

# THE HEALTH COMPETENCY DETERMINANT FACTORS OF LATVIAN POPULATION

Inara UPMALĒ<sup>1</sup>, Andrejs GESKĒ<sup>2</sup>

<sup>1</sup> Riga Stradins University Red Cross medical college; Latvia

<sup>2</sup> University of Latvia; Latvia

## ABSTRACT

Competencies develop and changes throughout a person's life, they can gain or lose, going through various age stages. Their development does not end in youth, but continue on through the adult life. The ability to think and reflect those thoughts specifically come forward in the center of structure of competency, which grows at the same time as the individual matures. One of the competency types is health competency. Health competency is a relatively new concept; it is not sufficiently researched. Aim of the study was to determine the factors of an adult individual health competency. 827 respondents participated in the study, in the processing of data was used SPSS. Was used factor analysis, analysis of variance with ANOVA and Kruskal-Wallis test and Pearsons correlation. It was found that health competency is affected by several factors. These are: health education, health behavior, and the value of the environment. Each of the sets was distributed to key factors. It is the main factors affecting the health competence, but additional factors are: gender, education and income.

## JEL CLASSIFICATION & KEYWORDS

■ I19 ■ Health competency ■ Health education ■ Health behaviour

## INTRODUCTION

Quality of life includes a number of factors - prosperity, security and sustainability by providing education, health, and participation in social processes. In addition, education and health are the two most important human characteristics. But health is not the capital, which can be spent; it is available only when it is created in all life time. Conversely, for every moment of life to maintain and promote health, the competence is required. Lifelong education in the field of health can give considerable investment in the health promotion and disease prevention in the life of society. It should be perceived as the instrument of social changes, where the individuals, groups and society in general can get knowledge and skills, also opportunities and resources are available to preserve and better the health now and always; the goal of adult health education is to create health competency (Hamburg 1997). Undoubtedly, the health education is not a narrow and specific health care question, there must be a multidisciplinary approach, taking in to account all the factors which form and affect the health competency of an individual. Ilona Kickbusch (2005) points out that the concept of the health has not only relating to medicine. This means that the sustainability of communities characterize not only by a variety of socio-economic indicators, but also attitudes towards health, the conservation opportunities and factors influencing awareness. Competence is developed in interaction in formal and non-formal education. Thus, competence is not only related to learning in school. In addition to the formal educational system are needed the competencies building and development in the other social institutions. These include the family, workplace, mass media, cultural and religious organizations, as well as other social institutions (DeSeCo 2002), including the health care system as a social institution (Maksimova 2005). Therefore, competence can be seen as a dynamic process, changing, incorporating the experience, knowledge and skills and the development of practice. Competence is developed and variable throughout the human life cycle; it can gain or lose by going through the different stages of age. Its development does not end at a young age, but will continue during adulthood. Moreover, demographic trends point to an aging population and the related quality of life changes that can be mitigated if the individual has the competence to maintain care about health in a variety of life situations. The author believes that by recognizing and understanding the value of health, as well as developing and using the skills and knowledge in health preservation, a health competency is created. The health education has the determinant role in this process, although, one must admit that the health competency of the adult inhabitant in Latvia has not been plenty researched.

Aim: To develop a model of adult individual health competence in Latvia.

## Material and methods

A quantitative research method was used, and data were processed with statistical program SPSS. Author assumed that health competence model is constructed by following determinants: health education, health behavior, environment and values, which are mutually interacting. Basing on literature study, the questionnaire, containing 47 groups of questions (of 131 questions) was developed as a measuring instrument to gather data. The answers were based on the Likert scale. Likert scale helps to avoid the inconsistencies in interpretations in the answers of various respondents. Using Likert scale, it is easy to create scales to establish factors that affect the research parameters. After the development of instrument for the study, was conducted pilot study (N = 100) as a measure of the quality of a questionnaire. A pilot study evaluated the framework of question clarity, as well as the elimination of potential ambiguities and errors in the content. Were developed five attitude scales, used internal reliability Cronbach 's coefficient and none of the determinants was less than 0.7. The study involved 827 respondents, 358 (43%) of the respondents were men and 469 women (57%). Involved were individuals 18 years of age. Was used the quota method of respondents selection. The study used univariate analysis of variance (ANOVA) investigated the influence of significance revealed by testing statistical hypotheses, which was the common variance, and the dissection of comparison, using the F test. In some variable analysis was used Kruskal-Wallis test. It was used as an alternative to ANOVA variants if each sample had a different level.

The data acquired were processed with the help of the factor analysis, using SPSS. Factor analysis, modeling the process, helps in lowering the considerable changeable amount to a much lower factor amount (Geske, Grinfelds 2006). Every factor was created from matrices, choosing only those variables, which weights were important. The weight of factors showed which input every manifesting changeable gives in each factor (Geske, Grinfelds 2006). Was a selected item whose factor scales were significant, or they were not lower than 0.4 in absolute value. The data processing was concluded with a factorial content connection disclosure and "naming". After data analyzing, the following factors were named (see chart No.2). In order to determine the independent variables (gender, age, residence, education level, income level), was used analysis of variance.

**Results**

The adult health competence influencing factors has not been researched in Latvia. It would give theoretical foundation for work with the adults where health education is involved, developing and implementing adequate recommendations in adult health education. While using the theoretical cognitions from the literature sources, the author surmised that adult health competence is impacted from such components as health education, health behavior, environment and values. Further for the purposes of analysis a collaboration research on scales was carried out and Pearson correlation coefficient was determined. The results acquired were statistically important and proved that correlation was most strongly associated between the health competency and health education (r=0,65) (see table 1).

Table 1: Correlation between health competency models determinants (\*\* Statistically important with 99% accuracy)

	Health Competency	Environment	Health Behavior	Health Education	Values
Health Competency	1	0,33**			
Environment	0,33**	1			
Health Behavior	0,48**	0,39**	1		
Health Education	0,65**	0,36**	0,59**	1	
Values	0,31**	0,27**	0,54**	0,37**	1

Source: Authors

Admittedly, it was substantial to find out how close was the correlations between these changing aspects, but it was more important to understand what factors affect the forming of health competency more strongly and which of them are more important in particular health competence determinants.(see table 2) After factors (in brackets) is Cronbachs alpha coefficient, because within each factor questions were summarized on a scale and determine the validity of the scale.

Table 2: Health competence determinant factors

	Health Education	Health Behavior	Environment	Values
F1	Knowledge in the social networks and the media (0,82)	Risk perception (0,76)	Health supportive work environment (0,70)	Individual values (0,70)
F2	Health literacy (0,81)	Social impacts (0,71)	Health supportive social environment (0,71)	Society values (0,70)
F3	Topic actuality in individual life cycle (0,7)	Emotional perception of annoyance (stress) (0,71)	Access to information technology (0,84)	
F4		Expectations of support (0,70)		

Source: Authors

**Health education**

Health education encompasses education possibilities; it includes various information as well as improving knowledge and developing life skills, which promote the health competency of an individual and society. Most experiences in educating, which was developed to alleviate voluntary action, promotes (furthers) the optimal health conditions for an individual and society in general (WHO 2006). Taking in account the afore mentioned, the adult health education is on its merits a value, social and political process, which is directed towards the live skill development and is very important component in the development of an individual, as well as facilitates the individual's and society's health in general. Learning is more than just a process of working-through; it is about working towards idealized mental frames of reference and beliefs that can be validated (Fenwick, 2000). Three factors were divided out.

F1. Individual's involvement in the acquiring of knowledge. Analyzing the above set of independent variables impact on divisional factor F1, was found in the independent variables gender ( $p = 0,00$ ), age ( $p = 0,00$ ), education ( $p = 0,00$ ) impact on the studied characteristics change. With 95% confidence, there are statistically significant differences between the genders in the acquisition of knowledge from social networks and the media. The most, who obtain knowledge from social networks and the media, are men and younger people (aged 18 to 30 years). It also could be explained by the fact that it is the younger people who are more using and exchanging information at variety of social networking sites: Twitter, Facebook, etc. c. relatively most passive there are people in the age group 51-60 years and there are differences in knowledge acquisition among individuals with basic education and higher education. This can be explained as a cognitive outcome of a learning path. Education is a key factor responsible for the health. Studies have shown that better-educated people can to reduce risk of chronic disease and they have less the number of bed-days spent in hospital (Cutler, Lleras-Muney 2006). Not found statistically significant effects of the individual residence, and income level on F1 knowledge extraction.

F2. Health literacy. Health literacy is more than just the ability to read a text of health-related information. It is the ability to find, and use information about health maintenance; this includes the ability to listen, to navigate the information obtained and to participate in public health promotion programs (Nutbeam 2000). Was found statistically significant independent variables as gender ( $p=0, 00$ ), income ( $p = 0.057$ ) and the individual's place of residence ( $p = 0,037$ ) effect on the health education component of the model factor F2 health literacy. The independent variable of education ( $p = 0,059$ ) effects were not significant, but the differences approached significance. Women Health literacy was higher than men, as well as, the urban population health literacy was higher than in rural areas and small cities residents. Increased health literacy observed in individuals with higher income per month. Other studies (Kichbush 2001; Rimal 2003; Fonseca-Becker et al. 2007) have shown that better educated and wealthier people have a higher level of health literacy; they are more involved in discussions on health maintenance and have a positive attitude towards a healthy lifestyle.

F3. Topic actuality in individual life cycle. Learning is effective when the learning subject is a actual for individual. Current topics about health preservation differ in established age stages:

- Youth: interested in possible contraceptives and safe sexual relationship, about maintenance of spiritual health (suicide prevention, interrelations), addictions, here referring to affects of alcohol, drugs and nicotine, addiction to gambling;
- Adults: about importance of nutrition and healthy diet, physical activities, stress management resources (about everything that helps the well-being), about the importance of cancer prophylaxis (f.e. breast self-control methods);
- Older generation people: must place emphasis on the importance of nutrition and physical activities to prolong the life span and maintenance of the physical form, about safety precautions which must be mastered due to the low movement abilities and the weakening of the organs of sense, as well as about the possible ways to retain active and independent lifestyle.

Adults are most interested in teach subjects that directly affect their work or personal lives (Knowles). Topic actuality health maintenance differs regarding human life cycle. There was found statistically significant variables: income ( $p = 0,000$ ), ie, an individual's material situation affects the choice of themes for the preservation of health issues, and age ( $p = 0,000$ ) because individual have another requirements related to health in every stage of live.

### Health behavior

Health behavior is: a person's behavior, independent from the actual or the assumed health condition, with the goal to promote, protect or preserve health, or also, action which is not objectively effective to reach this goal."(WHO) To be able to affect an individual within the health education frame, one must understand the person's behavior and must have a good knowledge of the factors that affect this, because the individual's behavior can both increase and decrease the health affecting risk throughout the lifespan. Health behavior is as much varied and complicated as other individual's social behavior aspects, therefore, health behavior literacy not only broadens our knowledge of this field, but also helps to understand how it would be possible to affect and promote the change in habits that endanger health. While analyzing the answers in the model component "health behavior", four factors were divided out:

F1 Risk perception. Risk perception is a general opinion on risk, which inheres to a specific person or group and which encompasses both feelings and judgments. Risk perception is connected with the values in the society. While analyzing the correlation between these changeable, a negative coherence was proven where the risk perception receded at the same time as the value system was changing in society. Risk perception is tightly connected with the attitude, social influence and self-efficiency (Van Osch; et all 2008). It was found a statistically significant differences (95% confidence) of risky health behavior in perception between men and women ( $p = 0,000$ ) and individuals with different education levels ( $p = 0,002$ ). Health-risky behaviors are the people with basic education, less pronounced in people with higher education. The destructive habits that affect health, commonly found in men and people with lower education level. Studies in other countries also show the impact of education on risk factor perception. A man with lower education is exposed to greater health risks for the behavioral habits (Driesken et al. 2010).

F2 Social impact. Social impacts can be divided into:

- Information effects: acceptance of information from others as evidence of the reality of reality, truth (reality). It leads to personal harmony (self-acceptance).
- Regulatory impact - to meet other people's positive expectations. There is a fundamental human need to belong to a social group important to him, so it can be very powerful regulatory influence. Studies (Emmons, Barbeau, Gutheil, Stryker, Stoddard 2007) shows that social norms, standards and behavior patterns of the individual instruments of social control.

The study showed that women ( $p = 0,000$ ) are more vulnerable to social impacts, and the education of the individual (0,008) determines the magnitude of the social impact on an individual's health behavior.

F3 Emotional perception of annoyance (stress, fear). Emotional factors on an individual's life is People with low incomes are more susceptible to emotional irritation (stress) daily lives, they are often perceived already as an integral part of modern life (Ewald 1993). An individual can receive threatening or unpleasant factors, which can lead to defensive reactions (Herring 2007), but excessive fear can also lead to denial, to avoiding thinking about behavioral health hazards (Montazeri et al. 1998). Were found statistically significant differences in emotional irritation perception of gender ( $p=0,009$ ). It must be assumed that the emotional perception of irritation as a factor greater impact on men. Analysis of income affects the perception of emotional irritation; people with low incomes are more susceptible to emotional irritation (stress). ( $p=0,04$ ). There is no statistically significant difference in the perception of emotional irritation of individuals in different age groups. Stress, fear and negative emotions are impact equally in all age groups.

F4 Expectations of support. The presence and interest of other people encourages and maintains the desire to change the behavior connected to health. Change of behavior can be full of stress and the individual might need support (Naidoo, Wils 2000). It plays an important role in determining the ways in which problems are solved and the extent to which individuals succeed in achieving goals. There is a statistically significant difference between the genders ( $p = 0,000$ ), education difference ( $p = 0,000$ ) and employment ( $p = 0,003$ ), men and the unemployed felt more support needing. Emmons et al. (2007) points out that much research done which revealed different interactions between an individual's health behavior influencing behavior and the different and sometimes conflicting roles, the social network effects, but there are few studies revealing the socio-demographic factors on health behaviors.

### Values

Every person forms their own value system, such is also formed for every specific people group and the society formed by these groups. Values are like the life orientation signs. Values are the conception of the ideal, rational, specifically the important in human life. In other words, learning is more than just a process of working-through, it is working towards idealized mental frames of reference, and beliefs that can be validated (Fenwick 2000). Human body and accordingly their health are deeply affected by the social experience, as well as the values and norms of the social group to which the individual belongs to (Giddens 2001). The factor analysis results were divided and afterwards two factors were named: F1. The values of the individual and F2 The values of society. The individual values statistically significant impact on education ( $p = 0,000$ ), also, in society values are differences in the age groups of respondents ( $p = 0,000$ ), which can be explained by differences in value priorities between generations.

### Environment

World Health Organization has defined the environment facts as such: "environment factors are formed by physical, social and attitude environment, where the person lives and spends their life. Against the individual they are the external factors and they might have both positive and negative effect on the individual as a part of society performance, to carry out work or tasks based on the individual's abilities, or base on individual's bodily function or structure (Health Promotion Glossary). While analyzing the answers in model component, environment was divided in three factors, where eigenvalue was bigger than 1.

F1. Health supportive working environment. Every human life is based on the work that gives a livelihood and to be aware of its significance, and promote common human values of society development and implementation. It was found that the health of a supportive work environment is more important for women ( $p = 0,002$ ), younger individuals (aged 18 to 30 years) ( $p = 0,000$ ), middle-income individuals ( $p = 0,000$ ), those individuals who live in rural areas ( $p = 0,000$ ).

F2. Health supportive social environment. Health supportive social environment does not allow a situation to develop where an individual is socially alienated. This is especially relevant in areas where there are no public facilities (cultural sites, cultural centers, sports grounds, stadiums, theaters, etc.). Education ( $p = 0,016$ ), employment ( $0,003$ ) and gender ( $p=0,000$ ) are the variables that affect the factor.

F3. Access to information technology. Access to information technology allows an individual to participate in the electronic service system, which is referred to as the "e-health". E-Health as an essential support for primary health care is emphasized their primary health care concepts. Access to information technology enables an individual to access information, including health education. Analysis of variables age ( $p = 0,000$ ), education ( $p = 0,000$ ), income ( $p = 0,000$ ), place of residence ( $p=0,000$ ) and employment ( $p = 0,000$ ) are statistically significant impact on F3 factor.

### Conclusion

Health competency model is designed to illuminate the factors that influence (either enable or act as barriers) an individual's ability to adopt health-supportive decisions in their daily lives. Were distributed latent variables or factors from each determinants of health competency. These factors are also influenced by the socio-economic manifesting variables, where statistically significant are the individual's gender, education and income. The gender effect is attributed to the roles and tasks for each individual. The education as a key variable is directly affected by its intangible as, broadening their horizons and allows the individual to better see the opportunities, what are the factors affecting health. An individual's income is an important socio-economic factor that determines the facilities available for the individual to be able to take better care of your health. Health competence factors model would give theoretical foundation for developing and implementing adequate recommendations in adult health education.

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