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*Małgorzata Rutkowska-Podołowska\**  
*Wrocław University of Technology*

*Nina Szczygieł*  
*University of Aveiro, Portugal*

*Grzegorz Podołowski*  
*Poland*

## **Vinotherapy as an Innovation – Impact on Health Attitudes**

**JEL Classification:** *I12; O13; O30; O35*

**Keywords:** *vinotherapy; wine consumption; health attitudes; cardiovascular system; innovation*

**Abstract:** *Evidence from research has not only excluded negative consequence of moderate wine consumption, but associated consumption of grapes and their components with a protective impact on health. Wine demonstrates anti-cancer, antioxidant and defensive results for the cardiovascular system. Not surprisingly, there is an interest in exploring a growing consumption of wine and turning it into innovative solutions with different approaches, making use of areas that have undergone*

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\* Contact corresponding author: [malgorzata.rutkowska-podolowska@pwr.edu.pl](mailto:malgorzata.rutkowska-podolowska@pwr.edu.pl), Wrocław University of Technology, Faculty of Computer Science and Management, Department of Infrastructures of Management, ul. Wybrzeże Wyspiańskiego 27, 50-370 Wrocław, Poland

*significant transformations over last decades as a results of a global dynamical change which offer new consumption patterns seen now as driving forces for stagnating economies of the XXI century.*

*This article builds on this perspective aiming to shed some light on wine consumption patterns, health attitudes and the perception and awareness of positive effect of a moderate consumption of wine on human health. The study was carried out between March and May 2013 as a self-administered questionnaire to visitors of liquor stores, wineries, wineries of the Lower Silesia region, Poland. Results demonstrate an interest in consumption of wine with opposite tendencies in opinions about the recommended about the recommended wine quantity of consumption. Some consciousness of health-related benefits and applications of wine show an increasing awareness in this matter.*

## **Introduction**

In modern societies, adopting healthy attitudes and living healthy lifestyles has become one of important factors influencing human development and quality of life (Greenlund *et al.*, 2002). In today's world, healthy attitudes create a stimulus to the development of the economy next to cultural and social values creating a kind of labor market in itself. Health is a value for a society as only healthy society allows for its growth (EFPIA, 2014). This logic is largely seen in more developed societies where primary concern is focused on human and its well-being.

The "French paradox" proves that the French suffer from 40% less heart attacks than the Americans consuming 30% more fat what is due to diet including regular modest amounts of wine (St. Leger, Cochrane, & Moore, 1979). With a global increase in wine consumption (Bruwer *et al.*, 2012; Anderson & Wittwer, 2015) there is a natural interest in exploring that pattern and reviewing possible economic applications turning into innovative solutions.

We undertake this challenge by exploring current patterns of wine consumption and analyzing attitudes toward health, also related to wine consumption, in the sample of Polish consumers of alcohol beverages in the Lower Silesia region.

## **Research Methodology**

The study was carried out between March and May 2013 in the Lower Silesia region, Poland. A self-administered questionnaire was applied to visitors and guests of wineries, liquor stores, restaurants and hotels and aimed

to understand patterns of wine consumption and attitudes toward consumption of wine related with health behaviors.

The motivation of the study was twofold. Firstly, we were trying to find out patterns of wine consumption within overall alcohol consumption. Poland is not a country of traditionally high wine consumption, however, lifestyles and approaches have been subject to change, and there have been some interesting tendencies in this matter in last years. Secondly, our objective was to determine attitudes towards health that respondents had, including general factors and those related to wine consumption.

The first part of the questionnaire contained items concerning broad issues related to the consumption of wine and its impact on health attitudes. The second part of the questionnaire sought for perceptions and knowledge of vinotherapy, benefits of moderate wine consumption on health, and possible wine applications.

The questionnaire was anonymous. Participants were informed about the objectives of the study and the possibility to deny participation. The interviewer did not intervene in the data collection given the specificity of the places (e.g. restaurant) yet, he was accessible in case of any eventual doubts remaining relatively close, in order to guarantee the privacy of respondents.

### **Literature review**

Vinotherapy is a relatively new trend in wellness, deriving from France and involving beneficial properties of grapes (Resch, 2010). Vinotherapy, according to the commonly accepted definition, is a programme based on elements of grapes, including grape, gels, skin, flesh and pips to effective treatments (Vinotherapy, 2015). Grape skin is well known from its beneficial properties to health. It contains resveratrol, a form of oestrogen, in high concentration proven to have antioxidant, anti-coagulant, anti-inflammatory and anti-carcinogen effects. Resveratrol is said to raise the levels of HDL and decrease the level of LDL in blood, hence having a preventive impact from heart attack and cerebrovascular accident. Proanthocyanidins in grape skin with their vitamins and minerals fight free radicals and boost antioxidant ability of the body. These potentials may be supportive in building the immune system and fighting severe malignant and other diseases (Celotti *et al.*, 1996; Gehm *et al.*, 1997; Jang *et al.*, 1997; Soleas *et al.*, 1997; Clement *et al.*, 1998; Kopp, 1998).

Vinotherapy is a philosophy of life based on the expectation of good quality life which can be achieved by appropriate treatments with the use of

wine, and, on the other hand, is a combination of the energy of nature with the latest scientific achievements (Władzyka, 2010). If vinotherapy is considered a philosophy of life, then it has a substantial impact on health attitudes.

Health is understood as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 1946, p. 100) and, consequently, provision of health care services is currently widening from being delivered to an ill person to approaching the general population, with efforts shifting beyond acute episodes to focus on health promotion, prevention and rehabilitation. Health is a multidimensional phenomenon, and requires nowadays an intersectoral and network approach in order to give response to complex long-term chronic conditions (Salomon *et al.*, 2003).

Health behavior is a specific action that has a direct impact on health (Kulmatycki, 1999). Among health behaviors, literature finds those with a positive impact on health, such as balanced diet, clean body and the environment, physical activity, good relations with people, and coping with stress, and behaviors with a destructive effect on health, such as substance abuse, lack of exercise or unreasonable diet (Szaruga, 2010). Attitude is told to represent a general evaluation of an object and, in this understanding, affect is thought the most indispensable feature of an attitude. Another perspective considers the attitude as multidimensional, comprised of related but at the same time independent elements (Rosenberg & Hovland, 1960). Research has investigated the relation between attitude and behavior constructs with early works indicating poor correlation and later ones turning into strong correlation between them (Corey, 1937; Ajzen & Fishbein, 1977).

There are several economic and social determinants of the innovation process. Among the external factors, the most important role is played by market conditions. Innovations are a result of collaboration between research and development, and social needs, expressed in a suitable structure of demand. New products, on the other hand, are provided to the market under the form of supply. Innovations relate thus to the sphere of social and economic activity without which any development, structural change or improvement in economic efficiency of enterprises would not be possible in a long-term. An interesting and relevant aspect would be then to seek for changes taking place in the society through the scope of postures and attitudes toward own health finding a reflection in new market responses and structures. This mechanism shall lead towards analysis of the extent to which economic and social conditions are able to encourage or confine pro-health activities.

The concept of innovation can be considered in two aspects. Some scholars understand innovation through changes in the sphere of production leading to new process resolutions and creation of new products. Others interpret it as much wider, believing that innovation is research and development aimed at application and use of improved technology and organizational solutions (Brzozowski *et al.*, 2001). Innovation undoubtedly needs to be considered as a behavior adopted “consistently over time” (Subramanian & Nilakanta, 1996, p. 633). Adopting a behavior earlier than others is not a reason to believe it will similarly happen in the future. Innovative behaviors need measurement under several occasions. Research in service innovation has drawn an extensive contribution from literature in product development and product innovation. While in some of the works the logic underlying the study was the same as for the product, others attempted to explore the difference between two concepts (de Brentani, 2001) and recent studies on service innovation have agreed that innovation in services follows different patterns than manufacturing innovation (Jong *et al.*, 2003).

In literature on service companies, the terms ‘product innovation’ and ‘service product innovation’ are used interchangeably to describe innovations in the core service that aim to create new revenue (Oke, 2007). Ostrom *et al.* (2010) suggest that service innovations are related to service delivery and overall experience, creating value for the business, customers, employees, partners and the community through the existing or improved offer, service process, and business model. Subramanian and Nilakanta (1996) argue that depending on the research area in which the study on innovation is carried out, there will be different patterns of research interests. In marketing, the unit of analysis is an individual consumer and the interest in studying innovation will include reasons for innovative behaviors among consumers. On the other hand, in strategic management or organisational theory, the unit of analysis is an individual organisation. At this point, the research will focus on understanding key features of successful innovative organisations and evaluating effects of innovative practices on performance (Subramanian & Nilakanta, 1996). From the viewpoint of the present work, innovations are a response to the changing environment, that is, changing patterns in wine consumption for health purposes. Consumers make their choices, may change their behavior and influence others, and so it is important to understand the opinion leaders and reasons behind their choices. Consumers are not merely passive recipients, but rather co-creators of value. Arising from a company innovative approach, it can develop a capability toward innovation, integrating product innovation, process innovation, organisational innovation and marketing innovation (OECD, 2005). A product innovation means introducing a good/service that

is new to the market or significantly improved to what consumers recognize as its specifications. A process innovation means implementing a new or considerably improved production or delivery method. An organizational innovation is an implementation of a new method of a business practice at any level that aims to increase the company performance. A marketing innovation means implementing a new marketing strategy involving changes in the product, price, promotion or distribution levels to better address customer needs and wants (OECD, 2005). Taking into consideration characteristics of vinotherapy and its current status especially in Poland, this study will consider it as a product innovation. It has, however, a potential to be included in other categories.

## **Results**

Questionnaires were initially distributed within 133 persons. From those, 16 persons refused to participate in the study and further 17 questionnaires were invalid after inspection. As a result, 100 questionnaires were validated for the study.

### **Differentiating Attitudes Toward Wine Consumption**

Men between 25 and 45 and women between 35 and 45 consume preferably wine, while younger women between 18 and 35 are inclined toward wine and beer. Women aged 45-60 demonstrated a preference for beer as well as men. The research shows that respondents prefer mainly red wine. This wine is consumed by both men and women, and in all age groups. White wine is consumed less frequently followed by rosé, which may be due to the lack of knowledge of this particular type. Preferences for the taste of wine among subjects differed, and the analysis did not indicate any clear tendency in this matter. Women prefer semi-sweet and semi-dry wine while men consume mostly dry and semi-dry wine. Sparkling wine is consumed occasionally. At the moment of purchase, the determining factors appear to be the taste (58.6% of females and 61.9% of males), color (24.1% of females and 19.1% of males), country of origin (27.6% of females and 23.8% of males), and price (24.1% of females and 38.1% of males). While choosing, respondents are driven firstly by taste. Price constitutes a more important factor for men than for women.

Subjects were asked to name factors differentiating positive attitudes to health. While having the general idea of the subject, only about 33% of respondents were actually able to list them. Collected subjective factors included health care, habits, good habits taken from home, health education and health-oriented culture. Objective factors mentioned by participants of the study comprehended financial resources, knowledge and education – including nutritional education, diet, meetings with experts, lifestyle, physical and social environment, genetics and fashion.

### **Current Knowledge of Vinotherapy and Its Impact on Health Attitudes**

Table 1 presents major motivation for wine consumption. Current knowledge of therapeutic capacities of wine seem limited. Respondents do consume wine, but consumption is mainly related to its taste, as well as it has to do with social purposes. Wine is consumed for its therapeutic purposes by 10.0% of respondents. Two male respondents aged 45-60 admitted the consumption of wine in excessive amounts (Table 1).

**Table 1.** Motivation for wine consumption (%)

<b>Gender/Age</b>	<b>Motivation</b>	<b>18-35</b>	<b>35-60</b>	<b>Above 60</b>
<b>Man</b>	Taste	14	14	2
	Social	0	4	2
	Therapeutic	0	4	0
	Declared excessive use	0	2	0
<b>Woman</b>	Taste	16	18	0
	Social	6	12	0
	Therapeutic	0	6	0
	Declared excessive use	0	0	0

Source: own study.

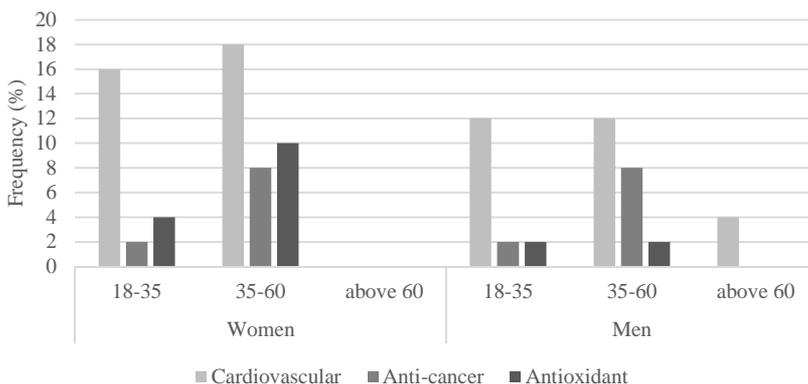
In the opinion of 42.0% of respondents (37.9% of women and 47.6% of men), consuming a glass of wine a day was the ideal amount of wine consumption. On the other hand, a group of 36.0% of respondents (41.4% of women and 28.6% of men) believed that the consumption of wine should be controlled and less frequent than 3 glasses a week. These two viewpoints indicated either a strong inclination into moderate regular wine consumption or belief that wine consumption should be limited due to its alcohol content (Table 2).

**Table 2.** Recommended wine consumption according to respondents of the study (%)

Gender/Age	Unit: 1 glass of wine/Frequency	18-35	35-60	Above 60
Man	Once a day	12	4	4
	1-3 times a week	2	8	0
	Less than 3 times a week	2	10	0
Woman	Once a day	8	14	0
	1-3 times a week	4	8	0
	Less than 3 times a week	8	16	0

Source: own study.

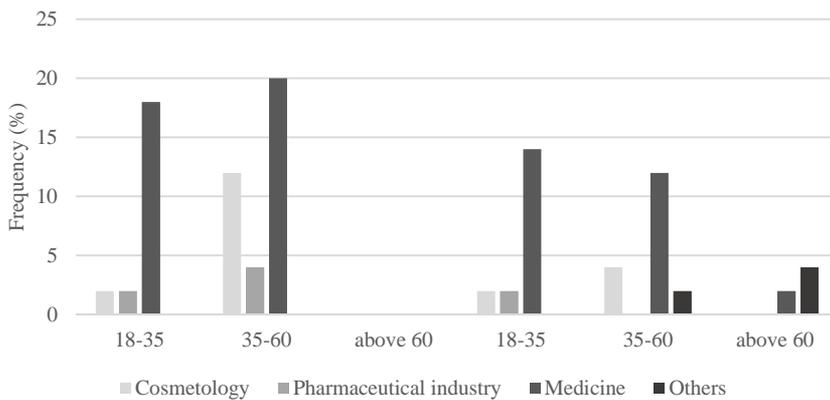
The concept of vinotherapy does not seem to be widespread within the Polish society yet. Only 20.7% of women and 23.8% of men were able to describe its meaning. Most respondents referred to vinotherapy as a therapy or treatment with the use of wine. One person however, expanded this definition and explained that vinotherapy is “a philosophy based on the hope for youth and health thanks to the consumption of wine in small quantities”. If considering its positive impact on health, respondents believed that moderate consumption of wine could function protectively for the cardiovascular system (62.0% of respondents, of which 58.6% of women and 66.7% of men), could have anti-cancer (20.0% of respondents, 17.2% of women and 23.8% of men) and antioxidant effects (18.0% of respondents, 24.1% of women and 9.5% of men) (Figure 1).

**Figure 1.** Perceptions about positive impact of a moderate wine consumption

Source: own study.

Regarding the opinions about application of wine in other areas, respondents felt wine could be successfully used in medicine (66.0% of respondents (65.5% of women and 85.7% of men), cosmetology (20.0% of respondents, 24.1% of women and 14.3% of men) and pharmaceutical industry (8.0% of respondents, 10.3% of women and 4.8% of men). Moreover, among male respondents, 9.5% mentioned some other possible use of wine, such as gastronomy (Figure 2).

**Figure 2.** Perceptions about the use of wine in health-related areas



Source: own study.

## Conclusions

This study was an attempt to understand patterns of wine consumption and character of health attitudes related to moderate consumption of wine. Wine appears to be the preferable alcohol for women aged 35-45 and men aged 25-45. When choosing wine, women seem to pay more attention to its taste and the country of origin, while to men, taste matters as well, and they are highly more price-sensitive than women. A daily consumption of a glass of wine was indicated by the largest group of respondents as a recommended amount and that tendency was the most visible in a between-group analysis in women aged 35-60. This could until some extent suggest an interest in consuming moderate amounts of wine for health-related benefits and an increasing consciousness in this matter. The consumption of wine in Poland, albeit higher over the course of last years, is still limited. While the

concept of vinotherapy is not widespread, this study gave some interesting idea on the rising notion of beneficial effects of wine consumption on health and wine application in medicine. Taking into account the consumption of wine with possible health-related benefits, respondents seemed aware of positive effects of a moderate consumption of wine. Mainly recognized was the protective effect of wine consumption for the cardiovascular system, for which wine demonstrates prophylactic, therapeutic results. Female respondents also believed that wine could be successfully applied in medicine as well as in cosmetology, which is likely to be a result of women's concern about health and beauty as wine contains antioxidants and free radicals (Troup *et al.*, 1994). Men's opinions focused mostly on medicine, yet provided other interesting applications of wine such as gastronomy. These results are an invitation to discuss possible future business opportunities that vinotherapy brings. We however acknowledge that wine consumption is associated with a higher socio-economic status and healthier lifestyles (Paschall & Lipton, 2005), which can suggest some participants' awareness of positive effects of moderate wine consumption on health.

Benefits of moderate wine consumption have been scientifically proven (Song *et al.*, 2015) and a challenge nowadays resides in exploiting current knowledge and turning it into profitable business solutions. Innovation is a critically important factor for a modern economy (Tellis *et al.*, 2008) and a growing interest in wine consumption, also for health-related purposes, opens a door for new, different ideas. Evaluation of innovation is a prerequisite of determining development and directions of strategic innovation programmes. There may be several obstacles to creating and implementing innovations, with the main being those of raising funds, and insufficient knowledge of the managerial personnel.

This is the first exploratory attempt to understand the idea of vinotherapy and awareness of benefits of moderate wine consumption. Further research is recommended in this matter, with larger samples and preferentially on a national level in order to evaluate the real dimension of the phenomenon and address issues of generalizability.

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