

Consumption and Preferences of Dairy Products by Taiwanese and Polish Students [†]

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Abstract: The consumption of dairy products, especially fermented milk products, which are attributed many health-promoting properties, seems to be different on the Polish and Taiwanese markets. The aim of the study was to assess consumption and preferences concerning the choice of dairy products by Polish and Taiwanese consumers. The present study was conducted in Taichung, Taiwan and in Warsaw, Poland. Data was obtained through the PAPI questionnaire, involving 200 respondents aged 19–25 years old. One hundred respondents were students from Department of Animal Science, National Chung Hsing University and another one hundred were students from Department of Human Nutrition, Warsaw University of Life Sciences. The results obtained indicate that Poles (39%) were more likely to declare consuming dairy products daily compared to Taiwanese (14%). Among the most frequently consumed dairy products, Polish students mentioned milk (89%), yoghurt (80%) and ripened cheese (69% of respondents). Taiwanese, on the other hand, mentioned milk (95%), yoghurt especially drinking yoghurt (81%) as well as dairy desserts (70%) and yakult (69%). Polish students preferred regular fat yoghurt (53%) and low fat yoghurt (22%), while the preferences of Taiwanese students were quite different, with most people declaring a preference for fat yoghurt (57%) and regular fat yoghurt (22%). Evaluation of dairy products, especially fermented milk products, consumption among consumers showed differences in consumption and preferences of these products between Polish and Taiwanese students.

Keywords: dairy product; fermented milk products; Taiwanese; Poles; preference; consumption

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1. Introduction

In Taiwanese, the dairy consumption practice in middle age is low and is 22.2–25.9%, while is higher in adolescents (32.1%), elderly (43.6%) and school children (49.3%) [1]. A study conducted by Grębowiec and Korytkowska [2] indicates that the frequency of consumption of dairy products by Poles is higher. When asked about the frequency of consumption of these products, 33% of respondents indicated the answer “several times a day”, while 29% of people indicated a less frequent frequency of consumption i.e., “several times a week”.

The consumption of dairy products, especially fermented milk products, which are attributed many health-promoting properties, seems to be different on the Polish and Taiwanese markets. The aim of the study was to assess consumption and preferences concerning the choice of dairy products by Polish and Taiwanese students.

2. Material and Methods

The pilot study was conducted in 2017–2018 in Taichung, Taiwan and in Warsaw, Poland. Data was obtained through the PAPI (Paper & Pen Personal Interview), involving 200 respondents aged 19–25 years old. One hundred respondents were students from Department of Animal Science, National Chung Hsing University and another one hundred were students from Department of Human Nutrition, Warsaw University of Life Sciences. The self-designed survey included questions about dairy product consumption and preferences as well as demographic questions (gender, age, home economic condition). Excel 2016 was used to analyze the data.

3. Results

The study involved 100 Polish and 100 Taiwanese consumers, aged 19 to 25 years, of which 79 women and 21 men in Poland, and 43 women and 57 men in Taiwan. The wealth situation of the respondents in both countries was mainly described by them as good and average (Table 1).

Table 1. Characteristic of the sample (N = 200).

Sample Characteristic		Poland (%)	Taiwan (%)
Gender	Female	79	43
	Male	21	57
Age	19–22	38	86
	23–25	72	14
Home economy conditions	Very good	11	2
	Good	53	10
	Average	34	83
	Bad	0	5
	Very bad	2	1

The results obtained indicate (Figure 1) that Poles (39%) were more likely to declare consuming dairy products daily compared to Taiwanese (14%).

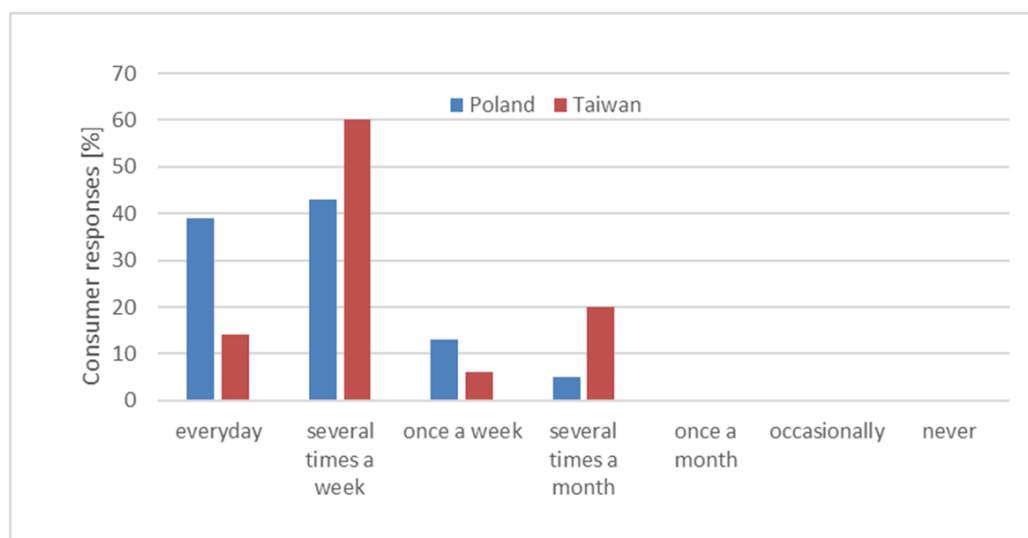


Figure 1. Frequency of dairy products consumption by Polish and Taiwanese consumers.

Among the most frequently consumed dairy products (Figure 2), Polish students mentioned milk (89%), yoghurt (80%) and ripened cheese (69% of respondents).

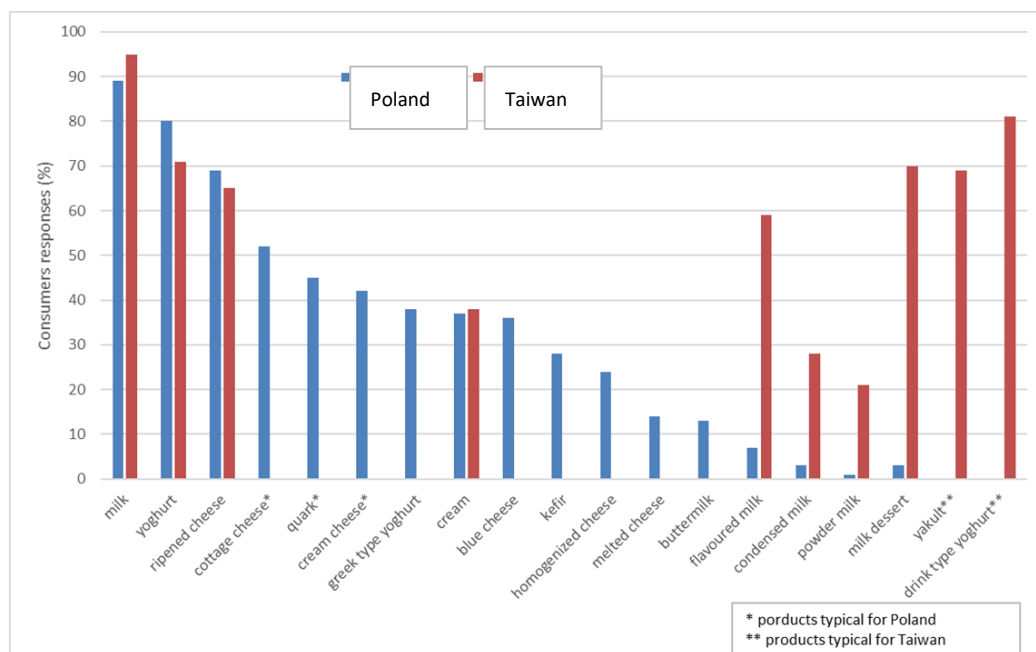


Figure 2. Dairy products declared as most consumed by Polish and Taiwanese respondents.

Taiwanese, on the other hand, mentioned milk (95%), yoghurt especially drinking yoghurt (81%) as well as dairy desserts (70%) and yakult (69%).

For Polish consumers, the most important characteristic of yoghurt influencing their purchase decision was its composition, followed by texture, appearance and sour taste (Figure 3).

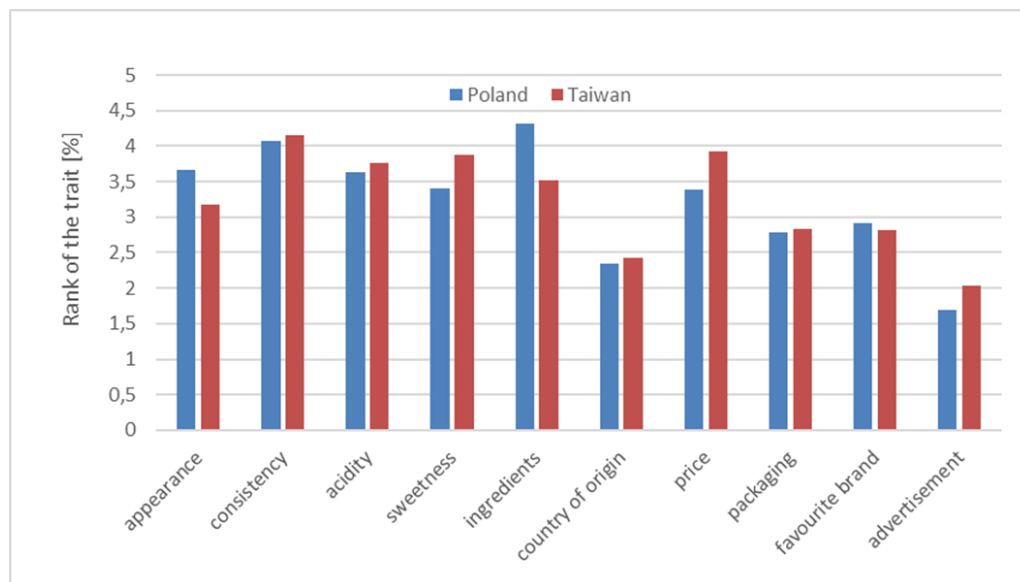


Figure 3. Characteristic of yoghurt influencing purchase decision of Polish and Taiwanese consumers- scale of 1–5, where 5-most important, 1-least important.

Whereas for Taiwanese students, the most important factor influencing the purchase decision of yoghurt was its texture, price and sweet taste of yoghurt.

There were also differences among the respondents regarding their preference for fat content in yogurt (Figure 4).

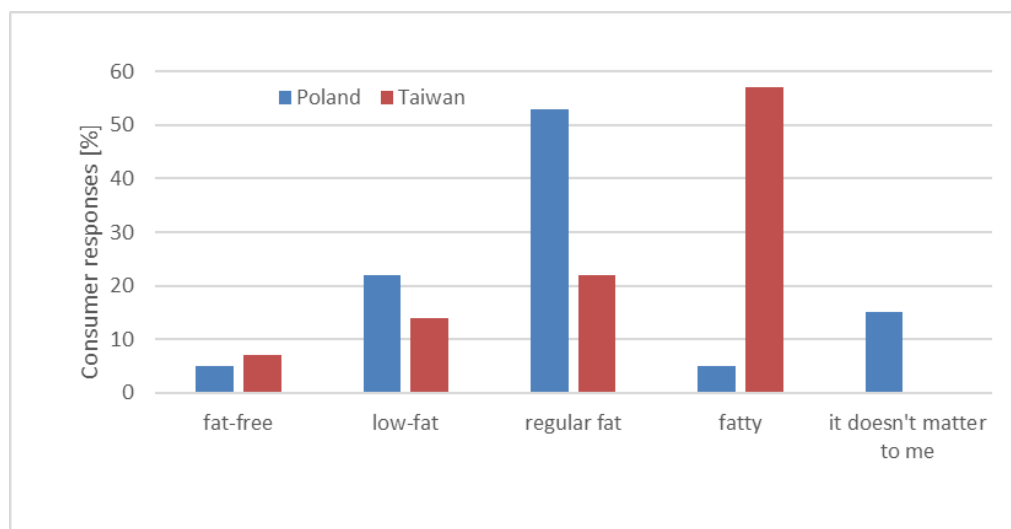


Figure 4. Fat content preferences in yogurt among Polish and Taiwanese respondents.

Polish students preferred regular fat yoghurt (53%) and low fat yoghurt (22%), while the preferences of Taiwanese students were quite different, with most people declaring a preference for fat yoghurt (57%) and regular fat yoghurt (22%).

According to Health Promotion Administration, Ministry's of Health and Welfare recommendations on dairy consumption in Taiwan, Taiwanese are recommended to consume "A glass of milk twice a day" [3]. However, according to Lee [2] the average availability of milk in Taiwan is only 0.6 servings per person per day due to Taiwan's limited milk production and high dependence on imports. Furthermore, as shown in analyses of dietary trends and balance sheets conducted in subsequent years, cultural and socioeconomic barriers cause resistance among Taiwanese to increase dairy intake beyond one serving per day [4]. Asians are generally lactose intolerant. A historical analysis of dairy consumption in Asia reveals that fermented mammalian milk was consumed in South Asia and various Asian subgroups and regions, while most dairy consumption in Asia after World War 2 was of imported milk powder or fresh liquid milk. The popularization of coffee and tea with milk, as well as yogurt, contributed to the increase in dairy consumption in Asian countries [4].

Dairy exports are important in the agri-food trade of all EU countries as well as in the global dairy trade [5]. Poland, Germany, France and Great Britain are the four countries with the highest milk production in Europe [6]. The Pyramid of Healthy Nutrition and Physical Activity for Adults in Poland created by Prof. Mirosław Jarosz, with reference to dairy products, recommends daily consumption of at least 2 large glasses of milk, which can be replaced by yogurt, kefir and partially by cheese [7]. However, recent data indicates that average monthly consumption of milk in Poland decreases from 4.6 [kg/litre per person] in 2004 to 2.94 [kg/litre per person] in 2018, while yoghurt consumption increases from 0.35 [kg/litre per person] in 2004 to 0.52 [kg/litre per person] in 2018. Consumption of butter and cheese&curd remains at a similar level, i.e., 0.37 [kg/litre per person/month] for butter and 0.87 [kg/litre per person/month] for cheese & curd [6].

4. Conclusions

Evaluation of dairy products, especially fermented milk products, consumption among consumers showed differences in consumption and preferences of these products between Polish and Taiwanese students. The results of this research were used to guide the next phase of the study, which aims to develop a functional yogurt that meets the preferences of respondents from both countries.

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