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14. A REVIEW OF RESEARCH ON THE HAPPINESS MEASURES: A SIXTY SECOND INDEX OF HAPPINESS AND MENTAL HEALTH

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ABSTRACT. Eighteen years of research using the Happiness Measures (HM) is reviewed in relation to the general progress of well-being measurement efforts. The accumulated findings on this remarkably quick instrument, show good reliability, exceptional stability, and a record of convergent, construct, and discriminative validity unparalleled in the field. Because of this, the HM is offered as a potential touchstone of measurement consistency in a field which generally lacks it.

Personal happiness is generally held to be the most important goal in life. Throughout history, it has been seen as the ultimate end of temporal existence. Aristotle's ancient view that "happiness is so important, it transcends all other worldly considerations" differs little form William James' more modern, psychological observation that "happiness is for most men, at all times, the secret motive of all they do . . ."

Despite the obvious importance of this basic human concern, the social sciences have only in the last decades turned any real, research attention to the topic (for reasons that Fordyce, 1981a, and Kammann *et al.*, 1979, discuss elsewhere). Although late getting started, research on happiness has mushroomed exponentially in recent years (cf. Diener and Griffin, 1982; Michalos, 1985a) and the results of this growing effort are currently most impressive. It is now widely accepted that happiness and related topics of subjective well-being can be measured and studied with reliability and validity (cf. Campbell, 1976; Diener, 1984; Fordyce, 1974b, 1986; Kammann *et al.*, 1979; Veenhoven, 1984) and the emerging research understanding of happiness is quite substantial. Much is now known regarding the nature of happiness, the factors which contribute to it, and the attributes of happy individuals (cf. Diener, 1984; Fordyce, 1974b, 1978, 1981a, 1981b, 1986; Veenhoven, 1984). Theoretical models are coming to the fore (Diener,

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1984; Fordyce, 1978, 1981b; Kammann and Flett, 1983; Michalos, 1980, 1985b; and Veenhoven, 1984). And even more exciting, a number of recent studies report interventions based on this accumulated research knowledge, to significantly increase the happiness-levels of normal adults (Fordyce, 1977, 1983; Fraser *et al.*, 1985; Lichter *et al.*, 1980).

Notwithstanding the tremendous progress in the field, there is one, somewhat nagging problem: the consistency of happiness and well-being measurement. To be more specific, the field of well-being research is plagued with a rather unique over-abundance of instrumentality. Perhaps more than in any other field in psychology, happiness researchers face a bewildering multitude of measurement possibilities.

There are the straightforward, "How happy are you?" items (with three responses: "very happy", "pretty happy", and "not too happy") used in the classic, national surveys of Gurin *et al.* (1960), Bradburn and Caplovitz (1965), Converse and Robinson (1966), and the many studies by Campbell and his fellows at the Institute for Social Research.

There have been a multitude of single-item scales developed over the years; the most recent and oft cited being those by Andrews and Withey (1976), Cantril (1965), Wessman and Ricks (1966), and the seven-point scales used by Kammann and Flett (1983a), and Michalos (1985b), as dependent variables in their research.

A plethora of multi-item scales and questionnaires also exist: e.g., Bradburn's Affect Balance Scale (1969), Campbell, Converse, and Rodger's Index of General Affect (1976), Fordyce's Psychap Inventory (1983, 1986), the Satisfaction with Life Survey (Diener *et al.*, in press), Kammann and Flett's Affectometer-2 (1983b), Nagpal and Sell's Subjective Well-Being Inventory (1985), Tellegen's DPQ Well-Being Scale (1979), and Underwood and Froming's Mood Survey (1980), yet these represent only a small fraction of such measures, some of which date as far back as Watson (1930), and others just in the design-stage.

Beyond these, one must consider scores of assessment devices that tap such happiness-allied fields as life-satisfaction, positive affect, geriatric morale, and satisfaction with specific life-domains (such as one's job or marriage).

There are also a host of widely recognized, clinical instruments designed to identify depressed (i.e., "unhappy") individuals (e.g., Beck's

Depression Inventory, 1978; Lubin's Depression Adjective Checklists, 1967; Krug and Laughlin's IPAT Depression Scale, 1970). And to compound it all, many of the most respected clinical and personality inventories (such as the MMPI), contain some form of emotional morale subscale in their protocol.

To the newcomer in this field, it would appear the alternatives are endless — and the perception is largely true. Over the years, no measure of happiness has emerged as a standard reference-point for ongoing study. In fact, just the opposite seems to be the case. Historically, every new researcher investigating happiness has tended to develop a new test to measure it, with little or no reference to past measurement efforts. Only in recent years has this trend been broken (with the comparative studies on measurement by Fordyce, 1986; Diener, 1984; Kammann *et al.*, 1981; and Larson *et al.*, 1985), and it now appears that measurement efforts in the field are begining to mature and trying to coalesce.

Given this background, the present article focuses on one, very simple happiness measure which has been around for a long time: the Happiness Measures (HM). Considered by some to be the "grand-daddy" of them all, the Happiness Measures — an especially quick and simple measure — has been the most researched and extensively validated, index of happiness proffered the field. This paper provides a review of its current status.

DESCRIPTION OF THE HAPPINESS MEASURES

The *Happiness Measures* consist of two, self-reporting items measuring emotional well-being: (1) an 11-point, happiness/unhappiness scale, and (2) a question asking for the time spent in "happy", "unhappy", and "neutral" moods (see Appendix I).

The scale used in the HM is based on the pioneering work of Wessman and Ricks (1966). Their well-validated scale was expanded and refined by Fordyce (1972, 1973b) to its present form. The present HM scale is unique in two respects: (1) it provides the widest range-of-response and variance of any established scale, and (2) it contains anchoring descriptions at each point on the scale (to insure a better cross-comparability of subject response).

The percentage question (which asks the subject to estimate the amount of time spent in happy, unhappy, and neutral moods), was added to provide a quantitative measure to compliment the qualitative scale. It also adds an index of unhappy mood, which (according to the work of Bradburn, 1969; Bryant and Veroff, 1982; Diener and Emmons, 1984; and Zevon and Tellegen, 1982), plays a somewhat independent role in the overall assessment of subjective well-being. The neutral percentage was included to allow the happy and unhappy mood estimates to vary independently. Originally, it was thought that the neutral estimate would yield close-to-zero correlations with happiness factors, but instead a long history of use shows that neutral mood is more unhappy than happy, and correlations show a consistently negative pattern of association with happiness factors.

Together, the *scale* and *percentage estimates* provide what Diener, in his timely review (1984), considered as the most important qualities of a well-being instrument: measures of *frequency* and *intensity* of affect. The HM *scale* is a measure of intensity (or quality) of happiness; the *percentage estimates*, a measure of its frequency (or quantity).

ADMINISTRATION AND SCORING

The HM is remarkably easy to administer and score. Directions for the examinee are provided on the sheet and most individuals can complete it without further instruction. Few examinees take more than a minute to finish, and the instrument is virtually scored as it's answered.

The *scale score* and the three *percentage estimates* — as they are marked — are used directly as raw scores. The *combination score* (combining the *scale* and *happy* % in equal weights) requires only minimal calculation (i.e., *combination* = [*scale score* × 10 + *happy* %]/2).

Generally, because of its stronger reliability and validity data (see sections below), the *combination score* is used as the primary criterion for happiness in research. However, in most studies all five HM scores have been examined, for each has its own interesting (and often independent) associations with other studied factors. Indeed, given the four basic scores the HM provides as it is completed, other combinations of the raw data are possible. Kammann, Farry, and Herbison (1981) used the HM to produce a "net-time happiness score" (subtracting the

unhappy % estimate from the *happy % estimate*), and others (like Larson *et al.*, 1985), have treated the subscales quite independently in their analyses.

It is also important to point out, that although the HM has been primarily used to measure happiness in a more general, "on the average" way, it can also be used to measure happiness over more specific time-periods (e.g., "this year", "last month", "today", etc.) as was done in Fordyce's study of daily mood-change (1972) and in more recent studies which successfully attempted to increase the happiness-level of normal adults (Fordyce, 1977, 1983).

RELIABILITY

The reliability data on the HM has always been good. Fordyce (1987) reports test-retest coefficients (for the *combination score*) of 0.98 (n = 111) for a two day period; 0.86 (n = 105) to 0.88 (n = 58) for two weeks; 0.81 (n = 57) for one month; and 0.62 (n = 71) and 0.67 (n = 27) for four months ($p < 0.001$ in each case) — (reliabilities of the other HM scores have been comparable). Larson *et al.*, found similar results in their comparative analysis of current well-being measures (1985). Their reliability data showed HM *scale score* coefficients of 0.59 (n = 34) for one month and 0.59 (n = 76) for two months; and 0.81 (n = 34) for one month and 0.60 (n = 76) for two months on the *happy percentage estimate* — the strongest of the reliabilities shown for the popular, single-item measures they analyzed.

In other related studies, the HM was given in a repeated series of four, over-time testings (one-and-a-half weeks apart) — the average reliability being 0.85 (Fordyce, 1983); and in another study (Fordyce, 1983a), three weeks of daily HM ratings correlated 0.70 to an "in-general" taking of the instrument given at the end of the daily ratings, and 0.60 when given 15 weeks later.

Despite the strong reliability data reported over the years for the HM, there is always a legitimate question as to how enduring happiness actually is or ought to be. Most investigators see happiness as a reasonably enduring phenomenon (cf. Diener, 1984; Veenhoven, 1984), and the collected data using the HM seems to support this contention. Still, unlike many, more stable personality traits, one's happiness can change

quite dramatically over time, especially if life-situations change. The Happiness Measures have demonstrated an ability to measure such changes in several studies. Fordyce, for example, found the HM sensitive to short-term change in his experiments to increase the personal happiness of normal adults (1977, 1983) and, likewise, servicable in a study of day-to-day happiness change (1972, 1973a).

STABILITY

Perhaps more important in measuring an inevitably changing phenomenon like happiness than its reliability, is an instrument's stability-of-measurement over time and samples. And in this regard, the data is quite clear: over several dozen testings — involving a great variety of ages, occupations, and socio-economic backgrounds — the internal-consistency coefficients, score means, score variances, and intercorrelational patterns with concurrent variables (see Validity sections below) have shown an extremely high degree of similarity over the years (Fordyce, 1987). Such stable, (and remarkably consistent) statistics suggest that the HM tends to measure the same properties, to the same degree, over various samples, and over time.

VALIDITY STUDIES

The validity of the Happiness Measures as a measure of emotional well-being and global mental health has been extensively investigated. Over the years, studies have examined its convergence with other happiness instruments, its construct validity, its ability to discriminate between known happy and unhappy groups, and its association with widely-accepted characteristics of mental health.

Convergent Validity

The HM has demonstrated a strong and consistent convergence with a wide array of recognized happiness, well-being, and emotion instruments (see Table I).

In Fordyce's ongoing assessment of the HM (1972, 1973a, b, 1977, 1983, 1986, 1987), validity studies have repeatedly compared the HM

TABLE I

A summary of converent validity correlations from three studies comparing the Happiness Measures to other indices of subjective well-being[a]

Test subscales & study reference	HM scores				
	Combination	Scale	Happy %	Unhappy %	Net Happy*
Affectometer-2 happiness score (Kammann & Flett)					
Fordyce, 1987	0.71	0.69	0.65	−0.61	—
Kammann *et al.*, 1981	—	—	—	—	0.68
Affectometer-2 7-point happiness scale (Kammann & Flett)					
Fordyce, 1987	0.76	0.77	0.64	−0.66	—
Kammann *et al.*, 1981	—	—	—	—	0.66
Andrews & Withey's D-T scale					
Larson *et al.*, 1985	—	0.58	0.56	—	—
Kammann *et al.*, 1981	—	—	—	—	0.70
Andrews & Withey's 'circles'					
Kammann *et al.*, 1981	—	—	—	—	0.73
Andrews & Withey's 'Faces'					
Kammann *et al.*, 1981	—	—	—	—	0.66
Beck Depression Inventory depression index					
Fordyce, 1987	−0.54	−0.51	−0.49	−0.52	—
Bradbrun's affect balance score (ABS)					
Larson *et al.*, 1985	—	0.52	0.41	—	—
Larson *et al.*, 1985	—	0.52	0.41	—	—
Kammann *et al.*, 1981	—	—	—	—	0.61
Bradburn's positive affect score					
Larson *et al.*, 1985	—	0.53	0.56	—	—
Bradburn's negative affect score					
Larson *et al.*, 1985	—	−0.33	−0.35	—	—
Campbell *et al.*, index of affect					
Larson *et al.*, 1985	—	0.65	0.62	—	—
Kammann *et al.*, 1981	—	—	—	—	0.66
Cantril's self anchoring ladder					
Larson *et al.*, 1985	—	0.58	0.51	—	—
Clinical Analysis Questionnaire suicidal depression scale					
Fordyce, 1987	−0.54	−0.57	−0.46	0.58	—

(*Table I continued*)

Test subscales & study reference	HM scores				
	Combination	Scale	Happy %	Unhappy %	Net Happy*
Clinical Analysis Questionnaire low energy depression scale					
Fordyce, 1987	−0.65	−0.52	−0.66	0.61	—
Depression Adjective Checklist (Form A)					
Fordyce, 1987	−0.79	−0.80	−0.69	0.51	—
Depression Adjective Checklist (Form B)					
Fordyce, 1987	−0.66	−0.72	−0.57	0.63	—
Depression Adjective Checklist (Form C)					
Fordyce, 1987	−0.55	−0.51	−0.53	0.40	—
Depression Adjective Checklist (Form D)					
Fordyce, 1987	−0.55	−0.62	−0.44	0.46	—
Diener *et al.*, satisfaction with life scale (SWLS)					
Larson *et al.*, 1985	—	0.64	0.60	—	—
Gurin *et al.*, 3-choice question					
Larson *et al.*, 1985	—	0.55	0.53	—	—
Kammann *et al.*, 1981	—	—	—	—	0.46
IPAT Depression Scale					
Fordyce, 1987	−0.48	−0.40	−0.45	0.30	—
Minnesota Counselling Inventory positive mood scale					
Fordyce, 1987	0.47	0.42	0.37	−0.27	—
Minnesota Multiphasic Personality Inventory depression scale					
Fordyce, 1987	−0.38	−0.27	−0.38	0.27	—
Multiple Affect Adjective Checklist depression scale					
Fordyce, 1987	−0.73	−0.73	−0.68	0.66	—
Profile of Mood States depression scale					
Fordyce, 1987	−0.66	−0.68	−0.56	0.73	—
Psychap Inventory achieved happiness scale (Form A)					
Fordyce, 1987	0.67	0.66	0.58	−0.66	—
Psychap Inventory achieved happiness scale (Form B)					
Fordyce, 1987	0.69	0.68	0.60	−0.66	—
Psychap Inventory achieved happiness scale (Form C)					
Fordyce, 1987	0.63	0.60	0.55	−0.56	—

(*Table I continued*)

Test subscales & study reference	HM scores				
	Combination	Scale	Happy %	Unhappy %	Net Happy*
Psychap Inventory achieved happiness scale (Form D)					
Fordyce, 1987	0.67	0.64	0.58	−0.61	—
Michalos' 7-point happiness scale					
Fordyce, 1987	0.72	0.69	0.64	−0.62	—
Tellegen's DPQ well-being scale					
Larson *et al.*, 1985	—	0.71	0.60	—	—
Underwood & Fromming's Mood Survey					
Larson *et al.*, 1985	—	0.74	0.70	—	—

[a] This table presents a summary of statistics gathered by three independent research teams. The data from Kammann *et al.*, represents a single sample ($n = 118$); statistics from Larson *et al.*, are the median correlations from three separate testings ($n = 34$—176); data from Fordyce are median correlations from numerous replications (n ranging from 46 to 123); dashes indicate comparisons that were not made. All correlations are significant ($p < 0.01$).

* Kammann *et al.*, used a 'net-time happy score' (i.e., subtracting the unhappy % score from the happy % score) in their analysis.

to numerous well-being indices. The collected data (Fordyce, 1987), show strongly significant, positive correlations between the HM and such happiness indices as the Affectometer-2 (Kammann and Flett, 1986), the *achieved happiness scale* of the Psychap Inventory (PHI; Fordyce, 1986) the Subjective Well-Being Inventory (Nagpal and Sell, 1985), the Wessman and Ricks Scale (1966), and a number of simple happiness scales (e.g., those used by Kammann and Flett, 1983a, and Michalos, 1985b). Marked, negative relationships have also been shown between the HM and indices of unhappiness like the Beck Depression Inventory (BDI; Beck, 1978), the Depression Adjective Check Lists (DACL; Lubin, 1967), the IPAT Depression Scale (IPAT-D; Krug and Laughlin, 1970), and the depression subscales of the Clinical Analysis Questionnaire (CAQ; Cattell *et al.*, 1970), Minnesota Counseling Inventory (MCI; Berdie and Layton, 1957), Minnesota Multiphasic Personality Inventory (MMPI; Hathaway and McKinley, 1951), Multiple Affect Adjective Checklist (MAACL; Zuckerman and Lubin,

1965), and Profile of Mood States (POMS; McNair *et al.*, 1971). Most of these comparisons have been replicated several times, using different samples, and some of the comparisons have been independently confirmed by others (e.g., Corwin and Teigue, 1984; Cejka, 1986).

More recently, two groups of researchers have conducted comparative assessments of well-being measures in which the HM was included.

Kammann, Farry, and Herbison (1981) compared twelve, current indices of happiness, including the widely cited measures of Andrews and Withey (1976), Bradburn and Caplovitz (1969), Campbell *et al.* (1976), Wessman and Ricks (1966), as well as their own Affectometer. Results indicated the HM to be among the top five in convergence with these other indices.

Diener, along with his associates Larson and Emmons, also conducted comparative studies of well-being measures. Included were the HM, along with measures by Andrews and Withey (1967), Bradburn and Caplovitz (1965), Campbell *et al.* (1976), Cantril (1965), Gurin *et al.*, (1960), Tellegen (1979), and scales of their own design. In their 1985 report (Larson *et al.*, 1985), the HM was found to be among the strongest in convergent validity of all measures, and the very strongest of the single-item measures they compared. And, in a later report (Diener, 1984), where twenty well-being indices were assessed, it was concluded that "the 11-point Fordyce scale showed the strongest correlations with daily affect and with life-satisfaction of any measure we assessed . . ." and that the HM's ". . . positive and negative frequency estimates provide convergent, construct, and criteria validities that are equal to or superior to those found for the Bradburn scale . . ." (i.e., the Braburn Affect Balance Scale [Bradburn, 1969] — widely cited as a model of frequency measurement).

Construct Validity

A measure of happiness should relate in a reliable and predictable way to the numerous personality, attitudinal, and life-style characteristics that have long been established about happy persons in the literature. In this regard, the Happiness Measures have accumulated more validational data than any other well-being measure.

Fordyce, for example, has compared the Happiness Measures to a

broad array of recognized tests and inventories (1972, 1973a, b, 1977, 1983, 1985, 1987). In this continuious effort, HM scores have been correlated to concurrently derived scores on the California Personality Inventory (CPS; Gough, 1957), Caring Relationship Inventory (CRI; Shostrom, 1970), Clinical Analysis Questionnaire (CAQ; Cattell *et al.*, 1970), Comrey Personality Scales (CPS; Comrey, 1970), Edwards Personal Preference Schedule (EPPS; Edwards, 1959), Eysenck Personality Questionnaire (EPQ; Eysenck and Eysenck, 1975), Greer Fear Survey (Greer, 1965), Health Problems Checklist (HPC; Schinka, 1984a), IPAT Anxiety Scale (IPAT-A; Cattell and Scheier, 1963), Laswell Values Ranking (Laswell, 1953), Marital Evaluation Checklist (Navran, 1984), Minnesota Counseling Inventory (MCI; Berdie and Layton, 1957), Minnesota Multiphasic Personality Inventory (MMPI; Hathaway and McKinley, 1951), Motivational Analysis Test (MAT; Cattell *et al.*, 1959), Morris Ways To Live Survey (Morris, 1956), Myers-Briggs Type Indicator (MBTI; Myers, 1962), Multiple Affect Adjective Checklist (MAACL; Zuckerman and Lubin, 1965), Pair Attracion Inventory (PAI; Shostrom, 1970), Personal Orientation Inventory (POI; Shostrom, 1963), Personal Problems Checklist (PPC; Schinka, 1984b), Personality Research Form (PRF; Jackson, 1967), Profile of Mood States (POMS; McNair *et al.*, 1971), Psychap Inventory (PHI; Fordyce, 1986), Rokeach Value Scales (Rokeach, 1968), Satisfaction and Happiness Survey (Michalos, 1985b), Schedule of Recent Experiences (SRE; Holmes, 1984), Sixteen Personality Factor Questionnaire (16PFQ; Cattell and Eber, 1957), Subjective Well-Being Inventory (SWBI; Nugpal and Sell, 1985), and Survey of Values (Allport *et al.*, 1953). Table II provides a sumarized review of the data Fordyce has collected, as well as data from the correlational investigations of others (Cejka, 1986; Corwin and Teigue, 1984; Dillman, 1979; Teique and Brandon, 1984). The table is taken from a complete presentation given in the *Research and Tabular Supplement for the Happiness Measures* (Fordyce, 1987).

The data in Table II shows strong relationships between the HM and concurrent measures of the personality characteristics established for happiness in past research. Reviewing the data as a whole, a number of trends appear: persons scoring happily on the HM have a personality profile on these other tests which suggest a low level of fear, hostility,

TABLE II

A summary of correlations between the Happiness Measures and other personality tests and inventories across studies

Test names and subscales	HM scores				
	Combination	Scale	Happy %	Unhappy %	Neutral %
Affectometer-2 ($n = 46$)*					
Happiness score	0.71	0.69	0.65	−0.61	−0.18ns
7-Point scale	0.76	0.77	0.64	−0.66	−0.13ns
Beck Depression Inventory (BDI) ($n = 46$)*					
Depression score	−0.54	−0.51	−0.49	0.52	0.31
Clinical Analysis Questionnaire (CAQ) ($n = 65$)*					
Hypochondriasis	−0.46	−0.43	−0.44	0.55	0.19ns
Suicidal depression	−0.54	−0.57	−0.46	0.58	0.20ns
Anxious depression	−0.25	−0.19ns	−0.26	0.29	0.14ns
Low-energy depression	−0.65	−0.52	−0.66	0.61	0.42
Guilt/resentment	−0.57	−0.48	−0.57	0.55	0.35
Bored/withdrawn	−0.58	−0.55	−0.53	0.50	0.33
Paranoia	−0.30	−0.26	−0.30	0.42	0.10ns
Psychopathic deviate	0.39	0.34	0.38	−0.21ns	−0.33
Schizophrenia	−0.50	−0.47	−0.47	0.57	0.22ns
Psychasthenia	−0.37	−0.31	−0.37	0.30	0.27
Inadaquacy	−0.61	−0.62	−0.54	0.56	0.31
Comrey Personality Personality Scales (CPS) ($n = 84$)*					
Activity	0.30	0.37	0.23	−0.10ns	−0.11ns
Emotional stability	0.52	0.61	0.43	−0.41	−0.05ns
Extroversion	0.42	0.45	0.40	−0.20ns	−0.22
Depression Adjective Checklists (DACL)					
Form A ($n = 58$)*	−0.79	−0.80	−0.69	0.51	0.36
Form B ($n = 46$)*	−0.66	−0.72	−0.57	0.63	0.26
Form C ($n = 46$)*	−0.55	−0.51	−0.53	0.40	0.25
Form D ($n = 46$)*	−0.55	−0.62	−0.44	0.46	0.27
Edwards Personal Preference Survey (EPPS) ($n = 65$)*					
Autonomy	0.37	0.45	0.25	−0.32	−0.13ns
Affiliation	0.38	0.37	0.40	−0.28	−0.23ns
Aggression	−0.39	−0.33	−0.31	0.27	0.05ns
Eysenck Personality Questionnaire (EPQ) ($n = 47$)*					
Extroversion	0.56	0.57	0.53	−0.43	−0.30
Neutroticism	−0.41	−0.42	−0.38	0.51	−0.02ns
Greer Fear Survey Schedule ($n = 87$)					
Fear score	−0.23	−0.19ns	−0.27	0.24	n/c

(Table II continued)

Test names and subscales	HM scores				
	Combination	Scale	Happy %	Unhappy %	Neutral %
Health Problems Checklist (HPC) ($n = 58$)					
General health	−0.43	−0.33	−0.44	0.29	0.42
Total health problems	−0.35	−0.26	−0.36	0.32	0.41
IPAT Anxiety Scale (IPAT-A) ($n = 65$)					
Covert anxiety	−0.74	−0.66	−0.70	0.54	0.50
Overt anxiety	−0.59	−0.51	−0.56	0.48	0.38
Total anxiety	−0.65	−0.58	−0.61	0.54	0.40
IPAT Depression Scale (IPAT-D) ($n = 108$)					
Depression score	−0.48	−0.40	−0.45	0.30	0.39
Marital Evaluation Checklist (MEC) ($n = 34$)					
Relationship problems	−0.54	−0.45	−0.64	0.42	0.63
Minnesota Counselling Inventory (MCI) ($n = 146$)					
Family relations	0.31	0.21	0.31	−0.25	−0.19
Social relations	0.41	0.38	0.32	−0.23	−0.16ns
Emotional stability	0.43	0.44	0.36	−0.41	−0.15ns
Conformity	0.25	0.27	0.17ns	−0.29	−0.02ns
Reality adjustment	0.49	0.49	0.41	−0.43	−0.18
Mood	0.47	0.42	0.37	−0.27	−0.20ns
Leadership	0.41	0.38	0.33	−0.27	−0.19
Minnesota Multiphasic Personality Inventory (MMPI) ($n = 58$)					
Depression (D)	−0.38	−0.27	−0.38	0.27	0.37
Psychopathy (Pd)	−0.42	−0.28	−0.44	0.32	0.39
Psychasthenia (Pt)	−0.34	−0.30	0.31	0.31	0.25
Schizophrenia (Sc)	−0.35	−0.29	−0.33	0.30	0.29
Introversion (Si)	−0.39	−0.37	−0.33	0.26	0.34
Anxiety (A)	−0.35	−0.33	−0.31	0.26	0.29
Motivational Analysis Test (MAT) ($n = 98$)					
Fear	−0.23	−0.23	−0.23	0.16ns	0.17ns
Super ego	0.25	0.27	0.20ns	−0.30	−0.02ns
Pugnacity/sadism	−0.34	−0.30	−0.30	0.25	0.19ns
Swetheart/spouse	0.26	0.14ns	0.32	−0.28	−0.19ns
Multiple Affect Adjective Checklist (MAACL) ($n = 71$)*					
Anxiety	−0.67	−0.67	−0.63	0.68	0.35
Depression	−0.73	−0.73	−0.68	0.66	0.44
Hostility	−0.64	−0.58	−0.65	0.62	0.38

(*Table II continued*)

Test names and subscales	HM scores				
	Combination	Scale	Happy %	Unhappy %	Neutral %
Myers-Briggs Type Indicator (MBTI) ($n = 98$)*					
Extroversion	0.61	0.64	0.53	−0.53	−0.25
Pair Attraction Inventory (PAI) ($n = 56$)					
Actualized relationship	0.63	0.59	0.66	−0.48	−0.33
Hawks (tense relations)	−0.33	−0.38	−0.29	0.37	0.32
Personal Orientation Inventory (POI) ($n = 58$)*					
Time-competence	0.46	0.43	0.41	−0.47	−0.07ns
Inner-directedness	0.55	0.50	0.54	−0.56	−0.17ns
Self-actualized value	0.50	0.46	0.53	−0.41	−0.32
Feeling reactivity	0.31	0.34	0.29	−0.33	−0.06ns
Spontaniety	0.36	0.36	0.30	−0.29	−0.11ns
Self-regard	0.60	0.57	0.58	−0.61	−0.17ns
Nature of humankind	0.29ns	0.33	0.19ns	−0.29ns	−0.04ns
Synergy	0.41	0.35	0.40	−0.28ns	−0.28ns
Acceptance of aggression	0.32	0.32	0.34	−0.26ns	−0.20ns
Intimate relationships	0.45	0.45	0.44	−0.46	−0.13ns
Personal Problems Checklist (PPC) ($n = 108$)					
Social problems	−0.37	−0.28	−0.38	0.21	0.35
Financial problems	−0.26	−0.24	−0.22	0.28	0.10ns
Emotional problems	−0.33	−0.27	−0.32	0.17ns	0.25
Attitude problems	−0.32	−0.20	−0.34	0.37	0.16ns
Total personal problems	−0.29	−0.22	−0.28	0.23	0.21
Personality Research Form (PRF) ($n = 58$)					
Affiliation	0.35	0.34	0.29	−0.20	−0.30
Change	0.34	0.36	0.27	−0.22ns	−0.25
Exhibition	0.35	0.31	0.32	−0.30	−0.27
Profile of Mood States (POMS) ($n = 98$)*					
Tension	−0.51	−0.47	−0.47	0.58	0.15ns
Depression	−0.66	−0.68	−0.56	0.73	0.14ns
Anger	−0.40	−0.46	−0.42	0.47	0.17ns
Vigor	0.63	0.61	0.55	−0.54	−0.28
Fatigue	−0.55	−0.52	−0.48	0.51	0.21
Confusion	−0.52	−0.49	−0.48	0.56	0.17ns

(*Table II continued*)

Test names and subscales	HM scores				
	Combination	Scale	Happy %	Unhappy %	Neutral %
Psychap Inventory (PHI) ($n = 123$)*					
Form A:					
Achieved Happiness	0.67	0.66	0.58	−0.66	−0.23
Happy Personality	0.53	0.48	0.49	−0.50	−0.28
Happy Attitudes & Values	0.56	0.57	0.47	−0.58	−0.18
Happy Life Style	0.55	0.52	0.49	−0.50	−0.29
Total Score	0.69	0.66	0.61	−0.67	−0.29
Form B:					
Achieved Happiness	0.69	0.68	0.60	−0.66	−0.27
Happy Personality	0.64	0.58	0.59	−0.56	−0.33
Happy Attitudes & Values	0.57	0.57	0.49	−0.53	−0.26
Happy Life Style	0.52	0.47	0.48	−0.41	−0.34
Total Score	0.69	0.66	0.61	−0.62	−0.33
Form C:					
Achieved Happiness	0.63	0.60	0.55	−0.56	−0.28
Happy Personality	0.57	0.48	0.56	−0.49	−0.37
Happy Attitudes & Values	0.55	0.52	0.50	−0.52	−0.26
Happy Life Style	0.55	0.51	0.50	−0.42	−0.34
Total Score	0.69	0.63	0.64	−0.60	−0.38
Form D:					
Achieved Happiness	0.67	0.64	0.58	−0.61	−0.29
Happy Personality	0.60	0.53	0.57	−0.54	−0.33
Happy Attitudes & Values	0.56	0.55	0.47	−0.53	−0.22
Happy Life Style	0.55	0.47	0.52	−0.42	−0.36
Total Score	0.68	0.63	0.62	−0.61	−0.35
Satisfaction & Happiness Survey (SHS) ($n = 107$)*					
Current	0.60	0.58	0.55	−0.53	−0.24
Want	0.39	0.37	0.33	−0.35	−0.14
Peers	0.50	0.42	0.50	−0.45	−0.26
Deserve	0.47	0.44	0.43	−0.32	−0.30
Need	0.42	0.44	0.37	−0.49	−0.02ns
Expected	0.46	0.38	0.44	−0.45	−0.21
Future	0.33	0.33	0.26	−0.25	−0.15
Past best	0.54	0.54	0.44	−0.47	−0.20
Self-esteem	0.54	0.48	0.50	−0.42	−0.28
Social support	0.45	0.41	0.41	−0.37	−0.21
7-point scale	0.72	0.69	0.64	−0.62	−0.30

(*Table II continued*)

Test names and subscales	HM scores				
	Combination	Scale	Happy %	Unhappy %	Neutral %
Schedule of Recent Experiences (SRE) ($n = 65$)					
Stress events (6 mos. to 1 year previous)	−0.30	−0.16ns	−0.36	0.26	0.27
Sixteen Personality Factor Questionnaire (16PFQ) ($n = 65$)*					
Outgoing	0.31	0.32	0.27	−0.23ns	−0.19ns
Emotionally stable	0.43	0.42	0.42	−0.62	−0.08ns
Happy-go-lucky	0.30	0.27	0.34	−0.14ns	−0.34
Conscientious	0.29	0.30	0.26	−0.08ns	−0.26
Venturesome	0.29	0.32	0.26	−0.15ns	−0.10ns
Guilt-prone	−0.47	−0.39	−0.46	0.50	0.28
High self-concept	0.40	0.44	0.33	−0.45	−0.21ns
Tense	−0.37	−0.40	−0.35	0.50	0.13ns

* This table presents a summarization of the collected data on the HM. In cases where the comparison has been replicated more than once, an asterisk is given next to the sample size. In such cases the correlations represent the MEDIAN of the replications. Unmarked samples are from single, non-replicated, comparisons. For brevity, the table excludes the listing of test subscales which have not shown consistently significant relationships with the HM.

All correlations are significant ($p < 0.05$) unless designated with ns (non-significant).

tension, anxiety, guilt, confusion, anger, and other negative emotion; a high degree of energy, vitality, and activity; a high level of self-esteem and a generally self-actualized, healthy, and emotionally stable personality; a strong social-orientation coupled with outgoing, spontaneous, extroverted characteristics; a marked absence of health concerns, personal problems, and psychopathology; healthy, satisfying, and warm love and social relationships; a life-style typified as involved, active, social, and meaningfully productive; and an attitudinal approach to life that is optimistic, worry-free, present-oriented, internally-locused, and well-directed. This description is quite in line with, indeed perhaps exemplifies, our current understanding of the "happy personality." But beyond this, this description also closely approximates what the literature in psychology views as the major criteria of optimal mental health.

Discriminative Validity

Ideally, a measure of happiness should statistically discriminate between known happy and unhappy groups, and the Happiness Measures has shown such discriminative validity in a number of studies. Fordyce (1987) has sampled numerous, socially-stratified groups over the years in his studies. Cullington and Plummer (1984) and Salazar *et al.*, (1984) have done similar work. The results of such inter-socioeconomic testings have been in accord with the predictions that would be made from past research: i.e., groups of higher social, economic, or occupational standing score higher (usually, significantly so) on the HM (cf. Fordyce, 1987). In addition, data from Hall (1984), Hodges (1985), Linden (1984), and Salazar *et al.*, (1984) has consistently indicated significant differences between HM scores obtained from from various "troubled" populations (e.g., hospitalized depressives, crisis intake-clients, individuals or couples seeking counseling, etc.) and those of more normal samples.

PSYCHOMETRIC CHARACTERISTICS

Beyond studies dealing with the reliability and validity of the Happiness Measures, a number of investigations have delt with more specific psychometric concerns.

Response Bias

The HM has been compared to a variety of response-bias measures over the years (Fordyce, 1987). These include such response-bias indices as the Crowne-Marlowe Social Desirability Scale (Crowne and Marlowe, 1960) and a number of response bias scales contained on other, more extensive inventories (i.e., the CPS, EPQ, MCI, MMPI, and PRE — as referenced above). Over a dozen such response-bias comparisons have been analyzed, and most have proven non-significant. Still, a few significant results have emerged which indicate the HM may be susceptible to bias from some examinees tending to portray themselves in a favorable light. Collectively, the findings indicate some caution should be exercised in the intrepretation of individual profiles,

but for general research use, it appears that the HM can be considered relatively free of bias.

Repeated Use and Sensitization Effects

In most work using the HM as a happiness-criterion, a single, "in general" testing has been used. However, the HM appears to have equal utility in repeated-measures and pretest-posttest designs (e.g., Fordyce, 1972, 1973a, b, 1977, 1983). In a series of studies (Fordyce 1973b, 1977) it was concluded, using Solomon designs, that previous takings of the HM do not appear to bias subsequent takings in any systematic way. In addition, there appears to be close correspondence between the average of a series of daily HM takings and a single, "in general" taking evaluating the same time-period (Fordyce, 1973a). However, in comparing the two methods (averaged daily-ratings *vs.* a one-shot, "general" rating) the one-shot administration proved more valid and less susceptable to response bias than the averaging method — supporting the way the HM and other well-being measures have been typically employed in research.

Sex, Age, and Racial Differences

There appears to be little discrimination in response to the HM due to sex, age, or race.

Sex differences have been most extensively examined (Fordyce, 1987), and in scores of testings over many years, sex differences have been generally nonsignificant. Additionally, other testing characteristics (i.e., interscore correlational patterns, correlations with outside criteria, etc.) show little sex difference. The data on age and race has, likewise, proven nonsignificant — although these factors have not received a great deal of study with the HM. Overall, work with the HM coincides with the literature which finds no particular sex differences in happiness, and only slight relationships regarding age and race factors (Diener, 1984; Fordyce, 1974b; Veenhoven, 1984).

Norms

For preliminary research use, Table III provides normative data on a

TABLE III

Normative means and standard deviations for preliminary uses ($n = 3050$)[a]

Score	Mean	S.D.
Combination score	61.66	17.84
Scale score	6.92	1.75
Happy % estimate	54.13	21.52
Unhappy % estimate	20.44	14.69
Neutral % estimate	25.43	16.52

[a] Sample characteristics: mean age 26.3; age range 16—73; 1237 males; 1813 females; adult community college students with varied educational, socio-economic, regional, ethnic, and occupational backgrounds.

sample of 3050 community college students. As typical of community colleges, the sample varies widely in age (mean = 26.3; range = 16—73), occupation, academic ability, socio-economic background, and mental health status. The normative sample should be considered more widely representative of young-adult Americans than might be obtained in other college samples.

For more specific research, means and other data from a number of occupational, special socio-economic, and clinical groups are also available (Fordyce, 1987).

DISCUSSION

As we examine the 15 years of study on the Happiness Measures, a number of conclusions come to the fore. The first and most obvious, is the extensive nature of the collected data. It would be safe to classify the HM as the most thoroughly analyzed well-being measure developed in the field. This is not to say it is the best of the instruments (although there is some evidence to support the contention) — it is only to say that the Happiness Measures have been tested and retested with respect to reliability, validity, and other important characteristics to an extent that far exceeds the efforts reported for other instruments. And from the collected data, it would appear that the Happiness Measures

demonstrate strong reliability; remarkable stability; relative freedom from response, sex, age, and race bias; and an exceptionally wide background of evidence supporting it's convergent, construct, concurrent, and discriminative validity.

The second general conclusion regarding the Happiness Measures is how deceptively simple an instrument it is. Happiness instruments have often been very simple (e.g., scales or one-item questions), yet what has has always been fascinating is how such simple questions elicit such an enormous amount of relevant information about an individual's life. The Happiness Measures are like this. The HM is amazingly simple: it's quick to administer (taking less than a minute to complete) — and it's actually scored as it's answered. Yet what it shows about a person's life, their basic emotional well-being, and their global mental health is most remarkable. The collected evidence suggests that a simple, one-minute testing using the HM can provide a general assessment of emotional, social, and mental health functioning that closely rivals hours of testing using the most respected clinical instruments in the field. Indeed, it could be paraphrased from Winston Churchill: "never has so much, about so many, been obtained by so little . . ."

The third conclusion regards the ultimate value of measurement investigation itself. Inevitably, our efforts to examine the measurement of happiness and subjective well-being offers new insights into the the nature of the phenomenon we are attempting to study. It is, as Kammann and Flett discuss (1983b), a process of ". . . double discovery . . . finding out simultaneously what it is that we are measuring and what factors are linked to it . . ." (p. 31). In this regard, the present paper provides the first published summary of an extensive reservior of data on personal happiness, which, in general, provides a strong, independent confirmation of the basic findings reported in the literature, and, in specific, adds even more, new findings to our understanding of happiness (cf. Fordyce, 1987).

The final conclusion regards the maturing of our field of research. It is currently quite clear that research on happiness and subjective well-being has grown to substantial proportions in recent years and that our present understanding of happiness in the literature is quite extensive. Much is now known about the nature of happiness, its objective and

situational correlates, and the personality characteristics of happy individuals. What is also intriguing, is how consistent and stable the happiness findings have been across cultures, between varied samples, and over time. Indeed, "the findings on happy people have proven to be so consistent that the nature of happiness is far more stable, understandable, and basically universal than most have ever expected" (Fordyce, 1981a, p. 8). Yet what is most remarkable of all, is the fact that these consistent findings have occurred despite any real consistency of measurment. Indeed, since practically every research group has chosen a new well-being instrument of its own design, what we have, essentially, is a situation of consistent results borne of inconsistent methods!

In a previous paper, the author considered this situation to be most fortuitous, ". . . since if great inconsistency in resultant findings occurred in the field, happiness studies would be in a thoroughly confused and confounded state" (Fordyce, 1886, p. 27). Apparently (and most fortunately, for those in the field), "no matter how you decide to ask people how happy they are, the results are the same" (Fordyce, 1986, p. 27).

We have been quite lucky so far — probably because the phenomenon we seek to measure is so basic and global to human personality (cf. Fordyce, 1986; Kammann and Flett, 1983b). But for our field to mature scientifically, measurement efforts must begin to coalesce rather than disperse. The beginings of such an effort toward convergence has recently begun in the literature (Fordyce, 1986; Diener, 1984; Kammann *et al.*, 1981; Larson *et al.*, 1985), and the conclusions of this paper represent a further step in this same direction.

More than anything else, the value of the Happiness Measures lies in its extensive validity data. The HM appears to be exceptional in this regard, and should be considered as an appropriate touchstone for the future research in the the field.

APPENDIX I

a. The Happiness Measures
b. Profile sheet for the Happiness Measures

DATE _____

NAME _____

AGE _____ SEX _____

EMOTIONS QUESTIONNAIRE

PART I DIRECTIONS: Use the list below to answer the following question: IN GENERAL, HOW HAPPY OR UNHAPPY DO YOU USUALLY FEEL? Check the *one* statement below that best describes *your average happiness.*

Check just one of these boxes!

- ☐ 10. Extremely happy (feeling ecstatic, joyous, fantastic!)
- ☐ 9. Very happy (feeling really good, elated!)
- ☐ 8. Pretty happy (spirits high, feeling good.)
- ☐ 7. Mildly happy (feeling fairly good and somewhat cheerful.)
- ☐ 6. Slightly happy (just a bit above neutral.)
- ☐ 5. Neutral (not particularly happy or unhappy.)
- ☐ 4. Slightly unhappy (just a bit below neutral.)
- ☐ 3. Mildly unhappy (just a little low.)
- ☐ 2. Pretty unhappy (somewhat "blue", spirits down.)
- ☐ 1. Very unhappy (depressed, spirits very low.)
- ☐ 0. Extremely unhappy (utterly depressed, completely down.)

PART II DIRECTIONS: Consider your emotions a moment further. *On the average*, what percent of the time do you feel happy? What percent of the time do you feel unhappy? What percent of the time do you feel neutral (neither happy nor unhappy)? Write down your best estimates, as well as you can, in the spaces below. Make sure the three figures add-up to equal 100%.

ON THE AVERAGE:

The percent of time I feel happy _____ %

The percent of time I feel unhappy _____ %

The percent of time I feel neutral _____ %

TOTAL: 100 %

PROFILE SHEET FOR HAPPINESS MEASURES

NAME _____ DATE TESTED _____

OCCUPATION _____ AGE _____ SEX _____

	INTENSITY (I)	FREQUENCY (F)			(I + F)	
	SCALE SCORE	% HAPPY	% UNHAPPY	% NEUTRAL	COMBINATION SCORE	
DESCRIPTION of SCORES:		100 ___ 95 ___			100 ___	80
Extremely happy	10 ___	90 ___ 85 ___			95 ___ 90 ___	70
Very happy	9 ___	80 ___ 75 ___	0 ___ 5 ___	0 ___	85 ___ 80 ___	
Pretty happy	8 ___	70 ___ 65 ___	10 ___ 15 ___	10 ___ 20 ___	75 ___ 70 ___	60
Mildly happy	7 ___	60 ___ 55 ___	20 ___		65 ___	
Slightly happy	6 ___	50 ___ 45 ___ 40 ___ 35 ___	25 ___ 30 ___	30 ___ 40 ___	60 ___ 55 ___ 50 ___ 45 ___	50 40
Neutral	5 ___	30 ___ 25 ___	35 ___ 40 ___	50 ___	40 ___ 35 ___	
Slightly unhappy	4 ___	20 ___ 15 ___	45 ___	60 ___	30 ___	30
Mildly unhappy	3 ___	10 ___ 5 ___	50 ___ 55 ___	70 ___	25 ___ 20 ___	
Pretty unhappy	2 ___	0 ___	60 ___	80 ___	15 ___ 10 ___	20
Very unhappy	1 ___		65 ___ 70 ___	90 ___	5 ___ 0 ___	
Extremely unhappy	0 ___		75 ___	100 ___		10
Raw Scores	_____	_____	_____	_____	_____	

NOTE

The Happiness Measures and other research materials cited in this article are available upon request from Michael Fordyce, Edison Community College, Fort Myers, FL 33907, U.S.A – telephone (813) 489—9000.

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