AN ANALYSIS OF CONSUMER BEHAVIOR TOWARDS HEALTH SLIMMING PRODUCTS USING THE TRIANDIS MODEL – A CASE STUDY FROM MAURITIUS

H Kassean & R Kaleeka
University of Mauritius

The purpose of this study was to explore the perceptions of potential consumers towards slimming products and the attributes that motivate these consumers to purchase the slimming products. Methodology – the study adopts the Triandis model of choice behaviour which is relevant and useful in the context of this study in exploring marketing behaviour. A sample of 150 participants using slimming products was targeted. The response rate was 66.7%. Findings - The following five items were found to be significant, using factor analysis: Losing weight becomes part of your daily life; losing fat can help you gain confidence; a fat person will be discriminated or laughed; a slim figure is very important for you; you always feel sad because of your body shape. Females tended to buy more slimming products than males do. Men preferred to use liquid drinks, tea whereas women chose to use other kinds of slimming products including body attachments but they had a preference for pills which they found easier and convenient to take. Effectiveness of these slimming products, limitations of this study and directions for further research are discussed.

Key Words: consumer behaviour, health slimming products, Triandis model, Mauritius

Field of Research: Marketing

1. Introduction

Losing fat is more of a major concern for young women than men and they use different types of weight loss regimen or slimming products. However, some of the products may be damaging to their health and may have many side effects (Solomon 1999). Performing exercise is a long term commitment, the slimming products may be seen as the best way to assist women losing weight compared to dieting (Halliwell and Dittmar 2003). These days, people are very busy and spend long hours at work and may have other commitments such as looking after their family, parents and have lesser time for leisure and recreational activities. We have witnessed recent emergence of companies dealing in slimming products, such as Kidskills Ltd, Santé Beauté, Slim-N-Trim and others in Mauritius spend huge sums of money in marketing their products.

The objective of this study is twofold: firstly, it is expected to establish the importance and role of slimming products in Mauritius and explore the determinants of buyer behaviour of these products by adopting the Triandis Model, so as to better serve this segment of the population.

2. Literature Review

1.1 Research in consumer behaviour of slimming products

Marketers across borders recognise that the way consumers behave is an on-going process, not merely what happens at the moment, when for example, a consumer hands over money or his credit card and in return receives something to use from experienced sales representatives. The exchange, in which one or more persons give and receives something of value, is an integral part of their behaviour, the expanded view emphasising the entire buying behaviour process, which includes issues that influence the consumer before, during and after a purchase (Michael, 1999).

2.2 Understanding consumers of slimming products

Losing weight has become a pressure for most women in society. According to Solomon (1999), women’s physical appearance is a large part of her self-concept. Women have their ideal of beauty and the pressure of losing weight is continually reinforced both by advertising and by peers.
1.2 Body Image

Cash and Brown (1989) defined body image as one’s perception of and attitudes about, his or her own body. The standard of beauty of the time has influenced the development of one’s body image in such a way that the discrepancy of perceptions of one’s own body and the body one perceive as ideal plays a critical role in determining how one feels about one’s body (Heinberg et al. 1995). On the other hand, Fallon (1990) defined body image as “the mental image we hold of our bodies,” and it affects how we perceive and evaluate ourselves and others in social interactions. Men experience much less body dissatisfaction than do women (Mintz and Bentz 1986; Demarest and Langer 1996; Halliwell and Dittmar 2003).

2.4 Body Focus

“Body focus” is defined as those aspects of the body that are most often associated with reasons for dieting or social acceptance (Lokken et al. 2003). For instance, women who diet might have concerns about specific aspects of their shape or weight. Women who are more body focused might buy certain products that they believe will give them a better body or might wear clothes that they believe highlight the best aspects of their body and hide the worst aspects. Women tend to be more body focused than men. Lokken et al. (2003) suggest that even women with low body focus have a strong desire to be thinner than they are and that men who have a high body focus report that their body shape is similar to their ideal body shape. This may indirectly indicate that women strive to achieve and maintain when they do not need to. Levels of body focus can thus be summarised as the extent to which an individual is concerned about the appearance of their body and how sensitive they are to it.

2.5 Understanding the Promotion Strategies of Slimming Products

Market researchers and advertising firms have used their special skills to educate people about healthy behaviour. Marketers emphasise that their products have been tested and use this as a good promotion strategy in their advertising. They also ask specialists to prove that their products are reliable and useful. Solomon (1999) added that consumers are often influenced by experts who are assumed to be able to evaluate products in an objective and informed way. Another strategy is to ask celebrities or super stars to promote their products. Women then think that they can be as thin as the superstar if they use the products. In order to gain confidence and attraction, some women tend to buy and use slimming products.

2.6 The Role of Media

Brownell (1991) argued that our concept of ideal beauty comes from a collective vision influenced by mass media such as television, catalogues, clothes and advertisements. The broadest and most aggressive socio-cultural factor that conveys the thin ideal is the mass media (Groesz et al. 2002). Media have been strongly criticised for their critical role of: (i) promoting the current cultural ideal of an emaciated female body and stereotypes related to weights; (ii) illustrating the positive consequences associated with thinness in diet advertisements and commercials when they are not true and further; (iii) sending subliminal messages that pressure women to crash diet. The rewards for losing weight such as love, admiration, respect, success and money are the sources of incentives for adopting the modelled behaviour. Many argue that we try to lose weight to achieve rewards promised by peers, parents and the media.

2.7 Understanding the Competitors of Slimming Products

Besides slimming products, many beauty and spa centres also provide weight loss service. They use special machines to help burning fat or use body massage and weight-loss creams to help losing of fat. At the same time, they provide a full set of service for customers. It seems that women are more willing to consume in beauty and spa centres rather than taking slimming pills. However, slimming products are still very popular because of the cheaper price. Another issue is that when people consume in beauty centres, it takes much time. In the meantime, the weight loss ways adopted by the beauty centres are more
risky than taking slimming products. As well, many rich women are willing to pay much, what they want to get is the excellent service. So, many beauty centres with good reputation still have many customers, it is a kind of brand loyalty.

2.8 The Slimming Market in Mauritius

There has been a substantial increase in the imports and consumption of slimming products and a number of slimming brands in Mauritius. Most of the companies in the industry are traders who act as agents of foreign brands. These include international brands, such as Xenical (Roche Products Ltd), XL to S (Omega Pharma), Minceur 24 (Forté Pharma), and Minceur 4-3-2-1 (Arkomédica).

Distripharm Ltd is the major importer for the various products under the Forté Pharma brand name. These are mainly distributed through specialised shops, like Santé Beauté in Port Louis and in Curepipe, and at the pharmacies in Mauritius. Similarly, Nature Verte specialised shops promote mostly Arkomédica products. Local representative of slimming products such as Slim-N-Trim is forced to put their focus on the middle-to-low price market segments based on aryurvedic concepts. The slimming product market in Mauritius is segmented according to price and brands that are determined according to customer’s differences in lifestyle, income, gender and age.

Theoretical Framework:

The Triandis model consists of five independent variables: Cognitive, affective, social and moral influencers, behavioural control which are mediated by facilitating and non-facilitating conditions in affecting a change in behaviour (Triandis, 1980)

3.0 Methodology

To test the Triandis research model, (Figure 1 above) this study adopted the survey method. The measurement scales of the questionnaire items of this study were developed by adapting measures that were previously validated by other
researchers. Cognitive, affective, social and moral influencers, behavioural control, facilitating and non-facilitating conditions, willingness to change and habits were measured using scales adapted from Sheth, (1982), Triandis (1980), Heinberg, Thompson, and Storme,(1995). All variables were measured on five-point Likert-style scales (1: strongly disagree, 5: strongly agree). The Cronbach’s alpha score for the overall questionnaire was 0.87, indicating a high degree of reliability. A convenient sample of 150 participants in 13 health centres and gymnasiums across the island were used for data collection, using a face-to-face interview. Only those who were currently using slimming products were eligible to take part in the survey and were invited to part in this study. As part of the analysis, a factor analysis was conducted to extract the significant factors that influenced purchase and use of slimming products and evaluated the given hypotheses using and Chi-Square Tests.

1.0 Findings
The response rate was 66.7%, with 80 female responses and 20 males. The low response rate from males could be explained by the fact that there were fewer men who were using slimming products to lose weight.

4.1 Factors motivating people to buy slimming products
A factor analysis was used to analyse and summarise the interrelationships among the three variables. The findings suggested that most people had negative perceptions about slimming products when asked to what extent social factors, moral influencers and behavioural control influenced them to buy slimming products. An initial factor analysis was run with all the 19 variables, which yielded 3 factors. Some of the variables loading onto a particular factor were low and did not make theoretical sense. These were eliminated in the final factor analysis. After several iterations the variables with loading greater than 0.5 on the original three factors were retained. A final factor analysis was completed using the resulting 15 variables. After varimax rotation three components were identified and accounted for 60.3% of the total variance with Eigen values greater than 1. Variables with high loadings (greater than 0.50) were considered to be representative of the characteristics reflected by that factor, indicating the convergent validity is adequate. But the third factor did not make theoretical sense and was not reported.

Component 1: Moral influencers
Component 2: Social factors
Component 3: Behavioural control

Table 1: Rotated component matrix - To what extent would the following influence you to purchase a slimming product?

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion (Big Sale, Discount)</td>
<td></td>
<td></td>
<td>0.704</td>
</tr>
<tr>
<td>Because these products are bought by another member of the family</td>
<td></td>
<td></td>
<td>0.803</td>
</tr>
<tr>
<td>My peers’ and friends’ recommendations</td>
<td></td>
<td></td>
<td>0.730</td>
</tr>
</tbody>
</table>
Mr social status 0.748
The advertisement is very attractive and persuasive 0.717
Experts recommend the products in advertisements 0.527
The products are without side effects 0.548
Celebrity's recommendations 0.524 0.510
Well-known in the market 0.593 0.430
Sales representatives recommendations 0.466 0.551
Preventive effect for certain illness 0.843
To improve my diet 0.790
Because I like these products 0.699
To be in good shape 0.684
Part of a medical treatment 0.741

Extraction Method: Principal Component Analysis  Rotation Method: Varimax with Kaiser Normalisation

Table 2: Rotated Factor Loadings

<table>
<thead>
<tr>
<th>Total variance explained (Rotated loadings)</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Percent of variance</td>
<td>41.246</td>
</tr>
<tr>
<td>Cumulative % of variance</td>
<td>41.246</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>6.187</td>
</tr>
</tbody>
</table>

Responses towards motivation factors were analysed by principal component factor analysis with orthogonal rotation. Two factors, accounting for 52.40% of the variance explained, were used in the study. Rotated factor loadings, communality (actual variance explained by each variance) and content of the factors are in Table 2. Along with Eigen values and variance explained. Seven items were identified under Component 1 with loadings ranging from 0.466 to 0.843 with items having sub loading. Specific items under Moral Influencers with loading on factor 1 included: The products are without side effects; well-known in the market; sales representatives’ recommendations; preventive effect for certain illness; to improve my diet; to be in good shape; part of a medical treatment.
Component 2 had eight factor loadings ranging from 0.430 to 0.803 and these items relate to the Social Factors: Promotion (Big Sale, Discount), Because these products are bought by another member of the family, My peers' and friends' recommendations, The advertisement is very attractive and persuasive, Celebrity's recommendations, Well-known in the market, Experts recommend the products in advertisements.

For Component 3, only 3 factors were obtained but they did not make theoretical sense and therefore were not reported.

Table 3: Respondents’ motivational factors’ frequencies

<table>
<thead>
<tr>
<th>Motivational Factor</th>
<th>Not influenced at all</th>
<th>Somewhat influenced</th>
<th>Highly influenced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion (Big sale, Discount)</td>
<td>48%</td>
<td>31%</td>
<td>21%</td>
</tr>
<tr>
<td>Because these products are bought by another member of the family</td>
<td>46%</td>
<td>30%</td>
<td>24%</td>
</tr>
<tr>
<td>My peers’ and friends’ recommendations</td>
<td>29%</td>
<td>43%</td>
<td>28%</td>
</tr>
<tr>
<td>My romantic partner</td>
<td>34%</td>
<td>36%</td>
<td>30%</td>
</tr>
<tr>
<td>My social status</td>
<td>51%</td>
<td>42%</td>
<td>7%</td>
</tr>
<tr>
<td>Experts recommend the products in advertisements</td>
<td>25%</td>
<td>43%</td>
<td>32%</td>
</tr>
<tr>
<td>The products are without side effects</td>
<td>10%</td>
<td>36%</td>
<td>54%</td>
</tr>
<tr>
<td>Their ingredients are natural/herbal</td>
<td>17%</td>
<td>37%</td>
<td>46%</td>
</tr>
<tr>
<td>Celebrity’s recommendations</td>
<td>53%</td>
<td>29%</td>
<td>18%</td>
</tr>
<tr>
<td>Well-known in the market</td>
<td>36%</td>
<td>28%</td>
<td>36%</td>
</tr>
<tr>
<td>Sales representative recommendations</td>
<td>39%</td>
<td>30%</td>
<td>31%</td>
</tr>
<tr>
<td>Preventive effect for certain illness</td>
<td>19%</td>
<td>43%</td>
<td>38%</td>
</tr>
<tr>
<td>To improve my diet</td>
<td>19%</td>
<td>49%</td>
<td>32%</td>
</tr>
<tr>
<td>To be in good shape</td>
<td>9%</td>
<td>43%</td>
<td>48%</td>
</tr>
<tr>
<td>Part of a medical treatment</td>
<td>17%</td>
<td>49%</td>
<td>34%</td>
</tr>
<tr>
<td>To lose weight</td>
<td>14%</td>
<td>28%</td>
<td>58%</td>
</tr>
</tbody>
</table>
The table 3 demonstrates that people were motivated to buy slimming products if the products were recommended by their peers’ and friends’. People were not willing to spend money on slimming products if they have any doubt about the product’s effectiveness. However, if their friends or relatives had tried the products before, this would induce a positive word-of-mouth referral. Most claims from advertisements of slimming products were perceived to be untrue. Although producers of slimming products ask experts and celebrities to prove that their products are effective and without side effect, most customers were not easily influenced by their recommendations. Even though celebrities promote these products, people do not know the real reason why they are so slim themselves. They thought it was unethical on behalf of promoters of slimming products to use these celebrities who had not used these products.

Table 3: Summary of Hypotheses testing:

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>P-value*</th>
<th>Accept/Reject</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ( H_1 ): There is significant association between perception of self and the perception of others on self-image</td>
<td>&lt; 0.05</td>
<td>Accept</td>
</tr>
<tr>
<td>2. ( H_2 ): There is a significant relationship between eating habit and product recommendation.</td>
<td>&gt;0.05</td>
<td>Reject</td>
</tr>
<tr>
<td>3. ( H_3 ): There is significant relationship between brand loyalty and slimming product benefit of the product</td>
<td>&gt;0.05</td>
<td>Reject</td>
</tr>
<tr>
<td>4. ( H_4 ): There is a significant relationship between abuse of dosage of slimming product and the frequency of purchase.</td>
<td>&gt;0.05</td>
<td>Reject</td>
</tr>
<tr>
<td>5. ( H_5 ): There are significant differences between expectations and perceived performance of slimming products on the attributes of the marketing mix.</td>
<td>&lt;0.05</td>
<td>Accept</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed)

What type of people will choose slimming products?
In this section, we analyse the type of people who bought slimming product...
73% of the respondents chose exercise through the physical body movement as the best way to burn fat, whereas 62% preferred taking slimming or weight loss tea to eliminate the extra fat from their body and regulate the balance of body fluid, 60% of respondents opted for light products. Moreover, 53% chose dieting, 46% for weight loss pills to aid in losing fat and weight, 34% preferred nutritious meal which included candies, fruit juice, wheat thus helping lose fat within a short time. 21% of respondents used slimming liquid drinks and slimming belts as an aid to lose weight.

**Gender**

The study found that females tended to buy more slimming products than males. The results showed that gender was a key factor on determining whether people buy slimming products or not. Women bought more slimming products because of their unrealistic perception of weight issue and concern about their body shape. When men wanted to lose to fat, they would do exercises in fitness centres whereas women would use other means, such as eat less, diet, and lose fat in beauty centres. Analysis also showed that men preferred to use liquid drinks, tea or cream whereas women preferred to use slimming products including body attachments but they had a preference for taking pills which they found to be more convenient.

**Age**

The findings suggested that younger people tended to buy more slimming products than the older ones and that age was no barrier to looking good. The findings suggest that age did not affect people buying slimming products, although it was found that most of the respondents who were using slimming products were in the age bracket 25–35 years.

**Eating Habits**

Respondents were asked about their eating habits. Bad eating habits included eating more meat than vegetables, preference to eat heavy meals at night, taking snacks in between meals and tendency to eat fast food outside. Therefore, it can be said that people who have good eating habits will not recommend slimming products to others.

**Effectiveness of Slimming Products**

59% of the respondents preferred to use slimming tea followed by liquid drinks (45%), pills (41%), body attachments (15%) and cream (10%). None of the respondents chose rolls-on. The survey also showed that 29% respondents used slimming periods mostly during festive periods, 26% all year round, 23% during summer, 9% after pregnancy, 8% in winter and 5% as others as factors being after the usage of cortisone in a medical treatment and by curiosity.

**5. Discussion**

The Triandis Model provides an insight for the evaluation of consumer sensitivity to weight loss, health issues and resulting behaviour. Various components and determinants of consumer behaviour have been identified. The relevance and reliability of major components of the model have been tested statistically and were found to be significant, with a cronbach alpha figure of 0.87. The use of slimming products was perceived by a majority of consumers as an important way to lose weight and fat. Slimming teas were the most popular form of slimming product used by customers in Mauritius together with other kinds of slimming products like pills, liquid drinks, creams and body attachments. The study reveals that only natural or herbal slimming products were mostly used and which had no side effects. These slimming products indicated a highest penetration degree among single people in the age bracket 25–35 years from all income groups. Consumers were aware that their diet could be improved mostly through eating less between meals and by diversifying their diet and having a good eating habit. Behaviour and the willingness to change behaviour towards slimming products were influenced by several factors. Consumers of slimming products were motivated by weight control intention, illness prevention, dietary improvement, family purchases, peers and relatives recommendations, slimming benefit, and the ingredients of the products bearing no side effects. Trying slimming products for the first time was
highly influenced by family members and peers recommendations and were important determinant factors. The main reasons for not consuming or recommending slimming products were lack of benefit, price, and refusal to modify eating habit and unpleasant side effects or gain of weight much more than before. The intake of slimming products should be recommended by a doctor or a professional. Eating out was on the increase thus implying that there was less control over food consumption. Demographic factors had a major impact on consumption of slimming products. Single people consumed more sophisticated kinds of slimming products whereas married people preferred the traditional Chinese tea. Packaging was not considered as an important factor when choosing a slimming product. The ingredients of the product with no side effects were the most important determinant.

6. Conclusion

Although the Triandis model was found to be relevant in studying buyer behaviour of slimming products in Mauritius, only moral and social influencers were found to be significant using factor analysis and only two of the hypotheses were accepted. This study therefore shows that the Triandis model has limitations in predicting buyer behaviour of slimming products when used on its own. Future studies could be conducted using larger sample sizes and combining with other models, for example TPB to test and validate these findings.

References


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