

Measuring Military Family Well-being

A Renewed Focus on Military Family Well-being

This document reviews well-being and its measures to help inform Military Officers Association of America (MOAA) Warrior-Family Roundtable discussions. The President and the First Lady have identified “The well-being of military families is an important indicator of the well-being of the overall force.”¹ As our service members experience multiple, prolonged deployments, the effects are felt and mitigated by military families, impacting each family member’s sense of well-being. Studies using population-based, well-being measures demonstrate correlations between reported well-being and career satisfaction, suicide, health behaviors, risk taking behaviors, self-esteem and depression.^{2,3,4}

Core Components to Well-being

Researchers, policymakers and caregivers define well-being in varied ways incorporating an array of human conditions. In its simplest form, well-being is defined as happiness, which is responsive to current conditions and events, and life satisfaction which is reflective of past experiences and is more stable over time. Well-being does not appear to be tied to any single aspect of the human condition. For example, Ryff, et al. observed that elderly people with chronic and terminal health conditions may still report positive well-being.⁵

Established Tools at Our Disposal: Well-being Measures

Researchers have surveyed and measured well-being for several decades using diverse approaches. Commonalities across measures include surveys of social, psychological, health and spiritual domains of the human condition. These surveys attempt to quantify well-being for a population of interest, such as the United States or Europe, and to correlate well-being with events (e.g. crime, war, suicide rates and teen pregnancy) and conditions (e.g. economic status, inclusion and diversity). On the following pages, 12 population-based measures are reviewed. Table 1 outlines the domains measured and their alignment with Joint Chiefs’ Total Force Fitness domains (psychological, social, spiritual, physical, medical, behavioral, nutrition and environment). Table 2 details psychometric and practical properties of each measure.

Strengthening Military Family Well-being and Our Force

Assessment and monitoring of our service members' and their families' well-being would help guide efforts to promote force readiness and support families. Existing well-being measures map to the Joint Chiefs' Total Force Fitness campaign, and as such measures of service member and family well-being can serve as an indicator of force well-being and readiness.

¹ Obama M. Strengthening our Military Families: Meeting America’s Commitment. Report, January, 2011 pp 1.

² Gallup-Healthways Well-being Index: Methodology Report for Indexes, <http://well-beingindex.com/files/Gallup-Healthways%20Index%20Methodology%20Report%20FINAL%203-25-08.pdf> Published 2009-2010. Accessed 4/15/2010

³ Brim OG, Ryff CD, Kessler RC. *The MIDUS national survey: An overview*. In: Brim OG, Ryff CD, Kessler RC eds. *How healthy are we? A national study of well-being at midlife*. Chicago: University of Chicago Press; 2004:1-36.

⁴ Fazio, AF. Concurrent validation study of the NCHS General Well-Being Schedule. *Data Eval and Meth Res.* 1977;2(73):1-62.

⁵ Ryff CD, Keyes CL. The structure of psychological well-being revisited. *J Personality and Soc Psychology.* 1995;69(4):719-727.



Table 1: Population-Based Well-being Measures

Total Force Fitness Domain Alignment

Well-being Measures	Total Force Fitness Domains							
	Psychological	Social	Behavioral	Spiritual	Physical	Medical	Nutritional	Environmental
Australian Unity Wellbeing Index		✓						✓
CDC Well-Being Scale - Brief								
European Social Survey (ESS)	✓	✓		✓	✓	✓		
Flourishing Scale				✓				
Gallup-Healthways Well-Being Index	✓		✓	✓	✓	✓	✓	
Global Assessment Tool (GAT)	✓	✓		✓				
Midlife Development in the United States (MIDUS)	✓	✓	✓		✓	✓		
NHCS General Well-being Scale			✓	✓				
Personal Wellbeing Index – Adult (PWI-A)		✓		✓	✓	✓	✓	✓
Ryff’s Scales of Psychological Well-being	✓	✓		✓				✓
WHO Quality of Life (WHOQOL-BREF)	✓	✓			✓			✓
World Values Survey (WVS)	✓	✓				✓		✓

Blank cells indicate measure does not map to specified Total Force Fitness domain.



Table 2: Population-Based Well-being Measures
Comparative Analysis of Psychometric and Practical Criteria

Well-being Measures	Reliability		Psychometric Validity					Practical							
	Test Retest	Internal Consistency	Test Content	Response Process	Construct	Concurrent	Internal	External	Length (items)	Time to Complete (min)	Standard Administration	Format*	Time Period (past days)	Normative Data	Military Relevance
Australian Unity Wellbeing Index			✓		✓				22	10	✓	I,P	1	✓	
CDC Well-Being Scale - Brief		✓				✓			10			P	30		
European Social Survey (ESS)			✓				✓		240		✓	I,P	7	✓	
Flourishing Scale	✓	✓	✓		✓	✓	✓		8	15		P	28	✓	
Gallup-Healthways Well-Being Index		✓	✓				✓	✓	42+	15	✓	I	1	✓	✓
Global Assessment Tool (GAT)		✓	✓	✓	✓				110	20	✓	C	28	✓	✓
Midlife Development in the United States (MIDUS)		✓			✓				>250	90	✓	I,P		✓	
NHCS General Well-being Scale	✓	✓	✓			✓		✓	18-33			P	30		
Personal Wellbeing Index – Adult (PWI-A)	✓	✓	✓	✓	✓		✓	✓	8-9	15	✓			✓	
Ryff's Scales of Psychological Well-being	✓	✓		✓			✓	✓	18-120			I			
WHO Quality of Life (WHOQOL-BREF)	✓	✓	✓		✓		✓		26		✓	I,P	14	✓	✓
World Values Survey (WVS)			✓		✓	✓			224		✓	I	1		

* Interview (I); Paper and Pencil (P); Computer (C)

Blank cells indicate no information found in published literature.

Background: Population-Based Well-being Measures

Australian Unity Wellness Index (AUWI)

The AUWI is comprised of the National Wellness Index (NWI), the Personal Wellness Index, and two to three additional questions regarding current topics. The AUWI is administered to 2,000 Australians every six months. The NWI asks respondents how satisfied they are with six aspects of Australian life: the economy, the environment, social conditions, governance, business and national security. Other countries have adapted the NWI for similar use. The NWI correlates with global and component scores of personal well being. It is also responsive to national events such as threats of war, terror attacks, substantial changes in economic conditions and media campaigns.^{6,7}

Centers for Disease Control (CDC) Well-being Scale – Brief

The CDC Well-Being Scale – Brief is a 10-item measure of psychological, physical and social components of well-being. These domains are based on the CDC’s literature review and consultation with subject matter experts, and are consistent with the World Health Organization’s (WHO’s) definition of health which includes, “Health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity.” This instrument relies on the self-report of functioning over the 30 days prior to administration. It is a paper and pencil survey with items designed in Likert fashion.⁸

European Social Survey (ESS)

The European Social Survey was developed to examine attitudes and beliefs across 30 European countries. The survey includes 240 core items with additional rotating item modules. The core items measure social variables such as media use; social and public trust; political interest, participation and orientation; moral, political and social values; national, ethnic and religious allegiances; well-being; health and security; socio-economic and demographic variables. The method of administration varies from paper and pencil questionnaire to in-person interviews depending on the culture and customs of each country. Studies published using ESS data show correlations with inclusion and reduced suicide in the elderly; trust and exploitation, and religion and life satisfaction, while formal and informal volunteerism was found not to correlate with social, psychological or cultural factors and political interest was unrelated to the duration before the next election.^{9,10,11,12,13,14}

⁶ Cummins, R. The wellbeing of Australians—Trust, life better/worse and climate change. Australian Centre on Quality Life Deakin University Website. <http://www.deakin.edu.au/research/acqol/auwbi/survey-reports/survey-024-report-part-a.pdf>. Published 2010. Accessed April 15, 2011.

⁷ Cummins R, Eckersley R, Pallant J, Van Vugt J, Misajon R. Developing a national index of subjective wellbeing: The Australian unity wellbeing index. National Centre for Epidemiology and Population Health Australian National University Website. [http://nceph.anu.edu.au/Staff_Students/Staff_pdf_papers/Richard_Eckersley_papers/SIR\(AUWI\).pdf](http://nceph.anu.edu.au/Staff_Students/Staff_pdf_papers/Richard_Eckersley_papers/SIR(AUWI).pdf). Published 2002. Accessed April 15, 2011.

⁸ Bann CM, Kobau R, Lewis MA, Zack MM, Thompson W, Luncheon C. Development and psychometric evaluation of the CDC Well-Being Scale: Short Form. 2011. Working Report.

⁹ Clark AE, Lelkes O. Let us Pray: Religious Interactions in Life Satisfaction, Report, Working paper. <http://ess.nsd.uib.no/bibliography/details/publication/377>. Published 2009. Accessed April 19, 2011.

Flourishing Scale

The Flourishing Scale is self-report measure of psychological and social functioning. College students (N=689) were used to develop the scale. It consists of eight items pertaining to positive relationships, feelings of competence, and a sense of purpose. The items are answered in Likert fashion to produce an overall score. High scores reflect an optimistic view of self. The Flourishing Scale has been demonstrated to correlate with the Ryff Scale and the Basic Need Satisfaction Scale.¹⁵

Gallup-Healthways Well-Being Index

The Gallup-Healthways Well-Being Index is a population-based survey which measures both experiential well-being (affective experiences over the last 24 hours) and evaluative well-being (memory of experiences). The survey is conducted through English- and Spanish-language telephone interviews. One thousand respondents are polled each day allowing for evaluation of daily variation as well as yearly aggregate responses. The telephone survey takes approximately 12 to 15 minutes to complete. The index is comprised of 42 core well-being questions as well as demographic items. Additional items may be added based relevant events. The survey measures six well-being domains: life evaluation, emotional health, physical health, healthy behavior, work environment and basic access. Survey data from 2008 indicate that as the well-being index increased so did physical activity, dental visits, life expectancy, school enrollment and household income. Conversely, as the well-being index decreased there were increases in rates of tobacco use, obesity, infant mortality, heart disease, disability, diabetes, teenage pregnancy, poverty, food stamp usage, fatal motor accidents, and unemployment.¹⁶

Global Assessment Tool (GAT)

The Global Assessment Tool (GAT) is a DoD measure designed to assess soldier fitness in four areas: social, emotional, family and spiritual. The tool is currently utilized to inform computer generated recommendations for education to address low functioning in any of the four areas. It is also used to provide unit leadership with an overall resiliency profile of their unit. Preliminary validation of the GAT has involved relating scores on this instrument to those of existing Army ratings of post-traumatic stress disorder (PTSD), depression, alcohol abuse and global ratings in the four areas of soldier fitness: social,

¹⁰ Plagnol A, Huppert F. Happy to help? Exploring the factors associated with variations in rates of volunteering across Europe. *Soc Indic Res.* 2010;97(2):157-176.

¹¹ Yur'yev A, Leppik L, Tooding L, Sisask M, Värnik P, Wu J, Värnik A. Social inclusion affects elderly suicide mortality. *Int Psychogeriatr.* 2010; 22(8):1337-1343.

¹² Solvak M. Events and reliability of measures: The effect of elections on measures of interest in politics. *Int J Public Opin Res.* 2009;21(3):316-332.

¹³ Butler J, Giuliano P, Guiso L. The right amount of trust. European Social Survey Web site. <http://ess.nsd.uib.no/bibliography/details/publication/513>. Published 2009. Accessed April 19, 2011

¹⁴ European Values Study Group and World Values Survey Association. European and World Values Surveys Integrated Data File, 1999-2002, Release 1. Inter-University Consortium for Political and Social Research. Ann Arbor, MI; 2005.

¹⁵ Diener E, Wirtz D, Tov W, Kim-Prieto C, Choi D, Oishi S. New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Soc Indic Res.* 2010; 97(2):143-156.

¹⁶ Gallup-Healthways Well-being Index: Methodology Report for Indexes, <http://well-beingindex.com/files/Gallup-Healthways%20Index%20Methodology%20Report%20FINAL%203-25-08.pdf> Published 2009-2010. Accessed 4/15/2010

emotional, family and spiritual. At this time, no other correlates have been identified as being associated with particular scores on the GAT.¹⁷

Mid-life Development in the United States (MIDUS)

The MIDUS is a study investigating age-related differences as they pertain to physical health, psychological well-being and social responsibility. The MIDUS was first implemented in 1994 to 1995 and then again in 2004 to 2009. For each participant, the MIDUS utilizes a phone interview in conjunction with a combination of questionnaires. These instruments are designed to assess factors such as psychological and physical health, beliefs about health, social participation, social networks and support, sexuality, childhood background, spouse and partner information, children and parenting, occupational history, finances, living arrangements, personality traits, well-being, positive and negative affect, sense of control and goal commitments. The instruments also collect demographic information such as marital status, age, race and education. The 2004-to-2009 survey added measures of daily stress, cognitive evaluations, biomarker assessments and neuroscience assessments. The MIDUS study has investigated correlations among variables such as marital status, family structure, socioeconomic standing, social participation, social support, employment status, health status, health care utilization with psychological factors.¹⁸

National Center for Health Statistics (NCHS) General Well-Being Schedule (GWB)

The NCHS GWB was developed in 1970 for the NCHS and was used as part of a national health examination of 6,931 adults from April, 1971 through October, 1975. The GWB intends to assess psychological and behavioral aspects of subjective well-being and distress. It is a self-report, paper and pencil instrument that is comprised of 33 items. Respondents answer primarily in a Likert fashion as to how they have felt for the past month for most items and for the past year for others. The GWB has six subscales to include health worry, energy level, satisfying-interesting life, depressed-cheerful mood, emotional-behavioral control, and relaxed versus tense-anxious. One study using the GWB, found that in a sample of African American women, those who had greater body mass, higher alcohol and cigarette use, and depression had lower psychological well-being measurements on the GWB. Women who were more physically active and who had reported self-esteem had higher well-being measurements on the GWB.^{19,20}

Personal Wellbeing Index – Adult (PWI-A)

The PWI-A was developed in Australia to measure quality of life issues that address success and positive aspects of participants' lives. The PWI-A adds subjective perceptions of well-being to the traditional objective measures of health, wealth and social functioning. The domains measured in the PWI-A include

¹⁷ Peterson C, Park N, Castro CA. Assessment for the U.S. Army Comprehensive Soldier Fitness program: The Global Assessment Tool. *Am Psychol.* 2011;66(1):10-18.

¹⁸ Brim OG, Ryff CD, Kessler RC. *The MIDUS national survey: An overview.* In: Brim OG, Ryff CD, Kessler RC eds. *How healthy are we? A national study of well-being at midlife.* Chicago: University of Chicago Press; 2004:1-36.

¹⁹ Fazio, AF. Concurrent validation study of the NCHS General Well-Being Schedule. *Data Eval and Meth Res.* 1977;2(73):1-62.

²⁰ Taylor JE, Poston WS, Haddock CK, et al. Psychometric characteristics of the General Well-Being Schedule (GWB) with African-American women. *Qual Life Res.* 2003;12(1):31-39.

standard of living, health, achieving in life, relationships, safety, community-connectedness, future security and spirituality and religion. The PWI-A advantages include development for two decades, availability in multiple languages, and versions available for pre-school children, school children, and adults. There is also an intellectual and cognitive disability version. The index is an eight-item, verbal or written, self-administered test with no defined time limit.²¹

Ryff's Scales of Psychological Well-being

The Ryff's Scale was developed to measure well-being in geriatric patients who in typically exhibit chronic psychological health conditions and would report low well-being using traditional measures. The domains in the Ryff's Scales include self-acceptance, environmental mastery, positive relations, purpose in life, personal growth and autonomy. This instrument is available in versions ranging from 18 to 120 items and is administered by interview. The self acceptance, environmental mastery and purpose in life domains correlate with other existing measures of well-being, while personal growth, positive relations and autonomy domains measure new constructs.^{22,23}

WHO Quality of Life Indicator – Brief Version (WHOQOL-BREF)

The WHOQOL-BREF is a shortened version (26 items) of the WHOQOL-100. It assess (via a five-point Likert scale) the individual's view of their well being in 24 particular facets of quality of life (e.g., positive feeling, social support, financial resources) as well as overall health. The WHOQOL-BREF measures four domains: physical health, psychological, social relationships, and environment. It has 24 items with only one question per facet. The WHOQOL-BREF was developed from surveys in 23 countries with data from 11,830 individuals. The four domain scores from the WHOQOL-BREF have been shown to correlate with those from the longer version as well as: other quality of life scales, measures of health-illness, age, depression, and disability.^{24,25,26}

World Values Survey (WVS)

The WVS was developed in an effort to examine the values and norms of inhabitants of over 50 nations representing approximately 90 percent of the world's population. The survey was conducted in five phases covering the time period from 1981-2007. Participants were primarily interviewed face-to face-fashion, although phone calls were made to participants in remote areas. The WVS is composed of 245 items that gauge participants' views on topics such as the economy, financial resources, work, politics,

²¹ McDowell I. Measures of self-perceived well-being. *J Psychosomatic Res.* 2010;69: 69-79. International Wellbeing Group. Personal wellbeing index: 4th ed. Melbourne:Australian Centre on Quality of Life, Deakin University <http://www.deakin.edu.au/research/acqol/instruments>. Published 2006. Accessed 4/15/2011

²² Ryff CD, Keyes CL. The structure of psychological well-being revisited. *J Personality and Soc Psychology.* 1995;69(4):719-727.

²³ Ryff CD and Singer B. Psychological Well-Being: Meaning, Measurement, and Implications for Psychotherapy Research. *Psychother Psychosom.* 1996;65:14-23.

²⁴ Skevington S, Lofty M, O'Connell K. The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial. *Qual Life Res.* 2004;13:299-310.

²⁵ WHOQOL Group. Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychol Med.* 1998;28:551-558.

²⁶ Cruz LN, Camey SA, Fleck MP, Polanczyk CA. World Health Organization quality of life instrument-brief and short form-36 in patients with coronary artery disease: Do they measure similar quality of life concepts? *Psychol Health Med.* 2009;14(5):619-28.

religion, marriage, family, morality, social issues and the impact of technology on society. Demographic information and participants' perceived interest levels in the survey are documented as well. More than 1000 publications are based on the data from this longitudinal study. WVS data indicate aggregate subjective well-being (i.e., happiness and satisfaction with life) correlates with freedom of choice in matters related to economic growth, democratization and social tolerance. Specifically, the WVS data show subjective well-being correlates with higher levels of gender equity, and tolerance for those with alternative lifestyles and neighbors of different races and ethnic backgrounds.^{27,28,29}

Questions and Comments

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²⁷ Inglehart R. World Values Survey. *Washington Quarterly*, 2000;23(1):215-228.

²⁸ Inglehart R, Foa R, Peterson C, Welzel C. Development, Freedom, and Rising Happiness: A Global Perspective (1981-2007). *Perspectives on Psychological Science*. 2008;3(4):264-285.

²⁹ Inglehart R, et al. World Values Surveys and European Values Surveys, 1981-1984, 1990-1993, and 1995-1997. ICPSR version. Institute for Social Research, Ann Arbor, MI; 2000.