

THE DEVELOPMENT OF SOCIAL BELONGING AND CHANGES IN LIFESTYLE FOR WOMEN IN FITNESS: CASE STUDY

Aleksandra Čuprika

Andra Fernāte

Leonīds Čupriks

Latvian Academy of Sport Education

Abstract. *Fitness as a healthy lifestyle implementation helps to improve the social, mental and physical well-being components. Several scientists have indicated that there is a connection between social belonging and physical activity (PA) as the structural component of a healthy lifestyle (Walseth, 2006; Walseth & Fasting, 2004; Antonsich, 2010; Yuval-Davis, 2006; Anthias, 2006; Pinquart & Sorensen, 2001; Everard et al., 2000). That is why the goal of the research is to develop and apply a social belonging promotion programme for women in fitness programme and to determine the changes in the lifestyle structural component health promoting PA. 10 women involved in fitness classes in small groups (2-4 people) participated in the case study, where in addition to PA social belonging promotion events were organized for all women together. In order to evaluate the structural components of social belonging and PA level and type, questionnaires adapted in Latvia and a semi-structured interview was used. Applying the social belonging promotion programme for women in fitness creates statistically significant changes in such structural components as sense of commitment ($p < 0.01$), perception of interpersonal relations ($p < 0.01$). By additionally promoting social belonging in fitness, women perceive the group better, are willing to spend more time with it; that, in turn, positively affects the willingness to be physically and socially active on a daily basis.*

Keywords: *lifestyle changes, social belonging development, women in fitness.*

Introduction

The necessity of social belonging for a person to be physically and mentally healthy has already long been proven in science (Barden et al., 1985; Hagerty et al., 1992; Hale et al., 2005; Leary et al., 1995). The physical health, psychological state, beliefs, social relationships of the person and the most significant factors of the environment affect the quality of life in a complex way (Oort et al., 2005). People need communication and social relationships. They not only live in groups, but also spend most time of their everyday life interacting. Roy F. Baumeister and Mark R. Leary (Baumeister & Leary, 1995) have concluded that the need to

belong is the main motivation for people. There is a correlation between the need to belong and the cognitive abilities, emotions, behaviour, health and quality of life. Researchers explain that much of what we understand as human interpersonal relationships can be integrated in the notion of *belonging*, which is a factor that affects the quality of life (Baumeister & Leary, 1995).

The development of the fitness field as an innovative social practice has contributed to the social changes between people. Attitude towards the body is changing, the role of the functional beauty has become more important, where external attractiveness presents evidence on the internal health and the characteristic properties of the person, as well as promotes the growth of competitiveness in the groups of society. The body becomes not only a fundamental value, but also a condition for achievements, an agent that allows a person to integrate into the part of the society, which he/she prefers. Thanks to the body, the person gives a signal to others in the group that he/she is one of them.

Fitness as a healthy lifestyle implementation helps to improve the social, mental and physical well-being components (Mammen & Faulkner, 2013). Several scientists have indicated that there is a connection between social belonging and the amount of physical activity (Walseth, 2006; Walseth & Fasting, 2004; Antonsich, 2010; Yuval-Davis, 2006; Anthias, 2006; Pinguart & Sorensen, 2001; Everard et al., 2000).

That is why the goal of the research is to develop and apply a social belonging promotion programme for women in fitness programme and to determine the changes in the lifestyle structural component health promoting physical activities.

Theoretical Framework

The general understanding of social belonging means an individual's belonging to a socio-cultural group, allowing to find their place in the socio-cultural environment and to navigate in the surrounding world. Belonging is a person's suitability or compatibility with the environment, in which the person is located (*University of Toronto*, 2012). People need communication and social relationships. One of the most important goals of a person's life is to create as many interpersonal relationships as possible and to belong to several groups (Cosmides & Tooby, 2005). Researchers explain the need for social relationships differently, for example, as a search for love (Murray, 1938), the need for recognition and support (Rogers, 1951), the need for belonging (Baumeister & Leary, 1995; Goodenow, 1993a; Maslow, 1954) and motivation to belong (McClelland, 1987), as well as the need for a sense of commitment (Deci & Ryan, 1991; Ryan, 1993; Vallerand, 1997), which forms from positive interpersonal relationships that are important for the person (Baumeister & Leary, 1995).

An integrated definition has been used in this research: social belonging is a sense of commitment (Deci & Ryan, 1991), a person's perception of interpersonal relationships in the particular social group or environment, an understanding of whether others in this group include, respect and value the person (Baumeister & Leary, 1995).

Social belonging allows the person to make more use of public benefits, to be active in the particular group of the society, to feel themselves associated with the group, to positively perceive relationships with other members of the group, to feel that his/her abilities are valued and he/she is recognized in the particular social group, which will be able to form his/her personal identity and to improve his/her quality of life, thus, positively affecting the promotion of a healthy lifestyle.

Belonging can be strengthened, to support morally and materially, to promote a sense of security, to provide access to information and other resources. The way how a woman feels in the particular social group may affect the fact, whether she will want to spend more time in this environment, to be more socially and physically active to improve her lifestyle.

By voluntarily meeting in fitness classes, women belong to the society by being physically active together, improving their lifestyle. A healthy lifestyle is such behaviour and habits that have a positive impact on health and include the use of a healthy diet (Bailey et al., 2013; Bourdieu, 1980; *WHO Regional Committee for Europe at its forty-eighth session, Copenhagen, September, 1998*), health promoting physical activity (Hutson, 2012; Shilling, 1991; Bourdieu, 1980; *WHO Regional Committee for Europe at its forty-eighth session, Copenhagen, September, 1998*), other social activity in the society (Shilling, 1991), which is an additional indicator of a healthy lifestyle.

Physical activity in fitness as a healthy lifestyle implementation, decreasing the risk of health problems, provides several advantages for the quality of life of people in general (Hills et al., 2013; Haskell et al., 2007). The research explores in depth health promoting physical activity as a health promoting structural component of a healthy lifestyle and other social activities in the society, during which the social belonging to a group will be additionally promoted.

Methods

A case study was selected for the organization of the research, in which voluntarily participated 10 socially and physically active women in the age range of 21 to 35, who already had been engaged in individual physical activities for some time with a trainer before the research. In order to promote social belonging, further increase the physical activity level and use a personalized approach during the research, the respondents were engaged in classes in small groups (2–4

people). During the research the respondents had the opportunity to also attend other small groups involved in the research, if they were not able to attend the class in their usual time. Social belonging promotion events were also included in the experiment in the 6-month fitness programme for women. Mostly the respondents attended the organized physical activities at least 2 times a week. In addition to the physical activities, theoretical interactive lectures and offsite events were organised for all respondents together 2 times a month on Saturdays. Discussions and observations were carried out during the whole implementation of the fitness programme to determine the reaction of the respondents towards the activity and to solve problems in a timely manner.

A survey method – questionnaire – was used to determine social belonging. During the procedure, the respondents had to answer all questions of the questionnaires (see Table 1), from which selected and grouped were those that meet the social belonging components *sense of commitment*, *perception of interpersonal relationships* and *understanding of whether I am included, respected, valued in this group* and which, based on previous research, have determined connections to physical activity (Cuprika et al., 2015a).

Table 1 Questions in the Questionnaires Characterizing the Structural Components of Social Belonging

Structural Component	Statement/Question	Title of the Questionnaire
Sense of Commitment	For me, this group is one of the most important social groups, to which I belong	<i>The Group Environment Questionnaire</i> (Widmeyer et al., 1985; Carron et al., 1997), adapted in Latvian (Vazne, 2008)
	Do you feel as a part of society? Do you have a sense of belonging to a group, team, etc.?	<i>The Personal Gain Index</i> (Schalock et al., 2007), adapted in Latvian (Vahļina, 2012)
Perception of Interpersonal Relationships	Are you satisfied with the class group, in which you are involved?	<i>The Quality of Life Questionnaire</i> (Schalock & Keith 1993), adapted in Latvian (Vahļina, 2012)
	Do your family members help you feel like a full-fledged member of the family?	
	How satisfied are you with belonging to the class group?	<i>The Personal Wellbeing Index</i> (International Wellbeing Group, 2006), adapted in Latvian (Šķestere, 2012)
	How satisfied are you with the relationships in the family and among friends?	<i>The A Scale of the Comprehensive Quality of Life Questionnaire</i> (Cummins, 1997),

Structural Component	Statement/Question	Title of the Questionnaire
	How important it is for you to have a close relationship with family and friends?	adapted in Latvian (Vahļina, 2012)
	How important it is for you to do something outside the house together with other people?	
	The members of our group would gladly participate in joint events outside the classes as well	<i>The Group Environment Questionnaire</i> (Widmeyer et al., 1985; Carron et al., 1997), adapted in Latvian (Vazne, 2008)
Understanding of Whether I am Included, Respected, Valued in this Group	Do you have a feeling that the people in the class group know you?	<i>The Personal Gain Index</i> (Schalock et al., 2007), adapted in Latvian (Vahļina, 2012)
	How often do you leave the house together with friends or attend events?	
	Do you feel that you are an important part of the surrounding society?	<i>The General Health Questionnaire (GHQ-12)</i> (Goldberg & Hillier, 1979), adapted in Latvian (Cekule et al., 2006)
	Do you sometimes feel redundant in social situations?	<i>The Quality of Life Questionnaire</i> (Schalock & Keith 1993), adapted in Latvian (Vahļina, 2012)
	How often do you attend entertainment events in your social group?	
	Do you actively participate in events?	

The short version (7 questions) of the *IPAQ* questionnaire (Craig et al., 2003) in Latvian (Kaupuzs & Larins, 2010) was used for the assessment of the amount of physical activities. In addition, a semi-structured interview was used to determine the subjective lifestyle characteristics of the respondents and their attitude towards the group.

The *SPSS 17.0* data processing programme (the Kolmogorov–Smirnov test, the Wilcoxon signed-rank test) was used for the data analysis. The qualitative data analysis was carried out with the *QSR NVivo10* processing software.

Results

In order to implement the promotion of social belonging in the fitness programme, an event programme was developed, which was organized for all the respondents together in one group. The goal of the additional event programme was to deepen the understanding of a healthy lifestyle implementation (see Table 2), but an additional goal was the promotion of the social belonging structural components sense of commitment, positive perception of interpersonal

relationships and understanding of whether the woman is included, respected, valued in the group. The tasks of the programme were to promote friendly relations within the group and to increase the social interest, allowing the women to feel safe in the environment of the group to form a desire to belong, which, in turn, would improve women's physical activity. Sports, psychology, nutrition and beauty specialists were invited to the additional events, their attendance was voluntary.

Table 2 Social Belonging Promotion Events in the Fitness Programme

Educational Lecture Plan	Methods	Number of Hours	Planned Results
I. A healthy diet and its use in everyday life	A lecture, a discussion, negotiations, brainstorming	6 hours	A deeper understanding of nutritional balance and diversity as a component of healthy lifestyle implementation
II. A woman's health and the impact of physical activity on a woman	A lecture, negotiations, a discussion	2 hours	An in-depth understanding of the impact of a lifestyle on a woman's reproductive health, hormonal state and the implementation of a healthy lifestyle
III. Joy hormones and physical activity	A lecture, negotiations, a discussion	2 hours	A deeper understanding of the impact of physical activity on the regulation of women's emotional state, balancing, of physical load adaptation to improve the emotional state
IV. Fitness and women	A lecture, negotiations, a discussion	2 hours	A deeper understanding of the connection between different types of physical activity and physical fitness components
V. Active lifestyle opportunities in your everyday life	A lecture, negotiations, a discussion	2 hours	An in-depth practical knowledge of back pain relief, when working at a computer for a long time, of physical activity types and the necessary daily amount, of opportunities to spend working days actively, of family involvement in physical activity
Joint Events			Methods
I. A master class on creating one's image, daily facial and hair care			A master class, negotiations, a discussion
II. One's self-image analysis, improvement and self-love			A lecture, a discussion, negotiations, brainstorming
III. A master class with a psychologist – emotions, their control or acceptance			A master class, negotiations, a discussion

IV. Beauty care day – holistic body care, self-love	A discussion, negotiations
V. A master class with a personal growth specialist – goal setting and achievement	A discussion, negotiations
VI. An event „Body Ritual” – <i>pirts</i> procedures for harmony and relaxation	A leisure event in the group
A camp „3 Days Together by the Sea”	A leisure event in the group

By developing and applying the social belonging promotion events in the fitness programme and analysing the changes of the structural component *sense of commitment* (see Table 3), it can be concluded that statistically significant changes are found in only one statement: *for me, this group is one of the most important social groups, to which I belong* ($p < 0.01$).

Table 3 Analysis of the Social Belonging Component *Sense of Commitment* before and after the Social Belonging Promotion Events in the Fitness Programme

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
before	2	3	5	9	5	1	7	4	1	7
after	6	9	7	9	8	3	9	8	6	8
p < 0.01	The changes are statistically significant									
	1	2	3	4	5	6	7	8	9	
	strongly disagree							absolutely agree		
	For me, this group is one of the most important social groups, to which I belong									

This means that currently the class group is more important to the respondents than it has been before, and they fill a connection with the group. However, by analysing the questions of the social belonging structural component *perception of interpersonal relationships* (see Table 4), it is concluded that statistically significant changes are in the question: *how satisfied are you with the relationships in the family and among friends?* ($p < 0.01$).

Table 4 Analysis of the Social Belonging Component *Perception of Interpersonal Relationships* before and after the Social Belonging Promotion Events in the Fitness Programme

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
before	3	3	2	2	2	3	2	3	2	3
after	2	2	1	1	1	1	1	1	1	1
p < 0.01	The changes are statistically significant									
	(1)very satisfied – (2)satisfied – (3)partially satisfied – (4)not too satisfied – (5)unsatisfied									
	How satisfied are you with the relationships in the family and among friends?									
before	3	3	2	3	2	3	2	3	3	3
after	2	1	1	1	1	1	2	1	1	1

better, are willing to spend more time with it, which confirms the data obtained in the interview on friendly relationships and pleasant communication between the group members, as well as that the group is a healthy lifestyle promoting condition that affects the desire of the respondents to be physically and socially more active.

By analysing the questions of the social belonging structural component *understanding of whether I am included, respected, valued in this group*, for which a connection to physical activity has been found, it can be concluded that there are no statistically significant changes ($p > 0.05$); however, there are several improvements, for instance, the respondents emphasize that now they attend events more often, actively participate in them, leave the house more often and less often feel redundant on social situations.

By analysing the number of physical activities in the last 7 days before and after the experiment, it can be concluded that all indicators have increased (see Table 5).

Table 5 Number of Physical Activities in the Last 7 Days – the Average Indicator in the Group Before and After the Experiment (based on the IPAQ questionnaire)

Physical Activity Type	The Average Indicator in the Group Before the Experiment	The Average Indicator in the Group After the Experiment
spends time sitting per day min	462 ± 109	360 ± 109*
number of high intensity PA days	2 ± 1.3	2.6 ± 0.8
total minutes of high intensity PA	57 ± 33	88.5 ± 32*
number of moderate intensity PA days	2 ± 1.5	3.3 ± 1.2 *
total minutes of moderate intensity PA	54 ± 39	120 ± 37**
walks – number of days	3.5 ± 2.5	4.9 ± 1.8*
walks – total minutes	18.5 ± 18.5	83 ± 44 **
PA level	1966.2 ± 1025	4862.8 ± 1427 **
<i>Wilcoxon Signed Ranks Test Asymp. Sig. (2-tailed) 0,01**; 0,05*</i>		

For a more detailed assessment of the lifestyle structural component physical activity of the respondents and its changes in the last 6 months and to additionally determine the changes of social belonging, the semi-structured interview was repeated (see Table 6).

Table 6 Evaluation of Lifestyle Changes and Social Belonging Based on a Semi-Structured Interview

Women	Lifestyle Changes (before/after)	Social Belonging
A1	organized PA/ organized PA	likes the group, but sometimes hindered the concentration
A2	organized PA/ organized PA + is walking more + sometimes exercises with her husband	likes the communication with the group, that it is possible to make friends during physical activities and it is a reason to leave the house and spend time together
A3	organized PA/ organized PA + is walking more + leisure time PA	likes the communication with the group, that it is possible to make friends during physical activities and it is a reason to leave the house and spend time together
A4	organized PA/ organized PA + is walking more + also exercises at home	the relationship is very friendly, the members of the group are united and support each other.
A5	organized PA/ organized PA + is walking more + leisure time PA	the relationship is very friendly, the members of the group are united and support each other.
A6	organized PA/ organized PA + is walking more	likes the communication in the group, but sometimes are bothered by other members and they have not fit into the group.
A7	organized PA/ organized PA + is walking more + leisure time PA	the relationship is very friendly, the members of the group are united and support each other.
A8	organized PA/ regular organized PA + independent PA	the particular group has become very important to her, close contacts have developed.
A9	organized PA/ organized PA + is walking more + leisure time PA	likes the communication in the group, but sometimes are bothered by other members and they have not fit into the group.
A10	organized PA/ organized PA + is walking more	likes the communication with the group, that it is possible to make friends during physical activities and it is a reason to leave the house and spend time together

By expressing their opinion on the time spent in the group and analysing the subjective opinion on belonging, it can be concluded that 7 women assess the process positively and admit that the group has become important and that the communication has been positive. However, 3 respondents did not fit into the group. By analysing the changes in the lifestyles of the respondents, it can be concluded that all have regular organized physical activities, the respondents are now more trying to move around by walking and for 7 respondents unorganized physical activities have appeared. On average the physical activity level of the

group has increased from health promoting to training, which are statistically significant changes.

Discussion

By communicating and creating positive social contacts in fitness, a woman feels belonging to the particular group and spends more time, engaging in physical activities (Yuval-Davis, 2006; Anthias, 2006), which contributes to the improvement of psychological processes, reduces stress, improves the mood (McAuley & Rudolph, 1995). Several researchers have pointed out that there is a connection between social belonging and physical activity (Walseth, 2006; Walseth & Fasting, 2004; Antonsich, 2010; Yuval-Davis, 2006; Pinquart & Sorensen, 2001; Everard et al., 2000). These data confirm the results obtained in the research as well: if a woman feels a greater commitment to the group, she will engage in more physical activities and is socially more active, which improves her lifestyle.

Some researchers also note that, by forming friendly relationships with other women in fitness classes, it is possible to receive emotional support, which has a positive impact on the women's health (Everard et al., 2000); it is also confirmed by the results obtained in the research on social belonging promoting environment during physical activities and organizing additional social belonging promoting activities in the group. Fitness classes in small groups positively affect the socialization of women of all ages (Pinquart & Sorensen, 2001). The research results also indicate that, if a person has a greater satisfaction with the social contacts ($p < 0.05$) and he/she feels a greater sense of commitment to the group ($p < 0.05$), feels included, supported and valued ($p < 0.05$), his/her lifestyle improves in everyday life.

By analysing the limitations of the research, it can be concluded that the number of participants is very low, which limits the ability to compare the obtained data with the results of other research. The research has been carried out, involving participants of individual classes of a one fitness club. The research results cannot be considered as representative of the state in general.

Conclusions

By developing and applying the social belonging promotion events in the fitness programme for women in fitness, it can be concluded that there are determined several statistically significant improvements in social belonging, it is also confirmed by the data obtained during the semi-structured interviews. The respondents feel more connection with other members of the class group, they would like to spend time with them outside the physical activities and other

research events as well. Having close relationship with family and friends has become more important to the respondents, they have become more satisfied with the relationships in their family and with their friends, now they leave the house more, actively participate in different events and feel less redundant in social situations, which indicates that the respondents have become more socially active and it has a positive effect on their willingness to further improve their lifestyle and to achieve even better results.

By determining the changes in the lifestyle structural component health promoting physical activity and analysing the dynamics of the amount of individual physical activities of each respondent, it can be concluded that all have improved their physical activity level and now it is above the highest one. A very positive factor is that all respondents are now walking more often and longer and spend less time sitting. Mostly all respondents after the experiment also have independent physical activities on a daily basis.

The creation of social belonging promoting environment in fitness allows to better perceive the group, women want to spend more time with it; this, in turn, positively affects the desire to be physically and socially active on a daily basis. It is important for women to be both physically and socially active to be able to keep up with a healthy lifestyle together with someone who also does it, because the surrounding environment, the people who do not support and live differently, can be a serious obstacle in the achievement of the goal.

References

- Anthias, F. (2006). Belongings in a Globalizing and Unequal World: Rethinking Translocations. *The Situated Politics of Belonging*. N. Yuval-Davis et al. (Eds.). London: Sage, 17–31.
- Antonsich, M. (2010). Searching for belonging – An analytical framework. *Geography Compass*, 4, 644–659.
- Barden, R. C., Garber, J., Leiman, B., Ford, M. E., & Masters, J. C. (1985). Factors governing the effective remediation of negative affect and its cognitive and behavioral consequences. *Journal of Personality and Social Psychology*, 49, 1040–1053.
- Bailey, C. H., Shawn, A., & Albert, P. (2013). Physical activity: an underestimated investment in human capital? *Journal of Physical Activity and Health*, 10, 289–308.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117 (3), 497–529.
- Bourdieu, P. (1980). Le Capital social: notes provisoires. *Actes De La Recherche En Sciences Sociales*, 3, 2–3.
- Carron, A., Widmeyer, W., & Brawley, L. (1997). The development of instrument to assess cohesion in sport team: the group environment questionnaire. *Journal of Applied Sport Psychology*, 9 (1), 244–267.

- Cekule, L., Kamerade, D., Murniece, D., Reinfelde, S., Urbans, I., & Vazne, Z. (2006). Vispārējās veselības aptaujas ticamība un faktoru struktūra Latvijā. *Teorija praksei mūsdienu sabiedrības izglītībai*, 64–68.
- Cosmides, L., & Tooby, J. (2005). Social exchange: the evolutionary design of a neurocognitive system. *The New Cognitive Neurosciences*, III. M. S. Gazzaniga (Ed.). Cambridge, MA: MIT Press, 1295–1308.
- Craig, C., Marshall, A., Sjostrom, M., Bauman, A., Booth, M., Ainsworth, B., Pratt, M., Ekelund U., Yngve, A., Sallis J. F., & Oja, P. (2003). International physical activity questionnaire: 12-country reliability and validity. *Medicine & Science in Sports & Exercise*, 35, 1381–1395.
- Cummins, R. (1997). *Comprehensive Quality of Life Scale-Adult*: Manual. School of Psychology, Deakin University-Burwood Campus. Victoria, Australia: Deakin University.
- Cuprika, A., Fernate, A., & Cupriks, L. (2015a). Women's in fitness social belonging and physical activity in the context of quality of life. *Proceedings of the International Scientific Conference "Society, Integration, Education"*, 3, 487–497.
- Deci, E., & Ryan, R. (1991). A motivational approach to self: integration in personality. *Nebraska symposium on motivation: perspectives on motivation*, 38. R. A. Dienstbier (Ed.). Lincoln, NE: University of Nebraska, 237–288.
- Everard, K. M., Lach, H. W., Fisher, E. B., & Baum, M. C. (2000). Relationship of activity and social support to the functional health of older adults. *Journals of Gerontology : Series B. Psychological Sciences and Social Sciences*, 55, 208–212.
- Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine*, 9 (1), 139–145.
- Goodenow, C. (1993a). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *The Journal of Early Adolescence*, 13, 21–43.
- Hagerty, B. M., Lynch-Sauer, J., Patusky, K., Bouwsema, M., & Collier, P. (1992). Sense of belonging: A vital mental health concept. *Archives of Psychiatric Nursing*, 6, 172–177.
- Hale, C. J., Hannum, J. W., & Espelage, D. L. (2005). Social support and physical health: The importance of belonging. *Journal of American College Health*, 53, 276–284.
- Haskell, W. L., Lee, I-M., Pate, R. R., Powell, K. E., Blair, S. N., Franklin, B. A., & Bauman, A. (2007). Physical activity and public health: Updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. *Medicine and Science in Sports and Exercise*, 39 (8), 1423–1434.
- Hills, A., Byrne, N., Lindstrom, R., & Hill, J. (2013). Small changes' to diet and physical activity behaviors for weight management. *The European Journal of Obesity*, 6, 228–238.
- Hutson, D. (2012). *Training bodies, building status: Health, physical capital, and the negotiation of difference in the U.S. Fitness Industry*. [Unpublished Dissertation.]. University of Michigan.
- Kaupuzs, A., & Larins, V. (2010). Pilot test of International Physical Activity questionnaire for cultural adaptation in Latvia. *Pedagogical Technologies in Socialization and Resocialization of Society*, 1, 21–27.
- Leary, M., Tambor, E., Terdal, S., & Downs, D. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology*, 68, 518–530.

- Mammen, G., & Faulkner, G. (2013). Physical activity and the prevention of depression: A systematic review of prospective studies. *American Journal of Preventive Medicine*, 45 (5), 649–657.
- Maslow, A. (1954). *Motivation and personality*. New York: Harper.
- McClelland, D. (1987). *Human Motivation*. CUP Archive.
- Murray, H. (1938). *Explorations in personality: A clinical and experimental study of fifty men of college age*. New York: Oxford University.
- Oort, F., Visser, M., & Sprangers, M. (2005). An application of structural equation modeling to detect response shifts and true change in quality of life data from cancer patients undergoing invasive surgery. *Quality of Life Research*, 14 (3), 599–609.
- Personal Wellbeing Index*. International Wellbeing Group. (2006). Melbourne: Australian Centre on Quality of Life, Deakin University.
- Pinquart, M., & Sorensen, S. (2001). Influences on loneliness in older adults: A meta-analysis. *Basic and Applied Social Psychology*, 23, 245–266.
- Rogers, C. (1951). *Client-centered therapy: Its current practice, implications, and theory*. Boston: Houghton Mifflin.
- Schallock, R., & Keith, K. (1993). *Quality of life questionnaire*. Worthington Ohio: IDS Publishers.
- Schallock, R., Gardner, J., & Bradley, V. (2007). *Quality of life for people with intellectual and developmental disabilities: Application across individuals, organizations, communities, and systems*. Washington: American Association on Intellectual and Developmental Disabilities.
- Shilling, C. (1991). Educating the body: Physical capital and the production of social inequalities. *Sociology*, 25 (4), 653–672.
- Šķestere, I. (2012). *Pētījums par dzīves kvalitātes izvērtējuma metodēm un instrumentiem* (1. daļa). Retrieved from: <http://www.lkndz.lv/lv/box/files/filelists/1337599472-petijumsdzkvalit1.pdf>
- University of Toronto. (2012). *Quality of Life Research Unit*. Retrieved from: www.gdrc.org/uem/goldefine.html
- Vahlina, T. (2012). *Pētījums par dzīves kvalitātes izvērtējuma metodēm un instrumentiem*. 2. daļa. Retrieved from: <http://www.lkndz.lv/lv/box/files/filelists/1339588737-petijumsdzkvalit2.pdf>
- Vazne, Z. (2008). Psychometric properties of the Latvian version of the group environment questionnaire test. *Sport Science Journal of Lithuanian Sport Science Council*, 2 (52), 12–16.
- Walseth, K., & Fasting, K. (2004). Sport as a means of integrating minority women. *Sport in Society*, 7 (1), 109–129.
- Walseth, K. (2006). Sport and belonging. *International Review for the Sociology of Sport*, 41 (3-4), 447–464.
- WHO Regional Committee for Europe at its forty-eighth session, Copenhagen, September (1998). Retrieved from: http://www.who.int/violence_injury_prevention/media/en/150.pdf
- Widmeyer, W., Brawley, L., & Carron, A. (1985). *The Measurement of Cohesion in Sport Teams: The Group Environment*. London: Sport Dynamics.
- Yuval-Davis, N. (2006). Belonging and the politics of belonging. *Boundaries, Identities and Borders: Exploring the Cultural Production of Belonging*. 40 (3), 197–214.