



## International Workplace Mental Resilience Training: Evaluation of TUFMINDS to Improve Mindsets, Coping and Life Satisfaction

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### Abstract

**Background:** Workplace mental health illness, absences and mental injury claims are significantly increasing and are the fastest rising work injury cost in Australia. TUFMINDS is a training program that provides active mental health improvement, resilience and coping techniques that potential needed to be evaluated.

**Aims:** To evaluate the efficacy and acceptability of the TUFMINDS program to deliver the TUFMINDS mindset program. In the work place. These include active processes to improve mental wellbeing, resilience, coping and optimism and to measure changes to life, work and personal attitudes.

**Method:** 434 participants attended 2 hours of TUFMINDS training with pre and post questionnaires evaluating the impact in optimism, mental resilience, life and work satisfaction and self-depreciation. These training sessions were run in multiple workplaces and countries covering Australia, Indonesia, USA, United Kingdom and China.

**Results:** Participants showed significant improvement in optimism, mental resilience, life and work satisfaction, self-control over their work situations and self-denigration. It appears that the mindfulness processes and active elimination of individual's negative self-talk creates significant

improvements in all the measured parameters. The level of changes achieved is all in the highly significant levels.

**Limitations:** This was a rapid intervention without follow up, use of some non-validated methods and the lack of a control group were the limitations of this study.

**Conclusions:** TUFMINDS training provides rapid and effective intervention in the workplace to increase mental resilience, coping, optimism and overall life satisfaction.

This study supports the hypothesis that the TUFMINDS mental health interventions can provide rapid and effective personal and workplace mental health benefits with improvements in optimism, resilience, attitudes, life and work satisfaction levels and coping ability.

### Introduction

Mental illness and lack of mental wellbeing are becoming increasing problems in communities and workplaces globally. Around 45% of Australians experience mental health conditions at some stage of their life and one in five experience mental health issue every year [1]. Workplace stress is a major risk for depression and anxiety and 38% of workers experience ongoing stress in their current job 46% believe that mental health is a "big problem" in their workplace and staff turnover

caused by poor mental health environment at work-40% have changed jobs and 50% would change jobs for this reason [2].

Suicide is the leading cause of death in 15 – 44-year-old Australians and 25% of deaths in the 15-24-year-olds [3]. Despite the significant efforts and national expenditure to reduce these rates, no significant improvement has been seen to reduce suicide rates and there is limited evidence of effectiveness of suicide prevention interventions [4, 5].

Work cover costs for mental illnesses are the most expensive work cover claims and cost Australian businesses \$10.9 billion per year [6]. Employers in Australia are now legally obligated to ensure mentally safe workplace [7]. Research also shows that every dollar spent on effective mental health initiatives in the workplace will, on average, have a positive return on investment of \$2.30 [8].

The deficiency that exists across most existing mental wellbeing and suicide prevention programs is the absence of active mental illness interventions in the community for the individuals at risk. The programs tend to focus on awareness, support and referral and this follows the historical approach of organizations avoiding direct mental health interventions for the person in distress and limiting the programs to recognition and referral. The reluctance of individuals in emotional distress to attend services, the delay in access to professional appointments and services not being available after hours [9] are all well documented. It may be the case that this lack of active, community based mental health interventions may be one of the reasons that these national programs and high-level national spending has not improved the suicide rates over the decades.

Another important aspect of addressing suicide risk is to have strategies in place to address impulsivity. Research also shows very clearly that the timeframe between suicidal ideation and suicidal action is very short [10]. The findings were that 75% of suicide attempts occurred within one hour of the initial suicidal thought. This very short timeframe from initial thoughts to action proves the importance for immediate access to suicide support and mental health intervention. The person at risk therefore needs to have access to the information, education and support at any time of day or night and not be dependent on obtaining a professional consultation.

The TUFMINDS program that was used in this research is available as face to face training, online or in a Smartphone app. These digital programs allow it to be accessed by anyone in the community or workplace 24 hours a day, in any site with telephone or internet connection and does not require professional input so has the potential to overcome many of the above barriers to receiving mental health support in the workplace or in the community.

The question being addressed in this research is whether TUFMINDS program impact the individuals to improve their optimism, mental resilience, and work and life satisfaction and levels of self-denigration. Given that the intervention is performed in 2 hours, it is easily performed in workplaces or community groups. It can be provided with face to face training, online modules and video format to allow flexibility to suit a wide range of community needs. If it is shown to be effective in improving mindsets, it has the potential to be shared and used widely in the community and workplaces very easily and very economically.

#### **The TUFMINDS program aims to provide:**

- Increase mental resilience by using “Positive Mindfulness Cognition”-a practical positive mindset process
- Stress and insomnia management strategies
- Active steps to recognise and eliminate negative thoughts in the mind
- Reduce depression, anxiety and stress
- “Suicide Crisis Module” – direct counselling for imminent suicide risk
- Recognise the signs and symptoms of suicide risk
- Know the action steps to take to help individuals at risk of suicide
- Mental Health Stigma reduction
- The practical steps to boost mental wellbeing
- Positive communication strategies
- Personal development strategies including 100% responsibility, Class Act and Goal Setting
- How to deal with negativity from others

This program was created based on evidence-based processes and accepted medical guidelines. The modules have been formulated using lived experience guidance, medical and psychological standards as well as using established Eastern philosophies of mindfulness, meditation and thought control. The program created “Positive Mindfulness Cognition” which is the active recognition and elimination of negative thoughts [11] and shared in published books “Mastering Negative Impulsive Thoughts” 2014 and “CEO Principles” 2017 [12,13].

The mental health parameters of the TUFMINDS program has already been researched to assess mental health parameters and to test the digital medium [14, 15]. These findings showed significant improvements (10-34%) in mental resilience, optimism, depression, anxiety and stress scores and further confirmation studies were recommended.

The aim of the research in this study is to assess the impact of the TUFMINDS program on optimism, mental resilience and various attitudes. The study was performed in multiple countries with different nationalities to test if there were any cultural barriers although the training was only provided to individuals that speak English. This study did not provide the TUFMINDS suicide awareness or intervention training and

was focused on the personal and workplace impacts of this short duration training program.

#### **The following hypotheses were tested:**

- TUFMINDS improves the optimism and mental resilience (coping with stressful situations) of participants to better manage stresses in life;
- TUFMINDS program improves perceived life satisfaction and work satisfaction separately;
- TUFMINDS program improves individuals' perception of their control of their workplace situation;
- TUFMINDS program reduces individuals' self-depreciation (negative self talk).

### **Method**

#### **Study Design**

The impact was assessed with a pre-test and post-test questionnaire and participants were assessed immediately before the TUFMINDS training and after the training. There was no control group and the pre-test questionnaires act as the baseline.

All participants signed the written informed consent form and only those that completed both questionnaires were included in the evaluation.

#### **Participants**

Participation was voluntary for the participants in the groups and workplaces chosen. The face to face sessions were run in Australia, Indonesia, China and the United Kingdom but also involved participants from the United States, Netherlands, and Germany using the online modules. The study was performed over several years to achieve these numbers of participants to ensure validity of the program.

The face to face training was performed in a variety of workplaces, community groups and sports clubs. The workplace included medical practices, hospitals, accountants, heavy industry, hotels and resorts, and spas with the community groups being Rotary, women's groups, cancer support groups and others.

The online participants were accessed through the TUFMINDS social media channels with interested and willing individuals offered participation online.

#### **Intervention**

The TUFMINDS program was run in a single two-hour session provided by face to face training or using the seven TUFMINDS video modules about Positive Mindfulness Cognition™.

The program approved by managers when run businesses or organizers of the community and social groups. Participation at the training and completion of the evaluation was voluntary.

#### **Measures**

Participants completed the pre and post questionnaires immediately prior to starting the program and immediately on completion. They were designed to measure optimism, mental resilience, life satisfaction, work satisfaction, level of control of work situation and level of self-depreciation.

#### **Demographics**

The participant's age, gender and nationality were collected. No identifiable data was recorded for confidentiality of data.

#### **Mental Health**

Optimism was measured with the Life Orientation Test – Revised (LOT-R) and is an evaluated research tools with validation.

Mental resilience was measured using a 10-point Likert scale and asking how well the individual was able to manage five stressful life events – “bad drivers on the road”, “someone driving into my car”, “incorrect bill at restaurant”, “house burglary” and “badly behaved children”. Improvement in ability to handle these non-critical events reflects improved coping and mental resilience.

Self-depreciation was measured using a 10 point Likert scale and asking four questions – “When I make a foolish mistake, I criticise myself”, “When I make repeated mistakes with a new task, the strength of my self-doubt to ever do it properly is”, “I am happy when I look at myself in the mirror” and “Criticisms hurt my feelings”. The TUFMINDS training teaches individuals to recognise this negative self-talk and create positive alternatives so the effective of the training will be measured by change with these items.

#### **Life, Work and Attitude levels**

Life and work satisfaction levels were assessed using the 10-point Likert scale and the following questions- “All things considered, how satisfied are you with your work as a whole these days?” and “All things considered, how satisfied are you with your life as a whole these days?”

Perceived ability to control the person's work situation was measured with 10-point Likert scale with the question – “Within the workplace, how much are you able to control your job and workplace situation?”

**Data Analysis**

Data was analysed directly from the pre- and post-questionnaires and change in levels assessed. This was performed using mean values for each outcome, standard deviation, 95% confidence levels, significance levels with p values and percentage change in actual numbers using linear regression.

**Results**

**Demographics**

There were 434 participants with 178 (41%) males and 256 (59%) females. The age ranges were predominantly middle aged with very few under 20 and over 65 years old (under 20yo – 6.2%, 21 to 30yo – 17.5%, 31 to 45yo- 41.2%, 46 to 65yo - 33.4% and over 65yo – 1.6%.

The higher proportion of females may have been due to the increased willingness of females to participate in the training and to complete the evaluations. There was also a few community groups that participated that were exclusively female and several of the workplaces had a disproportionately higher female staffing level like medical practices, hospitals and administration businesses.

The spread of nationalities assessed were:

|                |     |
|----------------|-----|
| Australian     | 273 |
| Indonesian     | 67  |
| United Kingdom | 35  |
| Chinese        | 26  |
| Netherlands    | 22  |
| Germany        | 11  |

**Mental Health and Impact Measures**

Optimism scores as reflected by the LOT-R test increased by 17% with mental resilience increasing by 36%. Self-depreciation reduced by 15%

Life satisfaction increased by 11% and work satisfaction increased by 7%. Level of perceived self-control at work increased by 20%. All of these scores reached statistical significance with p values less than 0.0001.

The data showed minor differences without significance across the different countries where it was tested and the results from the online modules were marginally better than the face to face training but again this did not have statistical significance. The reason for this may be that the online individuals had the ability to access the information and replay the modules and were not limited by having to absorb all the information in the one sitting.

| Measure   | Average      | % Change | Std Deviation | Conf Interval | 95% Conf Int           | P Value |
|---|--------------|----------|---------------|---------------|------------------------|---------|
| <b>LOT R Score - pre - post</b>   | 63.0<br>73.8 | 17%      | 16.4<br>14.6  | 1.54<br>1.37  | 61.5-64.6<br>72.4-75.2 | <0.0001 |
| <b>Mental Resilience- pre - post</b>  | 34.9<br>47.5 | 36%      | 16.7<br>17.5  | 1.57<br>1.64  | 33.3-36.5<br>45.9-47.5 | <0.0001 |
| <b>Life Satisfaction – Pre - post</b>                                       | 69.0<br>76.4 | 11%      | 16.5<br>15.9  | 1.56<br>1.49  | 67.5-70.6<br>75.0-77.9 | <0.0001 |
| <b>Work Satisfaction - pre -post</b>  | 67.7<br>72.3 | 7%       | 20.5<br>20.1  | 1.92<br>1.89  | 65.8-69.7<br>70.4-74.2 | <0.0001 |
| <b>Work Control - pre - post</b>  | 55.5<br>66.5 | 20%      | 22.6<br>17.5  | 2.12<br>1.65  | 53.4-57.6<br>64.8-68.1 | <0.0001 |
| <b>Self-Depreciation - pre - post</b>                                       | 52.5<br>44.5 | -15%     | 16.8<br>16.8  | 1.58<br>1.58  | 42.9-46.1<br>59.5-62.6 | <0.0001 |
| p* - Tests the hypothesis that Pre-test scores differ from Post-test scores |              |          |               |               |                        |         |

**Table 1:** Mean scores and variables using linear regression with pre- and post-training evaluation.

## Discussion

### Key Findings

This assessment of the TUFMINDS program attitude changes after a two-hour training intervention showed highly significant improvements in the measured parameters.

The program was focusing on improving mindset, self-talk and resilience for participants. The first hypotheses that TUFMINDS improves the optimism and mental resilience (coping with stressful situations) of participants to better manage stresses in life was confirmed with the 17% improvement in optimism and the 36% improvement in coping scores so shows dramatic improvements to dealing with life events and crises.

The fact that this program can actively improve individuals' optimism scores as measured by their LOT-R scores proves that many physical health benefits will also occur. This is because research over the last few decades has shown that improved LOT-R scores are associated with reduced heart attacks [16], strokes [17], 9 years longer life [18], improved mental health [19] and a measurable increase in antioxidant levels in the blood.

The hypothesis that the TUFMINDS program improves perceived life satisfaction and work satisfaction was confirmed as well with the lower but still significant levels of improvement -11% and 7% respectively. Additionally, the third hypothesis about being able to have more self-control over their work situation was also confirmed with a 20% improvement.

Considering all these attitudes are changed with a 2-hour intervention, these are very significant improvements. It is interesting also that the individuals' perceptions of their life satisfaction, work satisfaction and work control have all improved while clearly all of these situations are exactly as before and the person's improved mindset creates those improved satisfaction scores.

The fourth hypothesis that TUFMINDS program reduces individuals' self-depreciation (negative self-talk) was also confirmed with a 15% improvement. This reduction of their negative self-talks which will improve many areas of their lives like self-esteem, confidence and relationships. Controlling negative self-talk also creates positive communication processes that are explained in the TUFMINDS program but was not measured in this study. The outcomes are improved conflict resolution processes also improve interpersonal interaction and problem solving without personal attacks or denigration.

The magnitude of the changes seen with TUFMINDS is also very significant because the program is provided passively with

video modules that do not require skilled or trained presenters. Also creating such a level of change in such a short timeframe reinforces the value and effectiveness of the program. The lack of any significant difference in different countries and with different nationalities shows that this program works internationally and the initial concern from some that the program may only work in limited countries has been shown to be unwarranted.

The summary is that the TUFMINDS program had positive results in the workplace and for community individuals and all measured levels reached statistical significance. All the hypotheses were confirmed and TUFMINDS works equally well across borders, with different nationalities and whether the TUFMINDS program is provided face to face or online using digital media.

This study reinforces the improvements seen in previous studies of the TUFMINDS program [14, 15] with similar results achieved again. This large number of participants also increases the validation of the effectiveness of the TUFMINDS program so is useful confirmation of the previous studies.

The TUFMINDS program is available as a free Smartphone application so researchers, clinicians and community members can access the program at any time. The TUFMINDS program is downloadable from the Apple and Google stores with considerably more information and support training than was provided in this research study so the benefits seen in this study can be experienced by anyone wishing to help themselves or anyone else.

### Limitations

The limitations of this study need to be considered when interpreting the results. Firstly, while the LOT-R score is a validated measure, other measures used were self-reported and not validated questionnaires. However as most of those questions were used for the pre and post questionnaire, the change measured is still significant. Secondly, there is no control group for this study but the short timeframe for the intervention and the immediate attitude changes that were seen can only be from the training. Thirdly, there was no long term follow up to measure sustainability of the changes seen with this study.

Further research of the TUFMINDS program to measure all the parameters within the TUFMINDS program and to measure the long-term impacts.

### Implications

TUFMINDS presents an active mental wellbeing program with great potential to improve the mental resilience, coping and mood levels for community or workplace situations. Despite the limitations listed above, this evaluation shows very

strong support for the positive effects of the TUFMINDS program to improve mental wellbeing, personal and workplace improvements, optimism and mental resilience. The program provides significant benefits directly to each individual personally but also has potential to improve the workplace atmosphere, culture, personal interactions and relationships.

The implications of a passively delivered mental wellness program are enormous for workplaces and the community. There are cost savings to provide training in this manner and significantly improved health outcomes resulting in cost savings to businesses from reduced absenteeism and reduced mental health claims.

The additional benefit is that TUFMINDS is available 24 hours a day, seven days a week through online access or on smart phones. This would allow individuals to access the information at any time day or night to directly help someone in distress or to reinforce information they learnt previously from the TUFMINDS program.

This study shows that the TUFMINDS program is effective as a face to face or digital program and opens up the ability to share and educate individuals more broadly and in remote areas with fewer disadvantages from location. It also overcomes the barriers and costs of accessing trainers, professionals or facility costs. The benefits are potentially huge to provide effective workplace mental health wellbeing and resilience in a manner that is effective, safe, sustainable and economical while removing barriers of cost, distance and isolation and lack of skilled trainers to provide such mental wellbeing programs. The potential benefits are therefore profoundly significant providing evidence that TUFMINDS is an effective mental health program for widespread community and workplace use.

Further research needs to be performed measuring the long-term benefits of the program, measuring changes in mood and attitudes, and measuring the other mental health parameters and suicide interventions and testing the impacts across different digital media platforms.

## **Declarations**

This study was performed by the creators of the TUFMINDS program, Dr John and Elizabeth McIntosh in the process of developing and assessing the program content and acknowledges the conflict of interest.

## **Acknowledgments**

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