

Evaluation of Mental Health First Aid Educational Materials – a Randomized Controlled Trial

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Summary of Main Findings

Overview

The aim of the project was to evaluate the effects of Mental Health First Aid (MHFA) training of the public using a 12-hour e-learning CD (Kitchener & Jorm, 2008) compared to either receiving the information in a printed manual (Kitchener & Jorm, 2002) or receiving no training (Wait-list). Participants comprised 262 adults from the general community across Australia, randomly assigned into one of the abovementioned conditions. The primary aim was to evaluate the CD's impact on mental health literacy (knowledge and beliefs about mental disorders, which aid their recognition, management or prevention) confidence in providing mental health first aid, stigmatizing attitudes and first aid actions taken to help people with mental health problems. A secondary aim was to evaluate the impact of the training on the first aider's mental health. Participants were asked questions to determine changes in knowledge, attitudes and helping behaviour towards people with mental health problems, prior to receiving the educational material (at baseline) 1-month post and 6-months follow-up. Responses were received from 238 participants at 1-month post and from 229 participants at 6-months follow-up, indicating a response rate of 87.4%. The trial commenced in June 2008 and ran until December 2009.

Key findings

- Both the CD and manual improved participants' recognition of schizophrenia.
- Both the CD and manual improved participants' knowledge of what treatments are helpful for depression.
- Both the CD and manual improved participants' confidence in providing mental health first aid to someone with depression or schizophrenia.
- Both the CD and manual reduced stigma towards someone with depression.
- Both the CD and manual reduced stigma towards someone with schizophrenia, with the CD being superior.
- Only the CD increased the number of first-aid actions taken by participants.
- Only the CD decreased social distance towards someone with schizophrenia, resulting in more willingness to have contact with a person who has schizophrenia.
- Only the CD improved participants' knowledge of what treatments are helpful for schizophrenia.
- Only participants in the CD group had fewer days 'out of role' due to negative feelings.
- Only the manual decreased social distance towards someone with depression, resulting in more willingness to have contact with a person who has depression.

Overall, Mental Health First Aid information received by either the e-learning CD or printed manual had positive effects, but the CD was better at reducing stigma.

Detailed Summary of Results

Participants

The mean age of participants was 40 years (SD=12), 81% were female, 56% had a Bachelor or higher degree, 37% were currently studying, 91% were Australian citizens and 88% had English

as their first language. When participants were classified for remoteness according to the Australian Standard Geographical Classification (ABS, 2009), 79% lived in major Australian cities, 18% in regional areas and 3% in remote areas. A history of having a mental health problem was reported by 52% of participants. Participants in this study may not reflect the norm of the adult population, given the higher level of education and mental health literacy at baseline. However, they may reflect the type of people interested in using an e-learning approach to learning.

Recognition of mental disorders

Vignettes meeting minimal diagnostic criteria (DSM-IV-TR, 2000) depicting depression (Mary) and schizophrenia (John), were used to gauge participants' recognition of mental disorders.

Recognition of depression

Prior to receiving any educational material, results showed that $\geq 90\%$ of all participants were already able to recognize depression. This ceiling effect did not leave much room for improvement after training so statistical analysis was not possible.

Recognition of schizophrenia

Recognition of schizophrenia improved in both the manual group and the CD group, relative to the Wait-list. Prior to receiving the **CD**, 77.5% of respondents in the CD group recognized schizophrenia. A significant difference was not found at 1-month post training. However, at 6-months follow-up 91.3% of participants in the CD group correctly labelled schizophrenia, compared to 76% of participants in the Wait-list. This meant that participants in the CD group were 15.3 times more likely than the Wait-list to recognize schizophrenia at 6-months follow-up ($p < 0.01$).

Prior to receiving the **manual**, 76.7% of respondents in the manual group recognized schizophrenia. At 1-month post training, participants in the manual group were 12.59 times more likely than the Wait-list to recognize schizophrenia (94.9% compared to 81.3% respectively, $p < 0.01$). Improvements were still present for the manual group at 6-months follow-up, but had decreased to 88%, which meant they were 6.64 times more likely than the Wait-list to recognize schizophrenia ($p < 0.05$).

Beliefs about treatment of mental disorders

Depression

There is a professional consensus that GPs, psychiatrists, clinical psychologists, antidepressants, counselling and cognitive-behaviour therapy are helpful. Both interventions showed an improvement in participants' knowledge of what is helpful for depression, with beliefs more like those of mental health professionals. At 1-month post training, the **manual** group was 3.64 times more likely than the Wait-list to correctly identify all 6 items as helpful (67.9% compared to 52.4% respectively, $p < 0.05$). This increased to 5.92 times more likely at 6-months follow-up (65.8%, $p < 0.01$) compared to 44.4% of participants in the Wait-list. The **CD** group were also 4.38 times more likely than the Wait-list to identify all helpful items at 6-months follow-up (66.7%, $p < 0.05$).

Schizophrenia

There is a professional consensus that GPs, psychiatrists, clinical psychologists, antipsychotics and admission to a ward are helpful. Only the **CD** group showed an improvement in participants' knowledge of what is helpful for schizophrenia, with beliefs more like those of mental health professionals. At 1-month post training, the CD group was 4.16 times more likely than the Wait-list to correctly identify all 5 items as helpful (79.5% compared to 55% respectively, $p < 0.05$). However, this trend was not maintained at 6-months follow-up.

Confidence in providing mental health first aid

Participants were asked to rate their confidence in helping the people described in the 2 vignettes. Both interventions increased participants' confidence in helping someone with depression or schizophrenia. While the CD tended to increase confidence for both mental illnesses, the difference from the manual was not significant.

Depression

At 1-month post training, participants in the **CD** group were 13.51 times more likely than the Wait-list to feel '≥ moderately confident' in helping someone with depression (90.4% compared to 64.6% respectively, $p < 0.01$). This dropped to 11.54 times more likely than the Wait-list at 6-months follow-up (89.9% compared to 65.4% respectively, $p < 0.01$).

At 1-month post training, 87.8% of participants in the **manual** group felt '≥ moderately confident' in helping someone with depression. This was 8.22 times more likely than the Wait-list ($p < 0.01$) but this trend did not continue at 6-months follow-up.

Schizophrenia

At 1-month post training, participants in the **CD** group were 18.17 times more likely than the Wait-list to feel '≥ moderately confident' in helping someone with schizophrenia (72.6% compared to 24.7% respectively, $p < 0.001$). The **manual** also increased confidence at 1-month post training, with 48.8% of participants feeling '≥ moderately confident' in helping someone with schizophrenia. This was 5 times greater than Wait-list comparisons ($p < 0.05$). Significant improvements were still present for both educational modalities at 6-months follow-up, but these were lower than at 1-month post training. The **CD** was 4.75 times more likely than the Wait-list to increase confidence in helping someone with schizophrenia (60.9% compared to 30.9% respectively, $p < 0.05$) while the **manual** was 3.77 times more likely (50.7%) than the Wait-list to increase confidence ($p < 0.05$).

Helping behaviours toward people with mental health problems

Although there was no significant difference between educational interventions in whether participants had spoken with a person about their mental health problem, the number of first aid actions taken was significantly greater at 6-months follow-up in the **CD** group ($M = 5.33$, $SD = 2.31$) compared to the Wait-list ($M = 4.18$, $SD = 2.14$, $p < 0.01$). First aid actions taken included: listened to the person's problem, helped calm them down, talked to them about suicidal thoughts, recommended they seek professional help, recommended self-help strategies, gave them information about their problem, gave them information about local services, made an appointment for them, and referred them to books or websites for information about their problem. This outcome may be due to the inclusion of interactive case studies in the e-learning CD, which required the participant to rehearse the actions they would take to help someone who may be developing a mental illness. These exercises were not included in the manual.

Stigmatizing attitudes

This was divided into 'personal stigma' and 'perceived stigma', using scales developed by Griffiths et al., (2004). Personal stigma relates to a respondent's *personal attitudes* towards the person described in each vignette. For example, "A problem like Mary's is a sign of personal weakness." Perceived stigma relates to what a respondent believes *other people's attitudes* are towards each person in the vignette. For example, "Most other people believe that a problem like Mary's is a sign of personal weakness." Both the CD and manual reduced personal stigma for depression and schizophrenia, as outlined below.

Personal stigma towards depression

At 1-month post training, participants in the **CD** group were 8.65 times more likely than the Wait-list to disagree with stigmatizing attitudes toward depression (61.6% compared to 42% respectively, $p < 0.01$) and 35.73 times more likely to disagree with these at 6-months follow-up (68.1% compared to 35.8% respectively, $p < 0.001$).

Prior to receiving the **manual**, 38.6% of participants in the manual group disagreed with stigmatizing attitudes toward depression, increasing to 64.2 % of participants at 1-month post training. This was 13.68 times more likely compared to the Wait-list ($p < 0.001$). A reduction in personal stigma was still present for the manual group at 6-months follow-up, with 57.1% of participants disagreeing with stigmatizing attitudes, compared to 35.8% of the Wait-list. The manual group was 12 times more likely than the Wait-list to disagree with stigmatizing attitudes at 6-months follow-up ($p < 0.001$).

Personal stigma towards schizophrenia

The **CD** reduced personal stigma of schizophrenia more than did the manual. At 1-month post training, the CD group was 4.61 times more likely than the manual group to disagree with stigmatising attitudes towards schizophrenia (71% compared to 56.3% respectively, $p < 0.05$) and 4.4 times more likely to disagree with this at 6-months follow-up (CD = 65.2%, manual = 50%, $p < 0.05$). This outcome may be due to the inclusion of short film clips of people talking about their lived experience of mental illness in the CD. Previous research has suggested that personal contact is an effective way to reduce stigma (Corrigan, 2006; Kelly & Jorm, 2007). Although contact on the CD was via film rather than in person, it may have had a similar effect.

At 1-month post training, the **CD** group was 24.31 times more likely than the Wait-list to disagree with stigmatizing attitudes (71.2% compared to 38.8% respectively, $p < 0.001$) and 13.18 times more likely to disagree with these at 6-months follow-up ($p < 0.01$).

The **manual** also reduced personal stigma toward someone with schizophrenia but only at 1-month post training. Participants in the manual group were 5.28 times more likely than the Wait-list to disagree with stigmatizing attitudes (56.3% compared to 38.8% respectively, $p < 0.01$).

Perceived Stigma toward depression and schizophrenia

There were no significant differences in perceived stigma toward depression and schizophrenia between interventions. Generally speaking, perceived stigma toward both depression and schizophrenia decreased in all groups over time.

Social distance toward someone with depression

Stigmatizing attitudes were further assessed by using a Social distance scale (Link et al., 1999). For example, "How willing would you be to move next door to Mary?" At 1-month post training, the **manual** produced a reduction in social distance toward someone with depression (34.6% compared to 42.7% for the Wait-list, $p < 0.05$) but this trend was not maintained at 6-months follow-up.

Social distance toward someone with schizophrenia

At 1-month post training, the **CD** was superior to the manual in producing a reduction in social distance toward someone with schizophrenia (17.8% compared to 36.3% respectively, $p < 0.001$) but this trend was not maintained at follow-up. The CD also produced significant reductions in social distance toward someone with schizophrenia, relative to Wait-list controls at 1-month post training (17.8% compared to 40.7% respectively, $p < 0.001$) and at 6-months follow-up (24.6% compared to 42.0% respectively, $p < 0.01$).

Mental health of participants

There was no difference between interventions regarding participants' levels of psychological distress across 3 timepoints, measured by the K-10 Psychological distress scale (Kessler, 2002). However, a secondary analysis of the supplementary 'days out of role' questions at 1-month post training revealed that the CD group had significantly fewer days in which they were totally unable to work in the last 30 days due to negative feelings, with a mean of 0.52 days, ($SD = 1.76$) compared to either the manual group ($M = 1.54$ days, $SD = 5.04$, $p < 0.01$) or the Wait-list ($M = 1.33$ days, $SD = 4.13$, $p < 0.05$). This trend was maintained at follow-up with a mean of 0.68 days ($SD = 3.01$) reported for the CD group, compared to a mean of 0.79 days ($SD = 2.51$) for the manual group ($p < 0.05$) and a mean of 0.96 days for the Wait-list ($p < 0.05$). A possible explanation for this could be that the CD group were dealing with similar levels of stress at 6-months follow-up as at commencement, but had improved their coping strategies throughout the study, resulting in less down time in their usual role.

Attitudes towards the interventions

Participants were asked open-ended questions about what they liked/disliked about the educational material. Responses were received from 55 participants in the CD group and 64 in the manual group. There was little difference in their attitudes between the two modalities. Both groups reported the top 2 likes as 'ease of comprehension, clear, concise' and 'quality of content, information', followed by 'ease of navigation, easy to use format' for the CD group and 'layout of sections' for the manual group. The main dislikes about the CD were: 'navigation

difficult, not convenient for searching'; 'content too long or time consuming' and 'oversimplified content, want more depth'. The main dislikes about the manual were: 'repetitious'; 'oversimplified content, want more depth' and 'learning via manual not preferred learning modality'.

Conclusion

The results of this study show that both the MHFA e-learning CD and the MHFA manual had positive effects compared to Wait-list controls on recognition of schizophrenia, beliefs about depression treatment, personal stigma regarding both depression and schizophrenia and confidence in providing help to someone who has depression or schizophrenia. The CD was superior to Wait-list in producing more helping behaviours towards people with mental health problems. The findings justify the use of both the e-learning version and the manual as methods of conveying MHFA knowledge and instruction for skill development, with the CD being superior to the manual in reducing social distance and personal stigma in relation to a person with schizophrenia. These modalities of MHFA training are most likely to be useful in situations where attendance at face-to-face MHFA training is difficult, e.g. difficulties in rostering staff in workplace situations including shiftwork, living in a remote location, having difficulty travelling, or having family commitments which leave little time for course attendance.

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References

- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision (DSM-IV-TR). American Psychiatric Association: Washington DC; 2000.
- Australian Bureau of Statistics. 1216.0 - Australian Standard Geographical Classification (ASGC) - Jul 2009.
- Corrigan PW. Mental health stigma as social attribution: Implications for research methods and attitude change. *Clinical Psychology: Science and Practice*. 2006;7(1):48-67.
- Griffiths KM, Christensen H, Jorm AF, Evans K, Groves C. Effect of web-based depression literacy and cognitive-behavioural therapy interventions on stigmatising attitudes to depression: randomised controlled trial. *The British Journal of Psychiatry*. 2004;185(4):342.
- Kelly CM, Jorm AF. Stigma and mood disorders. *Current Opinion in Psychiatry*. 2007;20(1):13-6.
- Kessler RC, Andrews G, Colpe LJ, Hiripi E, Mroczek DK, Normand S-LT, et al. Kessler-10 Self-Administered Questionnaire - Short screening scales to monitor population prevalences and trends in nonspecific psychological distress. *Psychological Medicine*. 2002;32(6):959-76.
- Kitchener, B.A. & Jorm, A.F. *Mental Health First Aid Manual*. Centre for Mental Health Research: Canberra; 2002
- Kitchener, B.A. & Jorm, A.F. (2008) *Mental Health First Aid: An e-learning course*. ORYGEN Research Centre: Melbourne; 2008
- Link BG, Phelan JC, Bresnahan M, Stueve A, Pescosolido BA. Public conceptions of mental illness: labels, causes, dangerousness, and social distance. *American Journal of Public Health*. 1999;89(9):1328.