

Actions taken to cope with depression at different levels of severity: a community survey

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ABSTRACT

Background. Many people with symptoms of psychological distress do not seek professional help. Little is known about the actions taken by these people to reduce their symptoms. The present study aimed to assess, in a community sample, actions taken to cope with depression at different levels of psychological distress.

Method. A postal survey was carried out with 6618 adults living in Canberra and south-east New South Wales, Australia. Measures covered psychological distress and a checklist of actions taken to cope with depression in the previous 6 months.

Results. Actions taken to cope with depression could be classified as: intensification of everyday strategies, initiation of new self-help (including complementary therapies, non-prescription medication and dietary changes) and seeking professional help. Use of everyday strategies peaked with mild psychological distress, new self-help showed a peak in moderate distress, while professional help-seeking peaked in severe distress.

Conclusion. Self-help strategies are very commonly used, particularly in mild–moderate psychological distress. More evidence is needed to evaluate their effectiveness, so that optimal self-help can be encouraged.

INTRODUCTION

Many people who suffer from depressive or anxiety disorders do not seek professional help. According to the Australian National Survey of Mental Health and Wellbeing, 33% of adults with an affective disorder and 56% of those with an anxiety disorder have not sought professional help for their disorder in the previous 12 months (Andrews & Slade, 2001). Similar findings have been reported for the UK (Bebbington *et al.* 2000) and the USA (Kessler *et al.* 2001 *a*). These figures do not include people with disabling symptoms which fall short of diagnostic criteria (Judd *et al.* 1997). Although there has been extensive research on the pathways to professional care (Goldberg & Huxley, 1992), much less is known about other actions

that people take to cope with symptoms. There is evidence that self-help strategies and complementary therapies are commonly used (Parker & Brown, 1982; Jorm *et al.* 2000; Kessler *et al.* 2001 *b*), but we do not know how these vary with severity of symptoms and how they relate to professional help-seeking.

This paper reports the results of a community survey that assessed a wide range of actions to cope with depression, including self-help, complementary therapies and standard professional help. The self-help actions and complementary therapies covered in the survey have recently been the subject of a systematic review for evidence of efficacy (Jorm *et al.* 2002).

METHOD

Participants

From the electoral roll 27 000 names were selected at random: 9000 from Canberra,

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Australia and 18 000 from the area of south-east New South Wales, which surrounds Canberra. It is compulsory for Australian citizens aged 18 or over to be listed on this roll. Responses were received from 6618 persons, of whom 6529 had data relevant to the present analyses. The sample had a mean age of 48 years (s.d. = 15.5) and was 57% female.

Questionnaire

The questionnaire asked about sociodemographic characteristics, symptoms of psychological distress, knowledge about depression and its treatments, beliefs about the helpfulness of actions to cope with depression and use of these actions in the previous 6 months. The components of the questionnaire of relevance here are detailed below.

Respondents filled out the Kessler Psychological Distress Scale (K10), a 10-item screening test for anxiety and depressive disorders that has been validated for the Australian adult population (Andrews & Slade, 2001). Because anxiety and depression symptoms are so highly correlated in the general population, we did not attempt to separate them in the present analyses.

Respondents were also asked 'We would now like you to tell us which of the following treatments or activities (if any) you have used in the past 6 months to cope with depression'. The following list of items was given: acupuncture, antidepressants, aromatherapy, avoiding caffeine, avoiding sugar, being with pets, cognitive-behaviour therapy, colour therapy, counselling, counsellors and clinical psychologists, cutting out alcohol, dance and movement therapy, doing more things you enjoy, eating chocolate, electroconvulsive therapy, exercise, family and friends, ginkgo, ginseng, glutamine, GPs, homeopathy, hypnotherapy, interpersonal psychotherapy, lemon balm, light therapy, listening to music, massage, meditation, natural progesterone, oestrogen, painkillers, phenylalanine, psychiatrists, psychodynamic psychotherapy, reading self-help books for depression, relaxation therapy, selenium, St John's wort, taking fish oils, tranquilizers, tyrosine, using alcohol, vervain, vitamins and yoga. This list was based on treatments compiled during a systematic review of complementary and self-help treatments for depression (Jorm *et al.* 2002), except that a

small number of treatments were excluded because they were hard to access in Australia at the time of the survey (e.g. SAME, high density air ionization). The list was supplemented with a range of standard professional therapies for depression.

Survey procedure

Persons selected at random from the electoral roll were sent a questionnaire that was described as a 'Stress and Depression Survey'. They were provided with a reply-paid envelope for returning the questionnaire. Ethics approval for this study was given by the Australian National University Human Research Ethics Committee.

Statistical analysis

K10 scores range from 10–50 and were grouped into intervals as used by Andrews & Slade (2001). To aid discussion of the findings, these intervals are here given severity descriptions of 'Low' (10–14 and 15–19), 'Mild' (20–24 and 25–29), 'Moderate' (30–34 and 35–39) and 'Severe' (40–50). The percentage of respondents taking each action and its 95% CI was calculated for each K10 score interval. Some of the actions were found to be rarely used (including seeing a psychiatrist), so only those used by at least 3% of total sample are reported.

In order to reduce the number of actions to a smaller set, a principal components analysis was carried out. A scree plot was used to determine the number of factors subjected to varimax rotation. This analysis was carried out both with the full sample and excluding those who scored < 15 on the K10 (who rarely took any of the actions). The results of both analyses were very similar. Scale scores were calculated by summing the items that had loadings of ≥ 0.4 on each rotated factor in the second analysis.

Negative binomial regression analyses were used to evaluate differences in scale scores according to sociodemographic characteristics (age group, gender, education) and severity of distress. These analyses allowed for an examination of the effects of sociodemographic characteristics adjusting for severity of distress. Because the comparatively small number of participants in the severe distress group ($N = 102$), it was not possible to examine all three sociodemographic variables simultaneously in a single analysis, so each was examined separately.

The negative binomial model was used because of the highly skewed distributions of the scale scores. The $P < 0.05$ significance level was used.

RESULTS

Table 1 shows the percentage of respondents in each severity category carrying out each action. It can be seen that some actions become increasingly prevalent with greater severity (e.g. seeing a GP, taking antidepressants) whereas others show an initial increase followed by a decrease in use with greater severity (e.g. exercise, enjoyable activities). Shown in bold is the approximate point of peak use for each action. Table 2 summarizes these points of peak use.

To facilitate a grouping of activities, a principal components analysis was carried out. This revealed five factors, labelled as: everyday actions (pets, enjoyable activities, chocolate, exercise, family and friends, music); complementary therapies (aromatherapy, massage, meditation, relaxation, yoga); non-prescription medication (painkillers, St John's wort, fish oils, alcohol, vitamins); dietary changes (caffeine avoidance, sugar avoidance, cutting out alcohol); and professional help (antidepressants, counselling, counsellors or clinical psychologists, GPs). The items with high loadings were used to make scales which had alphas of 0.78 for everyday actions, 0.64 for complementary therapies, 0.45 for non-prescription medication, 0.65 for dietary changes and 0.68 for professional help.

These scale scores were examined across levels of severity. Fig. 1 shows the results. Everyday actions increase with mild distress, but decrease as distress becomes more severe. For complementary therapies, non-prescription medication and dietary changes, there is a rise in use that peaks in moderate distress, followed by a plateau or small decrease in use. With professional help, use increases steadily with increasing severity.

An analysis of gender differences on the scales showed that, after adjusting for severity, women had higher scores than men on all scales (all $P < 0.001$; except for dietary changes, $P = 0.003$). There were also gender-by-severity interactions for everyday actions ($P < 0.001$), professional help ($P = 0.010$), and non-prescription

medication ($P = 0.009$). For everyday activities, the interaction occurred because women had peak use in mild distress but men had peak use in moderate distress. For professional help and non-prescription medication, women had greater use than men at lower levels of distress but men had greater use than women at higher levels of distress.

An analysis of age group differences was carried out dividing the sample into those aged < 40 years *versus* those aged ≥ 40 . This analysis showed that, after adjusting for severity, younger people had greater use of everyday actions and complementary therapies ($P < 0.001$ for both). There were also age-group-by-severity interactions for everyday actions ($P < 0.001$), complementary therapies ($P = 0.012$) and professional help ($P = 0.033$). These interactions occurred because use of everyday actions peaked in mild distress for younger people and in moderate distress for older people. For use of complementary therapies, younger people had a bimodal distribution with peaks of use at both mild and moderate distress, whereas older people had a single peak at moderate distress. For professional help, there was a tendency for older people to have greater use in mild-moderate distress, but younger people to have greater use in severe distress.

An analysis of education differences was carried out by dividing the sample into those with a post-school diploma or degree *versus* those without these qualifications. This analysis showed that, after adjusting for severity, the better educated had greater use of complementary therapies ($P = 0.017$) and non-prescription medication ($P = 0.004$). There were also education-by-severity interactions for everyday actions ($P = 0.019$), complementary therapies ($P = 0.001$), and non-prescription medication ($P = 0.004$). These interactions occurred because for everyday actions the better educated showed peak use in mild distress followed by a sharp decline, whereas the less educated showed a plateau of use in mild-moderate distress followed by a decline in severe distress. The interaction effects with complementary therapies and non-prescription medication occurred because the better educated group continued to increase these types of actions in more severe distress, whereas the less educated group showed a peak in use followed by a decline.

Table 1. Percentage frequency (and 95% CI) of taking various types of action with increasing psychological distress (the points of peak use for each action are shown in bold)

Action taken	Low distress		Mild distress		Moderate distress		Severe distress
	Score 10–14 (N=2843)	Score 15–19 (N=1617)	Score 20–24 (N=894)	Score 25–29 (N=546)	Score 30–34 (N=330)	Score 35–39 (N=197)	Score 40–50 (N=102)
Antidepressants	2.6 (2.0–3.2)	7.8 (6.5–9.2)	14.3 (12.0–16.6)	23.6 (20.0–27.2)	33.6 (28.5–38.8)	38.6 (31.7–45.4)	52.0 (42.1–61.8)
Aromatherapy	3.8 (3.1–4.5)	11.3 (9.8–12.9)	13.9 (11.6–16.1)	14.1 (11.2–17.0)	17.0 (12.9–21.0)	22.3 (16.5–28.2)	14.7 (7.7–21.7)
Avoiding caffeine	5.3 (4.5–6.1)	14.4 (12.7–16.1)	15.4 (13.1–17.8)	16.7 (13.5–19.8)	19.7 (15.4–24.0)	26.9 (20.7–33.2)	24.5 (16.0–33.0)
Avoiding sugar	3.1 (2.5–3.8)	8.2 (6.9–9.6)	9.6 (7.7–11.5)	11.7 (9.0–14.4)	11.2 (7.8–14.6)	14.7 (9.7–19.7)	13.7 (6.9–20.5)
Being with pets	17.4 (16.0–18.8)	33.6 (31.3–35.9)	39.7 (36.5–42.9)	44.9 (40.7–49.1)	48.5 (43.1–53.9)	56.4 (49.4–63.3)	46.1 (36.2–55.9)
Counselling	2.7 (2.1–3.3)	8.3 (6.9–9.6)	13.2 (11.0–15.4)	18.7 (15.4–22.9)	24.8 (20.2–29.5)	33.5 (26.8–40.2)	44.1 (34.3–53.9)
Counsellors and clinical psychologists	1.1 (0.7–1.5)	2.3 (1.6–3.0)	6.0 (4.5–7.6)	9.5 (7.0–12.0)	11.8 (8.3–15.3)	14.7 (9.7–19.7)	26.5 (17.8–35.2)
Cutting out alcohol	3.8 (3.1–4.5)	9.8 (8.3–11.2)	14.0 (11.7–16.3)	15.8 (12.7–18.8)	21.2 (16.8–25.6)	24.9 (18.8–31.0)	17.6 (10.1–25.2)
Dance and movement therapy	3.7 (3.0–4.4)	6.5 (5.3–7.7)	10.1 (8.1–12.0)	10.1 (7.5–12.6)	10.0 (6.8–13.2)	12.2 (7.6–16.8)	2.9 (0.0–6.3)
Doing more things you enjoy	25.3 (23.7–26.9)	47.8 (45.4–50.2)	52.1 (48.8–55.4)	51.3 (47.1–55.5)	48.5 (43.1–53.9)	38.6 (31.7–45.4)	31.4 (22.2–40.5)
Eating chocolate	7.5 (6.5–8.4)	17.9 (16.0–19.7)	22.4 (19.6–25.1)	22.2 (18.7–25.7)	25.2 (20.4–29.9)	24.4 (18.3–30.4)	21.6 (13.4–29.7)
Exercise	28.7 (27.0–30.3)	51.4 (49.0–53.8)	58.5 (55.3–61.7)	55.3 (51.1–59.5)	52.4 (47.0–57.8)	49.8 (42.7–56.8)	38.2 (28.6–47.8)
Family and friends	28.6 (26.9–30.2)	53.4 (50.9–55.8)	59.4 (56.2–62.7)	62.8 (58.8–66.9)	57.3 (51.9–62.6)	55.3 (48.3–62.3)	47.1 (37.2–56.9)
GPs	3.9 (3.2–4.6)	10.5 (9.0–12.0)	19.7 (17.1–22.3)	27.1 (23.4–30.8)	31.8 (26.8–36.9)	36.6 (29.8–43.3)	43.1 (33.4–52.9)
Listening to music	23.0 (21.5–24.6)	45.0 (42.5–47.4)	51.2 (48.0–54.5)	54.2* (50.0–58.4)	53.0* (47.6–58.4)	54.3* (47.3–61.3)	52.9 (43.1–62.8)
Massage	10.7 (9.6–11.9)	21.9 (19.9–23.9)	26.7 (23.8–29.6)	29.8* (26.0–33.7)	23.9* (19.3–28.6)	31.0* (24.4–37.5)	15.7 (8.5–22.9)
Meditation	6.1 (5.2–7.0)	14.9 (13.2–16.6)	20.0* (17.4–22.6)	19.6* (16.3–22.9)	17.6* (13.4–21.7)	21.3* (15.6–27.1)	18.6* (10.9–26.3)
Painkillers	1.8 (1.3–2.2)	4.8 (3.7–5.8)	9.7 (7.8–11.7)	14.6 (11.7–17.6)	17.6 (13.4–21.7)	24.9 (18.8–31.0)	35.3 (25.9–44.7)
Reading self-help books	3.0 (2.4–3.6)	7.4 (6.1–8.7)	13.7 (11.5–16.0)	17.6 (14.4–20.8)	21.8 (17.3–26.3)	17.8 (12.4–23.2)	27.4* (18.6–36.3)
Relaxation therapy	4.2 (3.4–4.9)	9.3 (7.9–10.7)	12.2 (10.0–14.3)	14.1 (11.2–17.0)	16.1* (12.1–20.0)	16.8* (11.5–22.0)	19.6* (11.8–27.4)
St John's wort	1.6 (1.1–2.0)	4.5 (3.5–5.5)	7.3 (5.6–9.0)	9.7 (7.2–12.2)	11.8 (8.3–15.3)	7.1 (3.5–10.7)	5.9 (1.2–10.5)
Taking fish oils	2.1 (1.6–2.6)	4.1 (3.2–5.1)	4.6 (3.2–6.0)	5.3 (3.4–7.2)	7.9 (5.0–10.8)	6.1 (2.7–9.5)	5.9 (1.2–10.5)
Using alcohol	4.0 (3.3–4.7)	9.8 (8.4–11.3)	14.5 (12.2–16.8)	18.3 (15.1–21.6)	24.8* (20.2–29.5)	26.4* (20.2–32.6)	18.6 (10.9–26.3)
Vitamins	5.7 (4.9–6.6)	13.4 (11.7–15.0)	16.6 (14.1–19.0)	20.9 (17.5–24.3)	24.8 (20.2–29.5)	21.3 (15.6–27.1)	18.6 (10.9–26.3)
Yoga	2.5 (1.9–3.0)	5.9 (4.8–7.1)	7.0 (5.4–8.7)	5.3 (3.4–7.2)	5.2 (2.8–7.6)	8.1 (4.3–12.0)	4.9 (0.6–9.2)

* These actions show a plateau, so several values have been shown in bold.

Table 2. Summary of point of peak use for each action

Level of distress	Actions with peak prevalence at this level
Mild	Doing more things you enjoy, exercise, family and friends
Mild-moderate	Eating chocolate, listening to music, massage, meditation
Moderate	Aromatherapy, avoiding caffeine, avoiding sugar, being with pets, cutting out alcohol, dance and movement, St John's wort, taking fish oils, using alcohol, vitamins, yoga
Moderate-severe	Relaxation therapy
Severe	Antidepressants, counselling, counsellors and clinical psychologists, GPs, painkillers, reading self-help books

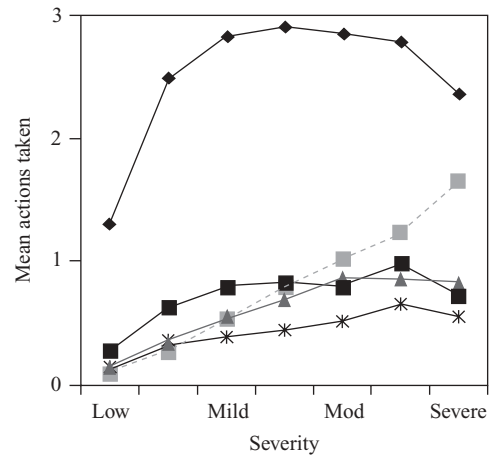


FIG. 1. Mean scores on action scales across levels of severity. (◆◆, Everyday; ■■, professional; ▲▲, non-prescription; ■■, complementary; **, dietary.)

DISCUSSION

Actions taken and severity of distress

It might be expected that actions taken to reduce distress would increase as distress becomes more severe. However, the present results show that this is not necessarily the case. Some self-help actions at first increase with distress, then decrease in those with more severe distress. By contrast, professional help-seeking continues to become more prevalent with increasing distress. Some of the decline in self-help actions with more severe distress could be due to these being abandoned as ineffective. Another explanation is that those who use self-help strategies actually prevent themselves from becoming more distressed. To distinguish between these possibilities would require longitudinal data. A third possibility is that severe distress affects the motivation to act. According to this possibility, actions which take more effort or planning would be the ones which reduce in prevalence with more severe distress. However, an examination of the data in Table 1 shows that some of the actions that continue to increase in prevalence with severe distress require considerable motivation (e.g. receiving counselling, reading self-help books).

Women showed greater use of both self-help actions and professional help-seeking, which is consistent with previous evidence that they have a greater range of strategies for reducing distress than men (Jorm *et al.* 2000). For professional help-seeking, there was an interesting interaction effect, with women receiving more professional help at lower levels of distress, but men

receiving more at higher levels. This finding is consistent with other evidence on male help-seeking, which finds they require higher levels of impairment before seeking professional help (Parslow & Jorm, 2000). Similarly, with some self-help actions men tended to show a later peak of use than women.

Better educated people also showed greater use of some self-help actions, as well as a difference in pattern of actions taken with increasing severity. In particular, the better educated showed an increasing use of complementary therapies and non-prescription medication with severity, whereas the less educated showed an initial rise in use followed by a decline with greater severity. The reason for this difference is not clear, but we can speculate that the better educated might see self-help strategies as complementary to professional help, whereas the less educated may see them as alternatives (i.e. not to be mixed).

There were also age group differences, with the older group less likely to use everyday actions and complementary therapies. It is impossible to say from the present data whether this difference represents a generational change in preference for self-help or whether the older group has learned from experience that some types of actions are not useful in relieving distress. It is also possible that the age differences are associated with lower education levels in older persons. However, the sample size did

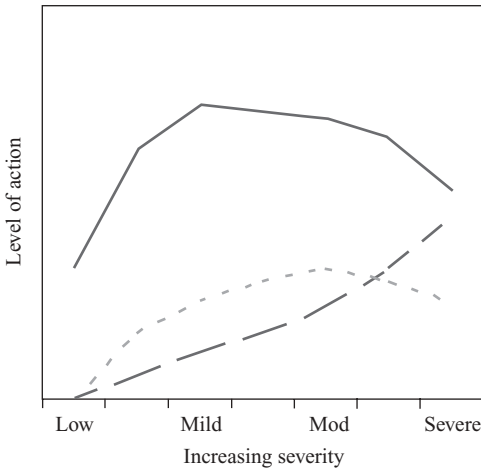


FIG. 2. Illustration of the overlapping waves of action model. (—, Increase existing self-help; ----, adopt new self-help; - · - ·, seek professional help.)

not permit an examination of age adjusting for education.

Need to evaluate effectiveness of self-help

The present findings confirm that self-help actions are more commonly used than professional help-seeking (Jorm *et al.* 2000). Given that these actions are so common, there is a need to find out whether they are effective and to guide the public to use those that are most likely to help. Most research on treatments for anxiety and depression has focused on a small number of professional treatments such as medication and psychotherapy, while more commonly used self-help strategies have been largely ignored. It was because of this need that we carried out a systematic review of evidence on complementary and self-help interventions for depression (Jorm *et al.* 2002). This review found some evidence to support the use of St John's wort, exercise, self-help books based on cognitive-behaviour therapy, acupuncture, light therapy, massage, negative air ionization, relaxation therapy, SAME, folate and yoga breathing exercises. Unfortunately, there is little correspondence between how frequently an intervention is used and whether it has supporting evidence of effectiveness. There is clearly a need to carry out more research on the effectiveness of what people actually do in practice and to develop methods for encouraging the community to use actions that work.

Proposed 'overlapping waves of action' model

The present data are cross-sectional, but we wish to suggest a dynamic model of action to cope with psychological distress based on our findings. At the level of the individual, actions taken to reduce distress can be taken in any order or in any combination. However, at the population level, certain 'overlapping waves of action' are apparent (see Fig. 2). The first wave of action, which occurs with mild distress, is an increase in the use of strategies that are readily available to the person and may already be in everyday use. These include exercise, music, enjoyable activities and interaction with family and friends. This wave of action declines as distress becomes more severe. The second wave of action involves self-help strategies that are not already in everyday use and are taken up specifically to deal with distress. These include using non-prescription medication, changing diet and taking up complementary therapies. This wave peaks in moderate distress, but tends to decline in severe distress. The third wave of action is professional help-seeking, which continues to increase in use as distress becomes more severe. This third wave may reflect the failure of the first and second waves to reduce distress for some individuals. It must be emphasized that these waves are distributions of action in a population rather than a sequence of actions for an individual. There may be sociodemographic factors that affect these waves of action. For example, in the present data, the second wave of action appears to persist longer in the better educated subgroup of the population.

Limitations

The present study has several limitations which must be acknowledged. First, the response rate to the survey was low, with possible biases in the sample and lack of representativeness. A limited budget precluded us from carrying out personal interviews, which would have resulted in a much higher response rate. However, using published national data (Andrews & Slade, 2001), it is possible to estimate the expected number of people in the full sample we surveyed who fell in each score range on the K10. Dividing the number of responders in each score range by these expected numbers for the full sample gives a rough estimate of response rate, which was 19% in the score range 10–19, 54%

in the range 20–29 and 100% in the range 30–50. Thus, it appears that the response rate was excellent for those who were experiencing a high level of distress, but poor for those with little or no distress. If there is any bias due to the low response rate, it will be seen at the lower end of the score range rather than at the upper end. Therefore, we can feel greater confidence about the decline in self-help and the rise in professional help-seeking found in moderate and severe distress, than about the changes in actions which were found in low and mild distress.

A second limitation is that the ‘overlapping waves of action’ model has been proposed based on cross-sectional data. Without historical information it is impossible to know whether a person at a particular level of severity is in a phase of increasing distress or is recovering. Neither is it possible to know whether the person is having a first episode or a recurrence or is receiving maintenance treatment. Obviously, further investigation of this model requires historical data.

A third limitation is that the study linked distress over the past month with actions taken over the past 6 months. A consistent time base for the questions would have been preferable.

A final limitation is that the checklist of actions may have excluded some interventions not covered in the systematic review by Jorm *et al.* (2002). Examples would be tobacco and illicit drug use.

Despite these limitations, the study is the first to show the role of different types of action across the full spectrum of psychological distress and draws attention to the importance of self-help strategies.

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