Effects of Higher Brain Living on Well-being

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Abstract

Higher Brain Living (HBL) is a light-touch protocol that is designed to increase well-being. This study sought to measure Higher Brain Living participant's self-reported well-being scores before sessions and after eight sessions. Pre-test data was obtained from 9 respondents. Respondents' demographic information and their well-being data was collected using a brief online survey instrument. The respondents demographics were predominately white, female, well-educated and affluent. The data collected in 2014 from participating in Higher Brain living's Fearlessly Authentic Life program, shows (unofficially analyzed) that the self-reported well-being scores reported by the subjects improved across nearly all domains measured. Based on these preliminary findings a larger scale study is underway. This larger study also passed University of Iowa Internal Review Board and will include a control group.

The Higher Brain Living (HBL) Program is a new modality designed to increase well-being. It is a light-touch protocol which claims to increase blood-flow and oxygen to the pre-frontal cortex of the brain, thereby creating more joy, happiness and life satisfaction to those who participate in the program. The HBL program consists of 22 forty five minute sessions (the Fearlessly Authentic Life Program) done on a massage table, once a week, for a period of 22 weeks. The technique incorporates light-touch, brief focused breathing and repetition of affirmative statements. To date there is some strong anecdotal evidence of the positive effects of HBL and a description of the benefits at the HBL website and in their guidebook (Higher Brain Living, 2013). Because the program has only recently become available to the public, there is no formal research documenting its effectiveness.

This research was a pilot study which looks at the effects of HBL program on participants' well-being. It utilized an online survey instrument, which intended to record responses before the program and after eight weeks of treatments, and to look for significant changes in subjects self-reported scores of flourishing, mastery, subjective happiness, anxiety, depression and goal achievement. Because of the time constraints of the study and lack of timely participation, this study was only able to record 9 pre-program responses. The subject population were adults who had signed up for the first two sessions of the HBL program but have not yet had their first session.

In constructing an instrument to measure well-being, I included a number of different factors from the literature, from my knowledge of the HBL protocol and from anecdotal reports of its effects. The current literature considers a number of different factors that make up well-being (Caunt, Franklin, Brodaty & Brodaty, 2012). In almost all of the studies reviewed, lack of anxiety and depression was a central criteria for well-being. In addition, Lyubomirksy states that

"happy individuals appear more likely to be flourishing people, both inwardly and outwardly" (2005). Flourishing refers to degree of successful relationships, sense of positive purpose, self-esteem and optimism (Diener, 2014). Therefore, I have included Diener's Flourishing Scale (2009). An environmental mastery component was noted by Caunt, et al. (2012) as an important component of well-being. Mastery refers to the sense of control one has over one's self and environment. This study used the well established Pearlin Mastery Scale (Pearlin, 1978) to measure mastery. Lyubomirsky describes happiness as "the experience of joy, contentment, or positive well-being, combined with a sense that one's life is good, meaningful, and worthwhile" (2008). In order to capture directly subjects' feelings of happiness this study used Lyubomirsky's Subjective Happiness Index (1999). Caunt, et al. (2012) and Lyubomirsky (2005) emphasize intentional action as a major component of happiness. Therefore, goals questions were added. There is also a strong emphasis in the HBL literature on taking action to achieve goals (Higher Brain Living Guidebook, p. 51-80).

Literature Review

Because the Higher Brain Living technique is new and relatively unknown, there is no formal research available. In addition, because it is so unique, there is no direct comparison to other established modalities.

Well Being

Well-being has become a more popular research topic in recent years. Caunt, et al. recently sought to more closely define factors in long-lasting happiness and well-being (2012). In the study, 68 males and 183 females were taken from a convenience sample and asked to reflect

on and provide answers to questions about the "elements that lead people to long-lasting happiness in their lives" (p. 482). The study looked at six main component categories of personality, circumstances, social relationships, behavioral, cognitive and volitional activities found in the literature. It then evaluated the responses of their subject population. Among other findings, the researchers concluded that "the six dimensions derived from the literature provided a useful framework for organizing ingredients from respondents' happiness recipes" (p. 489).

There are some interesting parallels between the definition of well-being in the study and the approach of HBL which make it relevant to my study. The study described psychological well-being as having components of environmental mastery, life purpose and positive relationship. In a similar way HBL emphasizes the necessity to influence all four dimensions of mind/emotions, body, relationships and environment for real change to occur (Higher Brain Living Guidebook, p. 51-80). In the study, different components of well-being are given a value of estimated influence with intentional activities given an estimated influence of 40%. In a similar way, the HBL Guidebook strongly emphasizes intentionally acting, stating that "you must take the action to create the outcome desired. …The action component is paramount" (p. 90). This is significant because the HBL approach is to promoting well being has a similar structure to the architecture of happiness described in the literature, lending credence to its effectiveness at promoting well-being.

Research Question and Hypotheses

The research question I intended to investigate was: How do Higher Brain Living Program sessions affect the self-reported measures for well-being of flourishing, mastery, subjective happiness, anxiety, depression and accomplishment of goals.

Given the literature and goals of the study the following six hypotheses were put forth:

Hypothesis 1: There is a statistically significant difference between pre-test group and mid-test group in scores of Flourishing Scale.

Hypothesis 2: There is a statistically significant difference between pre-test group and mid-test group in scores of Pearlin Mastery Scale.

Hypothesis 3: There is a statistically significant difference between pre-test group and mid-test group in scores of Happiness Scale.

Hypothesis 4: There is a statistically significant difference between pre-test group and mid-test group in scores of Anxiety Scale.

Hypothesis 5: There is a statistically significant difference between pre-test group and mid-test group in scores of Depression Scale.

Hypothesis 6: There is a statistically significant difference between pre-test group and mid-test group in scores of questions about goal accomplishment.

Because of the lack of data new hypotheses were created.

Revised Hypothesis 1: There is a significant correlation between age of the respondents and self-reported scores of flourishing.

Revised Hypothesis 2: There is a significant negative correlation between the age of the respondents and self-reported scores of depression.

Methods

Research Design

The design of the study was be explanatory and quasi-experimental, since there was not a randomized sample. It was conducted using a self-administered online survey taken before the first session, after eight weeks of treatment. Because of the time constraints, only the first survey, taken before the first session was taken.

Sampling Design

The research subject sample was drawn by convenience from a population that have decided to try the first two sample sessions of the Higher Brain Living program. Subjects were self-selecting for their participation based on a recruitment flyer (Appendix B) given to them by a licensed HBL facilitator at the time they signed up for their first two HBL sessions. The sampling design was a non-probability selected convenience sample, stratified by the Higher Brain Living facilitator. The population was approximately 150 HBL participants. The sampling ended when 16 people participated.

Human Subjects Procedures

The University of Iowa Internal Review Board (IRB) approved this study. A number of steps were taken to insure the integrity of the study as well as the preservation of the subjects anonymity. Firstly, the recruitment flyer used in the recruitment process contained no enticement to participate, only a simple invitation with details of the study, according to IRB guidelines (Appendix B). In order to protect against contamination of the sample by coercion, the recruitment flyer was distributed to the potential subject population by Licensed HBL facilitators who agreed not to encourage their clients to participate in any way, not to discuss the study and to direct any questions about the study to the research team. The web address on the flyer lead directly to an informed consent page, modeled on the informed consent document on the IRB website, which described the study procedures, risks and benefits, length of time and requirements for the study in more detail than the recruitment flyer. Subjects were informed that participation is voluntary and that they may discontinue their participation at any time for any reason. If potential subjects wished to participate, they clicked a “continue” button at the bottom of the web page, signifying their agreement and understanding of the informed consent. The only

identifying information collected was a required email address and optional phone number and first name. The only access to the data was through the Principal Investigator's Qualtrics account. All of this identifying information was anonymized when it was downloaded into SPSS software for analysis.

Instrument

The instrument used was an online survey created using Qualtrics survey software and hosted using a University of Iowa account (Appendix C). The first survey, after the informed consent page, asked two qualifying questions, requiring that the subjects age were over 18 years of age and had not have had their first HBL session yet. Email was also required to correlate answers and communicate to the subject when it is time to complete the second survey. Providing a first name and a phone number was optional and was to be used to follow-up with the subject if necessary. Next there were seven demographic questions on gender, age, level of education, marital status, income level, ethnicity and employment. Following the demographic questions, there were six scales which measured flourishing, mastery, subjective happiness, anxiety, depression and goal achievement. There were 42 questions total in the first survey, not including the first two qualifying questions. The questions in both surveys are formatted in 14 point type and spaced as to be easily readable.

Pilot Test

The instrument was pilot tested with five people, two of which were receiving HBL sessions. Based on feedback, some modifications were made to the wording of the Goals questions to make the questions clearer. There were also some spelling mistakes that were pointed out. One of the pilot testers responded that "the instructions are clear and the survey is

not too long or short and the scale allows the participant enough options to accurately reflect his/her opinions."

Data Collection Procedures

All responses were self-reported by respondents through an online survey. Data was stored and retrieved using the Qualtrics servers and interface. As previously described, an approved, printed recruitment flyer (Appendix B) was given to a HBL client by the licensed HBL facilitator after the client signed up for their first HBL sample sessions, with the URL to the study webpage.

Measures

Demographics. The seven demographics questions were taken from a marketing research website and slightly modified. The age and gender questions simply asked, "What is your age?" and "What is your gender?" The education question asked "What is the highest level of education you have achieved?" The seven responses ranged from "Less than high school graduation" to "Graduate or Professional degree." The marital status question asked "What is your marital status?" with answer choices being "Single," "Married," "Separated," "Widowed," or "Divorced." Household income asked "What was your total household income during the past 12 months?" with seven responses ranging from "Less than $25,000" to "$150,000 or more." "What is your racial or ethnic background?" had "White," "African American," "Asian," "Hispanic," "Pacific Islander" or "Other" for responses. "How many hours a week do you USUALLY work at your job?" had "35 hours a week or more," "Less than 35 hours a week," and "I am not currently working" as responses.

Flourishing. I measured flourishing by summing the eight questions of Diener's Flourishing Scale which had a strong internal consistency with an alpha of 0.87 (2009). Scores

range from eight to 56. Some questions from the scale were "I lead a purposeful and meaningful life," and "I actively contribute to the happiness and well-being of others." These questions were designed to measure a participants "self-perceived success in important areas such as relationships, self-esteem, purpose, and optimism" (Diener, 2013). A scale of seven responses ranging from "Strongly disagree" to "Strongly agree" were used. All of the questions were phrased in a positive way, with higher scores indicating a higher value of flourishing.

Mastery. I used the Pearlin Mastery Scale (Pearlin, 1978) to measure the subject's self-reported sense of mastery. The scale consisted of seven items with a four-point Likert response scale. Examples of two of the questions are "No way I can solve some of the problems I have," and "I often feel helpless in dealing with the problems of life." Five of the seven items were worded negatively as in these two examples and were reverse coded. Higher values therefore represent a greater sense of mastery. **A** composite scale variable was obtained by adding the five reverse coded items and remaining two items together, with a range of seven to 28. A slightly shorter version of this same scale had a reported alpha of 0.723 (Pudrovska et al., 2005).

Subjective happiness. I measured happiness with the four questions of the Subjective Happiness Scale which had strong internal consistency with an alpha of 0.86 (Lyubomirsky, 1999). The questions concerned how the subject perceives him/herself in terms of being a happy person, and the response choices were measured on different seven-point scales. An example question from the scale is "I consider myself a:" with a seven point scale of responses ranging from "not a very happy person" to "a very happy person." Question four was negatively phrased and therefore reverse coded. Higher scores indicate more happiness. The one reverse coded item and the remaining three items were added together for a composite scale variable, with a range of four to 28.

Anxiety. The four-question Anxiety Index was used to measure self-reported anxiety and had an alpha of 0.75 (Schieman, McCullen, Swan, 2007). All questions started with the phrase "In the past week, on how many days did you feel…" and then four items, "feel tense or keyed up," "feel afraid or fearful," "worry," "feel nervous or shaky inside." The response scale consisted of four choices from "no days," "one or two days," "three or four days," and "five or more days." Higher scores reflect more anxiety. The four items were added together for a composite scale variable, with a range of four to 16.

Depression. To measure depression I used the Depression Index with an alpha of 0.77 (Schieman, McCullen, Swan, 2007) which is similar to the Anxiety Index and was created by the same authors and has a similar structure. It consisted of four questions prefaced with "In the past week, on how many days did you feel…" and had the same response scale as the Anxiety Scale. Statements were "lack enthusiasm for doing anything," "feel bored or have little interest in things," "feel downhearted or blue," and "feel slowed down or low in energy." Higher scores reflect more depression. The four items were added together for a composite scale variable, with a range of four to 16.

Goals. I created the Goals Index for this study to measure self-reported progress on achievement of important goals. The first question "I have goals that are important to me," had a yes/no answer. If the subject answered "yes" they were presented with four further questions which progressively look at their perceived ability and progress in achieving them, such as "I am actively working to achieve them." A four-point Likert scale was used for responses. The four responses were added together to form a composite scale variable with a range of four to 16.

Data Analysis. Descriptive statistics were used to summarize the demographic data and the composite variables. A two-tailed Pearson's correlation was used to determine the

relationship between age and Depression Scale Composite scores and between age and Flourishing Scale Composite scores. I set the alpha level at .10 because of the small sample size. All analyses were conducted using IBM SPSS Statistics software version 21.

Results

Univariate Analysis

A univariate analysis was conducted on the sample (n=16) to examine the demographic data, Depression Scale Composite variable and the Flourishing Scale Composite variable. Of the respondents, 81.3% (n=13) were women, 68.8% (n=11) were white, 50% (n=8) worked more than 35 hours a week, 75% (n=12) had either a bachelors, Ph.D. or professional degree, and 68.8% (n=11) had combined household income of $75,000 or more. The mean income was 50.1 years of age with a standard deviation of 12.1 years. Descriptive statistics of the composite scale variables are summarized in Table 2. All scales show strong internal consistency with alpha values of 0.79 and above (Table 2).

Bivariate Analysis

To better understand the relationship between the respondents' age and scores for the depression scale composite and age and the flourishing scale composite, Pearson's correlations were conducted. The results indicated that there was a significant, moderately negative relationship between the respondents' age and their depression scale composite score ($r(16) = -.495$, $p < .10$); and that there was a significant, moderately positive relationship between the respondents' age and their flourishing scale composite score ($r(16) = .487$, $p < .10$).

Discussion

Interpretation

Although there was not enough data to interpret the initial hypotheses, there are a number of conclusions that are suggested by the demographic data and the bivariate analysis. The data indicates that the sample is fairly well educated, white, affluent and female, and that age matters in terms of increasing flourishing scores and decreasing depression scores. A possible explanation for this is that the sample has an interest in developing themselves, including increasing their well-being. This would be supported by the relatively high level of education and income attained, which suggests that this group is willing to work to develop themselves educationally and financially. They have also decided to try HBL, which suggests an interest in increasing their well-being. Since flourishing and depression are the only two measures to show significant correlation with age, it might indicate that increasing flourishing characteristics and decreasing depression are more important to successful, well-educated, white, women.

Implications

The initially planned study could have important implications for social work practice and policy if significantly positive results were found. Many areas of social work deal with cases where well-being is threatened such as in cases of domestic abuse, sexual abuse, drug addiction, and mental health, especially of chronic and disabling anxiety. If HBL was found to increase well-being, it could be incorporated into treatment of these problems. It could provide a valuable alternative to talk therapy. It could even provide reduced stress levels for those living in difficult neighborhoods. Of course it would also be important to recognize if HBL did not have a significant effect on subjects well being, so that resources and time could be focused elsewhere.

The current study could show implications for social work in that the same qualities that help women attain advanced education and affluence may increase well-being over time. This might help inform interventions designed at increasing women's self-esteem and sense of well-

being, by helping them focus on the qualities such as perseverance and patience. It could also support the idea that education leads to better financial outcomes which would inform social work policy.

Validity

The internal consistency of the measures indicates that the data does have strong internal validity. However, because of the small sample size, these conclusions are not easily generalizable externally.

Critique of Methods

The primary limitations of the initial study was that it was not a controlled and randomized. In this convenience sample participants were self-selecting based on interest in HBL and there was no true control group, only a comparison group. In addition, participants' interest and commitment to the HBL Program may have lead to more favorable results and might not be generalizable to the larger population. The study was also not designed to measure long-term effects of the intervention. Also, the measures used were selected partially based on their brevity. They may not have lead to as significant results as a more detailed instrument would. Finally, there were no biological markers measured, such as brainwave readings or stress hormone testing which would provide further validation of the self-reported findings.

For the current study, the primary limitation is lack of participants and lack of a post-test. The sample size is insufficient for in-depth analysis and the subjects' self-selection for interest in HBL poses an obstacle to generalizability. In addition, the post-hoc analysis does not incorporate information from the literature review. There is also limited relevance to social work in the current study.

Future Research

The primary condition to be met by any future research would be a large enough sample size with pre- and post-tests so that meaningful data analysis can be conducted. If this more robust exploratory study is completed, and significant positive results are found, a randomized, controlled study, with much larger sample size could be warranted. It would be helpful to study a wider demographic range as well, other than those that can afford the treatment. Longer term effects of the intervention should also be measured, after the primary intervention has ceased.

Conclusion

Although positive outcomes were noted across a wide spectrum of wellbeing measurements, limited conclusions can be drawn because of the lack of post-test data and low number of respondents. The study is worth continuing over a longer time frame in an effort to obtain a greater data sample and information about the effects of HBL. The data that was obtained suggests a successful, white, well-educated women who has increased her well-being as indicated by lack of depression and increased flourishing as she has gotten older. There may be more we could learn by further research into this demographic and by a more robust study of HBL.

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Table 1

Demographic Profile of Higher Brain Living Respondents (N=16)

Demographic	*n (%)*	*M (SD)*
Age in years		50.1 (12.1)
Gender		
Male	3 (18.8)	
Female	13 (81.3)	
Education level completed		
Some college/no degree	2 (12.5)	
Associates degree	2 (12.5)	
Bachelors degree	6 (37.5)	
Ph.D.	1 (6.3)	
Graduate or professional degree	5 (31.3)	
Marital Status		
Single	4 (25.0)	
Married	6 (37.5)	
Widowed	2 (12.5)	
Divorced	4 (25.0)	
Income		
Less than $25,000	2 (12.5)	
$25,000 to $34,999	1 (6.3)	
$35,000 to $49,999	1 (6.3)	
$50,000 to $74,999	1 (6.3)	
$75,000 to $99,999	4 (25.0)	
$100,000 to $149,999	5 (31.3)	
$150,000 or more	2 (12.5)	
Race/Ethnicity		
White	11 (68.8)	
African American	2 (12.5)	
Hispanic	3 (18.8)	
Hours Worked		
35 hours a week or more	8 (50.0)	
Less than 35 hours a week	2 (12.5)	
Not currently working	6 (37.5)	

Table 2

Descriptive Statistics & Alpha for Well-Being Measures of Higher Brain Living Respondents(N=16)

Scale Composite	Mean	SD	Min	Max	Alpha
Mastery	20.5	4.2	12	27	.82
Flourishing	42.9	9.2	26	55	.89
Happiness	18.9	5.7	11	28	.93
Anxiety	9.1	3.9	5	16	.93
Depression	8.6	3.3	4	14	.85
Goals	11.1	2.3	7	16	.79

Appendix A

Instrument

See attachments: HBL 1 - Survey Instrument.pdf

HBL 2 & 3 - Survey Instrument.pdf

Appendix B

Recruitment Flyer

See attachment: Recruitment Flyer.pdf

Appendix C

SPSS Printouts

Correlations

		What is your age?	Flourishing_Scale
What is your age?	Pearson Correlation	1	.487
	Sig. (2-tailed)		.056
	N	16	16
Flourishing_Scale	Pearson Correlation	.487	1
	Sig. (2-tailed)	.056	
	N	16	16

Correlations

		What is your age?	Depression_Scale
What is your age?	Pearson Correlation	1	-.495
	Sig. (2-tailed)		.051
	N	16	16
Depression_Scale	Pearson Correlation	-.495	1
	Sig. (2-tailed)	.051	
	N	16	16

Statistics

What is your age?

N	Valid	16
	Missing	0
Mean		50.06
Median		49.50
Mode		48
Std. Deviation		12.113
Range		49

Statistics

		Master_Scale	Happiness_Scale	Flourishing_Scale	Anxiety_Scale	Depression_Scale	Goals_Scale
N	Valid	16	16	16	16	16	15
	Missing	0	0	0	0	0	1
Mean		20.5000	18.88	42.94	9.13	8.56	11.07
Mode		19.00[a]	11[a]	26[a]	6[a]	6	10
Std. Deviation		4.22690	5.655	9.169	3.948	3.286	2.282
Range		15.00	17	29	11	10	9
Minimum		12.00	11	26	5	4	7
Maximum		27.00	28	55	16	14	16

a. Multiple modes exist. The smallest value is shown

What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	3	18.8	18.8	18.8
	Female	13	81.3	81.3	100.0
	Total	16	100.0	100.0	

What is the highest level of education you have completed?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Some College, no degree	2	12.5	12.5	12.5
	Associates degree	2	12.5	12.5	25.0
	Bachelors degree	6	37.5	37.5	62.5
	Ph.D.	1	6.3	6.3	68.8
	Graduate or professional degree	5	31.3	31.3	100.0
	Total	16	100.0	100.0	

What is your marital status?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single (never married)	4	25.0	25.0	25.0
	Married	6	37.5	37.5	62.5
	Widowed	2	12.5	12.5	75.0
	Divorced	4	25.0	25.0	100.0
	Total	16	100.0	100.0	

What was your total household income before taxes in the past 12 months?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than $25,000	2	12.5	12.5	12.5
	$25,000 to $34,999	1	6.3	6.3	18.8
	$35,000 to $49,999	1	6.3	6.3	25.0
	$50,000 to $74,999	1	6.3	6.3	31.3
	$75,000 to $99,999	4	25.0	25.0	56.3
	$100,000 to $149,999	5	31.3	31.3	87.5
	$150,000 or more	2	12.5	12.5	100.0
	Total	16	100.0	100.0	

Which of the following best describes your racial or ethnic background?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White	11	68.8	68.8	68.8
	African American	2	12.5	12.5	81.3
	Hispanic	3	18.8	18.8	100.0
	Total	16	100.0	100.0	

How many hours per week do you USUALLY work at your job?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	35 hours a week or more	8	50.0	50.0	50.0
	Less than 35 hours a week	2	12.5	12.5	62.5
	I am not currently working	6	37.5	37.5	100.0
	Total	16	100.0	100.0	

Scale: Flourishing Scale

Case Processing Summary

		N	%
Cases	Valid	16	100.0
	Excluded[a]	0	.0
	Total	16	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.893	8

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
42.94	84.063	9.169	8

Scale: Happiness

Case Processing Summary

		N	%
Cases	Valid	16	100.0
	Excluded[a]	0	.0
	Total	16	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.926	4

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
18.88	31.983	5.655	4

Scale: Anxiety

Case Processing Summary

		N	%
Cases	Valid	16	100.0
	Excluded[a]	0	.0
	Total	16	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.932	4

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
9.13	15.583	3.948	4

Scale: Depression

Case Processing Summary

		N	%
Cases	Valid	16	100.0
	Excluded[a]	0	.0
	Total	16	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.854	4

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
8.56	10.796	3.286	4

Scale: Mastery

Case Processing Summary

		N	%
Cases	Valid	16	100.0
	Excluded[a]	0	.0
	Total	16	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.819	7

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
20.50	17.867	4.227	7

Scale: Goals

Case Processing Summary

		N	%
Cases	Valid	15	93.8
	Excluded[a]	1	6.3
	Total	16	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.785	4

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
11.07	5.210	2.282	4