SUMMARY:

This article starts with a review of different recent theoretical views and positions on culture, menstruation taboos, and ethical consumer behaviour. We performed a quantitative research in England, Germany, Slovenia and Sweden on 1,081 responding female students about the effect of cultural and sociological factors on female consumer behaviour when buying feminine hygiene products. Countries were selected depending on different cultures, religions and consumer behaviour. Based on the acquired results, we established a structural model of female consumer behaviour in the selected countries. This model showed a spiral transfer of cultural limitations and prejudices to the respondent students through the environment.

Keywords: model of consumer behaviour, ethical consumerism, culture, taboo, feminine hygiene.

INTRODUCTION

Taboo

Taboos, ceremonies, rituals and sacrifices are often blood-related. Blood is connected with several different meanings. It symbolizes life as well as death. It is no secret that menstruation has been a taboo on a global level for centuries, regardless of the observed differences between cultures. In anthropological language, the word taboo often relates to cultural prohibitions imposed for symbolic, rather than pragmatic, reasons« (Winthrop 1991).

It is a fact that, throughout history, menstrual blood was regarded as disgraceful and the source of evil and toxicity. Menstruation is a taboo since the time of totemistic cultures when the contact with menstrual blood was regarded as dangerous. Members of the tribe believed that their totem is flowing with the blood and that it will destroy any person coming into contact with it (Durkheim 1992). On the other hand, menstrual blood was regarded as sacred and powerful (Stein and Kim, 2009). However, it is clearly visible in everyday life, that menstruation remains a taboo also in the Western countries. Kissling (1996) describes modern taboos related to menstruation as »concealment, behavioural taboos and communication taboos«. The concealment taboo dictates to women that menstruation is something disgraceful and should be concealed. Advertisers skilfully take advantage of this taboo for the purpose of convincing women that nobody will smell, notice or suspect that they are menstruating if they use their advertised products. Menstruating women are stigmatized and
don’t discuss their menstruation. Quite on the contrary, they hide their menstruation at home as well as in public. Because of the fear that others will find out they are menstruating, women avoid public events, sporting activities and sexual intercourse during the time of their menstruation (Britton, 1996). Some women avoid all activities with limited access to the bathroom such as: camping, concerts, picnics, etc., all in fear of bleeding and disclosure of their menstruation.

The behavioural taboo is related to everyday life and sporting activities. 33% of US women believe that bathing, swimming and sporting activities are not allowed during menstruation. The third taboo, communication taboo, restricts communication about menstruation, not only in company of men, but also in company of women or in the family circle. Williams (1983) notes that 33% of suburban girls believe that it is inappropriate to talk about menstruation with their fathers and that almost all of them believe that girls should not talk about menstruation with boys. Kissling (1996) warns that mothers are more comfortable to talk with their daughters about pregnancy than menstruation. Discussion about menstruation is often unpleasant for parents and they subconsciously postpone it or wait for the »right moment«. This is the reason why even today girls are not prepared for their first menstruation or why they start searching for information about this topic outside their family circle.

Girls find information about first menstruation from various sources such as parents, school, friends, media, advertisements (Havens and Swenson 1989; Britton 1996). Despite the various sources of information about menstruation, girls still report that they received poor information and that they were not prepared for their first menstruation (Koff and Riordan, 1995). Information about menstruation is mainly focused on the role of ovaries, menstruation and reproduction. Such information is often without practical tips on how girls should behave during menstruation, whether they are allowed to swim, dance, wash their hair, which products are available, etc., or how they will feel during menstruation (Kissling 1996). There is no doubt that sources of information in connection with culture and social environment have direct impact on the development of the attitude of women towards menstruation. Besides family environment, the establishment of positions and attitude towards menstruation is also influenced by the wider social environment, where the religion, the girl was raised in and whose values she adopted, plays a very important role. In Europe, menstruation was regarded as sin and a curse until the middle of the 20th century. Religions of that time considered women as mothers and wives. Female sexuality, menstruation and the role of women in traditional patriarchal societies were taboos with negative connotation. Žvele notes that »women who are raised Catholic or who adopt Catholic religion also adopt the concepts of this religion which affect their perception and the experience of menstruation. The process of identification with the concepts of the church as the process of their influence on the experience of menstruation takes place mainly on the unconscious level« (Žvele 2003). A very important role is given to educational contents about menstruation within the framework of sex and health education in schools. Experts warn that education about menstruation is focused on education about the physiology of the menstrual cycle and does not include information about the worries, fears, mood swings, behaviour, etc. (Prendergast 1994; Kissling 1996; Rembeck, Moller and Gunnarsson 2006). Educational material on menstruation is often sponsored by manufacturers of feminine hygiene products and contains a lot of negative messages and therefore a negative attitude towards menstruation: Menstruation is dirty, shameful and should therefore be concealed from others (Houppert 1999; Kalman 2003).

CULTURE

Culture is not characteristic of individuals but always a collective phenomenon since the individual shares it, at least partially, with people who live or have lived in the same social environment, i.e. where this individual learned this culture. Culture is a collective
programming of the mind due to which the members of an individual group or category differ from other groups or categories (Hofstede, 2001).

Cultural orientation of a particular society reflects the complex interaction of values, attitudes and behaviours expressed by the members of this society. Individuals express their culture through the values which they acquired in life and from their environment. In accordance with their attitudes, values demand the most appropriate and effective behaviour in a certain situation. The constantly changing behaviour pattern of an individual and the group affects the culture of the society. The rotation process starts back from the beginning (Heinze 1995).

The culture itself affects the life of people in the community. Cultural patterns strongly intertwine with taboos and attitude towards menstruation. Behaviour of women and their attitude towards menstruation are connected with cultural patterns in form of »unwritten« codes of behaviour.

ETHICAL CONSUMERISM

Brinkmann (2004) considers that there are four types of ethical consumerism: 1) positive shopping, favouring ethical products (FT, organic food products, feminine hygiene products made of organic cotton or animal-friendly products); 2) negative shopping, which means avoiding the products with which we do not agree (eggs from caged hens or cars with high CO2 emissions, Always sanitary pads); 3) shopping based on corporate policy as a whole (boycotts of Nestle and buying ‘Body Shop’ products or ‘Natracare’ products); 4) the fourth transparent approach is a combination of the previous three and means that the consumer is looking for companies and products together and evaluates which is the most ethical brand. Information about feminine hygiene products and procedures used in their development lead to the development of ethical consumerism in the field of feminine hygiene. Ethical consumerism at first developed in the field of the production and use of tampons. The materials themselves are extremely important.

Viscose fibres were once trees, whilst life-threatening pesticides are used in the US for the production of cotton. Applicators are made of plastic materials in combination with petroleum products which are simultaneously also extremely harmful to the health of the workers producing such products. Disposal of products represents a major problem, especially disposal of applicator tubes which are a major ecological problem in the US and UK (Davidson, 2012). Seas and shores are overflown with applicators which are regularly being removed by volunteers in clean-up operations.

The field of feminine hygiene includes all forms of ethical consumerism such as positive and negative shopping, i.e. boycott and combined approach. In the US as well as in UK it is possible to notice anti-tampon movements which started in the 1990’s after the unfortunate events and the TSS in connection with ‘Rely’ tampons. Besides TSS, a major problem in the past was dioxin which appeared during bleaching of materials with chlorine. Female US students began to organize themselves in societies with the objective to warn other women about the danger of the use of tampons. Soon, they started to use the internet to promote the use of »harmless« products such as the menstrual sponge, cup or washable sanitary pads (Kissling, 2006).

MODELS OF ETHICAL CONSUMER BEHAVIOUR

Throughout the review of the literature we can notice various models of ethical consumer behaviour. In most cases the very core of the model contains the logic of a »deliberate action« or »planned behaviour«. So it is all about the knowledge or beliefs that lead to the establishment of positions that effect intention and behaviour (De Pelsmacker in Janssens, 2007). The intention or behaviour can also be affected by the subjective norms and factors controlling the behaviour (Hunt and Vitell 1986; Shaw and Clarke 1999; Vitell, Singhapakdi and Thomas 2001; Shaw
and Shiu 2002, 2003). Hunte and Vitellov’s model (1986) describes the consumer’s decision making process with the help of various philosophical aspects that represent the basis for the consumer’s moral judgement. On the basis of qualitative research, Shaw and Clark (1999) suggested a conceptual model where the factors affecting beliefs play the key role. The core of the above stated models also includes the sequential logic – »beliefs – positions – behaviour«. Transfer of information about moral questions and/or dilemmas affects the beliefs, positions and behaviour of the consumer. Behaviour is also affected by the detected control of the behaviour or the degree to which the consumers believe that their actions will reach the desired effect, and situational factors such as: price, availability and accessibility which are added as variables determining intention and behaviour. Besides positions towards FT, subjective norms and control behaviours, Shaw and Shiu (2002, 2003) also studied the role of the moral commitment and self-esteem. The influence of the subjective norm turned out as statistically irrelevant, whilst the positions and individual characteristics had a tremendous effect on shopping decision making. Amongst the limitations the authors state that the establishment of models in the future should include the influence of information. In their model, Shaw and Clark (1999) stress the important role of information, literature, advertising and labelling of products when establishing positions and behaviour, and, on the other hand, note the importance of situational factors and product-related factors: price, availability, accessibility, information and time. Other studies on the ethical consumer behaviour identified similar factors which prove that positions often poorly predict ethical consumer behaviour (De Pelsmacker and Janssens, 2007).

Browne et al. (2000) and Roberts (1996) warn about the fact that so-called »ethical products« are too expensive and that, in the eyes of the consumer, the high price does not outweigh the price premium. Other researches show that the price, quality of the product and convenience of purchase are often the most important factors when deciding to purchase something. Carrigan and Attalla (2001) believe that ethical shopping arises when, during shopping, the consumer does not experience higher costs of the price premium, lower quality and poor product accessibility. On the basis of observations of female consumer behaviour, feminine hygiene product manufacturers, market trends and theoretical background, we established a theoretical model which represents the starting point to test the model of female consumer behaviour.

Figure 1: Basic model of female consumer behaviour
Culture (greatly influenced by religion) affects the environment and information establishing the attitude of society and women towards menstruation. Environment and information also have direct effect on behaviour and consumer behaviour. Attitude of women towards menstruation, which can be positive, negative or mixed, directly affects the behaviour influencing consumer behaviour.

METHODS

As part of the review of the conceptual model we performed an exploratory factor analysis in order to reduce the large number of the observed variables to a smaller number of latent variables (factors). With the help of the exploratory factor analysis we searched for the answer to the question of how many factors are needed to present the data (Hair 2010).

On the basis of the theoretical model we presumed the following factors; culture, environment, information and behaviour. Firstly, we must determine the adequacy of data for further analysis. We performed the factor analysis with the method of maximum likelihood (ML) and the oblique factor rotation together with the Kaiser normalization. The number of factors was determined with the help of the value of variables (>1), scree diagram and the interpretation of the acquired factors. Reliability of data for individual constructs is checked with Cronbach Alpha. Higher values mean more reliable data. Values of Cronbach Alpha ranged between 0.723 and 0.913 which means that data is very reliable.

As a first step, we had to determine whether the data is adequate for factor analysis. For this purpose we used the Bartlett test and Kaiser-Meyer-Olkin (KMO).

Table 1: Adequacy of variables of constructs Culture, Information, Environment and Behaviour

<table>
<thead>
<tr>
<th>KMO and Bartlett's Test</th>
<th>KULTURA</th>
<th>INFORMACIJE</th>
<th>OKOLJE</th>
<th>VEDENJE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</td>
<td>.758</td>
<td>.765</td>
<td>.711</td>
<td>.740</td>
</tr>
<tr>
<td>Bartlett's Test of Sphericity</td>
<td>Approx. Chi-Square</td>
<td>2180.917</td>
<td>1229.159</td>
<td>948.172</td>
</tr>
<tr>
<td>df</td>
<td>3</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Sig.</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Reliability p (sig.) is for all constructs lower than 0.05 which means that the test is statistically significant and that connections between the variables exist also in the population. Values of the KMO test ranged between 0.711 and 0.765 which means that the data is adequate for further analysis. In the second part we determined the communalities of individual variables. We excluded variables with inadequate communalities from further research. We set the criterion to exclude all variables with communality < 0.2. Claims of individual sets were already determined in the questionnaire itself.

Table 2: Correlations of the selected constructs »Information«, »Behaviour« and »Environment«

<table>
<thead>
<tr>
<th>Factor</th>
<th>INFORMATION</th>
<th></th>
<th>ENVIRONMENT</th>
<th></th>
<th>BEHAVIOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.000</td>
<td>-0.323</td>
<td>0.225</td>
<td>0.477</td>
<td>1.000</td>
</tr>
<tr>
<td>2</td>
<td>-0.323</td>
<td>1.000</td>
<td>-0.113</td>
<td>-0.410</td>
<td>-0.223</td>
</tr>
<tr>
<td>3</td>
<td>0.225</td>
<td>-0.113</td>
<td>1.000</td>
<td>0.140</td>
<td>0.357</td>
</tr>
</tbody>
</table>
| 4 | 0.477 | -0.410 | 0.140 | 1.000 | Source: Rihtaršič, own research 2014.
Structuring equation modelling (SEM) is a statistical method where the confirmation approach is used to test and confirm hypothesis of individual events, actions, theories or phenomena. Analysis of several different variables is typical. The set model is tested as a whole, whilst individual variables are tested as a part of the whole (Byrne, 2010). Validity of our model is tested with structural modelling with the help of the AMOS program. Validity is checked with the confirmatory factor analysis (CFA) of actual data and with the aforementioned exploratory factor analysis (EFA). EFA is aimed to identify and reduce the number of variables, whilst CFA is aimed to check whether the observed variables adequately measure (describe) the latent variables and their behaviour also in the structural model. Adequacy of each model is statistically tested. If the model fits with the data, data is adequate. Connections between individual constructs show how well they were assumed depending on the theory. The extent to which the data fits the model can be measured with various adequacy indices such as RMSEA, GFI, CMIN, RMR, CFI, TLI, NFI, PNFI and others.

Table 3: Adequacy model indicators

<table>
<thead>
<tr>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>$\chi^2$/df</th>
<th>RMSEA</th>
<th>NFI</th>
<th>CFI</th>
<th>PNFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid values</td>
<td>837.204</td>
<td>95</td>
<td>0.000</td>
<td>8.813</td>
<td>0.086</td>
<td>0.871</td>
<td>0.884</td>
</tr>
</tbody>
</table>

Source: Rihtaršič, own research 2014.

The RMSEA indicator amounting to 0.086 was used as the absolute fit value. This is less than 0.1 and represents a good fit. As the basic incremental fit indicator we used the CFI indicator with a value lower than the maximum permissible value. The parsimony indicator (PNFI) amounted to 0.69 which is higher than the minimum permissible value of 0.6. Based on indicators we can conclude that the data closely fits the model.

With the above procedure we tried to find the structural model of consumer behaviour in selected countries based on theoretical background, acquired data in individual countries and the procedure of structural equation modelling with the help of AMOS. Basic information about the model can be found amongst the results of the model.

Table 4: Basic information about the structural model

<table>
<thead>
<tr>
<th>Minimum is reached</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square = 860.072</td>
</tr>
<tr>
<td>Degrees of freedom = 98</td>
</tr>
<tr>
<td>Reliability = .000</td>
</tr>
</tbody>
</table>

Source: Rihtaršič, own research 2014.

DATA COLLECTIONS

Countries were selected depending on different cultures, religions and consumer behaviour. The research sample included 399 units from Slovenia and 1 unusable unit. Research samples in other countries: Sweden 240 useful and 3 unusable units. Germany - 210 useful units and 5 unusable units; Great Britain - 232 useful units and 13 unusable units. The research pattern therefore included 1,081 respondents or useful units in total. The majority of units was excluded due to their mismatch with the presumptions of our research because we decided that our research sample only contained the population of female students in a certain selected country. As the limit of usefulness we determined that at least 90% of all questions in the questionnaire had to be answered. We considered this as the biggest limitation of our empirical study (i.e. the study is performed on a »convenient« research sample). We shall not be able to generalize the acquired data to the whole population. Population of female students was chosen for two reasons: 1) we
were interested in the trends of behaviour of young women; 2) we estimated that the lifestyle and standard of female students is similar in all countries, regardless of the cultural differences between countries.

**Table 5:** Proportion of units in the research sample depending on the population for individual countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Tertiary education female students</th>
<th>Number of units in the research sample</th>
<th>% – units of the research sample depending on the population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Britain</td>
<td>220,000</td>
<td>232</td>
<td>1.1</td>
</tr>
<tr>
<td>Germany</td>
<td>1,245,241</td>
<td>210</td>
<td>0.2</td>
</tr>
<tr>
<td>Slovenia</td>
<td>52,336</td>
<td>399</td>
<td>7.6</td>
</tr>
<tr>
<td>Sweden</td>
<td>160,000</td>
<td>240</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Source: Office for National Statistics; Destatis Statistisches Bundesamt; Statistični urad Republike Slovenije; Uknä Universitet Kenslers Ämbetet, 2015.

The data was collected with the help of a questionnaire. This questionnaire was prepared on the website portal »surveymonkey.com« which is specialized for research. The questionnaire was in the language of the selected country was published on websites of at least 5 different faculties in the selected countries. Collection of data took place from the middle of March 2013 until the end of October 2013.

**Findings**

As the measure of value of consumer behaviour we used the variable in the model marked COM. We asked the responding females how much they spend monthly on feminine hygiene products. The answers were less than EUR 3, more than EUR 3 and less than EUR 5, more than EUR 5 and less than EUR 10, more than EUR 10 and less than EUR 15, and more than EUR 15. Answers were properly valued within the model.
Table 6: Monthly expenditure for feminine hygiene products in EUR in the selected countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Britain</td>
<td>232</td>
<td>2.62</td>
<td>0.86</td>
</tr>
<tr>
<td>Germany</td>
<td>209</td>
<td>2.71</td>
<td>0.99</td>
</tr>
<tr>
<td>Slovenia</td>
<td>396</td>
<td>3.17</td>
<td>0.99</td>
</tr>
<tr>
<td>Sweden</td>
<td>240</td>
<td>3.02</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Source: Rihtaršič, own research 2014.

Figure 3: Structural model of consumer behaviour

Source: Rihtaršič, own research 2014

DISCUSSION

Weights are presented in the above figure of the model. Culture negatively affects the environment as well as information. This is expected, since lower valued answers mean more open and modern society, whilst higher valued answers mean more closed and conservative society. Influence is negative. Influence is weak or medium and amounts to -0.22 or -0.35. Environment affects information. The environment directly and indirectly affects behaviour. Influence on information is weak and amounts to 0.18. This can be explained by the fact that certain information remain taboos and that the effect of the environment is minimal. Environment affects information. The environment directly and indirectly affects behaviour. Influence on consumer behaviour is negative which means that those, who are more open in relation to menstruation, spend less.

CONCLUSIONS AND IMPLICATIONS

In this section we would like to especially underline and emphasize the sociologically interesting conclusion of our study that the globalization, daily migration of population and access to information in the observed EU countries from the field of female behaviour during menstruation, blurred the boundary between the urban and rural population. Nevertheless, it was shown that our above tested Model of consumer behaviour indicates great culturally conditioned differences between individual countries. The common model confirmed our assumptions (established on the basis of the insight into the theoretical background of the observed phenomenon) that the culture has negative affect both on the environment and information. Environment affects information. Environment affects consumer behaviour. Effect on information is still weak because certain information remain taboo and because the environment only affects them in a very limited manner. Influence of the environment on behaviour is also weak. Direct effect of the environment on consumer behaviour is negative. There is still insufficient discussion on menstruation and feminine hygiene products in public and scarce research and discussion in academic spheres. In short, what all four countries from our study have in common is that the culture negatively affects the environment and information. On the other hand, good information is crucial for the development of ethical consumerism and changing of the consumer behaviour. Values, norms, rituals, signs and symbols keep changing, just like Mole says that »the culture is a living and changing system« (Mole, 2003). Under the influence of dynamic changes, cultures change as well. Openness of culture towards menstruation is, on one hand, historically connected with taboos and religion and, on the other hand, also with the dimensions of the culture.

Finally, we can see our above established model of female consumer behaviour as something practically useful and something that could be used in the economy and marketing. The results of the performed research indicate a process of the spiral transfer of cultural limitations and prejudices to the respondents through the environment.

Upon completion of the empirical research we recognized numerous possibilities to continue researching menstruation and ethical consumerism. Based on secondary data we can conclude that ethical consumerism appeared in the field of niche products, but slowly started to gain weight also in the field of feminine hygiene products. Nevertheless, information on suitable products and manufacturers in Europe is still scarce or non-existing.
Besides, there are still not enough suitable natural products accessible in the market. Ethical consumerism is a process based on »positions, information and knowledge of products« (De Pelsmacker et al. 2005; Jelovac and Rihtaršič 2013). It would be useful to conduct a research on the existing ethical female consumers. Is ethical consumerism in the field of feminine hygiene a transfer of the consumer behaviour model from another category of products, or has it developed independently?

The results of the performed research indicate a process of spiral transfer of cultural limitations and prejudices to the respondents through the environment. Ethical consumerism in the field of feminine hygiene is currently in the development stage. Based on theoretical discourse and the results of the performed empirical research and observation of trends we expect an increase of ethical consumerism in the field of feminine hygiene in the future.
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