hands for opening. It is also worth stating that one tenth of the European population is automatically disadvantaged because they are left-handed. Packages with twist-tops are opened in a counter-clockwise direction, which favours right-handed people.

PACKAGE developed new technical products to open packages, provide electronic speech and provide warnings of unsuitable food ingredients (potential allergic reactions, food intolerances etc.) using bar code technologies. The project was user driven and included disabled as well as elderly people as active participants. A “Tele-eye machine” was installed in a supermarket in Scotland by University of Strathclyde. The main target were elderly shoppers who have visual impairments and problems with the small print, or who may have restricted mobility. It displays and reads a list of ingredients on the screen and warns of any potential allergens. The “tele-eye” also details the volume, weight of a package, nutritional data etc. A smaller device to be installed in homes was also developed.

Netherlands Packaging Centre (www.nvc.nl)

The NVC Forum user-friendly packaging has been working with tests with elderly people concerning opening and re-closing packaging and searching for the ‘best consumed before...’ information. There were mainly two goals. The first was to carry out a qualitative experiment to get an indication of the biggest problems that the

elderly have with packaging. Secondly the NVC Forum wanted to help the elderly realise that they are not the only ones with packaging problems. The results of the experiment will be used to make a set of guidelines for designing user-friendly packaging.

Packforsk (www.packforsk.se)

Packforsk is one of the world's leading research and development companies in the field of packaging.

Packforsk is working on consumer attitudes and packaging and they made comparisons between younger and older consumers using questionnaires. Approximately 16 % of all packs were considered difficult to open or re-seal. Packages for sliced ham & cheese for sandwiches; coffee, meatballs, cheese and frozen fish were identified among the 10 most difficult packs. A comparison between younger (<30 years) and older adults (>60 years) showed that the younger group were more negative, i.e., they made more remarks about inconvenience in handling the various packs. It is possible that the younger group were more opinionated as their age was not an issue for them; therefore the difficulty in handling packages was not a reflection of their age.

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