



The psychological impact of Laughter Yoga: Measuring Wellbeing in Laughter Yoga Clubs across Victoria

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With thanks to the Laughter Yoga Club members and instructors

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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 Laughter Yoga (LY) club members the opportunity to participate in a study to assess the impact that LY had on their Subjective Wellbeing. A member of the research team first contacted the Instructors of each LY club, and a time was arranged to meet with the LY participants at one of their weekly gatherings. Participants included members of the LY clubs from Nunawading, Mitcham, Diamond Valley, Fitzroy North, Moonee Ponds, Melbourne, Surrey Hills, Hampton and Glen Waverley. They completed questionnaires to assess different aspects of their psychological wellbeing before and after participation in LY sessions.

1.2 Measures and Procedure

Data were collected at 4 time points. Participants completed the baseline measure (T1) prior to a Laughter Yoga class. The Time 2 (T2) questionnaire was completed immediately after that same Laughter Yoga class. Time 3 (T3) data were collected after their LY class in the following week, and Time 4 (T4) was completed following their LY class the week after that. 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	

All data presented in this report have been converted so that they represent the percentage of the scale maximum score. So, a score of 60.25 means that the average score for that variable was 60.25% of the total possible score for the scale.

1.3 The sample

Fifty-one participants completed the T1 questionnaire, including 39 females and 11 males (one participant did not reveal their gender). The age of the sample ranged between 18-87, with an average age of 55.46 (SD = 14.87). Thirty-eight participants completed the T2 questionnaire, 23 completed the T3 questionnaire, and 22 completed the T4 questionnaire. Seventeen participants completed every single questionnaire from T1 to T4.

Chapter 2: Major findings

2.1 The effect of one Laughter Yoga class

Thirty-eight 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 changes in General Life Satisfaction, Personal Wellbeing and Optimism were statistically significant ($p < .05$).

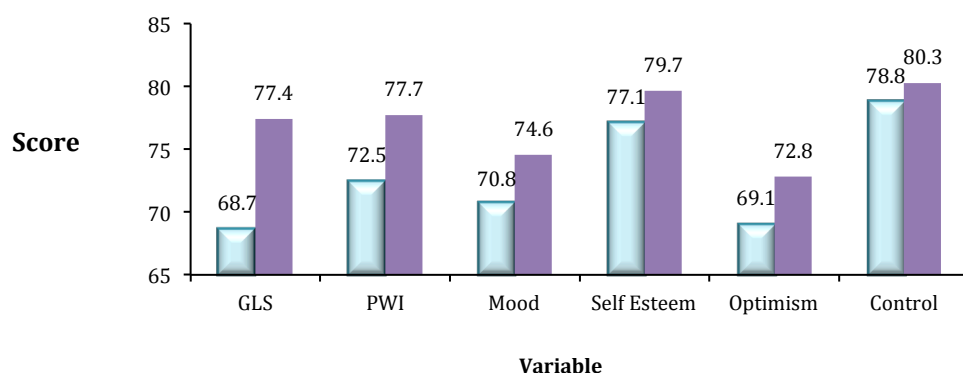


Figure 1: Wellbeing variables in T1 and T2

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 decreases for both Stress and Anxiety were statistically significant.

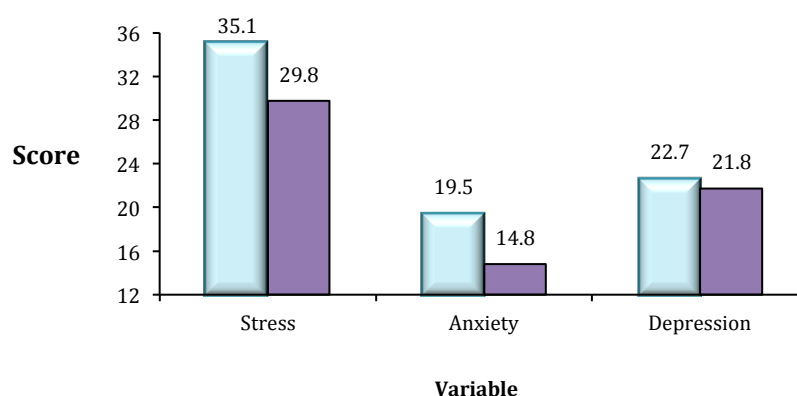


Figure 2: Stress, Anxiety and Depression at T1 and T2

These results imply that the immediate 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 Wellbeing variables for the 17 participants who completed the questionnaire at all 4 time points.

2.2.1 Wellbeing

Wellbeing in this context refers to Subjective Wellbeing. This is a person's perceived satisfaction with the major domains of their life, including their standard of living, health, achievements, relationships, safety, sense of community and future security.

Figure 3 shows the average Subjective 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 Laughter Yoga club members was below the general population average. However, the Wellbeing of the Laughter Club members rose significantly and was above the general population average following their participation in LY sessions.

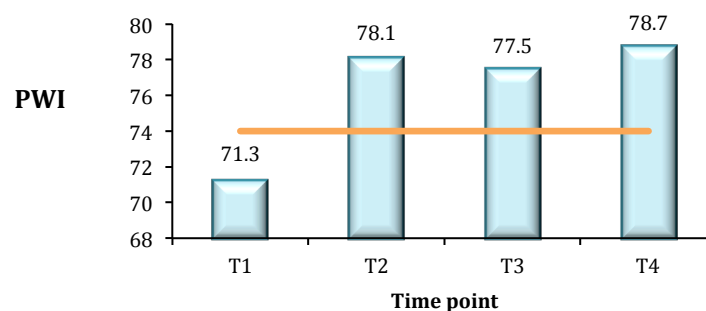


Figure 3: Personal Wellbeing Index across Time

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. Further, these findings lend to the idea that LY may be an especially effective intervention to improve SWB for participants who are functioning below the 'healthy' range of SWB. This healthy range has been identified in the Australian population through the Australian Unity Wellbeing Index to be between 72.7-76.7. The LY club members were operating below this level at T1.

2.2.2 Mood

Mood refers to General Positive Mood, which is an assessment of how people feel when they think about their life in general. The measure of mood used here reflects how happy, content and alert the participants feel.

A similar pattern emerged for general positive mood. This is not surprising as mood is the primary predictor of an individual's wellbeing. Participants' general positive mood improved significantly immediately after the first Laughter Yoga session, and remained high following the session one week later. Although this effect waned over time, Figure 4 reveals that positive mood was always above the initial level following an LY session.

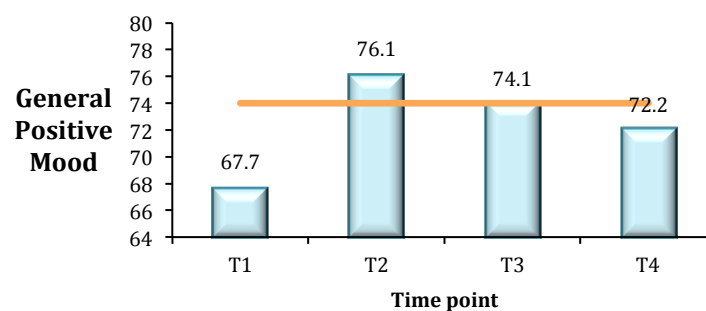


Figure 4: General positive mood across Time

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 T4 was unexpected, but exploration revealed that 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 after completing the questionnaire at T1, T2 and T3 they became more self-aware and were more conscious of their mood during the session. Such self-monitoring may have rendered them more resistant to its effects.

2.2.3 Self Esteem

Self-Esteem refers to an overall evaluation of an individual's self-worth and provides an indication of how people feel about themselves.

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 Laughter Yoga club members is below the general population average at all time-points, it was elevated (though not significantly) following LY sessions.

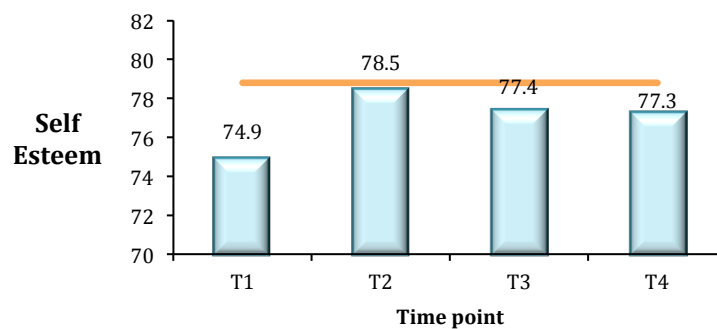


Figure 5: Self Esteem across Time

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 reflects a general sense of positivity about one's future.

Optimism also increased following each Laughter Yoga session. Though Optimism was above the general population average at T2 and T3, it is encouraging to see that even after the 2-week monitoring period, Optimism was still above the initial level.

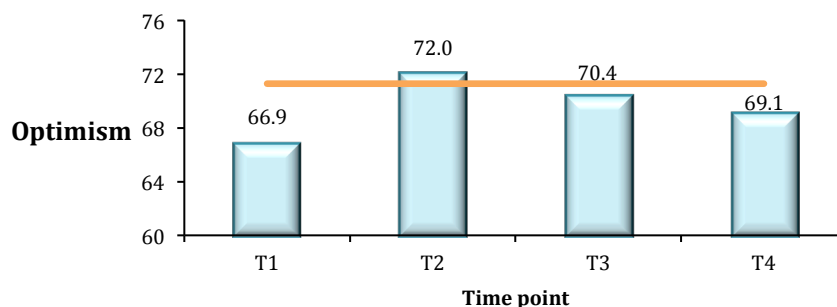


Figure 6: Optimism across Time

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

Perceived control reflects an individual's perception that they can cope when bad things happen to them.

Perceived Control for the LY club members was above the Australian average at baseline, but still improved after each session. These results are shown in Figure 7.

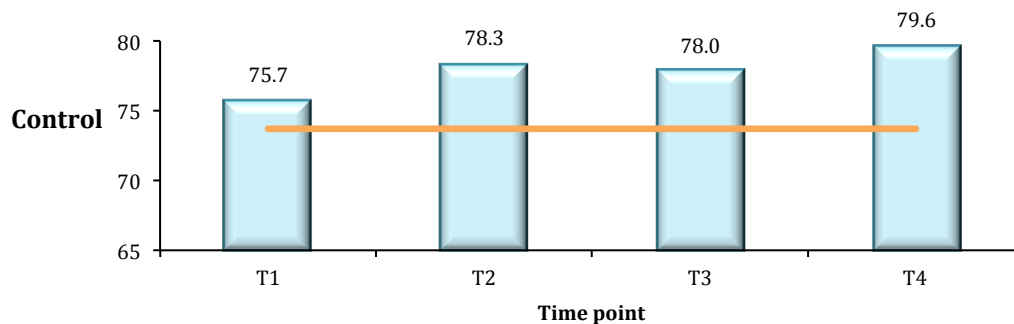


Figure 7: Perceived Control across Time

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 priming people to think of the bad things that happen to them reduces any effect of Laughter Yoga. In addition, of all the wellbeing variables, Control was the only one that was above the Australian average at the time of the initial measure. As such, there was less scope for scores on this variable to increase.

2.2.6 Depression

Depression here refers to depressive mood. Most people experience depressed mood to a certain degree at some time. The measure used here is not an indicator of clinical depression.

Depressive symptoms were reduced following each Laughter Yoga session, with the lowest levels of depression reported at T3. These findings are shown in Figure 8.

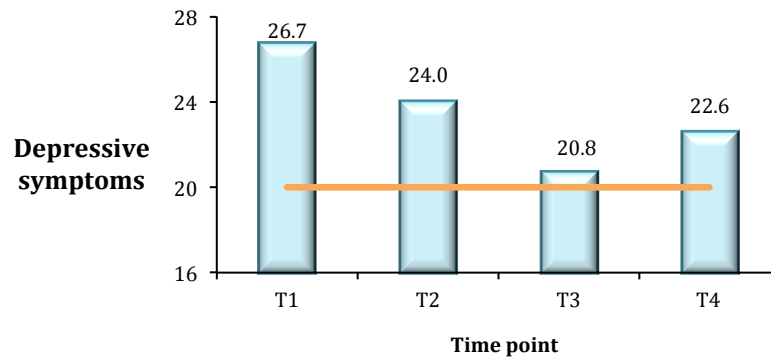


Figure 8: Depressive symptoms across Time

Depressive symptoms for LY club members were above the Australian average at all time points. This is unsurprising, as participants likely attend LY programs because they are experiencing some general unhappiness and are in need of a remedy. Promisingly, LY appears to be effective at reducing symptoms of depressed mood, though these reductions did not achieve statistical significance and LY is not adequate on its own to reduce depressive symptoms below the average level for Australians.

2.2.7 Anxiety

Anxiety here refers to physiological symptoms that are associated with general worry.

A similar, and non-significant pattern emerged for feelings of Anxiety. Laughter Yoga appeared to slightly reduce symptoms of anxiety after each Laughter Yoga session. These results are shown in Figure 9.

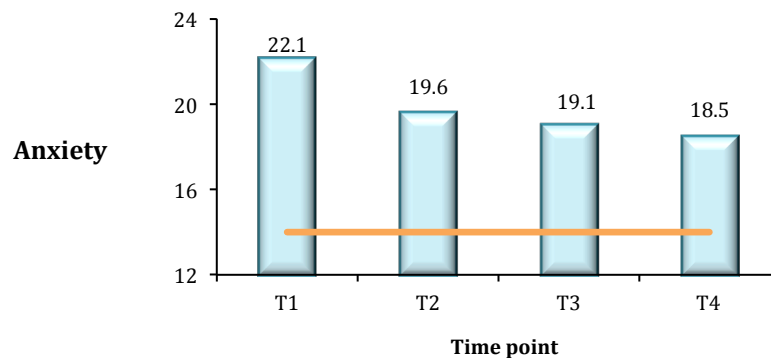


Figure 9: Anxiety across Time

This finding indicates some effectiveness of Laughter Yoga in diminishing the feeling of worry. However, levels of Anxiety remained above the general population average at all time points.

2.2.8 Stress

Stress is a psychological reaction to an event experienced as challenging. Generally, people like to feel a little bit stressed – it makes them feel busy and purposeful. Stress is only really a problem when it becomes distress.

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

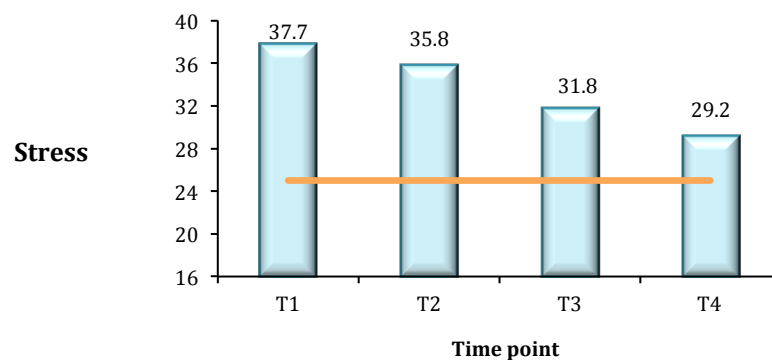


Figure 10: Stress across Time

The average level of Stress in this group remained above the average level of the general Australian population throughout the course of the study. Negative emotions like Stress, Anxiety and Depression appear to be common among LY club members, which probably underlies their decision to attend LY classes in the first instance. **For LY club members, Stress appeared to gradually decline with continued participation in LY classes.**

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 participants were generally happier and more satisfied with life after participating in their Laughter Yoga session. It should, however, be remembered that these sessions are attended voluntarily, and thus only those who feel that they actually obtain a benefit out of the sessions would be likely to continue to attend.

Laughter Yoga appears to be an effective intervention to increase general Psychological Wellbeing, and to reduce negative emotions. As would be expected, participants in these LY clubs reported lower wellbeing than average and higher levels of negative emotions prior to their LY classes, which likely underlies their involvement. It is promising to see that LY continues to be effective at increasing mood and reducing negative emotions over time. That is, participants do not become immune to the effects of LY, though monitoring over a longer time span is needed to confirm this statement.

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 How satisfied are you with your job as a whole?	0 1 2 3 4 5 6 7 8 9 10	
67 How satisfied are you with how much responsibility you have at your work?	0 1 2 3 4 5 6 7 8 9 10	
68 How satisfied are you with how meaningful your work is?	0 1 2 3 4 5 6 7 8 9 10	
69 How satisfied are you with your independence at your work?	0 1 2 3 4 5 6 7 8 9 10	
70 How satisfied are you that your work allows you to use your abilities and knowledge?	0 1 2 3 4 5 6 7 8 9 10	
71 How satisfied are you with the sense of achievement your work gives you?	0 1 2 3 4 5 6 7 8 9 10	
72 How satisfied are you with being valued as a person at your work?	0 1 2 3 4 5 6 7 8 9 10	
73 How satisfied are you with the recognition you receive for good work?	0 1 2 3 4 5 6 7 8 9 10	
74 How satisfied are you with your pay at your work?	0 1 2 3 4 5 6 7 8 9 10	
75 How satisfied are you with your job security?	0 1 2 3 4 5 6 7 8 9 10	
76 How satisfied are you with the convenience of your work hours?	0 1 2 3 4 5 6 7 8 9 10	
77 How satisfied are you with your working conditions?	0 1 2 3 4 5 6 7 8 9 10	
78 How satisfied are you with your supervisors at your work?	0 1 2 3 4 5 6 7 8 9 10	
79 How satisfied are you with your promotional opportunities at your work?	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 I like to take chances, although I may fail	0 1 2 3 4 5 6 7 8 9 10	
81 Although a new thing has a high promise of reward, I do not want to be the first one who tries it. I would rather wait until it has been tested and proven before I try it	0 1 2 3 4 5 6 7 8 9 10	
82 When I have to make a decision for which the consequence is not clear, I like to go with the safer option although it may yield limited rewards	0 1 2 3 4 5 6 7 8 9 10	
83 I like to try new things, knowing well that some of them will disappoint me	0 1 2 3 4 5 6 7 8 9 10	
84 To earn greater rewards, I am willing to take higher risks	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 your life as a whole?	0 1 2 3 4 5 6 7 8 9 10	
2 your standard of living?	0 1 2 3 4 5 6 7 8 9 10	
3 your health?	0 1 2 3 4 5 6 7 8 9 10	
4 what you are currently achieving in life?	0 1 2 3 4 5 6 7 8 9 10	
5 your personal relationships?	0 1 2 3 4 5 6 7 8 9 10	
6 how safe you feel?	0 1 2 3 4 5 6 7 8 9 10	
7 feeling part of your community?	0 1 2 3 4 5 6 7 8 9 10	
8 your future security?	0 1 2 3 4 5 6 7 8 9 10	
9 How satisfied are you with your spirituality or religion?	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 Thinking about my life in general I feel happy	0 1 2 3 4 5 6 7 8 9 10	
11 Thinking about my life in general I feel content	0 1 2 3 4 5 6 7 8 9 10	
12 Thinking about my life in general I feel tired	0 1 2 3 4 5 6 7 8 9 10	
13 Thinking about my life in general I feel active	0 1 2 3 4 5 6 7 8 9 10	
14 Thinking about my life in general I feel miserable	0 1 2 3 4 5 6 7 8 9 10	
15 Thinking about my life in general I feel alert	0 1 2 3 4 5 6 7 8 9 10	
16 Thinking about my life in general I feel enthusiastic	0 1 2 3 4 5 6 7 8 9 10	
17 Thinking about my life in general I feel sad	0 1 2 3 4 5 6 7 8 9 10	
18 Thinking about my life in general I feel distressed	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 In uncertain times, I usually expect the best	0 1 2 3 4 5 6 7 8 9 10	
20 I'm always optimistic about my future	0 1 2 3 4 5 6 7 8 9 10	
21 Overall, I expect more good things to happen to me than bad	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 You ask others for help or advice	0 1 2 3 4 5 6 7 8 9 10	
23 You look for different ways to improve the situation	0 1 2 3 4 5 6 7 8 9 10	
24 You use your skills to overcome the problem	0 1 2 3 4 5 6 7 8 9 10	
25 You remind yourself that something good may come of it	0 1 2 3 4 5 6 7 8 9 10	
26 You remind yourself that you are better off than some others	0 1 2 3 4 5 6 7 8 9 10	
27 You remember that the situation will improve if you are patient	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 I feel that I'm a person of worth, at least on an equal plane with others	0 1 2 3 4 5 6 7 8 9 10	
29 I feel that I have a number of good qualities	0 1 2 3 4 5 6 7 8 9 10	
30 I am able to do things as well as most other people	0 1 2 3 4 5 6 7 8 9 10	
31 I take a positive attitude toward myself	0 1 2 3 4 5 6 7 8 9 10	
32 On the whole, I am satisfied with myself	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 I found it hard to wind down	0 1 2 3 4 5 6 7 8 9 10	
34 I was aware of dizziness or my mouth	0 1 2 3 4 5 6 7 8 9 10	
35 I couldn't seem to experience any positive feeling at all	0 1 2 3 4 5 6 7 8 9 10	
36 I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	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 I found it difficult to work up the initiative to do things	0 1 2 3 4 5 6 7 8 9 10	
38 I tended to over-react to situations	0 1 2 3 4 5 6 7 8 9 10	
39 I experienced trembling (eg, in the hands)	0 1 2 3 4 5 6 7 8 9 10	
40 I felt that I was using a lot of nervous energy	0 1 2 3 4 5 6 7 8 9 10	
41 I was worried about situations in which I might panic and make a fool of myself	0 1 2 3 4 5 6 7 8 9 10	
42 I felt that I had nothing to look forward to	0 1 2 3 4 5 6 7 8 9 10	
43 I found myself getting agitated	0 1 2 3 4 5 6 7 8 9 10	
44 I found it difficult to relax	0 1 2 3 4 5 6 7 8 9 10	
45 I felt down-hearted and blue	0 1 2 3 4 5 6 7 8 9 10	
46 I was intolerant of anything that kept me from getting on with what I was doing	0 1 2 3 4 5 6 7 8 9 10	
47 I felt I was close to panic	0 1 2 3 4 5 6 7 8 9 10	
48 I was unable to become enthusiastic about anything	0 1 2 3 4 5 6 7 8 9 10	
49 I felt I wasn't worth much as a person	0 1 2 3 4 5 6 7 8 9 10	
50 I felt that I was rather touchy	0 1 2 3 4 5 6 7 8 9 10	
51 I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0 1 2 3 4 5 6 7 8 9 10	
52 I felt scared without any good reason	0 1 2 3 4 5 6 7 8 9 10	
53 I felt that life was meaningless	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 There is a special person who is around when I am in need	0 1 2 3 4 5 6 7 8 9 10	
55 There is a special person with whom I can share my joys and sorrows	0 1 2 3 4 5 6 7 8 9 10	
56 My family really tries to help me	0 1 2 3 4 5 6 7 8 9 10	
57 I get the emotional help and support I need from my family	0 1 2 3 4 5 6 7 8 9 10	
58 I have a special person who is a real source of comfort to me	0 1 2 3 4 5 6 7 8 9 10	
59 My friends really try to help me	0 1 2 3 4 5 6 7 8 9 10	
60 I can count on my friends when things go wrong	0 1 2 3 4 5 6 7 8 9 10	
61 I can talk about my problems with my family	0 1 2 3 4 5 6 7 8 9 10	
62 I have friends with whom I can share my joys and sorrows	0 1 2 3 4 5 6 7 8 9 10	
63 There is a special person in my life who cares about my feelings	0 1 2 3 4 5 6 7 8 9 10	
64 My family is willing to help me make decisions	0 1 2 3 4 5 6 7 8 9 10	
65 I can talk about my problems with my friends	0 1 2 3 4 5 6 7 8 9 10	