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William B. Bunn, III, MD, JD, MPH Editor-in-Chief, wiliam.bunn@navistar.com

Vice President, Health, Safety, Security, and Productivity, Navistar International Professor, Northwestern University School of Medicine Sean Sullivan, JD President and CEO, sean@ihpm.org Bill Williams III, MD, FAAFP Senior Vice President, bill@ihpm.org Deborah Love Executive Vice President and COO, deborah@ihpm.org Randall Hatfield Chief Innovations Office, deborah@ihpm.org Edward Jones, PhD Senior Vice President of Strategic Planning Joseph A. Leutzinger, PhD President (AHPM) Academy for Health and Productivity Management, joe@ihpm.org Steve Priddy Executive Director, Value-Based Health, steve@ihpm.org Pamella Thomas, MD Chief Medical Officer

PUBLISHING, EDITORIAL MANAGEMENT AND PRODUCTION SERVICES

Douglas Murphy Communications, Inc. P.O. Box 71895 Richmond, VA 23255-1895 **Tel.** 804.387.7580 **Fax**. 703.997.5842 www.douglasmurphy.com

Grant W. Murphy, President, grant.murphy@douglasmurphy.com Barry Barnum, Editorial Director, barry.barnum@douglasmurphy.com Rick Gutierrez, Graphic Director, rick.gutierrez@douglasmurphy.com

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Wellbeing: A Critical Health Domain

Ed Jones, Ph.D., Jeb Brown, Ph.D., Takuya Minami, Ph.D.

ABSTRACT

People worldwide are focused on health. Companies and countries are focused on health. In particular, mental illnesses have gained notoriety based on celebrity confessions, infamous murders, suicides, and drug overdoses. Depression has gained increasing attention in the past decade. The World Health Organization reports on its website that depression is the leading cause of disability worldwide, impacting more than 350 million people of all ages. Recently, however, a new concept focusing on the positive side of mental health is gaining attention. Unlike mental illnesses such as depression and anxiety, researchers have started focusing on concepts such as happiness and sense of achievement. The positive side of mental health is being termed as wellbeing.

I. The Emergence of Wellbeing as a Key Health Concept

You might immediately wonder how wellbeing is defined. A journal dedicated to this concept, *International Journal of Wellbeing*, illustrates the lack of consensus even among researchers: "The question of how wellbeing should be defined (or spelt) still remains largely unresolved."¹ However, three independent tributaries have come together in recent years to create this powerful current.

INTRODUCTION

MORE THAN THE ABSENCE OF DISEASE

Interestingly, the earliest expression of this concept dates back to 1946 with the founding of the World Health Organization. The preamble to its constitution includes this statement: "Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity²", WHO has not amended this definition of health and it remains as a broad conceptualization encompassing three dimensions of wellbeing.

One might wonder if the definition is so aspirational that only a few fortunate people ever achieve this state of mental health at any particular point in time. Clearly a somewhat more actuarial approach is needed to measure the range of wellbeing. The important point is that wellbeing and illness are not simply two ends on the same spectrum. The idea is that we want more than the absence of illness or disease in our lives. We want something distinctly positive; the implication is that our societies should be structured to promote this state of being. While it is conceptually a powerful distinction, it must be acknowledged that it has yet to be demonstrated that the differentiation is of empirical importance.

This article presents a new research program intended to develop sophisticated tools for measurement of the constructs of wellbeing and distress, and to further understand how these constructs might also relate to various measures of workplace productivity. It has been well established that illnesses, such as depression and anxiety, result in significantly reduced productivity in the workplace. This research program proposes to further this understanding by investigating the extent that measures of wellbeing might also prove to be powerful predictors of productivity.

SUBJECTIVE WELLBEING OR HAPPINESS

There is a body of research in psychology that emerged largely in the 1970s focused on wellbeing. In the earlier years, psychologists often conceptualized wellbeing as synonymous with happiness. However, as Shigehiro Oishi states in his 2012 book, *The Psychological Wealth of Nations: Do Happy People Make a Happy Society*³, psychologists prefer the term wellbeing in order to differentiate it from the common conception of happiness as "a temporary mood state." He summarizes the conclusions of this literature on the components of wellbeing in this way:

The cognitive component of subjective wellbeing is often represented by life satisfaction, or how well people think their lives are going. The affective component of subjective wellbeing is represented by positive and negative affect how often people feel happiness, sadness, and other emotions in their daily lives.

Oishi also notes that psychologists agree on how to measure wellbeing, namely, through the use of self-report questionnaires. Of course, many such tools have been used through the years and there is no single questionnaire that is embraced by all psychologists.

In recent years, wellbeing has been embraced by public policy experts as an important health concept. For example, the Centers for Disease Control and Prevention have posted an article on their website at http://www.cdc.gov/hrqol/wellbeing.htm which asserts that wellbeing is an important measure for public health:

Wellbeing is associated with numerous health, job, family, and economicallyrelated benefits. For example, higher lev els of wellbeing are associated with de creased risk of disease, illness, and inju ry; better immune functioning; speed ier recovery; and increased longevity. Individuals with high levels of wellbeing are more productive at work and are more likely to contribute to their communities.

THE GLOBAL PURSUIT OF HAPPINESS

Wellbeing as an idea has gained global momentum both as a research agenda and as a health improvement agenda. In order to understand the global and cultural dimensions of this health concept, it is best to start with the work of Ed Diener, the psychologist who has pioneered this research over the past three decades. He critiqued subjective wellbeing scales as far back as 1984⁴, and with William Tov, another significant thinker in this domain, analyzed the impact of culture on wellbeing. Tov and Diener argued that "some types of wellbeing, as well as their causes, are consistent across cultures, whereas there are also unique patterns of wellbeing in societies that are not compatible across cultures. Thus, wellbeing can be understood to some degree in universal terms, but must also be understood within the framework of each culture⁵".

If there is any doubt that wellbeing has a global research base, then it is not necessary to look beyond the World Database of Happiness collected by Veenhoven⁶ for wellbeing scores for over 160 societies based on survey studies from 1946 to the present. While this work may be faulted since many of the measures include only one item reflecting wellbeing, the enormity of the undertaking cannot be underestimated. Indeed, the work advances our understanding of the fact that "the 'happiest' nation in a cognitive sense may not necessarily be the happiest nation in terms of emotional experiences, and vice versa"⁷.

Global interest in wellbeing is evident from this research activity, but even more pervasive has been the expansion of employee assistance programs (EAP) around the world. EAPs began in North America in the 1970s and then expanded to the UK, Ireland, and Australia. The early discussion of global employee assistance outside these countries meant the provision of counseling and other support services almost exclusively for expatriates. However, in the past five to ten years, the focus has shifted dramatically to including local employees in much greater numbers. The challenge has been how to offer such services in a culturally sensitive way. In many instances it is culturally insensitive to suggest that people need "assistance" or need to address "stress," and so efforts to increase wellbeing and happiness have been found to be more resonant with cultural norms in many countries.

PATHWAYS TO WELLBEING

If we take the thinking of the WHO, research psychologists, and EAP clinicians as promoting the importance of wellbeing in complementary ways, we still have not answered the question of whether and how people can increase their wellbeing. Wellbeing is a construct comprised of different elements, as was described earlier in the work of researchers who identified life satisfaction and positive emotion as critical components. This has been a key focus of popular books published in the past few years by prominent researchers.

Tom Rath and Jim Harter published Wellbeing: The Five Essential Elements in 2010.⁸ They offer a holistic view of what contributes to wellbeing over the course of a lifetime based on research completed at Gallup, Inc. Harter is the Chief Scientist for Workplace Management and Wellbeing at Gallup. They identify five universal elements comprising wellbeing: career wellbeing, social wellbeing, financial wellbeing, physical wellbeing, and community wellbeing. These straightforward areas of focus offer a practical roadmap for building wellbeing.

A more psychologically-based model is offered by Martin Seligman, Ph.D., who is the recognized leader for the past two decades in the research and theory of positive psychology. His 2011 book, *Flourish: A Visionary New Understanding of Happiness and Wellbeing*,⁹ entails a major reformulation of positive psychology. He argues that "the topic of positive psychology is wellbeing" and furthermore, that "the gold standard for measuring wellbeing is flourishing". He goes on to say that wellbeing is a construct with several measureable elements, "each a real thing, each contributing to wellbeing, but none defining wellbeing".

Seligman offers five measurable elements of wellbeing, notably positive emotion (of which happiness and life satisfaction are all aspects), engagement, relationships, meaning, and achievement. These elements of wellbeing that he identified overlap with those studied by other research psychologists, but extend beyond those as well. He has much to say about each of these areas, but perhaps more importantly, he has developed very specific techniques for helping people improve these elements of their lives, or in other terms, flourish. Specifically, he led the development of the Penn Resiliency Program as a means of teaching wellbeing in schools, and he developed Master Resilience Training with the U.S. Army.

As would be expected, Dr. Seligman has conducted research on the impact of his programs and the results are encouraging. However, it seems clear that there are many pathways to enhancing the components of wellbeing. People who complete a variety of psychotherapy and counseling services report improvement in positive emotion and relationships, and any number of interventions can help people achieve more. The thrust of Dr. Seligman's work in positive psychology is that "positive mental health is not just the absence of mental illness," and so "being in a state of mental health is not merely being disorder free; rather it is the presence of flourishing". This certainly resonates with the constitution of the WHO, and it is a strong antidote to professionals who promote mental health services that focus exclusively on problems and disorders.

II. THE MEASUREMENT OF WELLBEING

One of the most critical yet unresolved issues is measuring wellbeing effectively, using reliable, valid, and preferably brief tools. Such an attempt by seven of the leading researchers in the wellbeing arena is illustrated in a 2009 article,10 which offers two new measures that were tested with 689 college students. The new measures were an attempt to improve on the previous approaches to wellbeing. Notably, they separated the questionnaire into two scales: one to measure the construct of "Flourishing" and a second Scale of Positive and Negative Experience (SPANE). The 12-item SPANE scale includes six items to assess positive feelings and six items to assess negative feelings.

This is a worthwhile effort to refine a measurement approach, but the authors in this case were constrained by a relatively small sample size of college students. This sample was too small and heterogeneous to permit a thorough investigation of the underlying psychometric constructs. In order words, in what ways does a measure of "Flourishing" converge or diverge from measures of positive or negative feelings/experiences? Are these in fact real and separate measurement constructs, or are the correlations among these items so high that they are best treated as a single construct?

Fortunately, over the course of several decades similar measures have been used for psychotherapy outcome research with hundreds of thousands of adults with diverse backgrounds. To take advantage of this rich source of data, the Institute for Health and Productivity Management has developed a global program focused on wellbeing in collaboration with Jeb Brown, Ph.D., Center for Clinical Informatics, and Takuya Minami, Ph.D., University of Massachusetts Boston.

Drs. Brown and Minami maintain a large database known as the ACORN data repository. ACORN is an acronym standing for A Collaborative Outcomes Resource Network. The repository contains data collected by thousands of mental health practitioners using a variety of questionnaires. The repository is one of the largest databases of its kind in the world, containing over 1.5 million records of completed questionnaires.

Under this new initiative, Drs. Brown and Minami are pursuing a research program that includes highly sophisticated measures of wellbeing. At the core of this program is a self-report questionnaire of wellbeing which not only builds on prior wellbeing research, but also takes advantage of a large database of well-validated questionnaires used in the measurement of outcomes for psychological distress and substance abuse treatment.

The new Wellbeing Questionnaire will enable employers (including both private and public employers) to assess the state of wellbeing of their workforce, identify sub-populations needing further attention, and implement a range of interventions recommended based on the results, taking into consideration regional and cultural issues. Because of the sophisticated questionnaire development methodology, employers can be assured that the measure embodies exceptionally strong psychometric properties, while retaining the flexibility to adjust the measure to fit the needs of specific cultures, language groups, or other populations of interest.

In reviewing the literature on existing wellbeing measures, it becomes readily apparent that the item content of these measures was chosen to fit the conceptual framework used to describe wellbeing. However, it is important to understand that using items with high face validity for the concept being measured does not necessarily translate into robust construct validity. Only when the items are subjected to extensive analyses employing large and diverse samples can validity be better understood.

Decades of research on treatment outcomes for depression, anxiety disorders, and related mental health problems can provide substantial guidance in this area. A number of highly reliable and valid questionnaires are in widespread use, providing a rich data set to explore the underlying psychometric constructs of the measure. When reviewing results from multiple factor analyses across many different outcome questionnaires, it becomes apparent that virtually all of the items are loading a common factor, generally referred to as "global distress."11,12 Questionnaires or subscales for depression, anxiety, social isolation/conflict, and impaired functioning/productivity do not emerge as discrete factors. The items from these various clinical domains all tend to correlate highly with the global factor, and so from a purely psychometric point of view, they all belong on a single scale.

While these outcome questionnaires tend to measure symptoms of mental illness (e.g., depression, anxiety) some items are worded in a positive manner. For example, "How often do you have a good level of energy," and "How often do you have little or no energy," are statements that function as essentially mirrors of one another. If they are scored so that a higher score always means more sadness/less happiness, then the results of the two items look virtually identical and load heavily on the global distress factor.

Other ACORN data repository examples of mirror items showing similar psychometric properties and strong loading on the global distress factor include: sadness/ positive mood; problems with sleep/right amount of sleep; trouble trusting others/ trust a friend; feel worthless/feel good about yourself; and problem achieving goals/making progress towards goals.

If the positive feeling items and negative feeling items were truly measuring different constructs, then a factor analysis on a large heterogeneous sample would find separate factors for distress and wellbeing, with the two being largely uncorrelated. In the case of these examples, this is clearly not true. Whether a scale including these pairs of items is labeled Global Distress or Wellbeing makes no difference from a measurement point of view.

A large body of research has demonstrated a strong correlation between reduced workplace productivity and symptoms of depression, anxiety, and other aspects of global distress.^{13,14,15,16} This in-and-of itself might be an argument to include at least some items to measure these symptoms within a wellbeing questionnaire. It seems quite plausible that items inquiring positively about wellbeing would exhibit similar correlations to workplace productivity. This question, which has not in the past been fully investigated, is the primary undertaking of the current collaboration between IHPM and Center for Clinical Informatics.

Another consideration when evaluating questionnaire items is the ease by which they translate to different languages and cultures. Many of the items in the ACORN inventory have been translated into multiple languages, including Korean, Chinese, and Japanese. While most items translate without difficultly, some items prove more challenging due to cultural differences in definitions of socially defined concepts such as a successful life, virtue, and even happiness. As a rule, items inquiring about specific concrete symptoms (e.g., sleep, pain, anxiety, and depression) translate more readily. This is another reason that negative symptoms should be incorporated into a questionnaire that aims to be cross-culturally sound.

III. IHPM WELLBEING QUESTIONNAIRE

The new IHPM Wellbeing Questionnaire was developed taking all of these considerations into account. The measure is designed to provide a brief but highly reliable and valid measure of quality of life and overall wellbeing. The Wellbeing Questionnaire is named as such because responses to its items make sense to a layperson as reflecting a person's sense of wellbeing.

This questionnaire fills a gap in existing measures of wellbeing and symptoms in that it provides a balance of both positive and negative emotional states along with other indicators of quality of life, including workplace productivity. The large sample size used in the development of the questionnaire, along with the continued research program to collect a large and diverse normative sample, assures that the underlying measurement construct is well understood and consistent.

Items were selected based both on their known psychometric properties, as well as face validity, meaning that similar items appear on other recognized measures of Wellbeing and Global Distress. When possible, items were also selected based on known correlations to self-reported productivity in the workplace.

The Wellbeing Questionnaire was developed using data from the ACORN data repository, which includes questionnaires completed by over 300,000 adults receiving psychotherapy. A great advantage of this scale is that it is comprised of items reflecting both clinical symptoms and emotional wellbeing. The items have been well tested in both clinical samples (i.e., individuals seeking mental health services) and non-clinical samples drawn from the workplace and community. With the exception of four new items included in the questionnaire, the normative sample sizes for the ACORN items included in the questionnaire ranges from just over 600 records to well over 50,000 records (most common). In other words, the psychometric properties of almost all of the items in the new questionnaire are already well understood.

Due to the inclusion of items known to work well in clinical populations, the questionnaire is both a measure of overall wellbeing and a tool that can be readily utilized to identify individuals who are likely to benefit from therapy, EAP services, or other forms of increased psychological support. Individuals who receive the necessary psychological services are highly likely to report significant improvements in workplace productivity.

The Wellbeing Questionnaire consists of 21 items. Seventeen of the items have already been used in clinical settings, and

questionnaires based on these items have shown high reliability, validity, and sensitivity to change over time (as measured by repeated assessments during the course of therapy).

New normative data, separately from the thousands already collected, are currently being collected on all 21 items from work-place and community samples. At the time this article went to press (September 2013), the new normative sample size was 478 adults between the ages of 18 and 90, with 80 percent between 24 and 54. Eighty one percent were employed, eight percent unemployed, five percent homemakers, and five percent students. The sample size continues to increase rapidly.

The 21 items cover five main domains drawn from the literature on wellbeing and quality of life. These are: Flourishing; Mental/Physical Health; Life Satisfaction; Productivity; and Substance Abuse. The item analyses performed to date indicate that these domains are all highly correlated and can be probably be treated as part of a single Wellbeing/Quality of Life scale.

As sample sizes increase, further research may reveal a more complex factor structure. We will be able to conduct complex factor analyses on individual items across varied age groups, employment categories, gender, ethnic groups, etc. However, the fact that the scale is currently loading onto a single factor is consistent with the body of empirical literature in psychology.

The items on the questionnaire are presented in a well-tested format, known to produce results with excellent psychometric properties. The questionnaire utilizes a five-point Likert-type scale, in which respondents are asked to rate how often in the past two weeks they have had certain experiences. Possible responses are: Never; Rarely; Sometimes; Often; and Very Often. The scale is scored simply by adding the value associated with each response. The questionnaire is scored so that high scores represent higher levels of wellbeing/lower level of distress. Specifically, items reflecting positive states are scored as follows: Never = 0; Rarely = 1; Sometimes = 2; Often = 3; Very often = 4. Conversely, negative states are coded as follows: Never = 4; Rarely = 3; Sometimes = 2; Often = 1; Very often = 1.

The reliability of the full 21 items, as assessed by Cronbach's coefficient alpha, is .91. A coefficient alpha of >.90 is considered excellent reliability, suitable for measurement of individuals.

The following list groups the items by domain/subscale, with the observed correlation between each domain and the common factor in parentheses after the domain name.

Items listed by domain (*placed after items indicate this is one of the four new items):

How often in the last two weeks did you... Flourishing (r = .88)

- Feel good/positive about yourself?
- Enjoy your leisure time? *
- Have a good energy level?
- Enjoy spending time with family or friends?
- Enjoy your work and other activities of daily life? *****
- Have the right amount of sleep?

Mental/Physical Health (r = .84)

- Have physical pain or other health problems?
- Worry about a lot of things?
- Feel unhappy or sad?
- Feel nervous or anxious?
- Cut back on activities due to physical or emotional health problems?
- Feel hopeless about the future?
- Feel lonely?

Quality of LIfe/Life Satisfaction (r = .84)

- Feel fulfilled in life? *
- Feel happy with your living situation?
- Feel fortunate about your social relationships? *

Productivity (r = .82)

- Feel unmotivated to do anything?
- Feel unproductive at work or other daily activities?
- Have a hard time paying attention?
- Accomplish most of what you wanted to do?

Substance Abuse (r = .28)

• Have problems at work, school or home due use of drugs or alcohol?

The new Wellbeing Questionnaire is a reliable (r = .91) and valid measure of overall wellbeing, quality of life, and level of psychological distress. All items correlated highly with a common factor, and therefore the measure can be scored as a single scale.

However, subscales can be reported to assist with interpretation based on the needs of the end user. For example, for clinicians working in an EAP setting, the different domains may be useful in planning treatment with their clients.

In clinical settings, reliability of similar Wellbeing/Global Distress questionnaires with at least ten items from the ACORN repository (including items from this new scale) have consistently revealed reliability of .85 or higher (Cronbach's alpha; sample size >300,000 adults). This means briefer versions of the questionnaire may be possible while still retaining high levels of reliability and validity.

Concurrent validity, as measured by correlations between the items in the ACORN repository and other widely used measures such as the PHQ-9 (depression), Beck Depression Inventory, Beck Anxiety Inventory, Outcome Questionnaire-45, and Outcome Rating Scale, is also very strong. Coefficients of correlation (Pearson's *r*) fall in a narrow range around .80. This is further evidence that all of these measures share a common factor.

Careful item selection, based on the psychometric properties of each item, will result in questionnaires with outstanding psychometric performance, well suited for the measurement task in target populations. Criteria for psychometric performance include:

- Reliability of .9 or higher, as measured by Cronbach's coefficient alpha.
- Differential validity: ability to differentiate between different target populations, such as individuals receiving mental health services and individuals in the community who have never sought services
- Construct validity: items are good representations of the underlying construct.
- Concurrent validity: high correlation with other measures assessing the same underlying construct.

SCORING INSTRUCTIONS

The Wellbeing Scale is scored as the mean of

the non-missing items on that scale. Each Item is scored on a five-point scale ranging from 0 to 4, with higher numbers indicative of a higher frequency of well-being/happiness/life satisfaction and lower frequency of symptoms and negative experiences. Since the scale score is derived by averaging the individual item scores, the full scale and all subscales range from 0 to 4, with 4 reflecting the highest level of wellbeing.

INTERPRETING SCORES WELLBEING

Wellbeing scores, with a possible range of 0 to 4, are divided into three severity ranges for ease of interpretation.

High wellbeing/normal levels of distress (score range 2.5 to 4): Approximately 25 percent of an outpatient mental health sample will score in this range at intake. Likewise, approximately 75 percent of a community sample not receiving mental health services will fall in this range. Low wellbeing/moderate distress (1.5 to 2.4): Approximately 50 percent of an outpatient mental health sample will score in this range at intake, while approximately 20 percent of a community sample will fall in this range. Very low wellbeing/severe distress (0 to 1.4): Approximately 25 percent of an outpatient mental health sample will score in this range at intake, with fewer than five percent of a community sample in this range.

SUBSTANCE ABUSE

The vast majority of people (90 percent) in the community sample scored 4 on this item, while among those receiving psychotherapy >65 percent score 4 on this scale at intake. A score of 2 or lower on this item is clear evidence of a self-reported substance abuse problem.

ONGOING RESEARCH AND DEVELOPMENT

The IHPM Wellbeing Questionnaire is a new measure in the sense that these exact 21 items have never been administered together in a single questionnaire. While the overall psychometric properties of the measure is easy to estimate based on the known properties of each item, for the purpose of methodological rigor, IHPM has implemented an ongoing process of research and development to field test the questionnaire as a whole.

Field testing is proceeding rapidly, and the complete results of these field trials will be presented in a forthcoming article. Continued evaluation of the questionnaire using factor analysis and other methods will further probe the nature of the constructs measured. This work will also permit development of briefer versions of the questionnaire to be used with targeted populations for specific measurement purposes.

It should also be noted that as we continue to accumulate data from different language/ cultural groups, it may prove necessary to refine or add items to reflect knowledge gained from cross-cultural comparisons. Continued testing and re-evaluation in real world environments assures that the questionnaire continues to perform as designed.

Most of the questionnaires used among researchers are intended to remain fixed in their item content. This posits a significant issue, as it cannot be tailored to meet the measurement needs of different customers and populations of interest. Ultimately, copyrighted and fixed questionnaires cannot prove as versatile as alternative versions of the IHPM Wellbeing Questionnaire, tailored to specific measurement needs.

AUTHORS

Ed Jones, Ph.D., is Senior Vice President, Strategic Planning, Institute for Health and Productivity Management.

Jeb Brown, Ph.D., is President, Center for Clinical Informatics.

Takuya Minami, Ph.D., is Associate Professor, University of Massachusetts Boston

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SEAN SULLIVAN, JD President & CEO, Institute for Health and Productivity Management Fortune Magazine, 12.12.05

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The health of the work force is the biggest unrealized source of competitive advantage in the global economy. The mind shift from viewing it merely as a labor cost to seeing it as a strategic business asset is fostering the growth of health and productivity management as a global discipline. Unhealthy employees are less productive and hurt the health of the corporate bottom line—IHPM has the measurement tools and



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