

Int J Aging Hum Dev. Author manuscript: available in PMC 2011 September 21.

Published in final edited form as: *Int J Aging Hum Dev.* 2010; 70(4): 299–317.

THE MEANINGFUL ACTIVITY PARTICIPATION ASSESSMENT: A MEASURE OF ENGAGEMENT IN PERSONALLY VALUED ACTIVITIES*

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Abstract

The Meaningful Activity Participation Assessment (MAPA), a recently developed 28-item tool designed to measure the meaningfulness of activity, was tested in a sample of 154 older adults. The MAPA evidenced a sufficient level of internal consistency and test-retest reliability and correlated as theoretically predicted with the Life Satisfaction Index-Z, the Satisfaction with Life Scale, the Engagement in Meaningful Activities Survey, the Purpose in Life Test, the Center for Epidemiologic Studies Depression Inventory and the Rand SF-36v2 Health Survey subscales. Zero-order correlations consistently demonstrated meaningful relationships between the MAPA and scales of psychosocial well-being and health-related quality of life. Results from multiple regression analyses further substantiated these findings, as greater meaningful activity participation was associated with better psychological well-being and health-related quality of life. The MAPA appears to be a reliable and valid measure of meaningful activity, incorporating both subjective and objective indicators of activity engagement.

Contemporary theories of adult development link meaningful life engagement to a sense of well-being through self-systems, which actively structure and interpret experiences, motivate engagement in activity, and provide a sense of continuity (Kaufman, 1986; Markus & Herzog, 1999). For example, within continuity theory (Atchley, 1989, 1999) familiar activities sustained through an individual's pursuit of valued developmental goals help to maintain a personally meaningful lifestyle. Further, Baltes and Baltes (1990) have proposed a model of selective optimization with compensation (SOC), in which individuals choose to make the best use of certain capacities and resources they still have, while finding ways to compensate for other limitations. Inherent within continuity theory and an explicit component of the SOC model of aging is an active practice on the part of the individual to maximize health and life satisfaction through selecting and investing in highly valued activities. These theories of adult development are congruent with other social science perspectives that hold that the meanings we attribute to our daily activities contribute strongly to our sense of purpose and fulfillment in life (Baumeister, 1991; Clark et al., 1991;

^{*}This article was made possible by NIH Grant Number R01AG021108 from the National Institutes of Aging. © 2010, Baywood Publishing Co., Inc.

Csikszentmihalyi, 1990; Maddi, 1998) with significant implications for health, well-being and aging successfully (Clark et al., 1997; Reker & Wong, 1988; Ryff & Singer, 1998).

Presently there exists a need to identify valid instruments to assess engagement in personally valued and meaningful activities (Clark et al., 1997; Lawton, Winter, Kleban, & Ruckdeschel, 1999; Ritchey, Ritchey, & Dietz, 2001; Van Willigen, 2000). The purpose of this study was to conduct a psychometric assessment of a new instrument designed to measure the degree of meaning that individuals' experience through participation in their activities, as weighted by frequency. This measure, termed the Meaningful Activity Participation Assessment (MAPA), was designed to address the objective and subjective aspects of activity participation in older adults. We hypothesized that the MAPA would demonstrate sufficient internal consistency and test-retest reliability in a sample of older adults. We further hypothesized that higher MAPA scores would be associated with fewer symptoms of depression, greater levels of purpose in life and activity meaningfulness, greater psychosocial well-being and better health-related quality of life, thereby providing evidence for the tool's construct validity.

METHODS

Participants

Data were collected on 154 women and men during September and October of 2004 following institutional review board approval. The participants constituted a convenience sample of persons who lived in the central and west Los Angeles areas and were residents of retirement communities and residential facilities, or who were community dwelling elders visiting local area senior centers. All participants were at least 65 years of age, sufficiently fluent in English, and cognitively able to participate in the study. Recall of the general purpose and procedures of the study, as reviewed through the process of informed consent, served as the screening mechanism to establish cognitive capacity. This screening was conducted by the first author, an occupational therapist with 13 years of clinical experience working with older adults. Persons with significant language or cognitive deficits were excluded from the study. There were 16 persons who expressed an interest in participating, but were excluded because of difficulties with either language comprehension or cognition. Participants reviewed and signed an informed consent form before testing was initiated.

Instruments

Pilot Testing—Eakman (2007) reports in detail on the development of the Meaningful Activity Participation Assessment (MAPA) for use in a population of Los Angeles older adults. The MAPA was developed by the Well Elderly II research team; NIH Grant Number R01AG021108 from the National Institutes of Aging; Health Mediating Effects of the Well-Elderly Program, Florence Clark, PhD Principal Investigator. In summary, pilot testing began with an initial list of activity items partially derived from the Everyday Activity Checklist (Arbuckle, Pushkar Gold, Chaikelson, & Lapidus, 1994; Pushkar, Arbuckle, Conway, Chaikelson, & Maag, 1997). Modification of the initial list of activity items was pursued via two methods to enhance the face and content validity of the instrument. First, two 2-hour focus groups, consisting respectively of three and five older adult members, were led by the first author. A modified Nominal Group Technique (Moore, 1987) was employed to clarify the list of activity items. This method of group facilitation encouraged discussion of personal definitions of each activity item. Alternate activity items were suggested by the group members, and input from all members was solicited. The process ended with an anonymous voting procedure which provided data for item inclusion and item elimination for the MAPA. Second, findings from the two groups were then discussed with select members of the Well-Elderly II research team; an interdisciplinary research group

representing biostatistics, family medicine, gerontology, nursing, occupational therapy, occupational science, psychiatry, psychology, preventive medicine, and salimetrics investigating the effects of an occupational therapy intervention for older adults. The researchers provided expert opinions based upon their experiences with older adults in a previous Lifestyle Redesign[®] intervention program (Clark et al., 1997; Mandel, Jackson, Zemke, Nelson, & Clark, 1999).

The final 28 MAPA activity items used for this study included: home making/home maintenance, personal finances, driving, using public transportation, medical visits, socializing, writing letters/cards, helping others, gardening, physical exercise, crafts/hobbies, cultural activities, musical activities, taking courses, creative activities, traveling, talking on the telephone, reading magazines/newspapers, other reading, playing games, radio/TV, religious activities, prayer/meditation, community organization activities, volunteer activities, pet care activities, computer use for e-mail, other computer use. Please refer to Eakman (2007) for greater detail on the initial development of the MAPA.

MAPA—The Meaningful Activity Participation Assessment (MAPA) is a checklist-type survey consisting of 28 diverse activity items which persons indicate their frequency of participation and the degree of personal meaningfulness experienced with each activity. To measure activity frequency, the instructions indicate: "Please rate the amount of time that you spent on the following activities during the last few months." For each activity, the MAPA includes the following response options: 0 (Not at all), 1 (less than once a month), 2 (once a month), 3 (2 to 3 times a month), 4 (once a week), 5 (several times a week), or 6 (every day). Activity meaning within the MAPA is assessed using Likert scaling. Participants are instructed to rate the meaningfulness of each activity, "Please rate each activity according to how meaningful it is to you. That is, how much it matters or is personally fulfilling for you." The following scale was used: 0 (not at all meaningful), 1 (somewhat meaningful), 2 (moderately meaningful), 3 (very meaningful), and 4 (extremely meaningful). When combined multiplicatively, the frequency of activity participation and the degree of ascribed meaning are intended to reflect an individual's overall level of meaningful activity participation. The total MAPA score involved the sum of the frequency rating multiplied by the meaning rating for each of the 28 items. The possible score range for the MAPA was 0-672, with higher scores indicative of greater perceived meaningful activity participation.

A unique approach undertaken in this study involved determining intra-individual *z*-scores for meaning for the different activities. Such *z*-scores allowed for a comparison of activity engagement identified as having lesser versus greater personal meaning on an ipsative level. Only those items in which persons reported being engaged in the past few months (i.e., respective MAPA frequency score greater than 0) were used in calculating the MAPA meaning *z*-scores. To generate these scores, the person's overall average level of meaning was subtracted from the value for each activity, and the signed difference was divided by the intra-individual standard deviation across items.

Analyses then involved the generation of two *z*-score-based MAPA variables. The first variable, termed *negative intra-individual meaning*, utilized persons' activities with negative meaning *z*-scores. The MAPA frequency and MAPA meaning values for these activities were multiplied and summed to create this variable, thereby reflecting participation in activities deemed least personally meaningful. The next variable, *positive intra-individual meaning*, incorporated activities with positive (and non-negative) *z*-scores, thereby representing participation in those activities perceived as most meaningful.

Additional Measures—The Engagement in Meaningful Activities Survey (EMAS) is a 12-item scale, with adequate psychometric properties, purported to reflect the construct of meaningful activity participation (Goldberg, Brintnell, & Goldberg, 2002). In general, the scale reflects individuals' beliefs that their daily activities: a) provide congruence with their value system and needs, b) provide evidence of competence and mastery and c) are valued in one's social or cultural group. The Life Satisfaction Index-Z (LSI-Z) (Wood, Wylie, & Sheafor, 1969) is a 13-item general assessment of life satisfaction for older adults with well established psychometric properties. The Satisfaction with Life Scale (SWLS), is five-item assessment of global life satisfaction suitable for use with older adults (Diener, Emmons, Larsen, & Griffin, 1985). The Center for Epidemiologic Studies Depression Scale (CES-D) is a 20-item self-report scale designed to measure current levels of depressive symptomology, which evidences very good psychometric properties with older adult samples (Radloff, 1977). The Purpose-in-Life Test (PIL) was developed by Crumbaugh and Maholick (1964, 1969) and is a well-validated measure of purpose and meaning in life (Reker & Fry, 2003). Version 2 of the SF-36 Health Survey (SF-36v2) is an improved version of the psychometrically sound SF-36 Health Survey (Ware, Kosinski, & Dewey, 2000) designed to assess eight health-related domains: physical functioning, role limitations due to physical problems, social functioning, bodily pain, general mental health, role limitations due to emotional problems, vitality, and general health perceptions.

Testing Procedures

Participants were tested in groups of 3 to 15 with the first author present at all times. For groups with more than 6 participants, graduate students trained in test administration were also available to assist in the assessment process. Participants were allowed as much time as needed to complete the questionnaires (approximately 45 minutes on average); questions and response options were read to participants expressing concern of visual impairment. After completing the battery of instruments, participants were given a \$10 stipend as compensation for their time. To evaluate test-rest reliability, a randomly chosen group of 25 participants was retested 1 to 2 weeks later on a reduced battery of instruments including the MAPA.

Data Management

The data were entered by hand into a Microsoft Excel (2002) database by staff of the Well Elderly II research team. Outlying or missing data were compared to the original instruments and discrepancies in the database were amended. The median income value was imputed for four subjects missing income data. Missing items from SF-36v2 scales were imputed in the manner suggested by Ware et al. (2000). Within each of the remaining instruments, no more than 5% of the items were found to be missing; mean intrapersonal scale values were imputed for those missing items.

Data Analyses

Descriptive statistics were calculated for the demographic data, MAPA and criterion-related variables. Internal consistency (Cronbach's alpha) was determined for each scale and item analysis was conducted on the MAPA. Normalizing transformations were conducted on variables with non-normal distributions. Test retest reliability (n = 25) was calculated using Pearson product-moment correlations. Pearson's r was also used to investigate the level of association between the MAPA and criterion-related variables; an alpha level of 0.05 (two-tailed) was used to assess statistical significance.

Multiple regression analyses were employed with the criterion variables serving as dependent variables utilizing the following statistical controls: demographic variables (gender [0 = female, 1 = male], ethnicity [0 = Caucasian, 1 = non-Caucasian], marital status

[0 = single, 1 = married/life partner], income [US dollars], and housing status [0 = independent living, 1 = assisted living]); SF-36v2-bodily pain and SF-36v2-general health for dependent measures of psychological well-being and the mental health scales of the SF-36v2. The CES-D, rather than SF-36v2-bodily pain and SF-36v2-general health, was entered when the physical health scales of the SF-36v2 were used as dependent variables. All data analyses were conducted with SPSS version 12.0 (SPSS, 2003).

RESULTS

Demographics

Table 1 presents the demographic characteristics of the sample. Participants were on average 80.5 ± 7.1 years old with a range of 65 to 100 years. Within the sample, 82% of the elders were Caucasian, 86% reported being married or living with another, and 66% indicated some post-high school education.

MAPA

The mean MAPA score was 214.3 ± 83.3 with a range of 47–426. Two-week test-retest reliability was 0.84 (p < .01) and internal consistency for the MAPA scale was good ($\alpha = 0.85$). Three activity items were found to have very low item-total correlations [playing games (-0.01), medical visits (0.02), and using public transportation (0.09)], though they were retained to support the content validity of the MAPA.

Negative intra-individual meaning scores on average consisted of 15 activities (SD = 3.8, range 6–22) and had a mean value of 62.2 ± 57.4 and a range of 0–302. The positive intra-individual meaning scores consisted of a mean of 10 activities (SD = 4.9, range 0–22) and had a mean of 142.7 ± 79.0 and a range of 0–404. Paired t-tests indicated that the negative intra-individual meaning scores were comprised of significantly greater numbers of activities (t = 6.98, p < .001) yet evidenced lower summed frequency × meaning scores (t = -9.20, p < .001) compared to positive intra-individual meaning scores.

Criterion-Related Variables

The criterion-related variables demonstrated adequate internal consistency. The measures of psycho-social well being had a mean coefficient alpha of 0.85 ± 0.05 , range 0.77-0.89. The SF-36v2 scales had a mean coefficient alpha of 0.82 ± 0.10 , range 0.62-0.93, though at 0.62 the bodily pain subtest of the SF-36v2 was relatively low (see Table 2).

Zero-Order Correlations

Pearson product-moment correlations revealed that the MAPA was significantly associated with nearly every criterion indicator (see Table 3). Correlations with measures of life satisfaction included the LSI-Z (r=0.38, p<.01) and the SWLS (r=0.24, p<.01), whereas the MAPA was negatively correlated with the CES-D (r=-0.36, p<.01). The MAPA evidenced the largest correlations with the EMAS (r=0.42, p<.01) a measure of meaningful activity, and the PIL (r=0.50, p<.01) a measure of purpose and meaning in life.

The SF-36v2 mental health scales demonstrated statistically significant positive correlations with the MAPA, with a mean correlation of 0.35 (median r = 0.36). The physical health scales of version 2 of the SF-36 Health Survey had a mean correlation of 0.26 (median r = 0.27) with the MAPA. Only one subtest, bodily pain (r = 0.13, p = .10), was not statistically significantly related to the MAPA.

There were no statistically significant zero-order correlations between the negative intra-individual meaning score of the MAPA and the criterion variables (see Table 4). Alternately, the positive intra-individual meaning score of the MAPA evidenced statistically significant correlations with 10 of 13 criterion variables. It appeared that MAPA activities imbued with less than average intra-personal meaning were not related to any of the criterion measures, whereas MAPA activities with average to greater than average intra-personal meaning produced correlations that approximated the entire MAPA scale.

Regression Models with the MAPA Predicting Criterion-Related Variables

The MAPA was found to be a substantial contributor to the prediction of each of the five psychological well-being indicators (see Table 5). A review of standardized betas revealed that the MAPA consistently provided the largest contribution of all model variables to the prediction of these measures. The largest MAPA standardized betas were obtained in the prediction of the EMAS and PIL; a similar pattern was also found in the zero-order correlations. Notably, general health from the SF-36v2 added meaningful variance to four of these five models.

When the SF-36v2 mental health variables were modeled, the MAPA again added to the prediction of every criterion-related measure (see Table 6). However, the MAPA explained the greatest amount of variance for just one model (role emotional), though this standardized beta was only slightly greater than that of general health. Rather, general health appeared to be the most substantial contributor in the SF-36v2 mental health models. Finally, the MAPA aided in the prediction of three of the four SF-36v2 physical health measures; failing in its contribution to bodily pain (see Table 7).

DISCUSSION

The findings of this study suggest the MAPA has adequate psychometric properties as a novel measure of meaningful activity participation. The reliability of the MAPA was substantiated, both in terms of internal consistency and test-retest reliability, suggesting its utility for population-based research (Streiner & Norman, 2003). The construct validity of the MAPA was supported because the scale demonstrated statistically significant meaningful relationships with criterion-related variables. The MAPA was positively correlated with two measures of life satisfaction, consistent with previous research findings involving frequency measures of activity (Harlow & Cantor, 1996; Menec & Chipperfield, 1997; Pinquart & Sorenson, 2000; Warr, Butcher, & Robertson, 2004). Significant positive correlations between the MAPA and seven of the eight subscales of the SF-36v2 was consistent with prior work demonstrating relationships between self-rated health and activity participation (Menec, 2003; Pinquart & Sorenson, 2001). In addition, the MAPA was negatively associated with depressive symptomology, also in line with previous studies of activity indicators (Adams, Sanders, & Auth, 2004; Morrow-Howell, Hinterlong, Rozario, & Tang, 2003; Utz, Carr, Nesse, & Wortman, 2002).

The Purpose-in-Life Test and the Engagement in Meaningful Activities Survey demonstrated the most substantial relationships with the MAPA when compared to the other criterion-related variables. The present study supports and extends prior research with older adult samples linking activity such as volunteering (Weinstein, Xie, & Cleanthous, 1995) or engagement in work (Gerwood, 1995) with purpose in life. However, the present findings are noteworthy as they are consistent with theoretical positions implicating meaningful or personally valued activity as a substantial component of life purpose and meaning (Baumeister, 1991; Clark et al., 1996; Csikszentmihalyi, 1990; Maddi, 1998; Prager, Bar-Tur, & Abramowici, 1997; Reker, Peacock, & Wong, 1987, Wong, 1989).

The MAPA was more consistently associated with measures of psychological well-being and mental health than with physical aspects of health-related quality of life; because the MAPA was the largest single contributor predicting measures of psychosocial well-being. The general health subscale of the SF-36v2 was also a consistent contributor to the psychological well-being models, echoing prior research implicating self-rated health as a key factor related to psychological well-being (Okun & Stock, 1984; Pinquart & Sorenson, 2001). The MAPA was also found to be a significant variable within three of the four SF-36v2 physical health models. Nevertheless, the MAPA contributions were not as high as other model variables such as housing status (i.e., residing in an assisted living facility) in predicting physical functioning or depressive symptomology in predicting physical role participation, general health and bodily pain, findings which were not unanticipated (Berkman et al., 1986; Kennedy, Kelman, & Thomas, 1990; Yang & George, 2005).

The use of positive and negative intra-individual meaning scores afforded an ipsative-level contrasted groups design to more fully explore the nature of the MAPA's unique scaling. Findings from these analyses were quite telling of the potential effect of personal evaluations of meaning, as weighted by activity frequency, with regards to key aging outcomes. Most notably, participation in those activities viewed as having average to greater than average intra-personal meaningfulness demonstrated correlation coefficients with criterion-related variables nearly approximating the entire MAPA scale. However, participation in activities viewed as least personally meaningful, despite their greater numbers, failed to achieve even one significant correlation. These results suggest that participation in activities having greater personal significance may have more influence upon psychosocial well being and health-related quality of life than participation in a greater number of lesser valued activities. This finding is reminiscent of existential philosophy (Frankl, 1959/1984; Maddi, 1998) and argues for full engagement in life tasks as a key component of successful aging (Rowe & Kahn, 1998). Given these results, the MAPA may be capable of explicating personal subjective evaluations relevant to the selection, maintenance and relinquishing of individual goal pursuits (Baltes & Baltes, 1990; Brunstein, Schultheiss, & Maier, 1999; Heckhausen & Schultz, 1995). This capacity would afford researchers an additional tool to explore the mechanisms underlying personal adaptation through aging as adults are inevitably faced with age-related impairments that may frustrate personal goal strivings.

Several considerations may limit the generalization of these findings. A convenience sample of older adults was utilized for this study and consisted primarily of Caucasian women who were fairly well educated. It is therefore unclear if the MAPA would demonstrate similar test properties in less homogenous samples. Fortunately, additional research conducted by the Well Elderly II research team has engaged an ethnically diverse sample of communitydwelling older adults; the MAPA was included as a measure of meaningful activity participation (Jackson et al., 2009). Next, the total time required by participants to complete the battery of study instruments was quite long, at times exceeding 1 hour. It is possible that some persons may have provided less then accurate responses because of a perceived testing burden which may have attenuated the actual level of association between study variables. However, testing did incorporate six different orders of the study instruments, which were randomly assigned to study participants; this effort likely minimized attenuation of the study findings. Additionally, given the cross sectional design of this study, it is not possible to substantiate a causal relationship between meaningful activity, health-related quality of life and well-being. Finally, it is recommended that future studies be conducted with the MAPA to continue to establish the psycho-metric properties of the instrument given its unique approach to measuring the meaningfulness of activity participation.

Acknowledgments

The research was funded by NIH Grant Number R01AG021108 from the National Institutes of Aging; *Health Mediating Effects of the Well-Elderly Program*, Florence Clark, PhD Principal Investigator. We would like to acknowledge the Well Elderly II research team at the University of Southern California who supported the conceptualization and implementation of this study.

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Table 1

Demographic Characteristics (N = 154)

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		Frequency	Percent
Gender	Female	119	77
	Male	35	23
Race/ethnicity	Caucasian	126	82
	Other	28	18
Marital status	Married/living together	132	86
	Other	22	14
Housing status	Independent living	123	80
	Assisted living	31	20
Education	5–8 years	1	1
	Some high school	5	3
	High school completed	45	30
	Business or trade school	19	12
	1-3 years college	37	24
	4 years college	22	14
	Post-graduate study	25	16
Income	\$0 to \$1,000/month	44	29
	\$1,001 to \$3,000/month	61	40
	\$3,001 to \$5,000/month	30	20
	\$5,001 to \$7,000/month	8	5
	\$7,001 to \$10,000/month	4	2
	\$10,000 or more/month	7	4

Note: \$ = US dollars.

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Table 2

Descriptive Statistics for Criterion Variables

	Mean	SD	Range	Cronbach's alpha
LSI-Z	17.8	5.4	4.0-26.0	0.77
PIL	108.5	17.3	74.0-140.0	0.89
CES-D	10.8	8.8	0.0-49.0	0.87
EMAS	48.1	6.6	17.0-60.0	0.89
SWLS	24.5	6.1	7.0-35.0	0.81
SF-36v2-PF	38.9	12.7	14.9-59.1	0.93
SF-36v2-RP	42.6	10.3	17.7-56.9	0.92
SF-36v2-BP	43.2	10.3	19.9-62.1	0.62
SF-36v2-GH	47.9	9.5	25.8-63.9	0.75
SF-36v2-VT	51.6	8.9	20.9-67.7	0.78
SF-36v2-SF	47.1	11.1	13.2-56.9	0.83
SF-36v2-RE	44.0	11.3	9.2-55.9	0.88
SF-36v2-MH	50.8	10.0	19.0–64.1	0.86

Note: LSI-Z = Life Satisfaction Index-Z, PIL = Purpose-in-Life test, CES-D = Centers for Epidemiological Studies Depression Scale, EMAS = Engagement in Meaningful Activities Survey, SWLS = Satisfaction with Life Scale, SF-36v2 Health Survey subtests: PF = physical function, RP = role physical, BP = bodily pain, GH = general health, VT = vitality, SF = social functioning, RE = role emotional, MH = mental health.

Table 3

Zero-Order Correlations between Criterion Variables and MAPA

	1	7	ю	4	w	9	7	œ	6	10	11	12	13	14
1. LSI-Z	1													
2. PIL	.62**	-												
3. CES-D	50 **	45	1											
4. EMAS	.34**	.58**	29	-										
5. SWLS	** 49.	.58**	48	.36**	-									
6. SF-36v2-PF	.28**	.26**	21 **	*81.	.05	-								
7. SF-36v2-RP	.21**	.25**	28	.23**	80.	**49.	-							
8. SF-36v2-BP	.34**	.32**	29 **	11.	.23**	.45**	.31**	-						
9. SF-36v2-GH	**24.	**24.	34 * *	.34**	.31**	* * *	.43**	**24.	1					
10. SF-36v2-VT	.40**	.45**	46	.29**	.30**	**14.	**84.	.40**	**65.	1				
11. SF-36v2-SF	.41	.35**	54 * *	.32**	.31**	.53**	.58**	.34**	.55**	**65.	1			
12. SF-36v2-RE	.24**	.29**	47 **	*61.	*61.	.43**	.57**	.12	.27**	.46**	**65.	-		
13. SF-36v2-MH	.55**	.53**	72 **	.35**	.51**	.26**	.30**	.27**	.53**	.57**	.67**	.52**	1	
14. MAPA	.38**	.50**	—·36 **	.42**	.24**	.36**	.34**	.13	.20*	.31**	.36**	.37**	.36**	-

Note: LS1-Z = Life Satisfaction Index-Z, PIL = Purpose-in-Life test, CES-D = Centers for Epidemiological Studies Depression Scale, EMAS = Engagement in Meaningful Activities Survey, SWLS = Satisfaction with Life Scale, SF-36v2 Health Survey subtests: PF = physical function, RP = role physical, BP = bodily pain, GH = general health, VT = vitality, SF = social functioning, RE = role emotional, MH = mental health. MAPA = Meaningful Activity Participation Assessment. Page 13

p < .05.

p < .01.

 Table 4

 Zero-Order Correlations between Criterion Variables and MAPA Intra-Individual Variables

Criterion variable	MAPA Negative Intra-Individual Meaning	MAPA Positive Intra-Individual Meaning
LSI-Z	.01	.26**
PIL	.07	.33**
CES-D	02	20 *
EMAS	01	.28**
SWLS	02	.12
SF-36v2-PF	.13	.34**
SF-36v2-RP	08	.29**
SF-36v2-BP	.03	.16
SF-36v2-GH	.02	.13
SF-36v2-VT	02	.24**
SF-36v2-SF	02	.27**
SF-36v2-RE	.05	.33**
SF-36v2-MH	.04	.18*

Note: LSI-Z = Life Satisfaction Index-Z, PIL = Purpose-in-Life test, CES-D = Centers for Epidemiological Studies Depression Scale, EMAS = Engagement in Meaningful Activities Survey, SWLS = Satisfaction with Life Scale, SF-36v2 Health Survey subtests: PF = physical function, RP = role physical, BP = bodily pain, GH = general health, VT = vitality, SF = social functioning, RE = role emotional, MH = mental health.

^{*} p < .05.

^{**} *p* < .01.

Table 5

Psychosocial Well-Being Regression Models

	LS	Z-IST	III III	T	CE	CES-D	EMAS	AS	SMLS	rs
Variable	SEB	β	SEB	β	SEB	β	SEB	β	SEB	β
Constant	5.80		16.64		1.63		664.70		328.29	
Gender	.95	.12	2.72	*41.	.27	09	108.86	.12	53.76	.20*
Race	1.01	.16*	2.90	.15*	.29	12	115.78	02	57.18	.15
Age	90.	80.	.18	.12	.02	90	7.12	.10	3.52	.31**
Education	.26	.01	.75	.07	.07	00.	29.89	08	14.76	13
Marital	1.13	80.	3.23	90.	.32	08	129.23	80.	63.83	.01
Housing	1.00	04	2.87	.15*	.28	60	114.51	.03	56.56	.01
Income	.76	.05	2.17	13*	.21	.03	86.71	12	42.82	05
SF-36v2-BP	.00	.16*	11.	*41.	.01	16	4.29	08	2.12	.12
SF-36v2-GH	.05	.27**	.13	.24**	.01	*61	5.15	.26**	2.54	.16
MAPA	.01	.32**	.02	.50**	00.	** GE	.59	.43**	.29	.33**
R^2		.34		.46		.26		.29		.26
F		7.33**		2.28**		4.92**		5.86**		5.08**

Note: LSI-Z = Life Satisfaction Index-Z, PIL = Purpose-in-Life test, CES-D = Centers for Epidemiological Studies Depression Scale, EMAS = Engagement in Meaningful Activities Survey, SWLS = Satisfaction with Life Scale, BP = bodily pain, GH = general health, MAPA = Meaningful Activity Participation Assessment. Page 15

p < .05.

p < 01.

Table 6

SF-36v2 Mental Health Regression Models

	Λ	VT	SF	<u> </u>	RE	ы	MH	H
Variable	SEB	β	SEB	β	SEB	β	SEB	β
Constant	843.50		945.08		1030.88		977.64	
Gender	138.14	00.	154.77	08	168.83	90	160.11	00.
Race	146.92	60.	164.62	.01	179.56	.00	170.29	.07
Age	9.03	90.	10.13	04	11.05	04	10.48	.14
Education	37.92	.10	42.49	90	46.35	.12	43.95	07
Marital	163.10	02	183.75	01	200.43	04	190.08	90.
Housing	145.32	02	162.82	09	177.60	17*	168.43	04
Income	110.03	00.	123.28	.05	134.47	.14	127.53	.02
SF-36v2-BP	5.45	*17	6.10	.13	09.9	03	6.31	90.
SF-36v2-GH	6.54	.47**	7.33	.47**	8.00	.23**	7.58	.42**
MAPA	.75	.20**	.84	.22**	.92	.26**	.87	.32**
R^2		.43		.40		.24		.37
F		10.84**		9.52**		4.58**		8.39**

Note: SF-36v2 Health Survey subtests: VT = vitality, SF = social functioning, RE = role emotional, MH = mental health, BP = bodily pain, GH = general health, MAPA = Meaningful Activity Participation Assessment. Page 16

$$p < .05.$$
**
 $p < 01.$

Table 7

SF-36v2 Physical Health Regression Models

	I I	PF	RP			BP	9	В
Variable	SEB	9	SE B	В	SEB	9	SEB	9
Constant	14.82		1001.38		14.13		11.71	
Gender	2.33	.13	157.32	80.	2.22	.11	1.84	90.
Race	2.48	08	167.51	17*	2.36	13	1.96	04
Age	.15	03	10.07	15	.14	.00	.12	24
Education	99.	.13	42.98	00.	.61	.12	.50	.07
Marital	2.78	04	187.41	09	2.64	.07	2.19	.03
Housing	2.45	30 **	165.71	09	2.34	11	1.94	03
Income	1.85	90.	125.24	.10	1.77	08	1.46	.01
CESD	.70	10	46.96	21	99.	26	.55	27 **
MAPA	.01	.24**	68:	.20*	.01	.01	.01	*61.
R^2		.28		.21		.15		.18
F		6.11**		4.35**		2.81		3.42**

Note: SF-36v2 Health Survey subtests: PF = physical function, RP = role physical, BP = bodily pain, GH = general health, CESD = Centers for Epidemiological Studies Depression Scale, MAPA = Meaningful Activity Participation Assessment. Page 17

p < .05.

p < 01.