



CONSUMER PREFERENCES AND DECISION-MAKING DETERMINANTS FOR THE PURCHASE OF SHEEP'S MILK AND ITS PRODUCTS

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ABSTRACT

When observing consumer behaviour, we find that the consumer carries out the process of purchasing decisions under the influence of several factors. These factors come from the external environment, from its individual characteristics, and also from the specific purchasing situation. The above facts show that consumer preferences and understanding of the behaviour is a very demanding process. This is mainly because consumers may behave differently, i.e. they may have different consumer behaviours that depend on their needs and desires. Therefore, it is necessary to know the factors that influence consumer behavior or the purchasing decision for certain market commodities. The presented research document is focused on the issue of consumer behavior and decision-making in sheep's milk and its products. Sheep's milk has a long tradition and is one of the basic building elements of human food. Consumer behaviour is constantly evolving, their needs and desires are changing as well as factors that influence their shopping behaviour. The main goal of the research is to draw attention to the personality of the consumer, to selected personality characteristics and social factors, and, subsequently, to evaluate their impact on purchasing behaviour and making purchasing decisions on the market of sheep's milk products. Primary data were obtained from a survey conducted on a sample of 796 respondents. Most of the respondents were classified in the sanguine group based on temperament - an emotionally stable extrovert. When buying sheep's milk and its products, they make emotional decisions (57.17%). The most important factor in buying these products was their quality (47.16%). Assumptions were formulated for deeper analysis, which was subsequently verified by the means of a statistical test - Chi-square of the square contingency. The degree of dependence between the examined variables was determined by the means of the Cramer contingency coefficient.

Keywords: consumer; sheep's milk; sheep's milk products; consumer behaviour; decision-making determinants

INTRODUCTION

Humans develop during their lives. They learn new things, come up with new ideas and thoughts, and ultimately change their behaviour (Christensen et al., 2014), behaviour towards other people in their lives but also their behaviour when buying common goods of daily consumption. On the one hand, shopping methods, preferences, tastes are changing, and on the other hand, the determinants of the influence on their shopping behaviour are constantly changing (Yadav and Pathak, 2017). In general, consumers develop over their lifetime. Currently, most consumers are becoming rational and conscious, as they live in a very fast period (Vuelvas and Ruiz, 2017). Recent years have shown that consumers pay close attention to what they put in their shopping cart when shopping (Ertemel and Ammoura, 2019). The authors Rana and Paul (2017) claim that in recent years there has been a growing consumer demand for healthy and especially high-quality food. This interest is causing a

positive year-on-year growth in the market for organic products.

Consumer, their behaviour and decision-making

A consumer is every person whose primary task is to satisfy needs and desires through the purchase of various goods and services (Javornik, 2016). These needs and desires can be his/hers but also another family member. In this case, when a family member buys goods and consumes them at the same time, we are talking about the consumer (Biswas and Roy, 2015). According to Lemon and Verhoef (2016), there is another type of consumer and that is the customer. For them, only a shopping act is typical. The customer does not get to the consumption and satisfaction of needs through purchased goods (Dabholkar, 2014). On the contrary, a person who only consumes pre-purchased goods and products without purchasing activity is called a consumer (Goodman and Paolacci, 2017). Each person has gone through all phases

of purchase and consumption in their lives. Based on the above, consumer behavior is a constantly changing process, the basis of which is the reflection of external but mainly internal attributes (Trudel, 2018). Consumer behaviour is defined by Drossos et al. (2019) as the intentional conduct of individual purchasers, whose primary task is to satisfy their needs. They try to meet these needs at the highest possible level (Coronel et al., 2019).

Determinants of consumer behaviour

Various factors play a role in enabling consumers to make the right purchasing decisions. These factors often operate at the unconscious consumer level (Victor et al., 2018). One of the main influences on the consumer when buying is still the price of goods or services. The monetary expression of the value of goods is perceived most among consumers whose incomes do not reach high numbers (Malc et al., 2016). According to Roux et al. (2017), however, solvent customers are much less prone to the pricing value of goods and services. Another important determinant is the product brand. Consumers are fond of reaching for familiar and already tried and tested products. If they are satisfied with a particular good or service, it is very difficult to get their affection to focus their attention on a competing product and to buy and try it (Godey et al., 2016). In the research by Madzharov et al. (2015), who discussed the relationship between the fragrance and space, the increased interest in premium and branded products was confirmed. The authors state that the smell influences the spatial perception of consumers in the shopping environment, which affects the feeling of the power of customers and thus the preferences of individual products and, ultimately, their shopping behaviour. Impulsive behaviour is also a very important determinant. Holly (2019) states that while this form of shopping behaviour will bring greater satisfaction to the seller, in the end, consumer behaviour is satisfied at a lower level. Very important determinants of the impact on consumer behaviour are consumer preferences, food trends, and also eating habits. In recent years, as a result of the growing interest in health, there is a preference for quality and organic products (D'Amico et al., 2016). Last but not least, the basic determinants include sufficient information that determines the purchase. Jiang and Yang (2018) argue that when looking for basic information about the products, the consumer's purchase is influenced by their needs, values, and interests. Therefore, individual companies need to build a certain competitive advantage. To achieve such an advantage, consumers must receive food products of different quality and the necessary information, which would allow consumers to make their choice easier (Gracia and Magistris, 2016). An important step in the decision-making process is also the attention that is a prerequisite for the consumer to thoroughly process the information (Drexler et al., 2017). Consumers also have the opportunity to use heuristics (methods of problem-solving) to simplify their decisions, through which they do not pay the required attention to all product features (Loo et al., 2015). Based on the above factors, it is interesting to analyze consumer determinants that lead to justification and understanding of consumer behaviour (Aquilani et al., 2015).

Sheep's milk and its products

The present document also deals with the consumption of sheep's milk, in particular with the cheeses made from this type of milk. In general, we can encounter various reasons why people do not consume this milk (Kurajdová et al., 2015). The most important reason is the content of lactose in milk and its products. The lactose content is higher in cow's milk products, as it decomposes in individual product processing processes. This process does not take place in sheep's milk products and therefore the milk and its products are also intended for people suffering from lactose intolerance (Balthazar et al., 2017). Concerning the content of fat and vitamins, the fat of sheep's milk is twice as high and the content of vitamins is higher than that of cow's milk (Revilla et al., 2017). A negative attitude towards the consumption of sheep's milk products may also stem from one's own beliefs but also the lifestyle of consumers (Griebler et al., 2016). The development of sheep breeding in Slovakia is constantly changing. Since 2013, it has been constantly declining. In 2019, the number was at the level of more than 351 thousand head of sheep. Compared to the previous year, this is a decrease of more than 14,000 head (Horalová, 2019). Based on the decline in sheep farming, it is clear that sheep milk production is also declining. According to Horalová (2018), consumption in 2018 was at the level of 1.3 million kg. As for world sheep milk production, it is headed by Greece, followed by Spain, Italy, and Romania (Palo, 2015). According to the Ministry of Agriculture and Rural Development of the Slovak Republic (2019), the estimated consumption of sheep's milk per capita is on average around 2 kg (in 2018 it was 1.96 kg per capita). The average selling prices of sheep's milk according to Huba et al. (2018) for the year 2018 are around 1 Euro (specifically 0.98 EUR per liter of sheep's milk).

Scientific hypotheses

Assumption n. 1: We assume that there is a relationship between the age of the respondent and the consumption of sheep's milk.

Assumption n. 2: We assume that there is no relationship between the respondent's temperament and the factor that most influences them when buying sheep's milk.

Assumption n. 3: We assume that the personality in terms of emotional stability/lability has an impact on the emotional behaviour and decisions of consumers on the food market.

Assumption n. 4: We assume that the consumer's extroverted/introverted personality does not affect their emotionality in food market behaviour and decisions.

Assumption n. 5: We assume that the type of consumer temperament influences their emotional behaviour and decision-making in the food market.

MATERIAL AND METHODOLOGY

Based on the findings of consumer behaviour on the market of sheep's milk and its products, a questionnaire method was used. The survey was conducted online using the Google Forms tool. Data acquisition was carried out at the turn of two years (2019 – 2020) and took place in the Slovak Republic. The sample was 796 respondents. The survey was divided into four parts. The first part focused

on the Eysenck personality test, which determines the temperament, emotional lability/stability as well as extroversion/introversion. The second part focused on factual issues related to consumer behaviour when buying food. This part focused on consumer behavior on the market, i.e. whether they act emotionally or rationally. The third part focused on specific-factual issues, which were focused on the consumption of sheep's milk, consumer preferences, and also on the factors influencing the purchase. The last part of the questionnaire survey was focused on classification questions. In the beginning, it was necessary to process and evaluate Eysenck's personality questionnaire. To evaluate the test, a publicly available and in practice used evaluation method was used - tabular application of values in a template, which is based on the horizontal and vertical axes.

Table 1 Rating scale intervals – temperament.

Type of temperament	Rating scale on the Y-axis	Rating scale on the X-axis
Melancholic	<13 – 24>	<0 – 11>
Choleric	<13 – 24>	<13 – 24>
Phlegmatic	<0 – 11>	<0 – 11>
Sanguine	<0 – 11>	<13 – 24>
Uncertain	= 12	= 12

Table 2 Rating scale intervals – emotionality.

Consumer	Rating scale
Rational	<1 – 24>
Emotional	<24 – 40>

Table 3 Characteristics of Respondents.

Category of Respondents	%	Place of Residence	%
Male	34.30	City	51.88
Female	65.70	Village	48.12
Age Structure	%	Net monthly income (€)	%
Up to 26 years	41.33	Up to 500	41.08
27 – 33 years	16.33	501 – 800	28.77
34 – 45 years	18.84	801 – 1 000	14.20
46 – 55 years	14.07	1 001 – 1 500	10.43
56 – 62 years	4.77	1 501 and more	5.53
63 and more years	4.65		
Education	%	Economic activity	%
Primary school	4.40	Student	26.88
Vocational school	6.91	Employed	59.92
Secondary school	43.47	Unemployed	6.66
University	45.23	Retired	6.53

The position of the resulting point (Table 1) represents the location in one of the four quarters, with each quarter representing a different temperament.

This was followed by a survey of consumer behaviour to assess consumers' emotional reactions, views, and attitudes in the sheep's milk market. The finding is based on a scale as an attitude test. It includes 8 items for which the respondents indicate the degree of their agreement or disagreement with the above statements concerning behaviour and decision-making when purchasing food products. A Likert 5 point scale was used (1 – strongly disagree, 2 – disagree, 3 – don't know, 4 – agree, 5 – strongly agree). Within this assessment, a gross emotionality score has been calculated, which can be in the range of 1 to 40. The higher the score, the higher the tendency of the consumer to behave emotionally. Individual respondents were evaluated based on a specified interval of the rating scale (Table 2).

The structure of the obtained data according to the gender was as follows - 65.70% of women and 34.30% of men. The age structure was divided into 6 age categories. The age structure up to 26 years had the largest share (41.33%). The highest achieved education was at the university level (45.23%). Regarding the economic status of the respondents, most of them (59.92%) are employed. Within the net monthly income per respondent, the largest interval turned out to be an income not higher than EUR 500 (41.08%). Most of the respondents stated the city as their residence and most respondents live in the Nitra region. More information on the structure of respondents is given in Table 3.

Statistic analysis

At the beginning of the questionnaire survey, the scientific assumptions were set, the validity of which would be verified using selected statistical methods. Contingency tables were applied to the obtained primary data and subsequently, the data were evaluated by the means of qualitative statistics - the Chi-square test of good agreement. The degree of dependence between the examined variables was determined by the means of the Cramer contingency coefficient.

If the calculated test criterion χ^2 is higher than or equal to χ^2 for the significance level $\alpha = 0.05$ and degrees of freedom $(r-1) * (s-1)$, then the H_0 hypothesis is rejected, which means that there is a relationship between the given variables. Conversely, if the calculated test criterion χ^2 is less than χ^2 for the significance level $\alpha = 0.05$ and degrees of freedom $(r-1) * (s-1)$, then H_0 hypothesis is accepted, which means that there is no dependence between the given variables.

RESULTS AND DISCUSSION

The research was implemented to identify the temperament, extroversion/introversion of the respondent or emotional stability/lability, and then define their impact on emotional or rational behaviour on the sheep's milk market and also to ascertain consumer attitudes towards the sold milk products. Therefore, it was necessary to categorize respondents at the beginning of the research. The sorting was carried out based on the question of whether they consume sheep's milk and sheep's milk

products. Thus, the respondents who answered positively to the above question continued. 642 respondents (80.65%) answered this question in the affirmative. The first part of the research was focused on determining the temperament, extroversion/introversion, and also on emotional stability/lability through Eysenck's personality questionnaire. Figure 1 shows approximately the same proportion of unstable and stable individuals in the sample of respondents. Emotionally stable people predominate (345 respondents), which is 54.33%. On the contrary, in a smaller proportion (297 respondents), the respondents are emotionally unstable.

Based on the above-obtained results, we can state that a large number of people do not have neurotic tendencies, i.e. they are emotionally stable. They are characterized by less sensitivity and susceptibility to other people. They are characterized by endurance and resistance, they react calmly and are not subject to impulsive reactions. They consider decisions precisely and have their emotions and feelings under control. On the other hand, there are people with neurotic tendencies, which represent their lability. They are more sensitive and easier to be swayed. Almost identical results were found in a research document by Rybanská (2015). The author discusses the fact that both groups of people are important for marketing research, as it is necessary to properly set up and target a marketing strategy along with communication to a selected segment of consumers.

The statistical observation was made on an assumption whether the personality in terms of emotional stability / lability has an impact on the emotional behavior and decision-making of the consumer on the food market.

H₀: We assume that personality in terms of emotional stability/lability does not influence the emotional behavior and decisions of consumers in the food market.

H₁: We assume that personality in terms of emotional stability/lability has an impact on the emotional behavior and decisions of consumers in the food market.

We have used the Chi-square test of square contingency to verify the hypotheses. In this case, the tabular value was at the level of 3.84 and the test characteristic was calculated at the level of 12.20, which means that we reject the null hypothesis. We accept the alternative hypothesis and claim that the personality in terms of emotional stability / lability influences the emotional behavior and decisions of consumers on the food market. Based on the test results, we consider the assumption to be correct. The strength of the observed dependence was subsequently investigated with the use of the Cramer correlation coefficient (0.17), based on which it can be stated that there is only a small correlation / weak dependence between the analyzed variables.

Figure 2 shows approximately the same proportion of introverted and extroverted respondents. Out of the total number of filtered respondents, we refer to 347 respondents as extroverts. The remaining more than 45% of respondents can be ranked based on a personality test among introverts (295 respondents).

Based on the above results, we can conclude that a larger number of respondents are extroverts. Impulsive action is typical for this type of personality (they act first and then

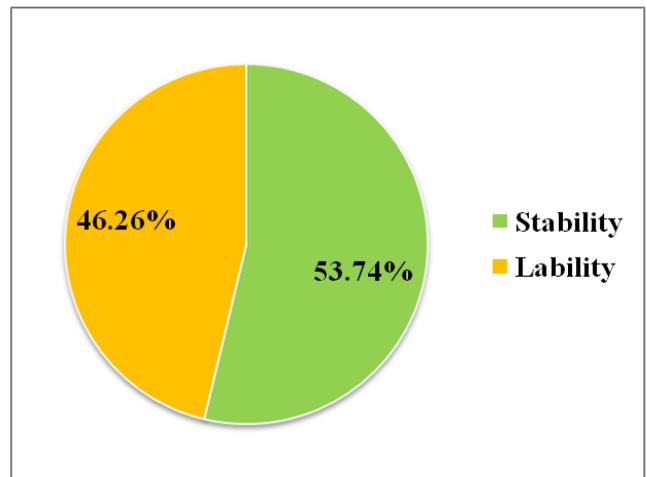


Figure 1 Structure of respondents according to the scale of extraversion.

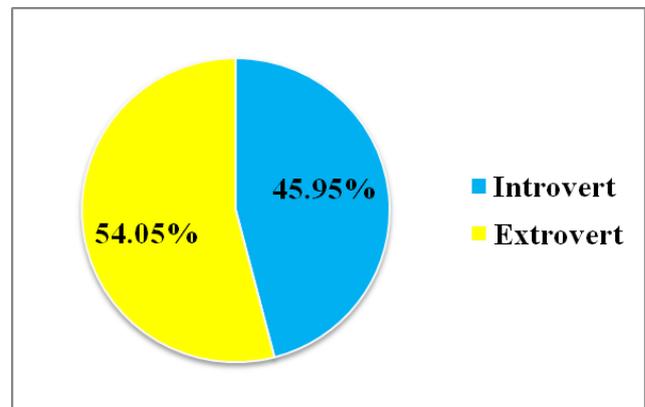


Figure 2 Structure of respondents according to the scale of extraversion.

think), they have a strong need for contact with the external environment. They also like diversity, they are open and motivated towards other people and things. On the contrary, the introverts are motivated internally, they are trying to establish an authentic connection with the others. The team of authors Lu et al. (2015) concluded that even with this division of people, one mentioned group of people in marketing research cannot be forgotten, as their response to stimuli is different.

A statistical observation was made on the established assumption that the extroverted / introverted personality of the consumer does not influence his emotionality in behaviour and decision-making on the food market.

H₀: We assume that the consumer's extroverted/introverted personality does not affect his/her emotionality on food market behaviour and decision-making.

H₁: We assume that the consumer's extroverted/introverted personality influences his/her emotionality on food market behaviour and decision-making.

To verify the hypotheses, we have used the Chi-square test of square contingency. In this case, the tabular value was equal to 3.84 and the test characteristic was calculated at 0.18, which means that we reject the alternative hypothesis. We accept the null hypothesis and claim that

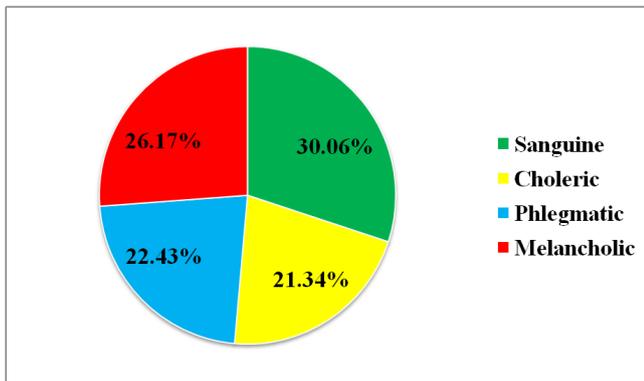


Figure 3 Structure of respondents according to temperament.

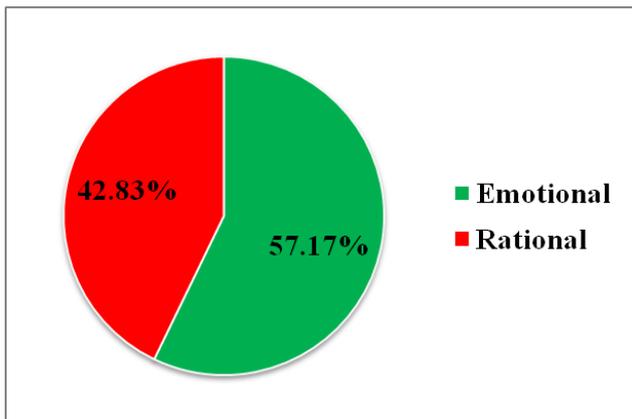


Figure 4 Emotional vs. rational consumer behavior.

the consumer's extroverted/introverted personality does not affect his/her emotionality on food market behavior and decision-making. Based on the test results, we consider the assumption to be correct.

If we reconcile the above dimensions of the personality test (emotional stability/lability and extroversion / introversion), Hippocrates' 4 types of temperament (phlegmatic, sanguine, choleric, and melancholic) can be confirmed. The distribution according to temperament is shown in Figure 3.

The most represented group among the evaluated respondents are sanguine, who is represented by 193 respondents in the total number. The team of authors **UI Islam et al. (2017)** claims that they are characterized by high mental activity and performance, but also by a rapid appearance and alternation of emotions. The second most represented type of temperament is melancholic (168 respondents). This type is characterized by a slow course of emotions, but with great intensity and longer duration. The third group of temperament was a phlegmatic (144 respondents). Low levels of mental activity are typical for phlegmatic. The last group of temperaments is choleric people (137 respondents), who are characterized by a high level of mental activity, energetic action, sharpness, short temper, the strength of movements, fast, pace and irascibility.

The second part of the survey was focused on identifying the emotionality manifested in the consumer behaviour of respondents. The task was to classify the respondents into two groups, namely emotional and rational consumers

(Figure 4). In this section, 8 statements were presented, in which the respondents had to mark their answers in the form of a Likert scale (assign points from 1 to 5).

Figure 4 shows that emotional consumers (367 respondents) are more represented in the research sample. They are characterized by the fact that they are strongly influenced by emotions when making purchasing decisions, their rational choices remain slightly in the background. The second group is rational consumers (275 respondents). Emotions do not have a significant effect on this type of person. The team of authors **Dwivedi et al. (2019)** states in their research that the fact of how they feel when buying remains in the background. It is typical of them that they consistently consider all possible alternatives and carefully compare them.

A statistical observation was made on the established assumption - that the type of consumer temperament influences his/her emotional behaviour and decision-making on the food market.

Ho: We assume that the type of consumer's temperament does not influence his/her emotional behaviour and decision-making in the food market.

H1: We assume that the type of consumer's temperament influences his/her emotional behaviour and decision-making in the food market.

To verify the hypotheses, we use the Chi-square test of square contingency. In this case, the tabular value was 3.84 and the test characteristic was calculated at 18.30, which means that we reject the null hypothesis. We accept the alternative hypothesis and claim that the type of consumer temperament influences his/her emotional behavior and decision-making in the food market. Based on the test results, we consider the assumption to be correct. The strength of the detected dependence was subsequently investigated with the use of the Cramer's correlation coefficient (0.18), based on which it can be stated that there is only a small correlation or weak dependence between the analyzed variables.

The last part of the research was focused on consumer behaviour on the market of sheep's milk and its products. In this part, we investigated consumer behaviour to the purchase of specific types of sheep products, reasons for consumption, the places of purchase, factors influencing the purchase, and also factors that would increase the consumption of these specific types of food. The first question in this part was focused on the specific types of sheep's milk products purchased (Figure 5).

It follows from the above figure that most respondents prefer sheep cheese (197 respondents), other popular and consumed products are parenica (steamed cheese), nite (string cheese), and korbáčiky (braided string cheese), which were mentioned by 164 respondents (12.81%). Oštiepok (cheese preserved by smoked cure) was purchased by 138 respondents, i.e. 17.34% of the total number of respondents. This was followed by hard and lump cheeses – 164 respondents (20.60%), sour milk (sheep's whey) – 69 respondents (8.67%) and yogurts (76 respondents). The least interest among consumers is in sheep's milk, which is bought by only 6.28% of respondents (50 respondents).

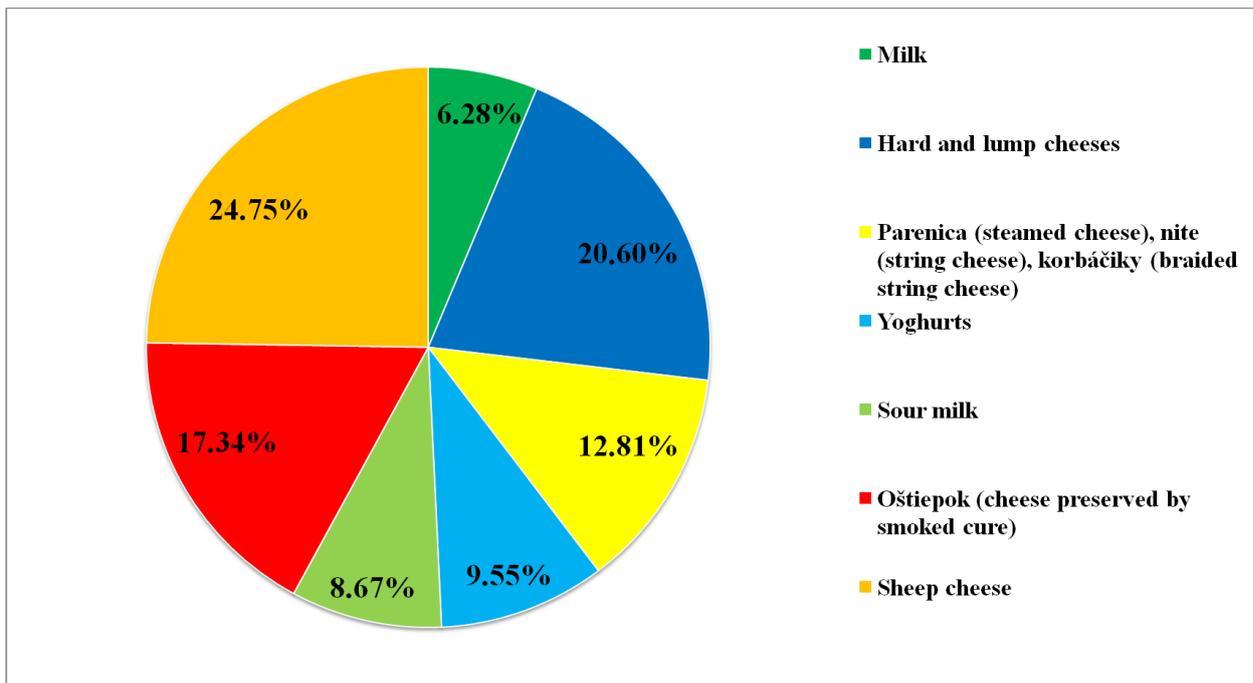


Figure 5 Purchased types of sheep products.

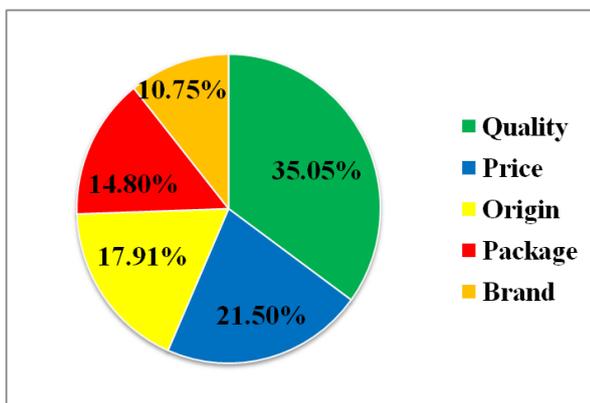


Figure 6 Factors influencing the consumer when buying sheep products.

A statistical observation was made on the established assumption - whether there is a relationship between the age of the respondent and the consumption of sheep's milk.

H₀: We assume that there is no relationship between the age of the respondent and the consumption of sheep's milk.

H₁: We assume that there is a relationship between the age of the respondent and the consumption of sheep's milk.

To verify the hypotheses, we use the Chi-square test of square contingency. In this case, the tabular value was 11.07 and the test characteristic was calculated at 39.40, which means that we reject the null hypothesis. We accept the alternative hypothesis and claim that there is a relationship between the age of the respondent and the consumption of sheep's milk. Based on the test results, we consider the assumption to be correct. The strength of the observed dependence was then investigated using the Cramer correlation coefficient (0.34), based on which it can be stated that there is a small almost medium correlation / dependence between the analyzed variables.

Another issue dealt with the reasons for consuming sheep's milk and sheep's milk products. Most respondents answered that the reason for consuming these products is their taste (55.76%). This was followed by the health factor (23.21%), nutritional value (19.47%), and finally other reasons for consumption, which were identified by 10 respondents (most often they reported consumption based on support for sheep breeding in Slovakia).

This was followed by a question that focused on the specific purchase of sheep's milk and its products. We, therefore, asked where specifically (which store) consumers buy these products. They most often make purchases in retail chains (48.44%). The main advantage of retail chains is time availability, which is a very important criterion for more and more buyers. Discounts and supermarkets, as a modern type of store in the vicinity, are gaining in importance, and buyers shop here more often. On the contrary, the importance of small and counter stores is declining and specialized stores are defending their position only with difficulty (Silver et al., 2016). Another shopping place is local stores (29.13%) and the last place was a specialized store (22.43%). The penultimate question of inquiry followed, and these were the factors that influence the consumer when buying sheep products (Figure 6).

The most significant influence on the purchase of sheep products is quality (225 respondents). Then the price (138 respondents), origin, and packaging follow. In the last place was the brand factor, which was marked by 69 respondents.

A statistical observation was made on the established assumption – whether there is some dependence between the respondent's temperament and the factor that most influences them when buying sheep's milk.

H₀: We assume that there is no relationship between the respondent's temperament and the factor that most influences them when buying sheep's milk.

H₁: We assume that there is a relationship between the respondent's temperament and the factor that most influences them when buying sheep's milk.

To verify the hypotheses, we use the Chi-square test of square contingency. In this case, the tabular value was at the level of 21.03 and the test characteristic was calculated at the level of 11.54, which means that we reject the alternative hypothesis. We accept the null hypothesis and claim that there is no relationship between the respondent's temperament and the factor that most influences them when buying sheep's milk. Based on the test results, we consider the assumption to be correct.

Most respondents know that the consumption of sheep's milk and sheep's dairy products is low in Slovakia. Therefore, the last question was focused on the reasons that would lead to higher consumption of sheep's milk and its products. Most respondents stated that the reason that would increase their consumption is the greater availability of products (25.86%). The second factor was a lower price (24.61%), followed by better promotion (22.43%) and higher quality (17.91%). Other respondents indicated a different option saying they would not be motivated by anything.

CONCLUSION

The survey showed that more than half of the respondents are emotionally stable (53.74%). Within the personality type, there is a higher proportion of extroverts (54.05%). The sanguine was most represented within the temperament (30.06%) and emotional types of respondents predominate (57.17%) within decision-making based on emotions.

In 2016, the Commodity Council for Sheep and Goats of the Ministry of Regional Development of the Slovak Republic stated that consumer interest in sheep products is increasing. Based on the results, it can be stated that the consumption of sheep's milk and sheep's products is not so high in Slovakia. More than 80% of respondents in the study consume sheep's milk and sheep's milk products. The rest of the respondents do not consume these products and the most common reasons were unpopularity, preference for cow's milk over sheep's milk, health reasons such as the allergy or intolerance, as well as high prices or unavailability. The most frequently consumed and also purchased sheep product is sheep cheese (24.75%), which is considered a traditional Slovak product. Other popular and consumed products among people are cheeses (20.60%), oštiepok (cheese preserved by smoked cure) – (17.34%). The research also found that consumers in the market of sheep's milk products use mainly retail chains as a place of purchase (48.44%). According to the respondents, the most important factor that affects the purchase of these products was their quality (35.05%). According to consumers of the survey, the price also has a significant impact (21.50%). An important finding was to obtain information about what would motivate consumers or would lead to higher consumption of sheep's milk and its products. The research shows that most respondents would welcome more accessibility (25.86%), followed by a lower price (24.61%) and better promotion (22.43%).

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