

Fighting the jar of gherkins

Christian Hentschel

The needs of older people are often neglected by manufacturers when designing product packages, several studies have shown. For these consumers however, the handling of product packaging plays a decisive role in their purchasing decisions.

Elderly people often suffer from age-related limitations of strength, sense of touch and vision. They have to deal with various product packages on a daily basis, most of which can only be opened with a lot of energy, although the surfaces are often too small to apply much pressure. In many cases, the opening mechanism is hardly recognisable for the consumer, which is why the handling of many packages can cause anger and annoyance. In order to examine this topic scientifically, customer surveys and user tests were carried out by Chemnitz University. Afterwards the researchers received several letters from consumers describing the problems of opening of product packages, proving that the study struck a nerve among the general public.

To improve the identification of problems concerning usability, 21 people aged 62 to 82 took part in the user tests. Ten different drinks bottles and cartons and their opening mechanisms were tested. Participants were asked to open a further twelve food packages, amongst them jars, cans and foil-wrapped products, and remove the contents. In addition, participants were asked to identify the expiry dates and to find and read the ingredients of fourteen other product packages. All tested packages were designed to be opened without any aids such as knives or can-openers.

Three packages were successfully opened by everyone taking part in the test. Ten packages proved to be problematic for at least 20% of participants, who couldn't open them at all. A foil wrapped packet of yeast proved to be most challenging with 78% of participants failing to open it. This was followed by vacuum-packed coffee powder (41%) and a plastic plate with tear-off foil (40%) of a kind often used for cheese and cold meats. The participants needed more than 30 seconds on

average per product for half of the successfully opened packages.

Their problems were caused by several reasons: the need for excessive force, very small surface areas on which to apply pressure, and opening mechanisms which were difficult to identify. Eleven packages could not be opened due to problems of visibility concerning the opening mechanisms.

In a comparison study with younger participants aged 20 to 30 there was only one single product, a beverage carton with a removable corner, which couldn't be opened by everyone. However, the younger subjects still needed as long as the seniors to successfully open half the packages. The higher opening rate may be due to the ability of younger participants to detect the opening mechanisms faster and to apply more force onto a smaller surface.

However, even packages with special 'user-friendly' designs aren't necessarily that usable. During the study's tests, non-functioning opening mechanisms appeared again and again. Even those mechanisms which were created especially to be user-friendly, weren't sufficiently marked and therefore could not be identified by the participants. One example is a high value chocolate bar package which has an attached strip that actually makes the opening procedure very easy. Unfortunately, because the strip is transparent, it was often overlooked by the participants and as a result not all of them succeeded in opening the package.

The user-friendliness of product packages has been examined in scientific studies for quite some time. In the 1970s and 80s, studies on the opening of packages were already being carried out. The problems which were identified then, have still to be satisfactorily solved, as is demonstrated by studies from the years 2000, 2009 and the current study carried out by the Chemnitz University of Technology. According to a 2005 study, 50% of participants older than 75 weren't able to open screw-top jars. A 2009 study arrived at the conclusion that there were several opening mechanisms of drinks cartons

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which couldn't be opened or even understood by older consumers. Seniors are the most impaired group of consumers when it comes to problems with product packaging. This conclusion is supported by surveys carried out by the Federal Association of the Seniors' Organisations in 1999 and 2003. Both surveys showed that 92% of the respondents between the ages of 50 and 80 reported problems concerning packages. 50% stated that they experienced these problems on a weekly, or even daily, basis.

One result is particularly alarming for manufacturers in that the respondents stated that they had never informed the sales staff or filed a complaint to the manufacturers. However, 40% named product packaging and its user-friendliness as a factor in purchasing a product. 31% even stated that they would buy a different product if they were dissatisfied with the packaging.

The majority of respondents try to cope with package opening problems on their own. It may be assumed, that this behaviour leads to the use of inappropriate aids, sometimes resulting in accidents.

The summary of studies from the last 40 years reveals that the older people's difficulties are known, though hardly any solutions have been found. The example of the jar of gherkins shows that almost nothing has been done to change things. The force which is needed to

open the mechanisms exceeds the strength of older people. There are a few examples of better solutions, but these are still exceptions. Consequently, the manufacturers' approach has potential but it appears that they do not sufficiently take into account the abilities and traits of the various consumers during the development of product packages. Thus, the packages are often designed for working people with none or few physical limitations, a target group which isn't compatible to the problems of senior citizens. People with limited abilities are rarely involved in the process of development. Instead, other criteria such as costs, production processes, and marketing specifications are in the spotlight in the design of packages, although age-appropriate packaging, and therefore an increase in usability, doesn't require much rethinking: all it requires is higher importance during the development. For instance, the opening mechanism should be obvious and tactile. As older people often suffer from limited dexterity and manual strength, the mechanisms should be smooth and the surface should be large. An easily readable label is also important.

The principle of the design of product packages should be: "Develop for the seniors, and it will include the young." Manufacturers should understand the potential of the usability of product packaging and see this as a competitive advantage. ❖



Bad and good examples of foil wrapping. 78% of elderly participants failed to open a foil-wrapped package of yeast (in German: "Hefe", photo above). A better design (photo below) shows a clearly visible opening strap.

