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## Consumer purchase behaviour of sports compression garments – A study of Generation Y and Baby Boomer cohorts

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### Abstract

The growing trend to live a healthier lifestyle and increase quality of life is important for sportswear marketers worldwide. This study applied generational cohort theory to compare the consumer purchase behaviour of Generation Y and Baby Boomer cohorts with regard to sports compression garments. In this research, a simulation study was carried out in Germany, using eye-tracking technology. The study focused on understanding of consumer behaviour with respect to factors such as comfort, quality, technical attributes and methods of product promotion. It was found that Baby Boomers gave more attention to factors of quality and garment comfort, while Generation Y subjects were more interested in the aesthetic appeal of the garments as well as the technical information provided on the packaging and hang tags.

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### 1. Introduction

As the world's population ages, and concern for living a healthier lifestyle becomes more paramount, the target market for the sportswear industry will broaden [1, 2]. According to Ausport [3], during 2009 69.4% of the Australian population aged 15 years and over participated in physical activity at least once a week, and 47.7% took part at least three times a week. In addition, it has been found that staying healthy and active is a top priority for those aged over 50, and that they are more active than any generation before them [2, 4].

Generational cohort theory suggests that those born in the same time period share similar behaviours and values, and therefore can be segmented and targeted according to the similar buying behaviours they portray as a group [5, 6]. Two particularly important consumer groups are Baby Boomers and Generation Y. Baby Boomers were born between 1946 and 1964 [5]. At this time the cohort is reaching retirement age and their children are leaving home, therefore they find themselves with extra time and money [7, 8].

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One important fact mentioned in the literature is that Baby Boomer women are unsatisfied with the advertising and availability of clothing targeted at them [9, 10]. This clearly indicates an under serviced market, which sportswear marketers must consider. Generation Y's were born between 1977 and 1994 [5] and have grown up in an age of rapid technological advancement. They are a very knowledgeable cohort, with the ability to easily access information and conduct their own research before making purchase decisions [11].

Sports compression garments, inspired by similar garments used in the health industry, provide the user with increased blood flow and oxygen to the muscles, reduced muscle vibration, injury and fatigue and faster recovery [12, 13]. The positive attributes of these garments make them an attractive sportswear choice for sporting enthusiasts who want to excel at their sporting activities.

An eye tracker is a device used to measure eye movements. The movements of eyes consist of two components, fixations and saccades. Saccades are rapid jumps that the eye makes when it is looking from one area to another [14]. Fixations are moments when the eye is relatively still and focusing on a specific object or location; during a fixation the area or object being viewed is being processed in detail [15]. Using saccade movements and durations of fixation, a pattern of eye movements, called the scan path [14], can be determined and then analysed to understand visual attention.

Although prior studies have compared generational cohort groups and their consumer behaviour toward various products [6, 7, 8], none have been found that focus on sports compression garments. It is believed that results from this study will be able to be applied to general sportswear, so that a greater understanding is gained of the desires of these different cohorts.

The initial study included a questionnaire that was distributed throughout Australia, to supplement results gained in the simulation carried out in Germany; however results from that part of the study were not included in this paper.

## 2. Experimental procedure

### 2.1. Experimental methods

There were two venues used to conduct the simulation; the Specialty Division of the Technical University of Munich, and the LaVida Gym, a local gym close to the University. A total of 40 subjects, 17 Baby Boomers and 23 Generation Y were recruited to take part in the simulation. The sample was quite balanced between genders for both cohorts, with 52.9% of the Baby Boomer, and 60.9% of the Generation Y subjects being male. Those recruited were required to belong to the specific cohorts and were to be physically active in various sports.

Subjects were fitted with the Dikablis eye-tracking system (Figure 1(a)), their eye movements and physical actions were monitored, over the 4 parts of the simulation:

1. Observation of seven promotional images of sports compression garments in succession, with no time limit (Figure 1(b)).
2. One-minute observation of three pairs of sports compression tights and their packaging.
3. Physical analysis of sports compression tights and packaging, as if in a purchase situation, without a time limit (Figure 1(c)).
4. Subject questioned by the examiner about the tights and packaging, whilst able to re-examine the products.



Fig. 1. (a) Dikablis eye-tracking system; (b) Observation of promotional images; (c) Physical analysis of garments/ packaging

Results from the simulation were used to ascertain if there was a difference in the behaviour of the two cohorts when exposed to promotional material, and placed in a purchase situation with sports compression garments. Data collected consisted of two forms, Dikablis D-lab video files and written answers from the questionnaire. The videos displayed the visual stimuli that the subjects were observing, and a crosshair indicated the exact location the pupil was fixated on. The change over time in crosshair position was used to manually develop a scan path drawing over the promotional images viewed by each subject in Part 1 (see Figure 3 for an example). The D-lab software was utilized to define the AOIs during Part 2 of the study; the program provided number of glances and time spent on each AOI. The videos were used to record the actions carried out by the subjects on the tights and packing during Part 3, with results being ranked in order of occurrence for each cohort.

## 2.2. Description of compression tights

Subjects were exposed to three pairs of sports compression tights and their packaging, consistent with their gender. The three brands chosen were: a) 2XU Elite Compression Tights [16] b) Diadora Compression Clothing Long Tights [17] and c) Skins™ Compression Long Tights [18] (Figure 2). The selection of tights was chosen so as they were product of well-known sports brands and was positioned in a range of price categories. The tights chosen had various design features in order to evaluate the preferences of the subjects; these included a) Eye-catching visual branding and contrast panels (2XU) b) Contrast stitching and waistband (Diadora) c) Simple design with discrete branding (Skins™). In addition the packaging of each of the tights ranged in design and style, including a) Pull out box design with use of vibrant colours, sporty model wearing the product, indication of affiliate sporting teams/sponsors and substantial technical and sizing information (2XU) b) Information card with image of model wearing product, branding in colour and minimal technical information c) Sturdy box with drawer, image of product on a ghost model, substantial technical and sizing information and a few affiliate sports teams mentioned.



Fig. 2. From right to left, tights and packaging for: a) 2XU b) Diadora c) Skins

## 3. Results and discussion

### 3.1. Observation of promotional materials

The total time taken for subjects to view the promotional materials was recorded, and scan path drawings were manually constructed. It was found that the Generation Y subjects spent approximately 23% longer viewing the images than their Baby Boomer counterparts, and according to Duchowski [14], increased viewing time indicates a greater level of visual interest. In addition as shown in Figure 3, the scan paths over the promotional material indicate a higher level of visual interest from the Generation Y subjects, with fixations concentrated on the text and model. The Baby Boomers on the other hand showed less focus on the information rich areas of the image, with glances over the entire image as a whole. Therefore the results from the first section of the study suggest that Generation Y is more inquisitive, appreciating information and detail in advertising. These findings are consistent with the claims by Wolburg and Pokryvczynski [11] that Generation Y requires more visual information.

It is important to note that there were no promotional materials including cognitive aged models, which the Baby Boomer cohort could relate to. This may have affected their level of interest in the

images, as they may not have felt that they could associate themselves with the sportspeople in the advertisements, a finding consistent with the claims of Wray and Hodges [19], that Baby Boomer women relate favorably to sportswear advertising that utilizes cognitive aged models. Further research needs to be undertaken in order to validate the proposed relationship between the scan path over advertising image and the participant's interest in the advertising content.



Fig. 3. (a) Promotional image used in the study (source: www.skis.net/de-DE); (b) Scan path of Baby Boomer; (c) Scan path of Generation Y cohort.

### 3.2. Observation of tights and packaging

The results of the one-minute observation of the tights and packaging were analysed in the D-lab software. The areas of interest (AOI) were defined as each particular tight and package, see Figure 4. Interestingly this section saw both cohorts have a quite similar number of glances over the AOI's. As expected the tights attracted more interest than their packaging, with both groups glancing over three times more at the garments than at the packages. It was found that over the minute, the total number of glances at the AOI's were very similar, with the Baby Boomers glancing 4.8% more times than the Generation Y subjects.



Fig. 4. Defined areas of interest in D-lab software

### 3.3. Physical analysis of tights and packaging

As subjects were physically analyzing the garments, the time taken to conduct analysis, and their actions were recorded. A similar result to Part 1 was found, with the Generation Y subjects spending 72 seconds, or 40% longer physically investigating the tights and packaging. This reinforces the notion that Generation Y as a cohort are more knowledge hungry and interested in the details of the products that they are purchasing; willing to spend a longer period of time investigating and comparing products before reaching a purchase decision. The Baby Boomers on the other hand, required less time to reach a purchase decision, being sure of their needs and desires and confident in their decision making skills, thus supporting previous research on the purchase behaviour of Baby Boomers [20, 9].

By viewing the actions performed by the subjects on the tights and packaging, a greater understanding of specific buying behaviour for the particular cohorts could be understood. Table 1 displays the actions performed on the tights by the two cohorts. Both cohorts cared about aspects of quality and comfort such as fabric feel and elasticity; however there were also clear differences between their actions. The Generation Y subjects showed interest in the aesthetics of the garment, visually inspecting and feeling the

print, as well as reading the information on the hangtags. Whereas the Baby Boomers placed greatest importance on aspects of quality and comfort, carefully inspecting the stitching and fabric, as well as looking at the back of the tights.

These results link back to the previous findings, where Generation Y has been found to be more inquisitive and knowledge seeking, as well as attracted to visual attributes such as branding. The actions of the Baby Boomers clearly show their priorities are the quality and comfort of the garments rather than technical details.

Table 1. Actions performed on the tights by 4 or more subjects

Rank	Baby Boomer	Generation Y
1	Generally felt the fabric	Generally felt the fabric
2	Felt waistband	Carefully inspected fabric
3	Carefully inspected fabric	Stretched waistband
4	Stretched waistband	Felt waistband
5	Visually inspected stitching	Stretched leg opening
6	Felt stitching	Read swing tag
7	Looked at back	Visually inspected print
8	Visually inspected print	Felt print

When inspecting the packaging, it was found that the Baby Boomers were less likely to pick up the packaging at all, with only 22% even looking at the packaging. Whilst those who did were likely to read some information, the percentage was relatively low. On the other hand all Generation Y subjects picked up the packaging and carefully inspected all information provided, including the technical information and sizing information. Once again this establishes the importance of information search and technical information for the Generation Y cohort. It also indicates to sportswear marketers the importance of including such information and graphics on their packaging, as it will ensure that the Generation Y consumer will be attracted to their product.

When asked about the importance of price when making a purchase decision, it was found that 58.8% of the Baby Boomers and 78.3% of the Generation Y subjects answered that price did influence their choice. A common observation from both cohorts was that they would not pay the listed price for the tights, not being confident that they would be of any benefit. Consumer education is important in this case, as well as product promotion in order to create value for the customer.

During the study a number of important comments were made by the Baby Boomer subjects, which are important to note when marketing products to their cohort. Firstly the font size of the text on the packaging was too small to read without glasses, and a number of comments were made about not being able to read the information. In addition, all information on the packaging was in English, and a few of the subjects mentioned that they could not understand what was written. This provides a potential reason to why only a small percentage of the Baby Boomers looked at the packaging.

As mentioned in the literature, many Baby Boomer women feel that they cannot relate to the models used in sportswear advertising, and that clothing is not designed with their needs in mind [9]. The results from the simulation, in addition to a number of comments made by the participants, confirm this notion. A collective comment made by the Baby Boomer women in the simulation was that they would never wear the leggings as they were so tight, and seemed for a younger woman, not themselves. In addition most of them had never seen sports compression garments before and did not understand their benefits.

#### 4. Conclusion and recommendations

The following conclusions have been made based on the simulation study presented here:

- Generation Y is attracted by technical information and visual branding on sports compression garments and packaging.
- Baby Boomers are quick to make their purchase decisions, not spending as much time on information search as Generation Y. Therefore education on the importance and positive attributes of sports compression garments is needed. This can be achieved through the use of cognitive age models, larger size text on packaging and translation of packaging into the language of the country of distribution.
- A group of particular consideration should be Baby Boomer women, as they have the spending power to be a key target audience. However as suggested in the literature, and ascertained in this study, these women need to be educated about the products, and the garments need to be designed in such a way as to attract them and make them feel comfortable wearing them. This may include providing layering options to be worn over the skintight compression layer.

The outcomes of this research are important as both Generation Y and Baby Boomer cohorts are powerful consumer groups and results provide a foundation for further research into required product design and performance attributes as well as their purchase behaviour with regards to sportswear.

Although this particular study had a focus on consumer purchase behaviour towards sports compression garments, its results can be applied to a much broader range of sporting apparel, therefore providing useful insights to product designers, manufacturers and engineers.

It is recommended that further study be performed to understand the influence of demographic background on the behaviour of generational cohorts. In addition, it would be beneficial to conduct this study in other countries, using larger sample sizes in order to understand purchase behaviour towards sports compression garments on a global scale.

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