

Psychological Resources and Self-rated Health Status on Fifty-year-old Women

Agnieszka Olchowska-Kotala

Department of Humanistic Sciences in Medicine, Wrocław Medical University, Poland

Objectives: The aim of the study is to expand knowledge about predictors of the self-rated health and mental health in fifty-year-old women. The study exploring links between self-rated mental/health and optimism, self-esteem, acceptance of the changes in physical look and some sociodemographic factors.

Methods: Participants in this study were 209 women aged 50 to 59. A single-items measures of self-rated health and mental health were used. Self-esteem was measured through the Rosenberg Self-Esteem Scale; optimism through the OPEB questionnaire; acceptance of the changes in physical look was rated by respondents on a seven-point scale. Participants were also asked about weight loss attempts, the amount of leisure time, and going on vacation during the last year.

Results: Predictors of the self-rated mental health in women in the age range of 50 to 59 were: acceptance of the changes in physical look, self-esteem and optimism. Predictors of the self-rated health were: optimism and acceptance of the changes in physical look.

Conclusion: Optimism and acceptance of the changes in physical look seem to be important factors that may impact subjective health both physical and mental of women in their 50s. The role of the leisure time and vacation in instilling the subjective health requires further investigation. (**J Menopausal Med 2015;21:133-141**)

Key Words: Health status, Mental health, Middle aged, Self concept, Self-assessment

Introduction

Middle-aged women struggling with a range of changes in their own bodies have poor general well-being and are more prone to depression.¹ In this period of life, they feel much more depressed than women in all other age ranges.² They are prescribed more psychotropic drugs than men at the same age and women in other life stages.³

A holistic approach to medicine causes the need for determinants of a satisfying life and guidelines for improving the quality of life. Studies in psychoneuroimmunology show that physical and mental health are interdependent.⁴

Research shows that at psychological factors affect not only the well-being of women but also experiencing of hot flashes and night sweats.⁵ Therefore, it seems important to search for the psychological factors supporting good functioning of the body.

It has been observed that optimistic people much less frequently report worrying about symptoms of diseases.⁶ Optimism is defined as expecting positive outcomes, whereas pessimism means expecting negative ones.⁷ Seligman⁸ who performed studies among optimists and pessimists for more +98 than 20 years, argues that the main difference between optimists and pessimists lies in a

Received: May 14, 2015 Revised: October 22, 2015 Accepted: October 26, 2015

Address for Correspondence: Agnieszka Olchowska-Kotala, Department of Humanistic Sciences in Medicine, Wrocław Medical University, ul. Mikulicza-Radeckiego 7, 50-367 Wrocław, Poland

Tel: +48-71-784-01-02, Fax: +48-71-784-01-03, E-mail: agnieszkakotala1@gazeta.pl

Copyright © 2015 by The Korean Society of Menopause

© This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>).

different perspective assumed. A characteristic feature of pessimists is that they maintain that bad events will last for a long time, will influence all their activities, and most often constitute an outcome of their own guilt. Optimists treat failures as temporary misfortunes, and do not perceive themselves as the only ones at fault. It should be noted that Seligman's standpoint is only one way of perceiving optimism. Some theorists view optimism and pessimism as distinctive dimensions, and do not interlink the lack of optimism with a pessimistic life attitude.⁹

Middle-aged women experience many changes both in their bodies and in the social environment. One of the important indicators of emotional and social adjustment is self-esteem.¹⁰ In general, self-esteem refers to a person's perception of their own worth or value. Although the perception may vary as influenced by the mood, changes in self-esteem proceed rather slowly and gradually. It should be distinguished from specific self-esteem, which is related to intellectual or physical abilities.¹¹ In Rosenberg's approach, presented here, high self-esteem consists in the belief that one is a 'good enough' and valuable person (not necessarily better than other people), whereas low self-esteem expresses the lack of satisfaction, discontent with oneself.

In this period of life body esteem, one of the z components of the global self-esteem¹² is exposed to decline. Poor body image is common among middle-aged women¹³ and a significant direct relationship between the quality of life and body satisfaction at this stage of life can be observed.¹⁴ Aging women's perception of their bodies is related to their mental health, and women who reported feeling unattractive are more likely to report a clinically significant level of depressive symptoms in midlife.¹⁵ Thus, acceptance of the changes in physical look caused by the passage of time seems to be the important in this stage of life.

Subjective evaluations are simple and inexpensive indicators of health and mental health status. A single-items measures of self-rated health and mental health were being used increasingly in health research and population health surveys.¹⁶⁻¹⁸ Self-rated health was found to be associated with mortality¹⁹ and many indicators of physical and mental health.²⁰ A single-item measure of self-rated mental health was less often used but it has also well-documented associations with mental health,

health problems and use of health services.¹⁶ The self-rated physical health and the self-rated mental health are related to each other and they are strong predictors of the self-rated overall health.¹⁸

When searching for ways to improve the quality of life in middle-aged women, as well as for the personality traits to work on in psychotherapy at this stage of life, the following study will more closely consider optimism, self-esteem and acceptance of the changes in physical look. Although researchers indicate optimism and self-esteem as psychological resources,^{21,22} the study aims to compare them with self-rated subjective health in fifty-year-old women. The study aimed to expand knowledge about predictors of the self-rated health and mental health in women in the age range of 50 to 59.

Materials and Method

1. Participants

The study sample comprised of middle-aged women living in one Polish city with the population of 600,000 inhabitants. The questionnaires were distributed to women aged 50 to 59 with mean age 53.92 ± 2.74 visiting 10 different primary health care centres. Eligibility criteria were as follows: (a) age of 50 to 59, (b) literacy, (c) no history of a serious mental disorder, (d) lack of medical conditions that would affect the ability to participate.

Out of 250 eligible women, 212 agreed to participate, 3 were excluded from the study because of their incapability to understand the items. Data from 209 questionnaire responses were included in the final data set, producing a response rate of 83.6%. All participants were informed about the research and its purposes. Descriptive data regarding the sociodemographic characteristics (marital status, family structure, educational level, income) of the study sample are presented in Table 1.

The study has been performed in accordance with Declaration of Helsinki.

2. Self-rated health/mental health

Self-rated health was assessed with a single item: "How would you rate your health in a last 12 months?".

Table 1. General characteristics of subjects

		N (%)
Marital status	Married	163 (78)
	Widowed	22 (10)
	Single	12 (6)
	Divorced	7 (3)
	Unmarried partner	5 (3)
Education	University	136 (65)
	Secondary	59 (28)
	Basic/vocational	14 (7)
Income <i>per capita</i>	Less than 500	14 (7)
	500-900	67 (32)
	900-1500	61 (29)
	More than 1500	68 (32)
Children	0	17 (8)
	1 child	31 (15)
	2 children	108 (52)
	3 or more	53 (25)
Vacation in last year	Yes	143 (68)
Weight lost attempt	Yes	78 (37)

Respondents rated their health on a scale from 1 to 7 (from poor to excellent) where 1 was the worst possible health and 7 was the best possible health. Similarly, self-rated mental health was assessed by question: "How would you rate your mental health in a last 12 months?" on a 7-point Likert-type scale from poor to excellent.

3. Self-esteem

Self-esteem was assessed with the Rosenberg Self-Esteem Scale (RSES), which comprised 10 statements. Participants rated the extent to which they agree with each statement on a four-point Likert scale ('strongly agree' to 'strongly disagree'). A total score was obtained by summing all responses and may range from 10 to 40, with higher scores indicating higher self-esteem.¹¹ The alpha coefficient reliability of the scale for the current study showed similar level of reliability (0.85) as the original version.

4. Optimism

Optimism was assessed with the OPEB questionnaire, most commonly used measure of optimism in Poland which strongly correlated ($r = 0.716$; $P < 0.001$) with widely used The Life Orientation Test.²³ The OPEB questionnaire comprised of 37 items. A response to each item was scored on a five-point scale ranging from 1 (strongly agree) to 5 (strongly disagree). Items are summed to give a total score, ranging from 1 to 185, where higher scores indicate higher dispositional optimism. The alpha coefficient reliability of the scale was 0.84 for the current study. Therefore, the reliability of the scale was slightly lower than those in the original OPEB.

5. Acceptance of the changes in physical look

Respondents were asked about how they accepted the changes in their physical look caused by the passage of time. Acceptance was measured by question: *How do you accept the changes in your physical look caused by aging?* The answers were marked on a seven-point scale, where 1 meant 'I did not accept the changes in my physical look at all' and 7 meant 'I fully accepted the changes in my physical look'. Because relationship among fear of aging and drive for thinness has been found,²⁴ women were asked additionally about weight loss attempts.

6. Sociodemographic

The participants provided demographic information, including age, educational status, marital status, number of children and income per capita.

As beneficial effect of vacation and leisure time on health has been found^{25,26} the survey also included questions about going on vacation in the last year (yes/no) and the amount of leisure time women enjoyed (the time in which they do what they want to, not what they are obliged to). The answers were marked on a seven-point scale, where 1 meant 'I have no free time'.

7. Statistical analysis

A regression analysis using SPSS statistical software, version 20 (SPSS Inc., Chicago, IL, USA) was conducted in order to establish the predictors of self-rated health / self-rated mental health in midlife women. Descriptive statistics

and correlations coefficients were performed to compare the study variables. Pearson's correlation coefficient was used to measure the degree of association for continuous variables; Cramer's phi coefficient for nominal and ordinal variables. The values of $P < 0.05$ were considered statistically significant.

Results

Table 2 shows associations between self-rated health / self-rated mental health and independent variables. As shown in Table 2, self-rated mental health correlated significantly with: optimism, self-esteem, acceptance of the changes in physical look and vacation in a last year. Self-rated health was significantly associated with optimism, self-esteem, acceptance of the changes in physical look, perceived amount of leisure time and income *per capita*. Neither educational level nor marital and family status was related to subjective health evaluations.

1. Self-rated mental health predictors

All independent variables were entered in the regression

model. The model turned out to be well adjusted to the variables ($F [11,197] = 5,750; P = 0,001$). Overall, the variables accounted for 20% of the variation in the self-rated mental health of the middle-aged women. Table 3 presents the regression coefficients for all variables.

As Table 3 shows, significant predictors of the self-rated mental health in the middle-aged women were: acceptance of the changes in physical look, self-esteem and optimism. It was found that self-rated mental health increased with increasing acceptance of the changes in physical look, self-esteem and optimism.

2. Self-rated health predictors

All independent variables were entered in the regression model. The model turned out to be adjusted to the variables ($F [11,197] = 3,364; P = 0,001$). Overall, the variables accounted for 11% of the variation in the self-rated health of the middle-aged women. As Table 4 shows self-rated health increased with increasing optimism and acceptance of the changes in physical look.

Table 2. Associations between self-rated health/self-rated mental health and variables

	Self-rated health		Self-rated mental health	
	r / ϕ_c	P value	r / ϕ_c	P value
Optimism	0.28	< 0.001	0.31	< 0.001
Self-esteem	0.24	0.001	0.34	< 0.001
Acceptance of the changes in physical look	0.19	0.007	0.33	< 0.001
Perceived amount of leisure time	0.15	0.032	0.10	0.151
Age	0.09	0.187	0.04	0.531
Educational level	0.17	0.427	0.13	0.880
Income <i>per capita</i>	0.22	0.035	0.20	0.143
Marital status*	0.15	0.594	0.20	0.199
Children	0.20	0.153	0.14	0.850
Vacation in last year	0.17	0.406	0.28	0.010
Weight loss attempts	0.22	0.111	0.18	0.347

r / ϕ_c : Pearson's correlation coefficient was used to measure the degree of association between variables for continuous variables; Cramer's phi coefficient for nominal and ordinal variables

*Marital status was divided into two subcategory: single /windowed/ divorced and married / unmarried partner

Table 3. Predictors of the self-rated mental health in the middle-aged women

	Mean \pm SD	β	<i>t</i> -value	<i>P</i> value
Acceptance of the changes in physical look	5.12 \pm 1.58	0.29	4.51	< 0.001
Self-esteem	30.53 \pm 4.39	0.21	2.80	0.006
Optimism	114.89 \pm 15.76	0.17	2.36	0.019
Age	53.93 \pm 2.74	-0.02	-0.29	0.772
Perceived amount of leisure time	3.73 \pm 1.54	0.04	0.57	0.569
Educational level		-0.05	-0.67	0.500
Income <i>per capita</i>		-0.01	-0.09	0.929
Marital status*		-0.04	-0.61	0.540
Children		-0.04	-0.60	0.548
Weight loss attempts		0.01	0.00	0.998
Vacation in last year		-0.10	-1.47	0.142

*Marital status was divided into two subcategory: single /windowed/ divorced and married/ unmarried partner
SD: standard deviation

Table 4. Predictors of the self-rated health in the middle-aged women

	Mean \pm SD	β	<i>t</i> -value	<i>P</i> value
Optimism	114.89 \pm 15.76	0.19	2.47	0.014
Acceptance of the changes in physical look	5.12 \pm 1.58	0.14	2.04	0.042
Self-esteem	30.53 \pm 4.39	0.07	0.96	0.340
Age	53.93 \pm 2.74	0.04	0.66	0.510
Perceived amount of leisure time	3.73 \pm 1.54	0.12	1.68	0.094
Educational level		0.03	0.36	0.719
Income <i>per capita</i>		0.09	1.09	0.278
Marital status*		0.01	0.01	0.992
Children		0.01	0.16	0.876
Weight loss attempts		0.11	1.69	0.093
Vacation in last year		-0.08	-1.07	0.286

*Marital status was divided into two subcategory: single / windowed / divorced and ma
SD: standard deviation

Discussion

The study investigated factors predicting the self-rated health and self-rated mental health in middle-aged women. Consistent with previous research^{22,27} this study found optimism to be a significant predictor for both self-rated

health and self-rated mental health. Number of studies have shown optimism to be protective against distress.²⁸ Positive expectations for the future has been shown as one of the psychological resources in midlife. In a study conducted on a large sample of 11,201 Australian women aged 50 to 55, respondents with a low level of optimism

more often looked for psychological support.² Similarly, in the research of Bromberger and Matthews²⁹ conducted on 460 middle-aged women, optimists who experienced stressful events and chronic stress fell in a depressive mood less often than pessimists. It has been suggested that optimism constitutes a buffer between acute and chronic stress, and falling into depression.³⁰ This study confirms that optimism is conducive to a higher subjective evaluation of the current mental functioning. The dispositional tendency to maintain optimistic expectations for the future is generally adaptive and has potential benefits for health outcomes. Meta-analytic review of the research exploring links between dispositional optimism and physical health indicated that higher levels of optimism are associated with a wide range of health outcomes, although the effects were larger for subjective measures of health than for objective measures.²² Recent study which used representative samples of 142 countries revealed that the magnitude of the associations between optimism and subjective health varied between countries but positive relationship between optimism and perceptions of physical health is consistent around the world.²⁷ Our results provide further evidence on benefits of being optimist in middle-age.

Self-esteem was a predictor of mental health in middle aged women. This finding is consistent with previous research indicating that low degrees of self-esteem is associated with higher depression in women.³¹ Some of the studies revealed positive relationship between self-esteem and physical health,^{32,33} we also found a correlation between self-esteem and self-rated health but global self-esteem was not a predictor of self-rated health. This indicate that the association between self-esteem and subjective physical health is weaker than self-esteem and self-rated mental health. This result seems to point out to the fact that other factors were more important for self-rated health in women in this period of life. In our study more important than self-esteem for self-rated health was the acceptance of the changes in physical look. The acceptance of the changes caused by the passage of time was a predictor of both self-rated health and self-rated mental health. The middle years of life are a difficult time for women: in this period, several life achievements are already completed and at the same time women have to struggle with changes in their bodies

and family structures. The study is in the line of research indicating the importance of body esteem for subjective health, and thus for adapting to the discussed phase of life. Although most of the women surveyed rated well the degree to which they reconcile themselves to the changes in their physical look (higher than the median value), the high acceptance of the changes fostered better subjective health evaluations both physical and mental. This finding is in line with study provided among other populations where it has been found that negative attitudes toward aging in terms of physical change are associated with dissatisfaction with health.^{34,35} In a study conducted in 20 countries elderly participants' attitudes toward physical change were the strongest mediator of health satisfaction.³⁴ Appearance is an important issue for many older women.³⁶ Middle aged women experience anxiety about age-related physical changes, such as weight gain, wrinkles, and loss of muscle mass and skin elasticity.¹³ An aging woman's body, as it is evaluated in reference to youthful ideals and faced with the equation of beauty with thinness, youthfulness, and the fashion model figure, many older women experience a sense of loss as they age.³⁷ Acceptance of change emerged as key components of successful aging.³⁸ Our study indicate that increases in changes acceptance might lead to better subjective health and mental health evaluation in middle-aged women.

Is not surprising that middle-aged women rated well the degree to which they accept changes in their appearance. As the women grow older and inevitably more further from the youthful thin beauty ideal, they adopt cognitive strategies such as lowering their expectations or reappraisals, whereas they increase their acceptance of otherwise socially undesirable and largely uncontrollable age related body changes.³⁹ In-depth interviews with women revealed that regarding acceptance they adopt mainly two strategy: acceptance of physical reality of growing older or rejection ageist beauty norms that emphasized appearance as markers of social value.⁴⁰

There is an increasing awareness of the importance of leisure and vacation as a factors which can contribute to health, well-being and work-life balance.^{26,41} Individuals who engaged in more frequent enjoyable leisure activities had better psychological and physical functioning.⁴² In a study based on in-depth interviews among middle-aged

women leisure was shown to have a number of beneficial outcomes with respect to the challenges faced in their everyday lives.⁴³ Perceived amount of free time was often considered in the context of work–life conflict. An inter–role conflict between work and family, was found to be the strong health risk factor.⁴⁴ In a survey carried out in European countries leisure satisfaction was associated with subjective good health.⁴⁵ In this large study having a full–time job, having children, and being married all decrease the amount of free time and leisure satisfaction for both men and women, however, similarly like in other studies⁴⁶ men reported more leisure time. Researchers concluded that increases in female labor market hours have not been compensated by equal decreases in household labor. We found association between amount of leisure time and self–rated health that is in line with research underlined the significance of rest periods for health, however, in our study amount of leisure time was not significant predictor of subjective health evaluation. Previous research suggests that not only the amount of leisure time but also types of leisure activities is relevant for health and well–being.⁴² Similarly, regarding vacation not only duration,⁴⁷ but also frequency⁴⁸ and the way an individual organizes their vacation makes a difference in regard to health–related vacation outcome.⁴⁹ We did not ask such a detailed question thus our study did not allow to resolve importance of leisure for self–health evaluations. More detailed analysis which included the type of leisure activities, duration, reasons why some women did not take vacation taking into consideration sociodemographic factors as well is required to establish the influence of leisure for self–rated health evaluations.

The study has several limitations. Firstly, it might be suspected that the researched group overrepresented women with higher education living in stable relationships and having children. Non–respondents may bias the findings; for instance, women with lower educational level were less likely to participate in the study. It could be a reason why no significant associations between sociodemographic variables and subjective health were found. Additionally, the sample was recruited only from one, relatively large city, which limited the characteristics of the resulting data. Moreover, mental and physical conditions were assessed by one question indicator. Not determining the menopausal

status may be perceived as another potential limitation. Finally, since this is a cross–sectional study, the direction of causality cannot be determined.

In summary, optimism and acceptance of the changes in physical look seem to be important factors that may impact subjective health both physical and mental of women in their 50s. Those results has implications for the design of interventions for middle–aged women. For example, women who reported poor self–rated health physical or mental may benefit from interventions focusing on the adoption of an optimistic perspective and acceptance of the changes caused by aging. The findings also suggest that global self–esteem is more important for self–rated mental health than for self–rated physical health in women at midlife. The role of the leisure time and vacation in instilling the subjective health, and, therefore, raising the quality of life in the discussed life period requires further investigation.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

References

1. Sampsel CM, Harris V, Harlow SD, Sowers M. Midlife development and menopause in African American and Caucasian women. *Health Care Women Int* 2002; 23: 351–63.
2. Schofield MJ, Khan A. Australian women who seek counselling: Psychosocial, health behaviour, and demographic profile. *Couns Psychother Res* 2008; 8: 12–20.
3. Russo NF, Green BL. Kobiety a zdrowie psychiczne. In: Wojciszke B, editor. *Kobiety i mężczyźni: odmienne spojrzenia na różnice*. Gdańsk, PL: GWP Gdańskie Wydawnictwo Psychologiczne; 2002, pp. 302–53.
4. Steptoe A, O'Donnell K, Marmot M, Wardle J. Positive affect and psychosocial processes related to health. *Br J Psychol* 2008; 99: 211–27.
5. Hunter MS, Chilcot J. Testing a cognitive model of menopausal hot flushes and night sweats. *J Psychosom Res* 2013; 74: 307–12.
6. Matthews KA, Raikkönen K, Sutton–Tyrrell K, Kuller LH.

- Optimistic attitudes protect against progression of carotid atherosclerosis in healthy middle-aged women. *Psychosom Med* 2004; 66: 640-4.
7. Scheier MF, Carver CS. Optimism, coping, and health: assessment and implications of generalized outcome expectancies. *Health Psychol* 1985; 4: 219-47.
 8. Seligman MEP. *Learned optimism: how to change your mind and your life*. New York, NY: Knopf Doubleday Publishing; 2006.
 9. Scheier MF, Carver CS. Dispositional optimism and physical well-being: the influence of generalized outcome expectancies on health. *J Pers* 1987; 55: 169-210.
 10. Elavsky S. Longitudinal examination of the exercise and self-esteem model in middle-aged women. *J Sport Exerc Psychol* 2010; 32: 862-80.
 11. Rosenberg M, Schooler C, Schoenbach C, Rosenberg F. Global self-esteem and specific self-esteem: different concepts, different outcomes. *Am Sociol Rev* 1995; 60: 141-56.
 12. Davison TE, McCabe MP. Relationships between men's and women's body image and their psychological, social, and sexual functioning. *Sex Roles* 2005; 52: 463-75.
 13. Slevac JH, Tiggemann M. Predictors of body dissatisfaction and disordered eating in middle-aged women. *Clin Psychol Rev* 2011; 31: 515-24.
 14. Jafary F, Farahbakhsh K, Shafiabadi A, Delavar A. Quality of life and menopause: Developing a theoretical model based on meaning in life, self-efficacy beliefs, and body image. *Aging Ment Health* 2011; 15: 630-7.
 15. Jackson KL, Janssen I, Appelhans BM, Kazlauskaitė R, Karavolos K, Dugan SA, et al. Body image satisfaction and depression in midlife women: the Study of Women's Health Across the Nation (SWAN). *Arch Womens Ment Health* 2014; 17: 177-87.
 16. Ahmad F, Jhaji AK, Stewart DE, Burghardt M, Bierman AS. Single item measures of self-rated mental health: a scoping review. *BMC Health Serv Res* 2014; 14: 398.
 17. Onawola RS, LaVeist TA. Subjective health status as a determinant of mortality among African-American elders. *J Natl Med Assoc* 1998; 90: 754-8.
 18. Levinson D, Kaplan G. What does Self Rated Mental Health Represent. *J Public Health Res* 2014; 3: 287.
 19. DeSalvo KB, Blosner N, Reynolds K, He J, Muntner P. Mortality prediction with a single general self-rated health question. A meta-analysis. *J Gen Intern Med* 2006; 21: 267-75.
 20. Piquart M. Correlates of subjective health in older adults: a meta-analysis. *Psychol Aging* 2001; 16: 414-26.
 21. Diener E, Diener M. Cross-cultural correlates of life satisfaction and self-esteem. *J Pers Soc Psychol* 1995; 68: 653-63.
 22. Rasmussen HN, Scheier MF, Greenhouse JB. Optimism and physical health: a meta-analytic review. *Ann Behav Med* 2009; 37: 239-56.
 23. Czerw A. *Optymizm, Perspektywa psychologiczna*. Gdańsk, PL: GWP Gdańskie Wydawnictwo Psychologiczne; 2010.
 24. Lewis DM, Cachelin FM. Body image, body dissatisfaction, and eating attitudes in midlife and elderly women. *Eat Disord* 2001; 9: 29-39.
 25. Gump BB, Matthews KA. Are vacations good for your health? The 9-year mortality experience after the multiple risk factor intervention trial. *Psychosom Med* 2000; 62: 608-12.
 26. de Bloom J, Geurts SA, Sonnentag S, Taris T, de Weerth C, Kompier MA. How does a vacation from work affect employee health and well-being? *Psychol Health* 2011; 26: 1606-22.
 27. Gallagher MW, Lopez SJ, Pressman SD. Optimism is universal: exploring the presence and benefits of optimism in a representative sample of the world. *J Pers* 2013; 81: 429-40.
 28. Carver CS, Scheier MF, Segerstrom SC. Optimism. *Clin Psychol Rev* 2010; 30: 879-89.
 29. Bromberger JT, Matthews KA. A longitudinal study of the effects of pessimism, trait anxiety, and life stress on depressive symptoms in middle-aged women. *Psychol Aging* 1996; 11: 207-13.
 30. Grote NK, Bledsoe SE, Larkin J, Lemay Jr. EP, Brown C. Stress exposure and depression in disadvantaged women: The protective effects of optimism and perceived control. *Soc Work Res* 2007; 31: 19-33.
 31. Beutel ME, Glaesmer H, Decker O, Fischbeck S, Brähler E. Life satisfaction, distress, and resiliency across the life span of women. *Menopause* 2009; 16: 1132-8.
 32. Forthofer MS, Janz NK, Dodge JA, Clark NM. Gender differences in the associations of self esteem, stress and social support with functional health status among older adults with heart disease. *J Women Aging* 2001; 13: 19-37.
 33. Reitzes DC, Mutran EJ. Self and health: factors that encourage self-esteem and functional health. *J Gerontol B Psychol Sci Soc Sci* 2006; 61: S44-51.
 34. Low G, Molzahn AE, Schopflocher D. Attitudes to aging mediate the relationship between older peoples' subjective health and quality of life in 20 countries. *Health Qual Life Outcomes* 2013; 11: 146.
 35. Barrett AE. Socioeconomic status and age identity: the role of dimensions of health in the subjective construction of age. *J Gerontol B Psychol Sci Soc Sci* 2003; 58: S101-9.

36. Clarke LH, Korotchenko A. Aging and the Body: A Review. *Can J Aging* 2011; 30: 495–510.
37. Hurd LC. "We're not old!": older women's negotiation of aging and oldness. *J Aging Stud* 1999; 13: 419–39.
38. Rossen EK, Knafl KA, Flood M. Older women's perceptions of successful aging. *Act Adapt Aging* 2008; 32: 73–88.
39. Webster J, Tiggemann M. The relationship between women's body satisfaction and self-image across the life span: the role of cognitive control. *J Genet Psychol* 2003; 164: 241–52.
40. Clarke LH, Griffin M. The body natural and the body unnatural: beauty work and aging. *J Aging Stud* 2007; 21: 187–201.
41. Trenberth L. The role, nature and purpose of leisure and its contribution to individual development and well-being. *Br J Guid Counc* 2005; 33: 1–6.
42. Pressman SD, Matthews KA, Cohen S, Martire LM, Scheier M, Baum A, et al. Association of enjoyable leisure activities with psychological and physical well-being. *Psychosom Med* 2009; 71: 725–32.
43. Parry DC, Shaw SM. The role of leisure in women's experiences of menopause and mid-life. *Leis Sci* 1999; 21: 205–18.
44. Hämmig O, Bauer GF. Work, work-life conflict and health in an industrial work environment. *Occup Med (Lond)* 2014; 64: 34–8.
45. Gimenez-Nadal JI, Sevilla-Sanz A. The time-crunch paradox. *Soc Indic Res* 2011; 102: 181–96.
46. Mattingly MJ, Blanche SM. Gender differences in the quantity and quality of free time: the U.S. experience. *Soc Forces* 2003; 81: 999–1030.
47. de Bloom J, Geurts SA, Kompier MA. Effects of short vacations, vacation activities and experiences on employee health and well-being. *Stress Health* 2012; 28: 305–18.
48. Hyypä MT, Mäki J, Impivaara O, Aromaa A. Leisure participation predicts survival: a population-based study in Finland. *Health Promot Int* 2006; 21: 5–12.
49. Strauss-Blasche G, Reithofer B, Schobersberger W, Ekmekcioglu C, Marktl W. Effect of vacation on health: moderating factors of vacation outcome. *J Travel Med* 2005; 12: 94–101.