



**“ laugh for no reason ”**

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## ***The psychological impact of Laughter Yoga: Findings from a one-month Laughter Yoga program with a Melbourne Business***

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## Chapter 1: Overview of the project

### 1.1 Summary of the project

Over the month of July, the CEO of Laughter Yoga Australia, Merv Neal, along with a research team at Deakin University, offered staff from a Melbourne business the opportunity to participate in daily Laughter Yoga classes. Staff members voluntarily attended the sessions. Before, during and after the course of the program, participants also voluntarily completed a questionnaire designed to assess the psychological impact of Laughter Yoga

### 1.2 Measures and Procedure

Data were collected at 5 time points. Participants completed the baseline measure (T1) prior to their first Laughter Yoga class. The Time 2 (T2) questionnaire was completed immediately after the first Laughter Yoga class. Most participants completed this upon returning to their desks. Time 3 (T3) data were collected the following Monday, after participants had attended the Laughter Yoga class for that day, and Time 4 (T4) was completed the Monday after that. A final data collection time point (T5) was collected on another Monday, one week after the completion of the Laughter Yoga classes. The full questionnaire can be seen in the Appendix (Appendix A: Questionnaire), and included reliable and valid scales to assess the following variables:

- General Life Satisfaction
- Subjective Wellbeing
- General Positive Mood
- Self Esteem
- Optimism
- Perceived Control
- Depressive symptoms
- Stress
- Anxiety
- Job Satisfaction
- Workplace Wellbeing

### 1.3 The sample

Of the participants who completed the T1 questionnaire, 80% were females and 20% males. The age of the sample ranged between 24-54, with an average age of 36.76 (SD = 8.53). Participants completed the T2 questionnaire, then completed the T3 questionnaire, then completed the T4 questionnaire, and then completed the final T5 questionnaire. Since some employees were hired on a part time or casual basis, not all participants were able to partake in every Laughter Yoga session and complete each questionnaire.

## Chapter 2: Major findings

### 2.1 The effect of one Laughter Yoga class

Participants completed both the T1 and T2 questionnaires. The difference in their scores on the wellbeing variables are shown in Figure 1 below. The blue bars represent the T1 scores and the purple bars represent scores at T2. As can be seen, an increase was reported in each of the variables. **The change in both General Life Satisfaction and Self-Esteem were statistically significant ( $p < .05$ ).**

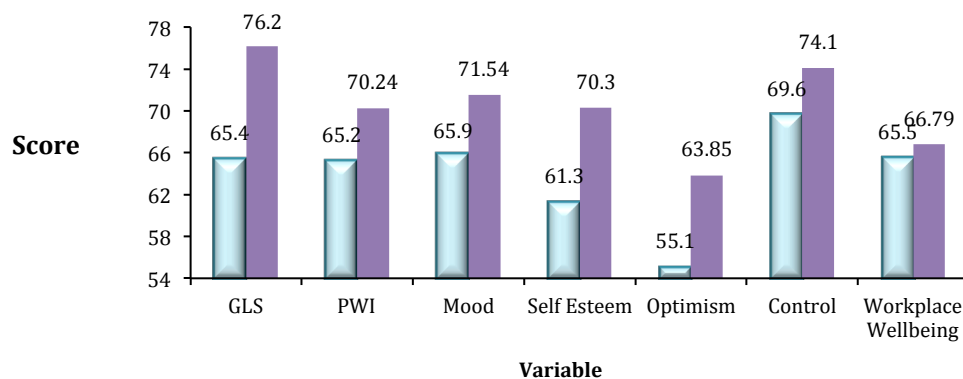


Figure 1: Wellbeing variables in T1 and T2

**These findings attest to an immediate impact of Laughter Yoga to increase wellbeing in participants.**

**The increase in wellbeing was supported by a decrease in symptoms of Stress, Anxiety and Depression, as shown in Figure 2. The decrease in both Stress and Anxiety was statistically significant.**

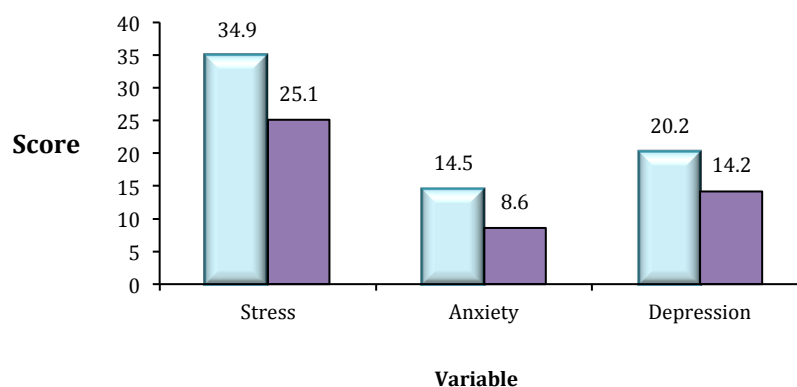


Figure 2: Stress, Anxiety and Depression at T1 and T2

**These results imply that the effect of Laughter Yoga is at least twofold – Laughter Yoga appears to improve positive aspects of wellbeing. Simultaneously, Laughter Yoga decreases negative emotions.**

## 2.2 The impact of Laughter Yoga over time

The figures shown below represent the scores on the wellbeing variables at each time point. It should be remembered that some people did not complete the questionnaire at each time point, and that participants may have attended any number of Laughter Yoga classes.

### 2.2.1 Wellbeing

Figure 3 shows the average Wellbeing score for the group at each time point. The average line represents the mean score of a comparison group comprising members of the general Australian population who were not exposed to Laughter Yoga. At Time 1, the average wellbeing score of the business group was slightly below the general population average. However, it rose slightly over the first week, and after 2 weeks of Laughter Yoga, the Wellbeing of the business group had risen above the general population average. Following the completion of the program it fell, but remained higher than at T1.

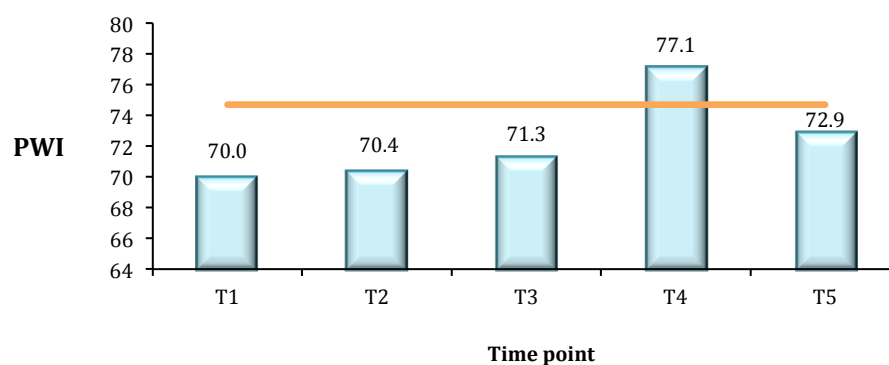


Figure 3: Personal Wellbeing Index across Time

The findings presented in Figure 3 appear to lend support for the effectiveness of Laughter Yoga as an intervention to increase Wellbeing. It is assumed that Laughter Yoga encourages participants to feel better about many aspects of their lives by improving their overall mood.

### 2.2.2 Mood

A very similar pattern emerged for general positive mood. This is not surprising as mood is the primary predictor of an individual's wellbeing. General positive mood increased slightly following the first Laughter Yoga class. It then dropped at one week follow up. It rose to its highest recorded value after 2 weeks of the program, and then fell once again a week after the completion of the program. Figure 4 shows the changes in positive mood over the course of the program and at follow up.

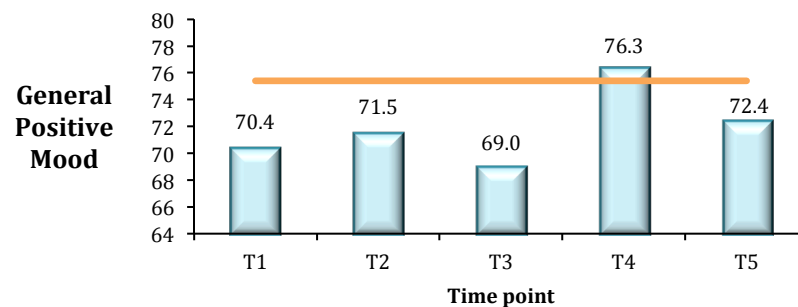


Figure 4: General positive mood across Time

The trend shown in Figure 4 is consistent with what Laughter Yoga purports to achieve. By simulating laughter, people are made to feel happier, more contented, and more alert. The lower mood reported at T3 appears to be an anomaly, but exploration revealed that one or two of the scores at this time-point appeared to be responsible for the overall lower average of the group. Perhaps something else happened to these participants over the weekend that detracted from the positivity they could experience during the LY session. Alternatively, perhaps they felt compelled to attend the session and were more resistant to its effects.

### 2.2.3 Self Esteem

Figure 5 reveals the pattern of change for Self Esteem over the course of the program and at follow up. Although Self-Esteem for the business group is below the general population average at all time-points, it increased during the LY program.

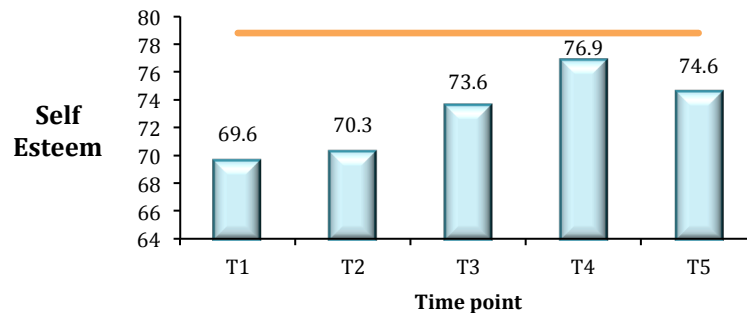


Figure 5: Self Esteem across Time

Laughter Yoga is anticipated to increase Self-Esteem by facilitating social interaction and group bonding. By encouraging eye-contact and touch amongst participants, Laughter Yoga is thought to foster a supportive environment in which each person feels like a valuable and contributing member to the group. In addition, a Laughter Yoga session typically involves assuring statements like “Very good, very good” which are specifically intended to enhance self-worth.

### 2.2.4 Optimism

Optimism also increased during the course of the Laughter Yoga program. It appears to have had a lasting effect, with the average Optimism score remaining relatively high at follow up after the completion of the program.

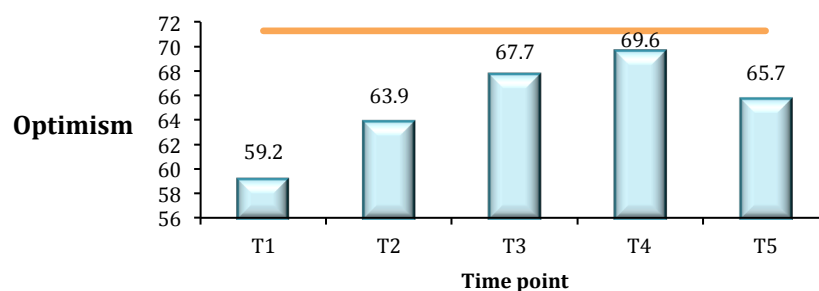


Figure 6: Optimism across Time

The effect of Laughter Yoga to improve Optimism is probably best explained in terms of the role that Laughing plays to emphasize the temporary nature of an event. The process of Laughing (particularly laughing at things that are often seen as troublesome or annoying) can help participants to realize that there is a brighter future ahead and to dissolve negative energy to do with a current bother.

### 2.2.5 Control

As per the other wellbeing variables, perceived Control for the business group peaked at T4, 2 weeks in to the Laughter Yoga program.

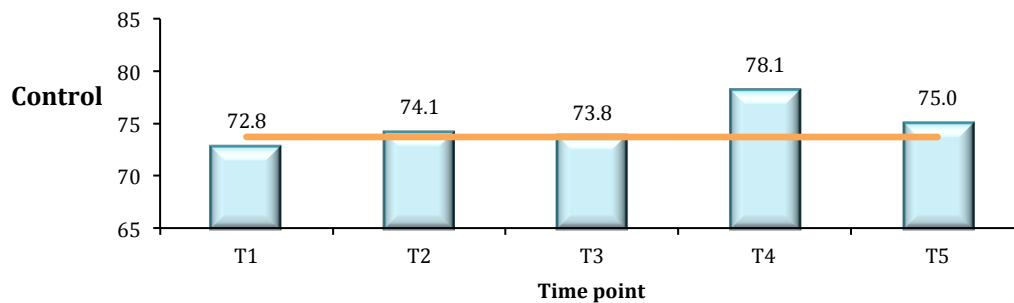


Figure 7: Control across Time

The impact of Laughter Yoga upon Perceived Control was not as obvious as for some of the other Wellbeing variables. This might have to do with the way the questions were worded with regard to this variable. The Control scale asks people to report how they might behave “when something bad happens”. It is likely that by priming people to think of the bad things that happen to them, any effect of Laughter Yoga is reduced. **However, participants still felt the greatest sense of control at T4, suggesting that perhaps with the passage of time, Laughter Yoga can help participants to realize that they are able to cope with aversive events by altering their reactions.**

### 2.2.6 Depression

Depressive symptoms reduced immediately after the first Laughter Yoga session. They peaked one week into the program, but then dropped again at the two-week mark. Following the end of the program, depressive symptoms rose slightly from T4, but remained lower than at T1.

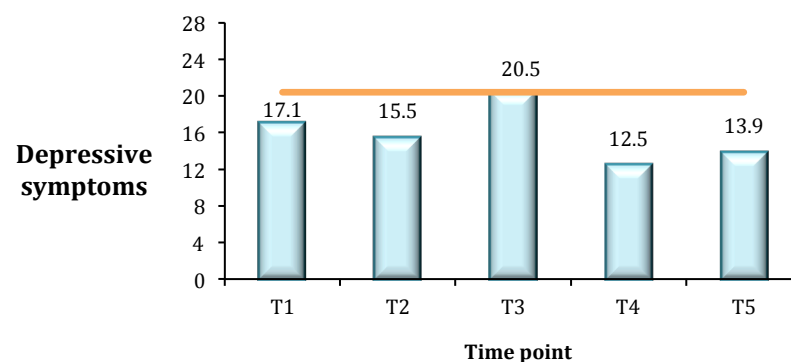


Figure 8: Depressive symptoms across Time

Laughter Yoga appears to have had a lesser effect on depressive symptoms than on some of the other measured variables. Depressive symptoms can be felt by those who are just ‘in a bad mood’, and so Laughter Yoga might have reduced



depressive symptoms in those participants. However, for others, depressive feelings might indicate a more serious underlying condition.

### 2.2.7 Anxiety

A similar pattern emerged for feelings of Anxiety. Laughter Yoga appeared to reduce symptoms of anxiety after the first class, though these symptoms returned after one week. Two weeks into the program, anxiety symptoms fell to their lowest point, but they again returned a week after the completion of the program.

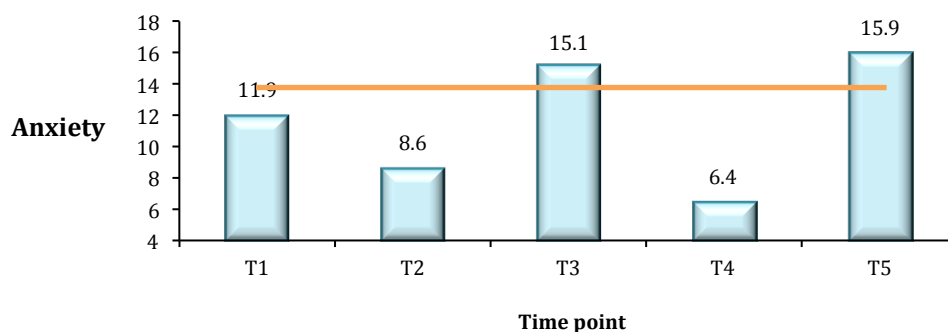


Figure 9: Anxiety across Time

Anxiety appeared to change the most out of the negative emotions assessed. This is probably because anxiety is characterized in terms of a perceived physiological response, and Laughter Yoga specifically affects one's physiological state. The rise in anxiety following the completion of the program is of greatest concern, and is perhaps something that could be monitored with this group in the future.

### 2.2.8 Stress

The same findings emerged for Stress, which is unsurprising given the intertwined nature of these variables.

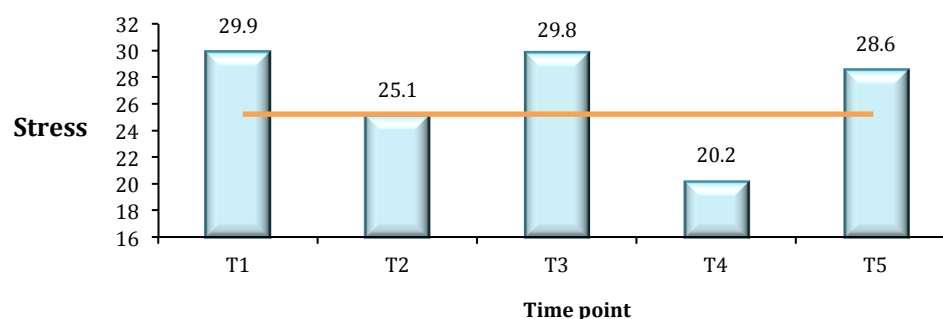


Figure 10: Stress across Time

The average level of Stress in this group remained at or above the average level of the general Australian population throughout the intervention, except for at

T4. Like anxiety, Stress appears to be a concern among this group and something to be addressed.

### 3.1 The impact of laughter yoga on job satisfaction and workplace wellbeing

Job satisfaction was assessed using the general question “How satisfied are you with your job as a whole?” whilst Workplace Wellbeing involved a series of 13 questions regarding specific intrinsic and extrinsic factors relating to the job.

#### 3.1.1 Job Satisfaction

Overall Job Satisfaction dropped immediately after the first Laughter Yoga class. They rose at T3 and then dropped again at T4. This trend is inconsistent with the general findings for Wellbeing. The average scores for Job satisfaction over all time points are presented in Figure 11.

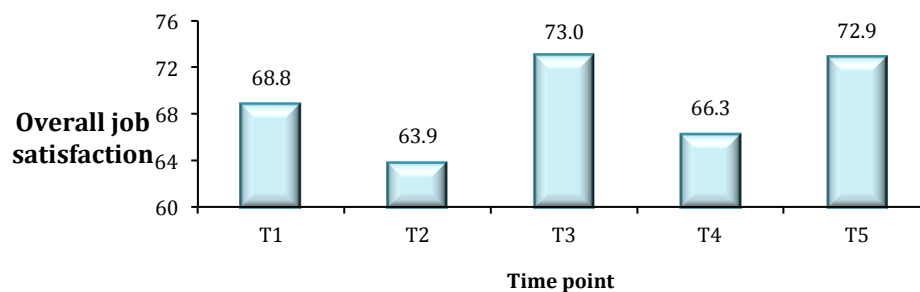


Figure 11: Job Satisfaction across Time

The finding that Job Satisfaction declined after the first Laughter Yoga session could reflect resistance on behalf of some members of the sample to participate in the intervention. Some may have felt a sense of obligation to participate and subsequently expressed some resentment about their job after the session. **By T3, however, their Job Satisfaction rose by about 10 points, which was retained at T5.**

#### 3.1.2 Workplace Wellbeing

The trend for Workplace Wellbeing was similar to that of overall Job Satisfaction, although Workplace Wellbeing peaked at T5.

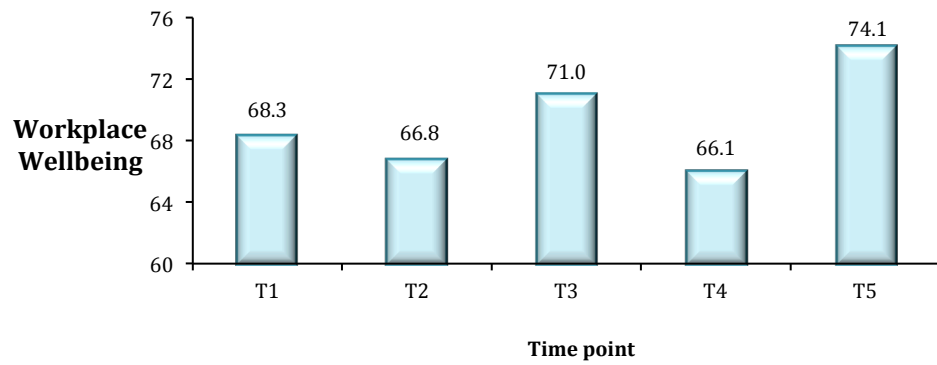


Figure 12: Workplace Wellbeing across Time

The high score recorded at T5 for Workplace Wellbeing indicates that, after the completion of the program, participants felt a greater sense of satisfaction with more specific job-related areas, such as 'being valued as a person at work' and receiving recognition for good work. This shows promise for Laughter Yoga as an effective intervention to improve the work environment.

### Chapter 3: Summary and recommendations

An instant effect of Laughter Yoga was demonstrated in the participants who completed the measures at T1 and T2. Put simply, one Laughter Yoga session makes people feel immediately better.

The trend throughout the Laughter Yoga program was that Wellbeing was highest and negative emotions were lowest at T4, 2 weeks into the program. It should, however, be remembered that since participation was not compulsory, only those who felt they were actually obtaining a benefit out of the sessions would be likely to continue to attend.

Encouragingly, the participants who completed the questionnaire at all 5 time points reported increased Job Satisfaction and Workplace Wellbeing at the completion of the program, even after the Laughter Yoga sessions had stopped.

Laughter Yoga appears to be an effective intervention to increase general Psychological Wellbeing. However, the impact of Laughter Yoga changes over time, and is felt most strongly after 2 weeks of participation in Laughter Yoga classes.

# Appendix A: Questionnaire

SECTION H

YOUR JOB

Please circle the number that best represents how satisfied you feel...

	Not At All Satisfied	Completely Satisfied
66	0 1 2 3 4 5 6 7 8 9 10	
67	0 1 2 3 4 5 6 7 8 9 10	
68	0 1 2 3 4 5 6 7 8 9 10	
69	0 1 2 3 4 5 6 7 8 9 10	
70	0 1 2 3 4 5 6 7 8 9 10	
71	0 1 2 3 4 5 6 7 8 9 10	
72	0 1 2 3 4 5 6 7 8 9 10	
73	0 1 2 3 4 5 6 7 8 9 10	
74	0 1 2 3 4 5 6 7 8 9 10	
75	0 1 2 3 4 5 6 7 8 9 10	
76	0 1 2 3 4 5 6 7 8 9 10	
77	0 1 2 3 4 5 6 7 8 9 10	
78	0 1 2 3 4 5 6 7 8 9 10	
79	0 1 2 3 4 5 6 7 8 9 10	

SECTION I

RISK TAKING

How much do you agree with the following statements?

	Do Not Agree At All	Completely Agree
80	0 1 2 3 4 5 6 7 8 9 10	
81	0 1 2 3 4 5 6 7 8 9 10	
82	0 1 2 3 4 5 6 7 8 9 10	
83	0 1 2 3 4 5 6 7 8 9 10	
84	0 1 2 3 4 5 6 7 8 9 10	

Thank you for your time and participation in this survey

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Wellbeing Questionnaire

Thank you for your involvement in this survey. This is a confidential questionnaire so please ensure that you do not write your name, or any other comments that will make you identifiable. By completing the questionnaire you are consenting to take part in this research as explained in the Plain Language Statement enclosed. The intention of this project is to investigate general wellbeing.

Please read each question and response option carefully before answering the questions and make sure that you have provided an answer for every question.

SECTION A

PERSONAL WELLBEING

Thinking about your own life and personal circumstances, please circle the number that best represents how satisfied you feel with your life.

	Not At All Satisfied	Completely Satisfied
1	0 1 2 3 4 5 6 7 8 9 10	
2	0 1 2 3 4 5 6 7 8 9 10	
3	0 1 2 3 4 5 6 7 8 9 10	
4	0 1 2 3 4 5 6 7 8 9 10	
5	0 1 2 3 4 5 6 7 8 9 10	
6	0 1 2 3 4 5 6 7 8 9 10	
7	0 1 2 3 4 5 6 7 8 9 10	
8	0 1 2 3 4 5 6 7 8 9 10	
9	0 1 2 3 4 5 6 7 8 9 10	

(You may leave the question blank if you have no spiritual or religious beliefs.)

SECTION B

HOW YOU GENERALLY FEEL

Please indicate how each of the following describes your feelings when you think about your life in general.

	Not At All	Extremely
10	0 1 2 3 4 5 6 7 8 9 10	
11	0 1 2 3 4 5 6 7 8 9 10	
12	0 1 2 3 4 5 6 7 8 9 10	
13	0 1 2 3 4 5 6 7 8 9 10	
14	0 1 2 3 4 5 6 7 8 9 10	
15	0 1 2 3 4 5 6 7 8 9 10	
16	0 1 2 3 4 5 6 7 8 9 10	
17	0 1 2 3 4 5 6 7 8 9 10	
18	0 1 2 3 4 5 6 7 8 9 10	

SECTION C

WHAT YOU EXPECT TO HAPPEN

How much do you agree with the following statements?

	Do Not Agree At All	Completely Agree
19	0 1 2 3 4 5 6 7 8 9 10	
20	0 1 2 3 4 5 6 7 8 9 10	
21	0 1 2 3 4 5 6 7 8 9 10	

SECTION D

COPING WITH PROBLEMS

How much do you agree that when something bad happens...

	Do Not Agree At All	Completely Agree
22	0 1 2 3 4 5 6 7 8 9 10	
23	0 1 2 3 4 5 6 7 8 9 10	
24	0 1 2 3 4 5 6 7 8 9 10	
25	0 1 2 3 4 5 6 7 8 9 10	
26	0 1 2 3 4 5 6 7 8 9 10	
27	0 1 2 3 4 5 6 7 8 9 10	

SECTION E

MORE ABOUT YOURSELF

How much do you agree with the following statements?

	Do Not Agree At All	Completely Agree
28	0 1 2 3 4 5 6 7 8 9 10	
29	0 1 2 3 4 5 6 7 8 9 10	
30	0 1 2 3 4 5 6 7 8 9 10	
31	0 1 2 3 4 5 6 7 8 9 10	
32	0 1 2 3 4 5 6 7 8 9 10	

SECTION F

OVER THE PAST WEEK

How much did these statements apply to you over the PAST WEEK?

	Not At All	Extremely
33	0 1 2 3 4 5 6 7 8 9 10	
34	0 1 2 3 4 5 6 7 8 9 10	
35	0 1 2 3 4 5 6 7 8 9 10	
36	0 1 2 3 4 5 6 7 8 9 10	

SECTION G

SUPPORT

How much do you agree with the following statements?

	Do Not Agree At All	Completely Agree
54	0 1 2 3 4 5 6 7 8 9 10	
55	0 1 2 3 4 5 6 7 8 9 10	
56	0 1 2 3 4 5 6 7 8 9 10	
57	0 1 2 3 4 5 6 7 8 9 10	
58	0 1 2 3 4 5 6 7 8 9 10	
59	0 1 2 3 4 5 6 7 8 9 10	
60	0 1 2 3 4 5 6 7 8 9 10	
61	0 1 2 3 4 5 6 7 8 9 10	
62	0 1 2 3 4 5 6 7 8 9 10	
63	0 1 2 3 4 5 6 7 8 9 10	
64	0 1 2 3 4 5 6 7 8 9 10	
65	0 1 2 3 4 5 6 7 8 9 10	

Section F continued

How much did these statements apply to you over the PAST WEEK?

	Not At All	Extremely
37	0 1 2 3 4 5 6 7 8 9 10	
38	0 1 2 3 4 5 6 7 8 9 10	
39	0 1 2 3 4 5 6 7 8 9 10	
40	0 1 2 3 4 5 6 7 8 9 10	
41	0 1 2 3 4 5 6 7 8 9 10	
42	0 1 2 3 4 5 6 7 8 9 10	
43	0 1 2 3 4 5 6 7 8 9 10	
44	0 1 2 3 4 5 6 7 8 9 10	
45	0 1 2 3 4 5 6 7 8 9 10	
46	0 1 2 3 4 5 6 7 8 9 10	
47	0 1 2 3 4 5 6 7 8 9 10	
48	0 1 2 3 4 5 6 7 8 9 10	
49	0 1 2 3 4 5 6 7 8 9 10	
50	0 1 2 3 4 5 6 7 8 9 10	
51	0 1 2 3 4 5 6 7 8 9 10	
52	0 1 2 3 4 5 6 7 8 9 10	
53	0 1 2 3 4 5 6 7 8 9 10	