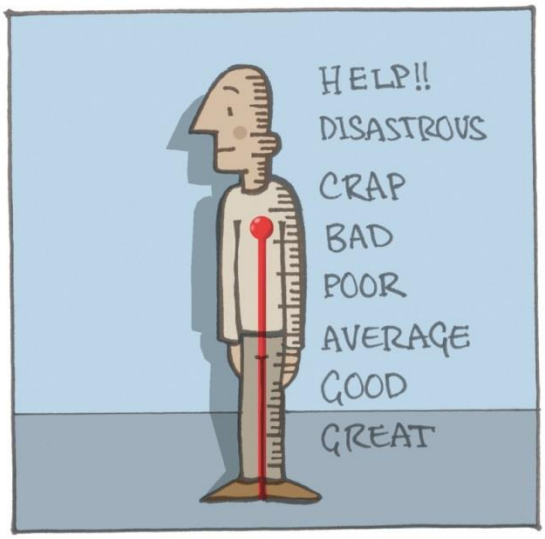
DOING WHAT COMES NATURALLY: POSITIVE SELF-HELP STRATEGIES USED BY MEN TO PREVENT DEPRESSION AND SUICIDE



FINAL REPORT

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This research project was funded by *beyondblue* with donations from The Movember Foundation.

TABLE OF CONTENTS

MAIN MESSAGES

Men were recruited to a multi-phase research project investigating their use of positive coping strategies to prevent and manage the development of feeling flat, down, or depressed. Men from around Australia participated, and in total 770 men were recruited across three phases of research.

The main messages arising from the study are as follows:

- Men use a broad range of positive coping strategies and appear to have several on stand-by to use as necessary.
- Men actively engage with their mental health, through monitoring symptoms, engaging in activities to keep themselves feeling good, acknowledging signs of feeling down, proactively responding to problems with the potential to worsen their mood, and through making conscious choices about when to take action.
- Men make clear distinctions between prevention and management when it comes to their mental health.
- Good prevention is multifaceted, personal and characterised by having a routine which incorporates keeping busy, social connections, acceptance of a range of feelings, maintenance of physical health and regular engagement with enjoyable activities.
- Good management builds on prevention by acknowledging changes in mood and deploying additional resources to solve or mitigate problems that can impact negatively on mood. This includes taking time out when needed, talking to others and finding ways to take a new perspective on problems.
- The positive coping strategies used by men varied according to general health, severity of depression, history of depression, and psychological resilience. In general, those in poorer health or with lower psychological resilience used fewer strategies.
- The men who participated in the study were particularly open to using many different strategies (e.g. having a mentor, practicing meditation, etc.) and advocated the importance of challenging traditional notions of 'masculinity' to achieve good mental health (e.g. talking to others about feeling down or needing help).
- Men reported being interested in using online interventions via their mobile phones, tablets, or computers and appeared to enjoy monitoring their symptoms, moods or behaviours. In particular, monitoring motivation seems be particularly salient for men with depression. myCompass may be a useful tool for depressed men to use in the future.
- Continuing to engage men in online programs is crucial and there may be a tendency for men to drop out of using these programs at various stages, which future research will need to understand and address.
- There is still considerable need to educate men about suicide: what contributes to suicide, how to intervene or support a suicidal person and potential strategies to use when feeling particularly distressed or facing a crisis.

EXECUTIVE SUMMARY

The purpose of the study was to examine men's use of positive coping strategies to prevent, manage or cope with feeling down or depressed. In addition, the project sought to examine the potential utility of a brief online intervention to reduce symptoms and improve functioning and resilience, through incorporating positive skills and strategies in a strengths-based approach.

Data were collected in three parts.

- Part One used interviews and focus groups to examine men's current and previous experiences using positive strategies to prevent, or cope with tough times. Some of the men had previous experience with depression, help-seeking, or taking medication, while others did not. Part One thus explored a broad range of views and experiences in order to generate a richly detailed picture of men's use of positive coping strategies.
- Part Two used a national online survey to examine men's use of positive strategies in a broader sample. The survey attracted a large sample, the majority of whom had previous experience with depression (though this was not a prerequisite to enrolment) and examined men's use of a range of strategies for prevention and management of feeling down or depressed.
- Part Three enrolled men with at-least-mild depression to an online program called myCompass for a period of four weeks. To participate, the men used a newly developed psychoeducational module (Man Central) and tracked their moods, symptoms and behaviours. Data were collected before commencing the study, and again afterwards, which examined men's symptoms of depression, resilience, and work and social impairment.

USE OF POSITIVE COPING STRATEGIES

In contrast to previous research, which has emphasised men's use of ineffective, unhelpful or inappropriate coping strategies (e.g. excessive use of alcohol or drugs, aggression or risk-taking), Part One revealed that men employ a comprehensive variety of positive coping strategies. Participating men described an active and conscious engagement with maintaining their mental health and taking action to solve or mitigate the impact of problems that were detrimental to their moods. Men made a clear delineation between strategies for preventing feeling down or depressed and strategies to pick themselves up during tough times. However, they also favoured strategies which could be flexibly adapted to be used as either prevention or management.

Prevention strategies were those that were easily incorporated into a regular routine, and often were comprised of activities aimed at staying in good physical health (e.g. a healthy diet, regular sleep and exercises such as running, cycling, walking, team sports etc.) or activities that were enjoyable (e.g. fishing, camping, art, music, crosswords, gardening, seeing friends etc.). Men saw good physical health as crucial to good mental health and regular engagement in social and enjoyable activities helped them to maintain a sense of connectedness and wellbeing. In general, the key to good prevention was feeling balanced in multiple areas of life (e.g. work, family, health, friends etc.).

Men reported occasional use of many prevention strategies, indicating they had a variety of options on standby to draw from. However, the top five prevention strategies used **regularly** by the most men to *'keep myself feeling OK or on an even keel day to day'* were:

- Eating healthily (54%)
- Keeping busy (50%)
- Exercising (45%)
- Using humour to reframe thoughts and/or feelings (41%), and,
- Doing something to help another person (36%).

Men were less likely to report **regularly** using a relationship with a mentor, or following faith, religion or spirituality as a form of prevention. However, many strategies that were not used regularly by high proportions of men were still endorsed, in that men who did not use them still *'thought they were a good idea'*. For example, nearly 80% of men did not maintain a relationship with a mentor, but 58% thought it was a good idea. Similarly, nearly half of the sample 47% reported being open to using meditation, mindfulness or gratitude as a prevention strategy, even where they had not previously tried it.

Management strategies relied on recognising changes in mood and acknowledging the need to do something in response to stress or feeling down. Men conceived of management as using additional resources to respond to problems as required and management strategies emphasised problem solving, communicating with others, and seeking help as necessary. Key to successful management of feeling down or depressed was: having a 'structure' to rely on (e.g. prioritising tasks, developing a plan), perseverance, and actively trying to change their perspective on a problem (e.g. thought re-framing, practising gratitude exercises, seeking advice etc.). Successful mood management involved having a sense of perspective, particularly having learned through experience, and was described as something that took time and effort to develop skilful habits.

Similar to prevention, men reported using many management strategies occasionally. However, the top five management strategies used **regularly** to "*pick myself up in the times I'm feeling flat or down"* were*:*

- Taking time out (36%)
- Keeping busy (35%)
- Rewarding myself with something enjoyable (35%)
- Exercising (33%) and,
- Spending time with a pet (33%).

Smaller proportions of men reported **regular** use of crying (14%), focusing on their life's purpose (14%), following faith, religion or spirituality (14%), joining a group, club or team (13%) or contacting a mentor when feeling down (7%). However, as with prevention strategies, men were open to using some of these strategies to manage their moods. For example, nearly half (47%) were open to joining a club, group or team, or setting goals for the future (42%), or seeing a health professional (41%) as potential strategies to use when feeling flat or down. In contrast, the majority of participants (58%) were not open to using the strategy of following faith, religion or spirituality.

OPENNESS TO USING MANY STRATEGIES

Notably, the men in Part One were not markedly affected by traditional notions of 'masculinity' and instead described challenging stereotypes such as self-sufficiency and/or emotional toughness, in pursuit of better mental health. They used (and advised the use of) strategies which challenged 'typical masculinity', for example, admitting and accepting vulnerability, talking to others about emotions, or seeking help. This openness to using other strategies extended to somewhat novel strategies, such as focusing on life's purpose, or practicing meditation, mindfulness and/or gratitude exercises.

The project also found that men were interested in the use of online interventions accessed through their mobile phone, tablet or computer to monitor and help maintain their mental health. The project sought to recruit only a limited number of men (n=30) to pilot test a newly developed psychoeducational module for men with at-least mild depression, yet over 300 men expressed an interest in the study and more than 250 then directly accessed the study website. Thus, e-health solutions are something that some men appear to be interested in using.

USE OF AN ONLINE INTERVENTION: PROMISING, WITH CAVEATS

The majority of men who used the program reported that overall myCompass was easy and convenient to use and the information was easy to understand. A majority of enrolled participants used the newly developed Man Central module (70%) and the mood monitoring functions (75%) to track their symptoms, moods and behaviours. The five most popular items monitored were:

- Motivation (monitored 471 times)
- Depression (monitored 399 times)
- Sleep (monitored 323 times)
- Anxiety (monitored 316 times), and
- Stress (monitored 262 times).

These results suggest that for men with mild-to-severe depression, motivation appears to be a particularly salient option to monitor. On average the men logged into myCompass multiple times throughout the week and used both the mobile site and the full website to login, indicating they do not have a clear preference for mode of access. They were most likely to be at home, or at work, while using myCompass. For those who returned follow up data after four weeks of using the program, there appears to be a decrease in symptoms of depression and work or social impairment. There is potentially an improvement in resilience, which would need to be further explored.

However, there are some caveats to interpreting the findings:

- Men dropped out at every stage – midway through screening, the beginning, middle or end of baseline data collection, after registering to use myCompass, after monitoring symptoms, after starting the module – and it was not possible to clearly understand factors which led to dropout.
- There were no differences in age, relationship or baseline measures of depression, resilience, and work or social impairment between those who completed the follow-up measures and those who did not. Thus, we cannot hypothesise about who engages more with an online program on the basis of demographics or illness severity.

So while men may be interested in using online programs to monitor or manage their mental health, there is still clearly room for improvement in understanding the factors that contribute to keeping men engaged and accessing online programs.

CONTEXT

INTRODUCTION

The 'Doing What Comes Naturally' Project was a two-year, multi-phase, mixed-methods project conducted by the Black Dog Institute in partnership with Faces in the Street at St Vincent's Hospital and Mensheds Australia. The project arose due to growing recognition of the need to provide help to men experiencing distress, depression and/or crisis. The project was funded by *beyondblue* with donations from the Movember Foundation and commenced during 2013.

Depression and suicide are major problems in men

Globally, suicides occur more frequently among men [1] and in Australia during 2012, men accounted for three quarters of 2,535 deaths from suicide [2]. Suicide is the 10th most common cause of death for Australian males with proportionally higher rates in men who are younger, separated/divorced, unemployed, with physical health problems or mental health disorders, particularly depression [3-5].

While rates of depression are often higher in women [6, 7], one in eight adult men will still experience depression in their lifetime and 5.3% in any one year [8]. Additionally, the prevalence of depression in men may be underestimated, given that major depression can often be masked [9], or under-diagnosed by traditional measures [10, 11].

Men often use unhelpful or ineffective coping strategies

Research has found that some men express or cope with emotional distress using a variety of unhelpful, inappropriate or ineffective coping strategies [12-15]. Men can express emotional distress in the form of anger, hostility, aggression, risk-taking, somatic complaints, antisocial and externalising behaviours, with subsequent use of unhelpful strategies, such as isolating themselves, gambling, excessive alcohol or drug use, drink-driving, road rage, over-work and self-harm, to numb or distract from problems [9, 11, 16, 17]. Use of ineffective and unhelpful strategies to cope with depression thus contributes to prolonged distress, lower detection, delays in treatment, and exacerbation of problems, which may contribute to overall increased suicide risk.

Low rates of help-seeking are cause for concern

Men also report low rates of seeking help for psychological distress. Of the men who reported a 12-month mental disorder in National Survey of Mental Health and Wellbeing 2007, only 28% accessed services for mental health problems (cf 41% of women), with only one in six seeing a general practitioner [8]. Processes associated with help-seeking, such as recognising an emotional problem, admitting a need for help and relying on others, may be seen by men to conflict with gender norms of self-reliance, toughness and emotional control [18]. Similarly, barriers to seeking care can also include the effects of stigma [16, 19] and apprehension about what treatment will involve [15, 20].

New methods to reach men are needed

Given that men in distress are often reluctant to seek help, have difficulty disclosing problems to health professionals [11], and that previous research has often focused on men's negative responses to distress and depression [15, 21], new methods are clearly needed to reach men.

Depression is preventable [22], with some estimates suggesting that at least 22% of new cases can be prevented each year using evidence-based interventions [23]. Research that focuses on men's positive or productive responses to stress, depression and crisis is vital. Some previous research has highlighted men's helpful responses to depression, including distracting or involving themselves in something new, taking 'time out', solving problems, forming stronger connections or being active physically [9, 17, 24]. Physical activity, adventure-based programs and/or lifestyle changes have been reported to alleviate depression. For example, the Cure Together site compiles "treatments" from consumers lists, such as exercise, outside activity, swimming, cold showers, which may not be recommended by health professionals [25].

Understanding men's productive responses has the potential to derive strategies for men to use to avert or respond constructively to adverse circumstances. The *'Doing What Comes Naturally'* project was therefore designed to consult men to identify and understand the positive strategies that they use to cope with distress and depression. It is set within a context of innovative technology that is readily available and likely to be of interest to men, and at a time when there is interest in using strengths-based approaches to address mental health issues.

OVERVIEW OF THE PROJECT

The project undertook a comprehensive exploration of men's use of positive coping strategies to successfully manage their mental health and wellbeing, cope with crises, and prevent depression and suicide.

Specifically, the project aimed to:

1. Investigate men's current understandings and recollections of past experiences about the self-help strategies used as prevention or to cope with feeling down or depressed.

2. Using a mobile phone program, (a) monitor moods and associated situational information and (b) use positive coping strategies which effectively prevent and lift negative moods when feeling down or depressed.

The project used a mixed-methods approach to investigate the issue and the study involved three phases of data collection and analysis as follows:

- **Part One qualitative investigation**: aimed to recruit 30 men to interviews and 144 men to focus group discussions in NSW and Victoria. The interviews and focus groups collected information about self-help methods, or positive strategies, men used to prevent, intervene early, or cope with feeling down or depressed.
- **Part Two quantitative investigation**: aimed to recruit 300 men around Australia. Based on a compilation of strategies identified during Part One, Part Two involved an online survey to determine the acceptability and use of a variety of positive coping strategies for distress and depression.
- **Part Three development and testing of an online tool**: aimed to recruit and follow up 30 men to a pilot study using myCompass, a mobile phone and internet based monitoring and self-help program. Key positive and productive coping strategies for men found during Part One and Part Two of the project were built into a brief new psychoeducational module. The module was specifically developed for men and tested via repeated measures of mood, behaviour and setting, collected over a 4 week period.

Data from all three phases of the project were analysed and form the basis of this report.

APPROACH

PART ONE: FOCUS GROUPS AND INTERVIEWS

STUDY DESIGN

A qualitative interview schedule was designed on the basis of existing literature to explore the aims of the project. The questions were piloted in-house among men affiliated with the Black Dog Institute, via three focus groups and three interviews. Adjustments were made, including reducing the number of participants in each group and shaping the questions more clearly around prevention, early intervention and management of depression and stress.

A formal pilot study was then conducted in partnership with a Men's Shed in a regional NSW city to review questions and procedures in the field. The final semi-structured interview schedule was confirmed and used during all interviews and focus groups to explore how participants prevent themselves from feeling down, intervene early when they notice something is wrong, and how they manage situations when they are down or depressed.

RECRUITMENT & ELIGIBILITY

Men from metropolitan and non-metropolitan areas in NSW and Victoria took part in the project (Table 1). The study was promoted via partner organisations, including nine local Men's Sheds, two community based men's organisations and the Black Dog Institute's professional and digital networks. A local facilitator was employed at some of the locations to publicise the study, recruit participants, arrange a venue, and identify local mental health services.

Men were eligible to participate if they were aged 18 years or more and could attend the specified time and location.

PROCEDURES

Participating men could take part in one-to-one interviews or in focus group discussions with between six and eight participants, in their local area. Two researchers attended each location. Participants were given an information sheet and an opportunity to ask questions before giving signed consent.

A brief questionnaire was administered to all participants prior to the start of the interviews/focus groups. It contained demographic information (employment, marital status, educational attainment, age), current depression was assessed via the Patient Health Questionnaire-9 (PHQ-9) (29, 30), and lifestyle behaviours using the FANTASTIC checklist [26]. The PHQ-9 is comprised of nine items on a four-point scale (0-3) and asks how often in the past two weeks a person has been bothered by a range of symptoms. Total scores range from zero to 30, with clinically significant cut-points that indicate no/minimal (0-4), mild (5-9), moderate (10-14), moderately severe (15-19) or severe (20+) depression. The FANTASTIC checklist is comprised of 25 items on a three point scale (0-2) covering 12 domains of lifestyle. Total scores range from 0-50, with higher scores indicating healthier lifestyle behaviours. History of depression, use of medication or seeing health professionals for a mental health issue were also collected.

A self-administered visual analogue scale was used to measure participant well-being both before and after the interview/discussion, as is recommended when discussing suicide (31). Men indicated how they were feeling on a scale of 1 (*"as unhappy as I can be"*) to 10 (*"as happy as I can be"*). Afterwards, participants also gave written feedback on their experience and were reimbursed AU$50 for their time and travel.

RISK MANAGEMENT

A robust risk management procedure was in place throughout the project. 'At-risk' participants were identified in one of four ways:

- indicating current suicidal thinking by scoring higher than zero on item ix of the PHQ-9 (*'thoughts that you would be better off dead or of hurting yourself in some way'*),
- indicating current severe depression by scoring 20 or more on the PHQ-9,
- on the visual analogue scale, reporting a worsening of mood after the discussion, or,
- becoming distressed and/or disclosing current suicidal thinking during participation.

Any participant identified by these measures was supported by a researcher through the discussion, offered the option of taking a break if they chose, and followed up by a researcher at the close of discussion, who remained until their distress eased. Where further follow up was required, permission was sought from the participant to contact a family member and/or their GP. There were two instances where the researcher made contact with local services on the advice of the project's lead clinician.

All participants received a resources sheet containing websites and phone numbers for information, referral or services in their local area, and all participants were phoned or emailed in the week after participation to check how they were.

DATA ANALYSIS

All discussions were recorded with consent, transcribed and de-identified. Data was analysed using NVivo 10 (32), according to thematic analysis guidelines (33). The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was used to guide reporting of results (34).

PART TWO: ONLINE SURVEY

The online survey was developed to assess whether the findings from the qualitative study were relevant to a larger sample of men from across Australia.

SURVEY DESIGN

Using results from qualitative data analysis of Part One, a cross-sectional online survey was designed. Only a minority of men in Part One reported a stage of 'early intervention' related to managing their mental health, so the decision was made to focus on strategies for prevention and management only.

PREVENTION

Defined as strategies men use *'to keep myself feeling OK, or on an even keel from day to day'*

MANAGEMENT

Defined as strategies men use *'to pick myself up in the times I'm feeling flat or down'*

Twenty six positive coping strategies were included in the survey. Men were asked whether they used these 26 strategies for either prevention or management of their mental health. Participants indicated how frequently they used a strategy, or their openness to using it, by rating each strategy according to the following response options: (i) *'I do this regularly'*, (ii) *'I do this occasionally'*, (iii) *'I don't do this, but I think it is a good idea'*, or (iv) *'I don't do this and I wouldn't ever'*. Open-ended questions asked about additional prevention or management strategies not mentioned in the list of 26 and participants were asked to nominate the strategy they found most useful, and to describe the specific benefits received.

Standard demographic data was collected, including age, location (postcode), Aboriginal or Torres Strait Islander status, employment, marital status, educational attainment, smoking status and self-reported general health.

Current depression was assessed by the PHQ-9 [27] (see page 10) and the Male Depression Risk Scale (MDRS) [28]. The MDRS is comprised of 22 items on an eight point scale (0-7) and asks participants to rate how often each item had applied to them over the previous month. The scale assesses six domains of 'externalising symptoms' associated specifically with male depression (distress, drug use, alcohol use, anger and aggression, somatic symptoms, and risk-taking). Scores range from zero to 154, with higher scores indicating higher distress and risk of depression.

Previous history of depression was assessed by number of lifetime episodes, age of onset, and number of previous suicide attempts, as well as current or previous treatment for depression, anxiety or stress.

Personality was assessed using the Ten Item Personality Inventory (TIPI) [29] and psychological resilience was assessed using the Brief Resilience Scale (BRS) [30]. The TIPI is comprised of ten items on a seven point scale (1-7) and asks participants to rate the extent to which a pair of traits applies to them. Scores are used to calculate a person's score on five subscales of personality that match to the 'Big Five' personality traits [31]: extraversion, agreeableness, conscientiousness, emotional stability and openness to experience. The BRS uses six items on a five point scale (1-5) and asks participants to indicate how much they agree with a particular statement. Three items are reverse scored, with a higher total score indicating higher resilience.

The survey design was piloted in-house using the Think Aloud Method, which invites participants to verbally express their thought processes to a researcher while completing the survey [32]. This enabled identification of where participants became bored and which questions required clarification or simplification. The survey was adapted accordingly and was delivered using QuestionPro [33], an online survey software package. Screening and completion of the survey took approximately 20-25 minutes.

RECRUITMENT & ELIGIBILITY

Participants were recruited through an extensive Australia-wide promotion campaign, which publicised the study via the Black Dog Institute's digital networks (including Facebook and Twitter), emails circulated by partner organisations, and interviews given by the study team to television, radio and print news organisations.

Interested men were directed to the study website, where an online screening process assessed their suitability for the study. Men were eligible to participate if they were:

- Male.
- Aged 18 years or more.
- Resident in Australian.
- Comfortable reading and writing in English.
- Willing to give online consent.
- Able to access to the internet to complete the survey.

RISK MANAGEMENT

As with Part One, a robust risk management procedure was used to identify potentially at-risk participants using scores on the PHQ-9. Participants who scored 20 or more, or indicated current suicidal ideation (score > 0 on item ix), automatically triggered the survey's risk protocol. A pop-up screen appeared with the following message:

> *"It seems that you may have been having a tough time recently. We recommend that you contact someone who can help. Would you like to be contacted by Lifeline?*
>
> *We have an arrangement with Lifeline for this research project to provide help if people would like it. If you enter your contact details in the box, we (the research team) won't know what you talked about with Lifeline. Any contact you have with Lifeline will remain confidential. At the end of the project, Lifeline will just report to us on how many people they contacted during the study but will not give any details about individuals.*
>
> ○ *Yes, I would like to be contacted by Lifeline in the next 24hrs. Please click here to submit your phone number. Otherwise, please click 'Continue' to resume the survey."*

This specialised call-back service was negotiated with Lifeline H2H and remained in place throughout the duration of the survey. A fee was charged by Lifeline for the service. The automatic risk protocol was also triggered at a second point in the survey, based on participants' responses to a question about whether they had ever attempted to take their own life. Any participant who responded with *'yes, in the past month'* received the same pop-up message with the opportunity to be contacted confidentially by Lifeline. Any participant who responded *'yes, in the past 12 months'* or *'yes, but it was more than 12 months ago'* received an informational pop-up message as follows:

> *"It seems that you may have had a tough time in the past. If these feelings ever start to come back, please contact someone who can help you, like Lifeline, Men's Line or beyondblue. The contact details for these services are:*
>
> *Lifeline: 13 11 14 www.lifeline.org.au*
>
> *beyondblue: 1300 224 636 www.beyondblue.org.au*

MensLine Australia: 1300 789 978 www.mensline.org.au"

Lastly, the same contact information for these services was displayed to all participants at the close of the survey.

DATA ANALYSIS

All data analyses were conducted using Statistical Package for Social Sciences 22 [34]. Descriptive statistics are used to report the demographic and clinical characteristics of the sample, as well as use of prevention and management strategies. Relationships between strategy-use and a range of variables are also investigated using primarily correlations, ANOVA, t-tests or chi-squared statistics.

PART THREE: ONLINE TOOL DESIGN, DEVELOPMENT AND TESTING

Using findings generated in Part One and Part Two, an online tool was developed to be deployed via the myCompass program. Named 'Man Central' the tool took the form of an online, interactive psycho-educational module, and a small sample of men was recruited to pilot test the tool.

THE MYCOMPASS PROGRAM

myCompass [35] is a fully-automated, online self-help program for people with depression, stress, and/or anxiety. Using a mobile phone, tablet or computer, users can monitor moods, symptoms and/or behaviours (e.g. depression, irritability, sleep, and alcohol use), receive monitoring reminders, tips and motivational messages via SMS or email and explore or print feedback graphs which present their data alongside contextual information (e.g. where they were, what they were doing, etc.). Users can also complete a range of interactive, tailored psychological modules on their computers. Registration to use the program is free and user privacy is managed using a password protected login. Research has shown that use of myCompass facilitates rapid improvement in symptoms of anxiety and depression, alongside gains in work and social functioning [36].

Monitoring

Upon registration, myCompass makes recommendations to monitor certain symptoms, behaviours or moods based on the user's answers to profile questions. Users can follow these recommendations, choose items to monitor from a list, or can create a personalised option to monitor. Registration requires they select at least one monitoring option, but can choose up to three options. For each 'tracker' users are asked *'how [e.g. depressed/anxious/stressed] do you feel right now?'* and enter a rating on a scale of 1-10. At the same time, users record what they are doing, who they are with and where they are. At each login, a mood monitoring graph displays their accumulated data.

Modules

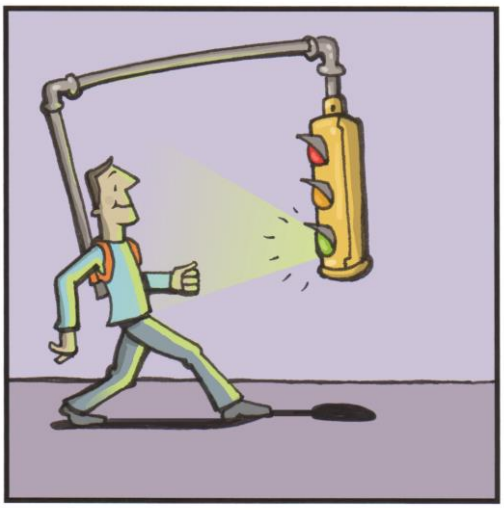
myCompass also offers twelve evidence-based, interactive modules for users to complete which are derived from Cognitive Behaviour Therapy (CBT), as well as interpersonal psychotherapy, problem solving therapy and positive psychology. Access to these modules was restricted during the trial period, as participants were piloting the newly developed men's module.

MODULE DEVELOPMENT

A new myCompass module called 'Man Central' was developed for men with at least mild depression. Using a strengths-based approach, the module incorporated a range of strategies identified during Parts One and Two of the project as useful tools for prevention and management of down and depressed moods. All content was drafted by a clinical psychologist under supervision of the Chief Investigator, with input from the research team.

Following the existing structure of the myCompass modules, the Man Central module is comprised of three brief, interactive sessions designed to last between ten and 15 minutes, and two home tasks ('Man Experiments'). Users are advised to complete one session per week and to complete the home tasks in between sessions. The Man Experiments encourage men to try different strategies during the week and to gauge how useful they are, or how easy they are to incorporate. A traffic light analogy is used throughout, alongside case studies featuring two male characters, Costa and John, who illustrate scenarios and provide examples for men to consider. In particular, the repeated use of the traffic lights analogy is designed to help men:

- Understand both the connections, and the distinctions, between moods and behaviours.
- Recognise when their mood is in the Green (*'I'm feeling good'*), Orange (*'I'm not so great'*), or Red (*'I'm having a tough time'*) zone.
- Understand the potential for a downward spiral in their mood, which can contribute towards a 'big build' with the potential to overwhelm.
- Identify any unhelpful strategies they might be using and replace them with more effective responses.



- Build a mental 'tool kit' of enjoyable activities and potential strategies to use during tough times.
- Notice when things aren't going so well and choose the appropriate action to take.
- Identify and trouble-shoot any barriers preventing them from taking action (e.g. challenge negative thinking patterns).

The module culminates with users developing their own personalised 'traffic lights' plan that they can refer to in the future which incorporates what they have learned from the module about their moods, warning signs and preferred strategies.

PILOT STUDY DESIGN

The pilot study used a single-group, repeated measures design to test the Man Central module. In particular, the use of Man Central was evaluated in terms of symptoms of depression, and measures of psychological resilience and work and social functioning. As with earlier stages of the project, symptoms and risk of depression were assessed using the PHQ-9 [27] (see page 10) and the MDRS [28] (see page 12). Psychological resilience was assessed using the Connor-Davidson Resilience Scale (CD-RISC) [37], comprised of 25 items rated on a five-point scale (0-4) which asks participants to rate how much they agree with particular statements over the last month. Total scores range between zero and 100 and a higher score indicates higher resilience. Functional impairments were assessed using the Work and Social Adjustment Scale (WSAS) [38], which uses six items rated on a nine-point scale (0-8). Participants are asked to rate the degree to which their ability is impaired regarding work, home management, leisure and social activities and forming relationships, and a higher score indicates more severe impairment.

Participants contributed data before commencing (i.e. baseline), and again after using the module and mood monitoring functions of myCompass for a period of four weeks (i.e. 4-week follow up). All data for the study were collected online via a study-specific website built using the e-Health Authoring Tool (eHAT), a custom-built platform and content management system. The research website was integrated with the myCompass program such that program registration was automated and participants only had to verify their email address and mobile phone number before being able to access myCompass and the Man Central module.

At the close of the study, participants were reimbursed AU$50 for their time and they were offered access to the other myCompass modules.

RECRUITMENT AND ELIGIBILITY

Participants were recruited in similar fashion to previous stages, with the study being publicised via the Black Dog Institute's digital and professional networks and via partner organisations. Men were eligible to participate if they were:

- Experiencing at least mild depression, indicated by a PHQ-9 score of five or more.
- Aged 18 years or more.
- Resident in Australia.
- Able to read and write in English.
- Able to access the internet via both mobile phone and computer.

Participants were ineligible to participate and excluded on the basis of experiencing psychotic symptoms, according to the Psychosis Screening Questionnaire [39], or severe suicidal thinking, as indicated by a score of 3 on item ix of the PHQ-9. The Psychosis Screening Questionnaire uses 22 questions on varying scales to assess the presence of psychotic-like symptoms in five domains: paranoia, hallucinations, mania, disordered thinking and strange thoughts. Participants were excluded if they scored higher than zero in two or more of the five domains.

RISK MANAGEMENT

Similar to previous stages, at-risk participants were identified at screening as follows:

- indicating current suicidal thinking by scoring higher than zero on item ix of the PHQ-9,

- indicating severe depression by scoring 20 or more on the PHQ-9, or
- experiencing psychotic symptoms.

Where participants were excluded on the basis of psychoses or severe suicidal thinking, they were offered information and contact details to seek referral to services, as well as being offered the opportunity for Lifeline to directly contact them. Where participants indicated severe depression, or suicidal thinking that was not severe, they were still able to enrol in the study, but were also offered the same information, contact details and opportunity to be followed up by Lifeline.

DATA ANALYSIS

All data were downloaded from the eHAT website and linked with data collected by the myCompass program, before being de-identified. All data analyses were conducted using Statistical Package for Social Sciences 22 [34].

RESULTS

PART ONE: FOCUS GROUPS AND INTERVIEWS

DEMOGRAPHIC AND CLINICAL PROFILE

In total, 168 men participated in the interviews and focus groups in NSW and Victoria (Table 1). Their age ranged between 19 and 92 years, with a mean age of 55.7 years (SD 18.5). Half were retired, and more than half (56.5%) reported being married or in de-facto relationships. Two-thirds (69.1%) were tertiary educated (Table 2).

TABLE 1: Location of interviews and focus groups

Sample	Interview participants (n)	Focus group participants (n)	Number of focus groups (n)
NSW			
Metropolitan	6	36	6
Non-metro	7	37	5
VIC			
Metropolitan	4	31	4
Non-metro	7	40	6
TOTAL	24	144	21

The majority (62.7%) reported no or minimal symptoms of depression, a third (33.0%) reported mild-to-moderate depression, with only 4.4% experiencing moderate-to-severe depression (Table 2). Over half (52.4%) had ever been depressed, with 36.5% seeking help from a GP for mental health problems, or another health professional (29.4%). About a quarter (25.9%) had ever taken anti-depressant medication.

TABLE 2: Demographic and clinical characteristics of the sample

Demographic profile			Clinical profile		
	n	%		n	%
AGE			**PHQ-9 SEVERITY**		
18-24 years	14	8.4	None – minimal depression	101	62.7
25-34 years	16	9.6	Mild depression	41	25.5
35-44 years	17	10.2	Moderate depression	12	7.5
45-54 years	19	11.4	Moderately severe depression	4	2.5
55-64 years	33	19.9	Severe depression	3	1.9
65-74 years	44	26.5			
75 or more years	23	13.9			
EMPLOYMENT			**FANTASTIC**		
Full- or part-time or self-employed	55	32.3	No lifestyle changes needed	51	37.8
Retired, full-time home duties	85	50.0	Lifestyle 'on the right track'	57	42.2
Unemployed, unemployed due to illness or injury	17	10.1	Fair lifestyle 'some changes suggested'	16	11.9
Student	13	7.6	Lifestyle changes suggested 'could take more control'	11	8.1
MARITAL STATUS			**EVER been depressed**	88	52.1
Never married	43	25.6			
Married, de facto	95	56.5			
Separated, divorced, widowed	30	17.9			
EDUCATION			**HELP SEEKING**		
Primary, secondary	52	31.0	Ever seen a GP for mental health problems	62	36.5
Trade, apprenticeship, certificate, diploma	64	38.1	Ever seen another health professional for mental health problems	50	29.4
Bachelor degree	27	16.1	Ever taken medication for depression	44	25.9
Post-graduate degree	25	14.9			

Four major themes emerged from analysis of the transcripts, as follows: (i) a range of positive strategies on stand-by; (ii) recurrent ideas about 'manliness'; (iii) silence around suicide; and (iv) accumulated wisdom for others. Related sub-themes are described.

Theme 1: A range of positive strategies on standby

Men reported using a broad variety of adaptive coping strategies and choosing a particular strategy depended on what they were feeling and/or whether they perceived that action was needed. A clear distinction arose between two stages: preventing feeling down and managing distress. Though men were asked about early-intervention, this resonated only with a minority of men who had generally previously received professional help.

Prevention

Generally, the men conceptualised prevention as investing time and energy into things that directly benefited overall health, with particular emphases on (1) physical health as a gateway to better mental health and (2) enjoyable activities incorporated into daily life regularly. There was considerable diversity in the strategies described to maintain physical health (e.g. running, cycling, restful sleep, a healthy diet, soccer, team sports etc.) or enjoyable activities that helped them to stay feeling good (e.g. fishing, camping, art, music, walking the dog, photography, blogging, crosswords, gardening, visiting a driving range, seeing friends, etc.).

"I watch the sunrise over the park every morning and listen to the birds, and then I get up and I go for a run or a ride on my bike, and it sets me up for the day. No matter what happens during the day, I've had that 'me' time, and nobody interfering." (FG50yrs)

Often men were motivated by side-benefits of a particular prevention activity (e.g. socialising, connecting with friends) and where using these strategies was interrupted, men perceived immediate flow-on effects for how they were feeling:

"I think along with activity, but eating well and getting plenty of sleep. I find if I don't sleep well then all hell breaks loose pretty quickly." (FG56yrs)

Key to the prevention strategies were two ideas: routine and balance. Ideal prevention strategies were those that were easily incorporated into a daily routine and those that helped them to feel 'balanced'. Having the incorrect balance was seen as unsustainable, leading some to take concrete steps to maintain a good mood (e.g. avoid an over-crowded schedule, learn to say 'no' to things, etc.). In short, in describing prevention strategies, men articulated a process of conscious engagement with a variety of activities as a way of maintaining wellbeing.

Management

On the whole, the men conceived of management as using additional resources and recognising the need to solve or mitigate problems that contributed to feeling down or depressed. As with prevention, use of particular management strategies involved a process of conscious engagement and proactively responding to problems during tough times:

"I call it clutter removal. All the things that clutter up my life that are unnecessary, I'll remove. I'll simplify my life; I'll bring it back to the important things, family, friends, and what I need in my life – my health, my peace of mind. And I find de-cluttering helps a lot." (FG69yrs)

Management strategies often emphasised problem solving, communicating with others, and seeking professional help when required. Successful mood management was characterised by a sense of

perspective, particularly having learned through experience, and was described as something that took time and effort to develop skilful habits. Key to successful management of feeling down or depressed was: having a 'structure' to rely on (e.g. prioritising tasks, developing a plan, etc.), perseverance, and actively trying to change a perspective on a problem (e.g. practising gratitude exercises, seeking advice, etc.).

Flexibility of strategies

While men were clear that 'prevention' and 'management' were two distinct behaviours, their favoured strategies were those that were flexible and adapted across both. For example, one man described practising meditation regularly as a form of prevention, yet explained that in times of stress or depression, he might meditate for a longer period of time. Similarly, for another man, starting anti-depressant medication was necessary to manage an episode of depression yet he now viewed it as a form of prevention since it became a daily routine:

"I think [medication] is an invisible suit of armour that makes bullets bounce off…" (FG47yrs)

Also key was the use of one strategy for multiple mood-protective benefits. This was apparent among men who mentioned belonging to a community group, or played team sports, where participating came with 'prevention' benefits (e.g. a sense of value and a social network), which also functioned as 'management' resources to be used as needed (e.g. support, talking to others).

Theme 2: Recurrent ideas about 'manliness'

The men's discussion of positive coping strategies was often framed in terms of how society conceives of a 'typical' man, and how this affects men's handling of feeling down or depressed:

"…it's the man thing, it's the blokey thing where you don't want to be – they don't want to be seen to be weak, because they're a man, male…" (FG71yrs)

Not all of the men identified with this attitude and thought it could be harmful sometimes. Men associated successful prevention and management of their moods with being open to using a range of strategies, regardless of how 'masculine' they were.

'Typically masculine' strategies

Typically masculine strategies that came 'naturally' to men were those that emphasised self-sufficiency, achievement and problem solving. Examining the cause of a problem, finding another way to look at it, identifying 'logical' solutions and having a plan provided relief from stress and boosted self-worth, confidence and motivation.

"Isn't that such a typical man way of doing? We look for a reason; how do we fix that reason. I don't know if that's too stereotypical."(FG35yrs)

Problem solving often emerged as a process of reframing thoughts, where men asked themselves a series of questions that helped them to change perspective on a problem (e.g. am I overreacting?). For some this was a skill learned via Cognitive Behaviour Therapy, for others it was a natural, instinctive skill. Thought reframing helped men interpret problems differently, allowed them to choose a new approach and to feel in control of problems.

Another common strategy strongly tied to masculine pride or achievement was goal-setting, which fitted neatly with their ideas about having a routine for prevention. Use of this strategy was common

and goals varied considerably (i.e. could be large or small), but achieving them was an essential component of mental health and wellbeing:

"I get an A4 sheet, and roughly plan seven days at a time… write down all the trivial things you do, and then tick them off, and then you get a sense at the end of the day or midday, well I've done something…but tick them off because otherwise you can really be depressed" (FG72yrs).

Challenging expectations of manliness

Discussion consistently highlighted that conforming to stereotypically male behaviours could have negative effects (e.g. not talking about problems) and men were open about challenging these ideas. Strategies which challenged 'typical masculinity' included accepting their feelings, admitting vulnerability, crying, talking to others and asking for help.

"Guys have a good way of doing it, and they probably don't get the credit…it can be a bit of a stereotype to say guys don't talk, because we certainly do…" (I38yrs)

While many said it had not always been the case that they used these strategies, they emphasised that they had learned the value of connecting with others, especially in difficult times. Other atypical strategies included practising meditation and mindfulness, dedication to helping others, finding their life purpose and consciously building relationships. On the whole, they perceived that the situation was slowly changing and that men would benefit from continuing to challenge stereotypes and be open to using a variety of different strategies.

Theme 3: Silence around suicide

A major finding was that the men struggled with talking about suicide and volunteered few strategies as useful in preventing suicide. The men described limited experience with suicide and couched any suggestions they made with caveats that they weren't sure about whether they would help. They were unsure of the factors that led to making suicide attempts and of how to detect when somebody was at-risk. Where the men knew about another's suicide or attempt, the recurrent narrative was of being shocked, bewildered and unsure what to do or how to intervene.

"I actually had a friend that committed suicide last year… He actually never mentioned he had a problem, to nobody. He wasn't going to the doctor or whatever. So when I actually heard the news, it was very shocking" (FG22yrs)

Men were unclear about specific warning signs, some worried that intervening could make things worse and overall men described feeling powerless, despite wanting to help. In this context, some proposed strategies when asked – e.g. seeking professional help, persisting, thinking about family – but emphasised they didn't feel certain about such suggestions. Those who had disclosed a previous attempt agreed with the importance of family, particularly children, in helping them to keep going. Others talked about helping suicidal men, through offering support, talking things through, or creating distractions and one was particularly straight forward:

"I think if you are concerned about someone, then I think the best thing you can do for them is ask them the question, 'Are you thinking of suicide?'" (FG83yrs)

Theme 4: Advice for others

The men had advice for others, based on things they had learned through experience or things they wished they had known earlier. Their advice for other men who might be struggling was essentially: talk to others, remember that tough times are temporary, and develop a personal plan.

They advocated talking to a range of people (e.g. friend, mentor, family, professionals) and choosing wisely about who they trusted to understand and be of assistance. For some, finding peers was essential – through joining a Men's Shed, for example – while still others stressed the importance of talking with a professional:

"Find a good doctor…You know, there are an ocean of things that you can do that can better manage the mood or the depression, but in the end they can't surpass the stability of seeing someone who is looking for the warning signs and knows them..." (I38yrs)

While not everybody agreed with the need to talk to a professional, nearly all agreed with the need to talk to somebody.

"It's no good keeping it inside. Talk to someone. Talk to someone and you've got to get someone that understands it…It relieves you. It takes a weight off you somehow…" (I79yrs)

In remembering that tough times were temporary, many emphasised the importance of taking a long perspective, not reacting too quickly and realising that all problems were manageable. Strategies that helped them to do so included distracting themselves – through hobbies, activities, helping others, doing pleasurable things, finding joy or purpose – and to embrace anything that helped them to shift focus from their problems to gain perspective.

"…as you get older I've found that you get better at dealing with problems, you start seeing things in better perspectives, you get a bit smarter as to how you deal with things and you learn that this too will pass. No matter what comes up, you'll deal with it. Now I wish I'd known that in my 20s…" (FG47yrs)

Advising others to 'have a plan' reflected earlier ideas, in that it helped men to feel prepared, in control and supported by some kind of structure that also helped them feel self-sufficient. Having a plan meant having an idea about how to handle problems in the future:

"I really think that's a good thing. To have a flow-chart, these are the steps you can take. Have you tried this? Yes. All right. Did it work? No. Go to this one. Did that work? No. And then ultimately it's down to professional help." (FG52yrs)

PART TWO: QUANTITATIVE INVESTIGATION – ONLINE SURVEY

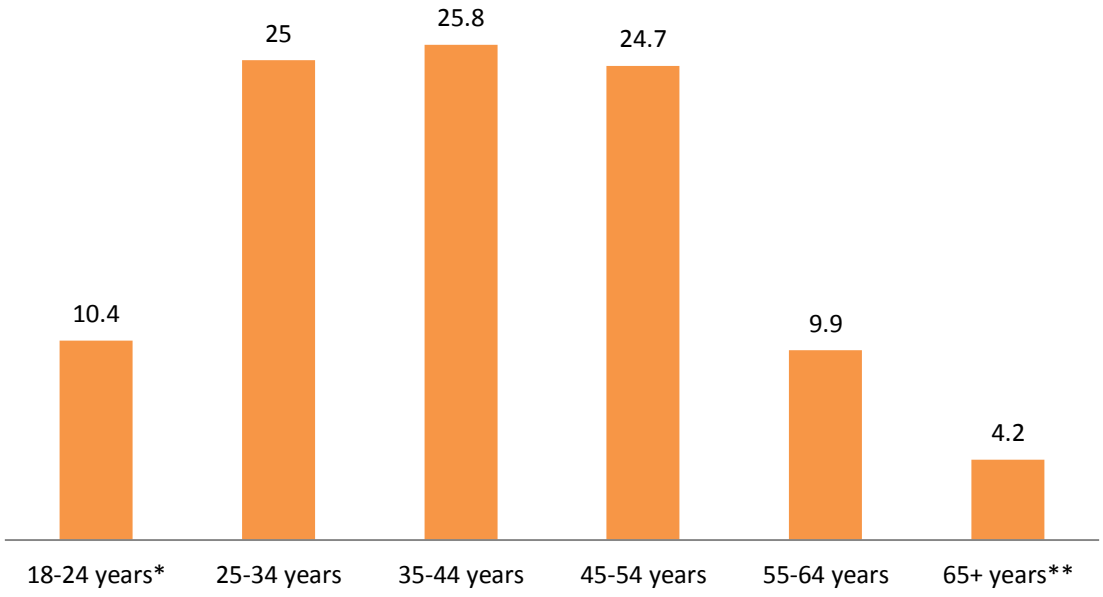
The online survey was launched in April 2014 and ran for two months. A total of 689 men passed the screening criteria and consented to participate. Of those, 465 men completed all sections of the online survey, giving a response rate of 67%. The 465 men who completed the survey form the basis for all results reported here.

DEMOGRAPHIC AND CLINICAL PROFILE

Participants ranged in age from 18 years to 74 years old, with a mean age of 40.6 (SD 12.3) years (Figure 1). A majority (67.3%; n=313/465) were employed full-time, part-time or casually, with 8.2% unable to work due to illness or injury, 4.5% unemployed and 6.9% studying (Table 3). A very small minority (1.96%; n=9/465) reported being of Aboriginal or Torres Strait Islander descent. More than half (56.8%; n=264/465) were married or in a de facto partnership and a majority (80.4%; n=374/465) had received some form of tertiary education. Only two men reported primary school as their highest level of education.

A majority (83.0; n=385/465) self-rated their general health as 'good', 'very good' or 'excellent'.

FIGURE 1: Age group of participants (%) according to ABS standard classifications [40].



*ABS reports on 15-24 years; no participants were younger than 18 years. **We collapsed the categories 65-74 years and 75+ years due to low numbers

TABLE 3: Demographic and clinical profile of the sample (N=465)

Demographic profile			Clinical profile		
	n	%		n	%
AGE			**PHQ-9 SEVERITY**		
18-24 years	46	9.9	None – minimal depression	149	32.0
25-34 years	115	24.7	Mild depression	150	32.3
35-44 years	126	27.1	Moderate depression	72	15.5
45-54 years	116	24.9	Moderately severe depression	50	10.8
55-64 years	49	10.5	Severe depression	44	9.5
65-74 years	13	2.8			
75 or more years	15	2.2			
EMPLOYMENT			**SELF-RATED GENERAL HEALTH**		
Full- or part-time or self-employed	313	67.3	Excellent	66	14.2
Retired, full-time home duties	61	13.1	Very good	149	32.0
Unemployed but able to work, unemployed due to illness or injury	59	12.7	Good	170	36.6
Student	32	6.9	Fair	64	13.8
			Poor	16	3.4
MARITAL STATUS			**EVER been depressed**		
Never married	143	30.8	Yes, in the past month	103	22.2
Married, de facto	264	56.8	Yes, in the past 12 months	192	41.3
Separated, divorced, widowed	58	12.4	Yes, more than 12 months ago	140	30.1
			No, never	30	6.5
EDUCATION			**EVER ATTEMPTED SUICIDE**		
Primary, secondary	91	19.6	Yes, in the past 12 months	14	3.0
Trade, apprenticeship, certificate, diploma	146	31.4	Yes, more than 12 months ago	82	17.7
Bachelor degree	143	30.8	No, never	368	79.3
Post-graduate degree	85	18.3			

Scores on the PHQ-9 indicated nearly a third (32.0%; n=149/465) reported no or minimal depression, a third (32.3%; n=150/465) reported mild depression, with the remainder reporting moderate-to-

severe depression. Among those with *at least mild depression* (N=316), 60.8% reported that these symptoms made it *'somewhat difficult'* to do their work, take care of things of at home, or get along with other people, with 26.9% reporting it was *'very difficult'* or *'extremely difficult'*.

Table 4 shows the mean scores of six separate sub-scales of 'externalising' symptoms of depression as indicated by scores on the MDRS [28].

TABLE 4: Mean scores on the MDRS subscales (n=465)

	Distress	Drug use	Alcohol use	Anger & aggression	Somatic symptoms	Risk-taking
Mean (SD)	15.4 (7.1)	2.0 (4.9)	6.55 (8.3)	6.6 (7.1)	6.2 (6.4)	3.62 (4.4)
Minimum	0	0	0	0	0	0
Maximum	28	21	28	28	28	21
Possible range	0-28	0-21	0-28	0-28	0-28	21

A large majority of the sample (93.5%; n=435/465) reported they had *ever* been depressed, with nearly two-thirds (63.5%; n=295/465) reporting depression in the previous 12 months. Table 5 shows the age of onset for depression and Table 6 shows the number of previous episodes among those who had previously been depressed (N=435).

TABLE 5: Age of onset among those who report having EVER been depressed (N=435)

	N	Percentage
0-12 years	43	9.9
13-19 years	152	34.9
20-29 years	106	24.4
30-39 years	63	14.5
40 years or more	60	13.8
Don't know	11	2.5

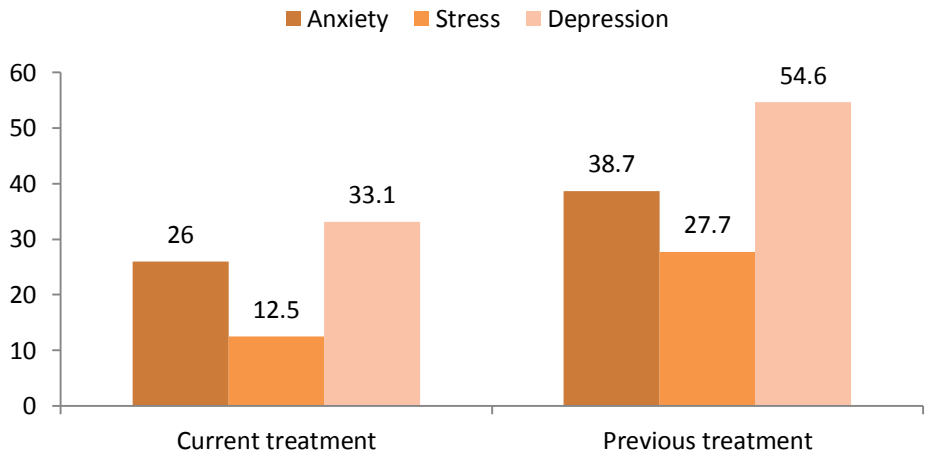
TABLE 6: Number of previous episodes of depression (N=435)

	N	Percentage
1-3 times	101	23.2
4-9 times	68	15.6
10 or more times	206	47.4
Don't know	60	13.8

About one-fifth of the men (20.7%; n=96/465) had ever made a suicide attempt. Among those 96 men, 43.8% (n=42/96) had made one previous attempt, while 56.2% (n=54/96) had made two or more suicide attempts.

Nearly a third (33.1%; n=154/465) reported currently receiving treatment for depression, 26.0% (n=121/465) for anxiety and 12.5% (n=58/465) for stress (Figure 2). A large majority (90.1%; n=419/465) reported experiencing one or more stressful events in the past year.

FIGURE 2: Proportion of participants receiving current or previous treatment for anxiety, stress of depression (N=465)



Note: categories are not mutually exclusive

USE PREVENTION AND MANAGEMENT STRATEGIES

PREVENTION

Figure 3 shows the proportion of men who reported using a particular strategy **regularly** or **occasionally** to prevent the development of a down or depressed mood (i.e. *"to keep myself feeling OK or on an even keel from day to day"*). In general, use of the strategies was high, with 13 out of26 prevention strategies being used by 75% or more of the men. The number of prevention strategies used by men ranged between four and 25, and the mean number of prevention strategies used was 16.8 (SD 4.1).

The top five strategies used **regularly** to 'keep myself feeling OK or on an even keel day to day' were eating healthily (54.2%; n=252/465), keeping busy (50.1%; n=233/465), exercising (44.9%; n=209/465), using humour to reframe thoughts and/or feelings (41.1%; n=191/465), and, doing something to help another person (35.7%; n=166/465) (Figure3). Only 11 men reported that they did not use any of the 26 prevention strategies regularly.

The five strategies that were used **regularly** by the least number of people were focusing on life's purpose (14.4%; n=67/465), following faith, religion or spirituality (14.4%; n=67/465), using meditation, mindfulness or gratitude (9.9%; n=46/465), maintaining a relationship with a mentor (6.5%; n=30/465) and crying (5.2%; n=24/465).

However, while some strategies were regularly used by only a small proportion of men, some men thought these strategies were a good idea. Figure 4 shows the proportion of men who report they do *not* use the strategies for prevention, broken down by those who do not use a strategy and **never would** and those who **think it is a good idea**. While nearly 80% of men (n=350/465) reported that they do not maintain a relationship with a mentor, 58.3% (n=271/465) think that doing so is a good idea. Similarly, nearly half of the sample 46.5% (n=216/465) reported being open to using meditation, mindfulness or gratitude as a prevention strategy.

MANAGEMENT

As with prevention, men reported using a variety of strategies to manage down, flat or depressed moods (i.e. *"to pick myself up in the times I'm feeling flat or down"*). Figure 5 shows the proportion of men who used these strategies **regularly** or **occasionally**, with nine of the 26 strategies being used by 70% or more men. The men reported using between zero and 26 of the management strategies, and the mean number of management strategies used was 15.1 (SD 5.1). Three men reported they did not use any of the management strategies listed.

The top five strategies used **regularly** to manage feeling down or flat were taking time out (35.7%; n=166/465), keeping busy (35.1%; n=163/465), rewarding themselves with something enjoyable (35.1%; n=163/465), exercising (33.3%; n=155/465) and spending time with a pet (32.7%; n=152/465). Smaller proportions of men reported using the following five management strategies **regularly:** crying (13.8%; n=64/465), focusing on their life's purpose (13.8%; n=64/465), following faith, religion or spirituality (13.5%; n=63/465), joining a group, club or team (12.5%; n=58/465) or contacting a mentor when feeling down (7.1%; n=33/465).

Similar to the use of prevention strategies, men reported being open to management strategies they did not currently use. Figure 6 shows the proportion of men who do not use a particular strategy, where more than half (57.8%; n=269/465) thought contacting a mentor was a good idea, and 47.3% (n=220/465) were open to joining a club, group or team. Similarly, more than 40% of men were open to meditation, mindfulness or gratitude (45.2%; n=210/465), setting goals for the future (41.7%; n=194/465), or seeing a health professional (41.3%; n=192/465) as potential strategies to use when feeling flat or down.

There was only one strategy where a majority of participants (58.1%; n=270/465) reported they did not use this strategy and wouldn't ever and that was following faith, religion or spirituality.

FIGURE 3: PREVENTION strategies used REGULARLY or OCCASIONALLY *'to keep myself feeling OK or on an even keel from day to day'* (%; N=465)

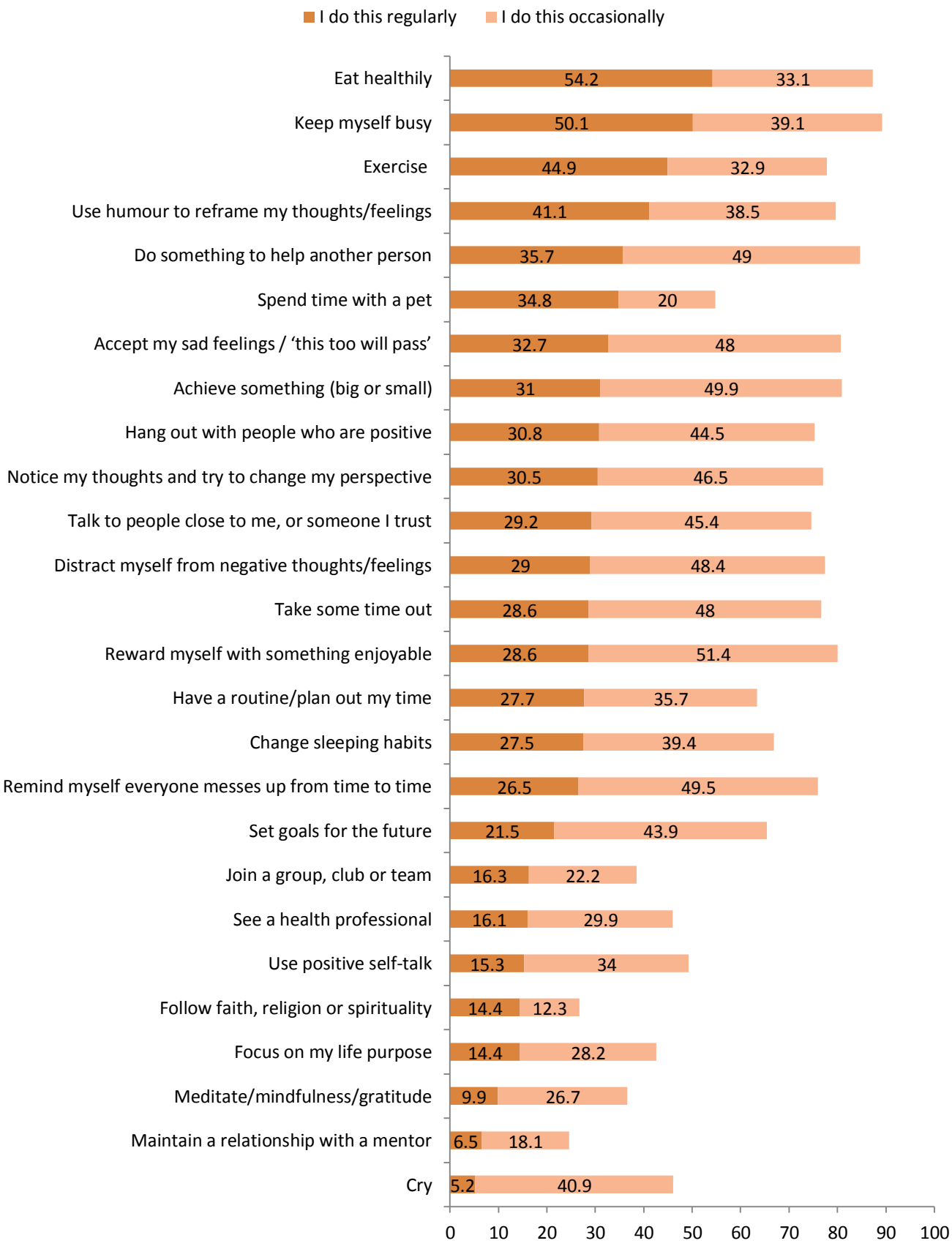


FIGURE 4: PREVENTION strategies men DO NOT USE AND WOULDN'T EVER, or DO NOT USE, BUT THINK ARE A GOOD IDEA *'to keep myself feeling OK or on an even keel from day to day'* (%; N=465)

FIGURE 5: MANAGEMENT strategies used REGULARLY or OCCASIONALLY *'to pick myself up in the times I'm feeling flat or down'* (%; N=465)

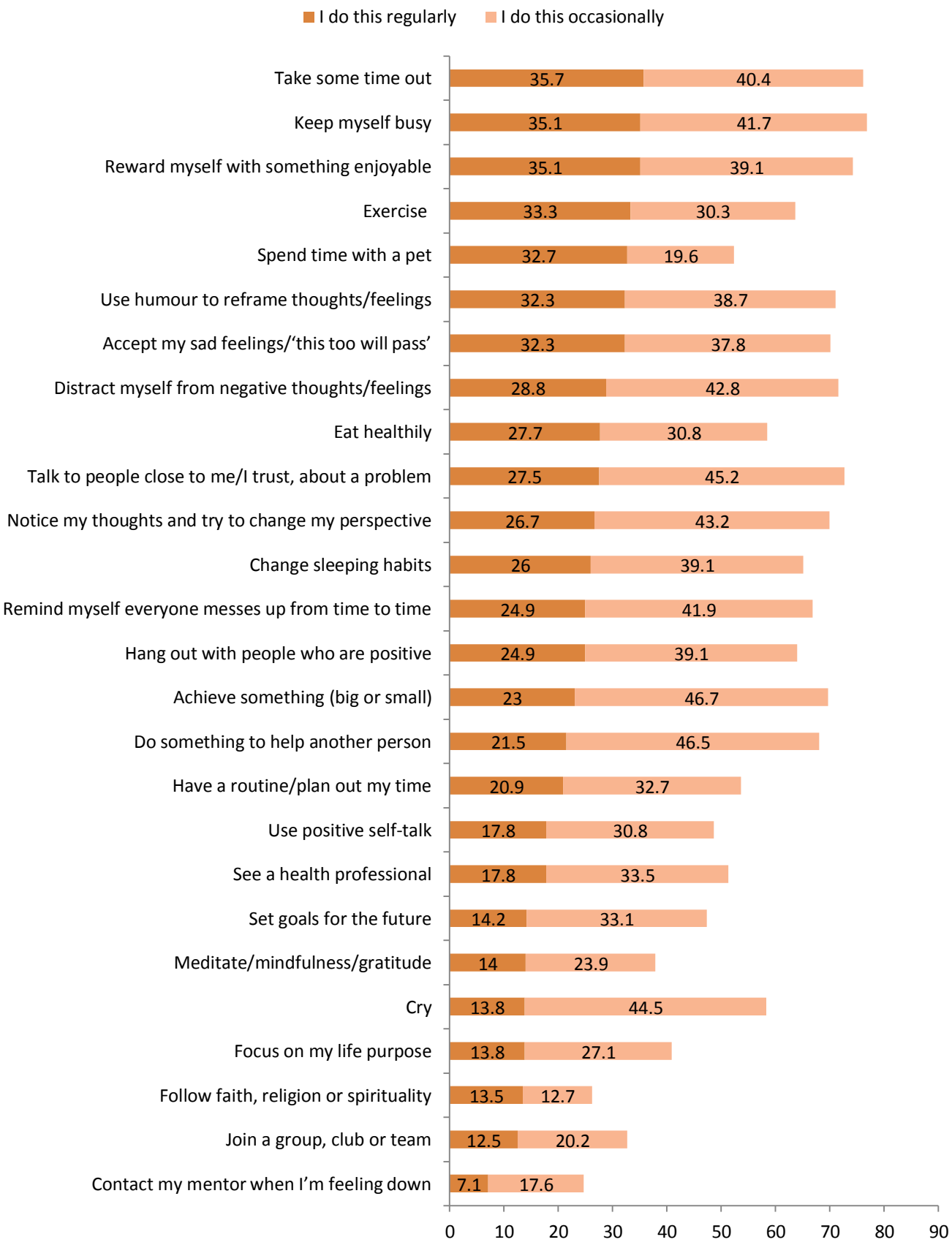
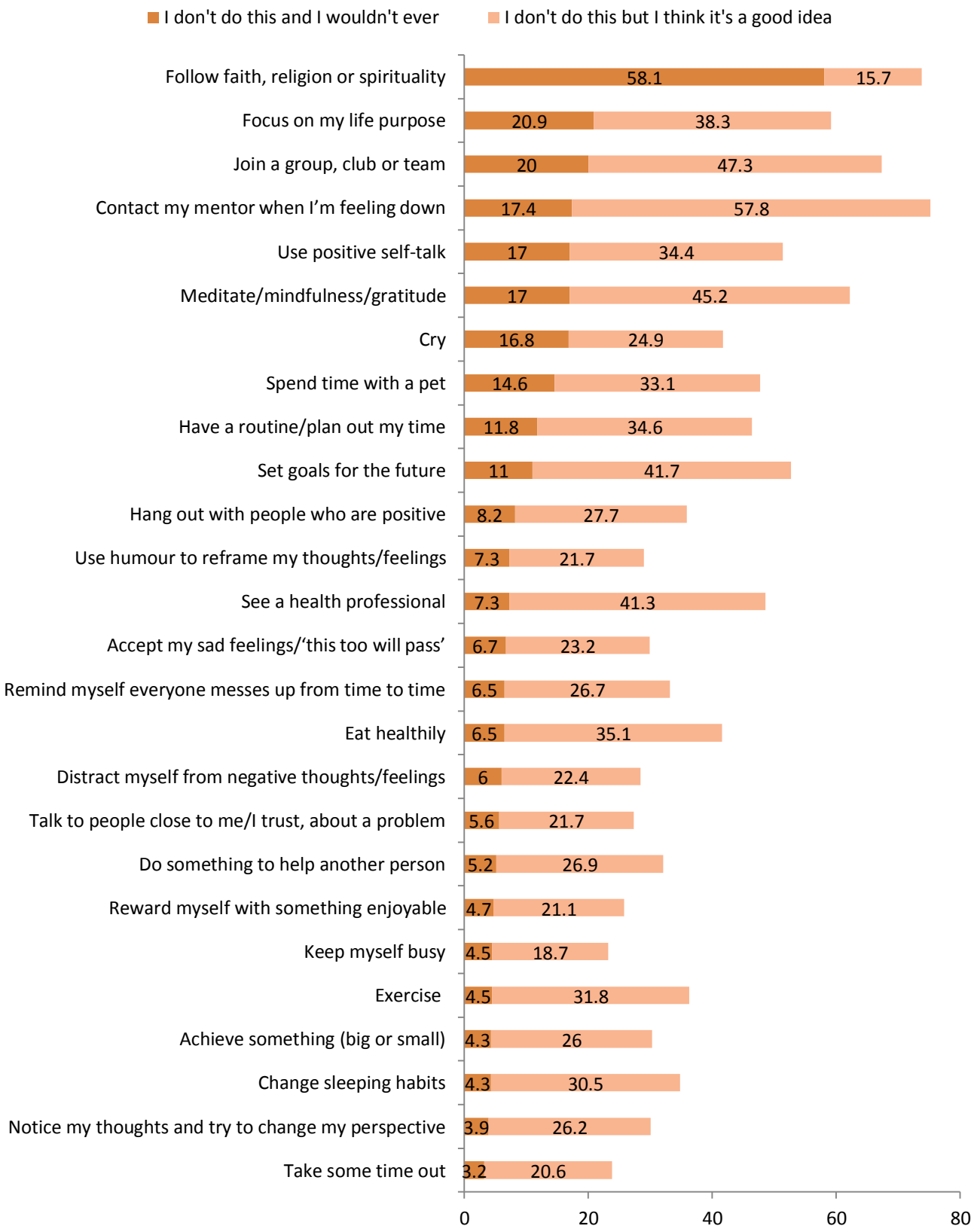


FIGURE 6: MANAGEMENT strategies men DO NOT USE AND WOULDN'T EVER, or DO NOT USE, BUT THINK ARE A GOOD IDEA *'to pick myself up in the time I'm feeling flat or down'* (%; N=465)



USE OF PREVENTION AND/OR MANAGEMENT STRATEGIES AND RELATIONSHIP WITH LIFESTYLE, HISTORY OF DEPRESSION AND PSYCHOLOGICAL RESILIENCE

It was hypothesised that men's use of positive coping strategies would vary according to measures of drug and alcohol use, psychological resilience, lifetime episodes of depression and severity of symptoms of depression. These hypotheses are further explored below.

Hypothesis 1: Men reporting alcohol/substance use and poor lifestyle behaviours will use fewer adaptive coping strategies than those without such patterns and behaviours

Alcohol and substance use and poor lifestyle were assessed by: participants' scores on the MDRS drug use subscale and MDRS alcohol use subscale, current smoking status, and self-rated general health.

The majority of participants (82.2%; n=382/465) did not smoke and smoking was not associated with the mean number of strategies used for either prevention or management. Participants' self-rated general health was moderately correlated with the number of prevention strategies used (r=.31, p<.001). Those who reported better general health reported using more strategies than those in poorer health (Table 7).

TABLE 7: Mean number of strategies used and self-rated general health status

	Mean number of strategies used (SD)	
	Prevention	Management
	Regular/occasional use	Regular/occasional use
SELF-RATED GENERAL HEALTH		
Excellent	18.0 (3.2)	16.9 (4.6)
Very Good	17.7 (3.9)	15.7 (5.2)
Good	16.3 (4.3)	15.0 (5.1)
Fair	15.1 (4.1)	13.1 (4.9)
Poor	14.1 (4.4)	11.6 (3.9)

Participants' scores on the MDRS alcohol subscale were weakly negatively correlated with the number of prevention strategies used (r=-.18, p<.001), and management strategies used (r=-.18, p<.001). That is, there was small correlation between higher scores on the alcohol subscale and using fewer prevention and management strategies.

There was no correlation between participants' scores on the MDRS drug use subscale and the number of prevention strategies used. There was a weak negative correlation with the number of management strategies used (r=-.16, p=.001).

Hypothesis 2: Respondents with repeated lifetimes episodes of negative affect will report poorer lifestyle behaviours and more unhelpful responses to stress, depression and crises than those who have 0-3 previous episodes

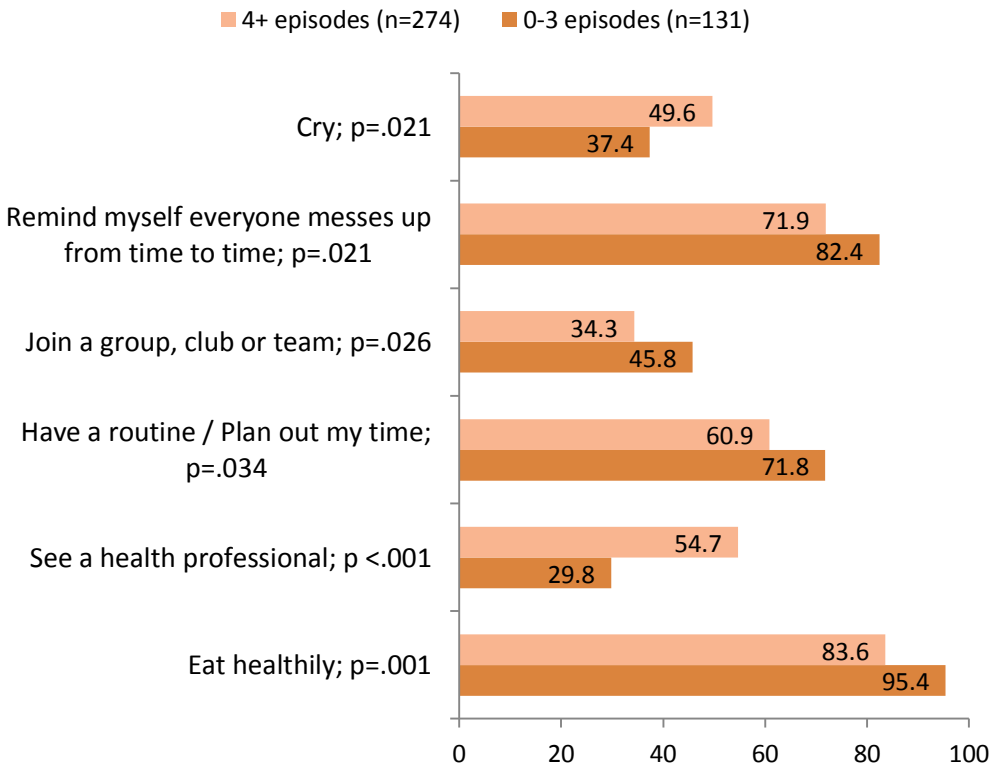
A majority of participants (58.9%; n=274/465) reported four or more previous episodes of depression, while 28.2% (n=131/465) reported 0-3 episodes. A minority (12.9%; n=60/465) didn't know how many times this had occurred and were excluded from further analyses. Results for the following section are based on N=405.

Among those with four or more previous episodes, a higher proportion (19.7%; n=54/274) currently smoked than those with 0-3 episodes (11.5%; n=15/131).

Prevention strategies

There were no significant differences in the mean number of prevention strategies used by those with four or more previous episode (16.6) and those with 0-3 episodes (17.2). In general, there were no significant differences in use of the majority of different prevention strategies according to number of lifetime episodes of depression. However, there were some exceptions. Figure 7 shows there were four prevention strategies that a significantly smaller proportion of participants with 4 or more episodes reported using, compared with those with 0-3 episodes: eating healthily; having a routine or planning out my time; joining a group, club or team; and reminding myself that everyone messes up from time to time. In contrast, a significantly higher proportion of those with repeated episodes reported using seeing a health professional or crying as prevention strategies when compared with those with 0-3 episodes.

FIGURE 7: Differences in use of PREVENTION strategies by episodes of depression (N=405)

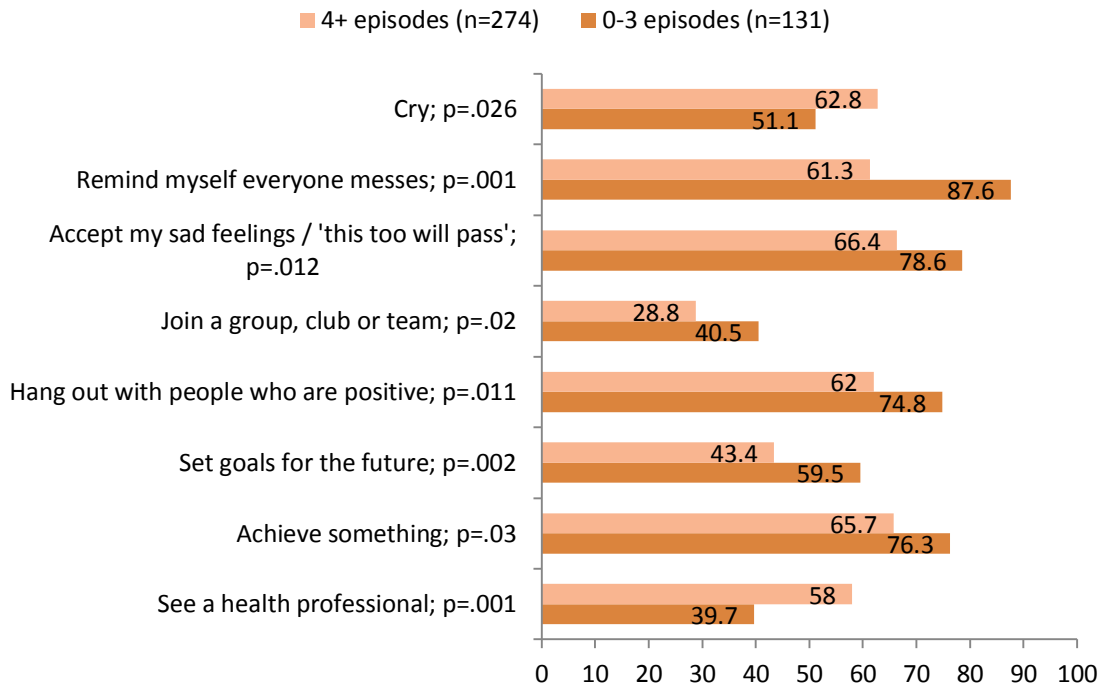


Management strategies

Figure 8 shows there were six management strategies that a significantly smaller proportion of those with repeated episodes of depression reported using when compared with those with 0-3 episodes: remind myself everyone messes up from time to time; accept my sad feelings; join a group, club or team; hang out with people who are positive; set goals for the future; and, achieve something.

As with prevention strategies, significantly higher proportions of those with four or more previous episodes reported seeing a health professional or crying as management, than did those with 0-3 episodes (Figure 8).

FIGURE 8: Differences in use of MANAGEMENT strategies by depression episodes (N=405)



Repeated lifetime episodes of depression were significantly related to participants' average total MDRS score, and mean scores on every MDRS subscale (Table 8). Those with repeated episodes of depression had higher distress, drug use, alcohol use, somatic complaints, risk-taking, and anger and aggression, compared with those with 0-3 episodes.

TABLE 8: Number of previous episodes of depression and mean scores on MDRS subscales (n=405)

		N	Mean (SD)	p
MDRS total score	0-3 episodes	131	25.7 (20.9)	<.001
	4+ episodes	274	46.5 (25.5)	
MDRS distress	0-3 episodes	131	11.3 (7.1)	<.001
	4+ episodes	274	16.9 (6.6)	
MDRS drug use	0-3 episodes	131	.89 (3.3)	.002
	4+ episodes	274	2.49 (5.4)	
MDRS alcohol	0-3 episodes	131	4.6 (6.1)	<.001
	4+ episodes	274	7.7 (9.0)	
MDRS anger & aggression	0-3 episodes	131	4.0 (5.8)	<.001
	4+ episodes	274	7.6 (7.2)	
MDRS somatic symptoms	0-3 episodes	131	2.8 (4.1)	<.001
	4+ episodes	274	7.6 (6.7)	
MDRS risk-taking	0-3 episodes	131	2.1 (3.9)	<.001
	4+ episodes	274	4.2 (4.4)	

Hypothesis 3: Psychological resilience will account for some of the variation in responses to stress, depression and crisis

Psychological resilience was assessed using the Brief Resilience Scale [30] (see page 12). Responses to stress, depression and crisis were assessed using the total number of strategies used, scores on the MDRS and its subscales, and particular strategies used for prevention and management. Table 9 shows the selection of prevention and management strategies where use was significantly related to mean scores on the BRS. On the whole, those who used a particular strategy had higher resilience scores.

TABLE 9: PREVENTION and MANGEMENT strategies used and Brief Resilience Scale scores

		PREVENTION			MANAGEMENT		
		N	BRS score Mean (SD)	P	N	BRS score Mean (SD)	P
Eat healthily	Use	406	18.3 (5.4)	<.001	-	-	NS
	Don't use	59	15.3 (5.8)		-	-	
Exercise	Use	-	-	NS	296	18.5 (5.3)	.006
	Don't use	-	-		169	17.0 (5.8)	
Reward myself with something enjoyable	Use	372	18.3 (5.4)	.008	345	18.3 (5.4)	.035
	Don't use	93	16.6 (5.7)		120	17.0 (5.7)	
See a health professional	Use	214	16.2 (5.5)	<.001	239	16.4 (5.4)	<.001
	Don't use	251	19.4 (5.1)		226	19.6 (5.1)	
Achieve something	Use	376	18.3 (5.4)	.001	324	18.6 (5.3)	<.001
	Don't use	89	16.2 (5.7)		141	16.4 (5.6)	
Set goals for the future	Use	304	18.5 (5.4)	.006	-	-	NS
	Don't use	161	17.0 (5.5)		-	-	
Talk to someone close to me/I trust	Use	229	18.8 (5.3)	.001	338	18.4 (5.6)	.007
	Don't use	236	17.1 (5.6)		127	16.8 (5.2)	
Focus on my life purpose	Use	198	18.8 (5.2)	.004	190	18.7 (5.0)	.016
	Don't use	267	17.3 (5.6)		275	17.4 (5.7)	
Hang out with positive people	Use	350	18.3 (5.4)	.023	298	18.9 (5.2)	<.001
	Don't use	115	16.9 (5.6)		167	16.3 (5.6)	
Accept my sad feelings / 'this too will pass'	Use	375	18.7 (5.3)	<.001	326	19.0 (5.2)	<.001
	Don't use	90	14.9 (5.3)		139	15.6	
Remind myself everyone messes up from time to time	Use	353	18.7 (5.3)	<.001	311	19.1 (5.1)	<.001
	Don't use	112	15.5 (5.5)		154	15.6 (5.5)	
Cry	Use	214	17.2 (5.6)	.006	271	17.4 (5.4)	.008
	Don't use	251	18.6 (5.3)		194	18.7 (5.5)	
Notice my thoughts and try to change my perspective	Use	358	18.4 (5.3)	.003	325	18.9 (5.2)	<.001
	Don't use	107	16.6 (5.8)		140	15.8 (5.5)	
Distract myself from negative thoughts/feelings	Use	360	18.3 (5.3)	.008	333	18.7 (5.3)	<.001
	Don't use	105	16.7 (5.9)		132	16.0 (5.6)	
Use humour to reframe my thoughts/feelings	Use	370	18.4 (5.4)	.001	330	18.6 (5.3)	<.001
	Don't use	95	16.3 (5.5)		135	16.3 (5.5)	
Join a group club or team	Use	-	-	NS	152	18.9 (5.6)	.011
	Don't use	-	-		313	17.5 (5.4)	

The strategies where use was related to resilience were very similar across prevention and management, with some exceptions: goal-setting and eating healthily were significantly related to resilience scores for prevention only, while exercise, or joining a group, club or team was significantly related to resilience scores for management only.

There was a weak correlation between participants' total scores on the BRS and the number of prevention strategies used (r=.20, p<.001) or management strategies used (r=.22, p<.001), such that higher resilience was associated with using more strategies in total. In contrast, total BRS scores were moderately negatively correlated with total MDRS score (r=-.41, p<.001) and four MDRS subscales. Lower resilience was related to higher distress (r=-.37, p<.001), anger (r=-.35, p<.001), somatic symptoms (r=-.30, p<.001) and risk-taking (r=-.34, p<.001).

Hypothesis 4: A greater range of positive coping strategies, including lifestyle behaviours, will be reported by men with moderate rather than severe symptoms

Symptoms of depression were assessed using total scores on the PHQ-9, where a higher score indicates more severe depression symptoms. Table 3 showed that a third of the sample reported no or minimal symptoms of depression, nearly half reported mild-to-moderate depression, and a fifth reported moderately severe or severe depression. Use of positive coping strategies was assessed using the total number of strategies used for prevention or management, as well as looking at differences in use of individual strategies.

Tables 10 and 11 respectively show which of the 26 prevention and management strategies were significantly related to depression severity.

TABLE 10: Relationship between depression severity and use of PREVENTION strategies (N=465)

	Depression severity indicated by PHQ-9				
Use of prevention strategies	None (n=149)	Mild to moderate (n=222)	Moderately severe/severe (n=94)	χ^2	p
Eat healthily	98.7	89.2	64.9	60.7	<.001
Exercise	86.6	77.9	63.8	17.3	<.001
Change sleeping habits	72.5	68.9	53.2	10.5	.005
Reward myself with something enjoyable	87.2	79.3	70.2	10.6	.005
See a health professional	37.6	41.9	69.1	26.0	<.001
Keep myself busy	94.0	88.7	83.0	7.4	.025
Achieve something (big or small)	89.3	81.1	67.0	18.4	<.001
Having a routine/plan out my time	73.2	62.6	50.0	13.4	.001
Set goals for the future	76.5	61.3	57.4	12.4	.002
Use positive self-talk	58.4	46.4	41.5	8.0	.019
Talk to people close to me, or someone I trust, about a problem	83.2	69.8	72.3	8.8	.012
Hang out with people who are positive	85.9	71.6	67.0	14.1	.001
Join a group, club or team	49.7	35.6	27.7	13.3	.001
Accept my sad feelings / 'this too will pass'	89.3	82.4	62.8	26.8	<.001
Remind myself everyone messes up from time to time	89.3	74.3	58.5	30.4	<.001
Notice my thoughts and try to change my perspective	85.9	74.3	69.1	10.8	.004

TABLE 11: Relationship between depression severity and use of MANAGEMENT strategies (N=465)

Use of management strategies	Depression severity indicated by PHQ-9: None (n=149)	Mild to moderate (n=222)	Moderately severe/severe (n=94)	χ^2	p
Eat healthily	68.5	56.8	46.8	11.7	.003
Exercise	75.8	60.4	52.1	16.0	<.001
Change sleeping habits	72.5	64.9	54.3	8.5	.015
See a health professional	41.6	50.0	70.2	19.2	<.001
Achieve something (big or small)	77.9	71.6	52.1	18.8	<.001
Having a routine/plan out my time	59.7	55.0	40.4	9.0	.011
Set goals for the future	55.7	45.0	39.4	7.1	.029
Use positive self-talk	61.7	47.3	30.9	22.3	<.001
Focus on my life purpose	45.6	42.3	29.8	6.4	.041
Do something to help another person	75.2	62.6	69.1	6.5	.038
Talk to people close to me, or someone I trust, about a problem	81.2	70.7	63.8	10.0	.008
Hang out with people who are positive	82.6	57.7	50.0	34.2	<.001
Spend time with a pet	59.7	45.9	55.3	7.2	.027
Join a group, club or team	46.3	30.6	16.0	24.9	<.001
Accept my sad feelings / 'this too will pass'	80.5	73.4	45.7	35.5	<.001
Remind myself everyone messes up from time to time	82.6	67.6	40.4	46.3	<.001
Notice my thoughts and try to change my perspective	85.9	67.6	50.0	36.4	<.001
Distract myself from negative thoughts/feelings	77.2	74.3	56.4	13.8	.001

In general, for both prevention and management, higher proportions of people reported using a strategy when they had none-to-minimal depression than if they were moderately-severe or severely depressed. The only exception was for seeing a health professional, where higher proportions of those with more severe depression used this strategy as both prevention and management.

Likewise, total PHQ-9 scores were moderately negatively correlated with total number of prevention strategies used ($r=-.28$, $p<.001$) and the total number of management strategies used ($r=-.29$, $p<.001$). Greater depression severity, as indicated by the PHQ-9, was related to using fewer strategies to prevent or manage down or depressed moods.

PART THREE: ONLINE TOOL DESIGN, DEVELOPMENT AND TESTING

SCREENING

More than 300 men submitted an 'expression of interest' to this phase and in total, 254 men visited the Man Central screening and recruitment site. Of those, 26.4% (n=67/254) were excluded based on study criteria (e.g. not having an internet enabled phone, or not meeting criteria for at least mild depression) and 15.7% (n=40/254) dropped out at some point during the screening process.

DEMOGRAPHIC AND CLINICAL PROFILE

A total of 144 men met study criteria, consented to participate and completed baseline data collection. Participants ranged in age from 18 years to 68 years with a mean age of 40.5 (SD10.9) years. More than half (55.1%; n=81/147) were married or in de facto relationships (Table 13).

As per the eligibility criteria, all participants had at least mild depression. The majority (34.0%; n=49/144) reported moderate depression, 29.9% (n=43/144) had moderately severe depression and a minority (13.2%; n=19/144) had severe depression. Table 12 shows participants' mean scores on baseline clinical measures (i.e. PHQ-9, CD-RISC, MDRS and WSAS).

TABLE 12: Mean scores on baseline clinical measures (N=144)

	PHQ-9 (depression)	CD-RISC (resilience)	MDRS (male depression)	WSAS (functional impairment)
Mean (SD)	13.7 (4.9)	52.3 (12.7)	61.9 (22.7)	21.4 (8.0)
Minimum	5	16	18	0
Maximum	25	79	126	38
Possible range	0-27*	0-100	0-154	0-40

*for this sample there are no participants with a score lower than 5

Participants' mean score on the CD-RSIC (52.4, SD 12.6) was lower than general population scores [37], but similar to samples of participants with depression [41, 42]. A WSAS score higher than 20 is associated with high levels of functional impairment in depressed samples [38]. Participants' mean score was just over 20, indicating functional impairment with less severe clinical symptoms.

USE OF MYCOMPASS

Registration and accessing myCompass

After completing baseline data collection, a majority of participants (95.1%; n=137/144) registered their email address or mobile phone number with the myCompass program. As registering either a phone number or email address is a prerequisite of using the program, the following results are based on the 137 participants who registered.

In total, 69.9% (n=93/133) used the Man Central module over the four week trial period.

Participants logged in to myCompass 12 (SD15.8) times on average. The mean number of logins via the website was 6.2 (SD12.7) and the mean number of logins via the mobile site was 5.8 (SD9.1). Table 13 shows that after registration with the program, 45.3% (n=62/137) logged in between one

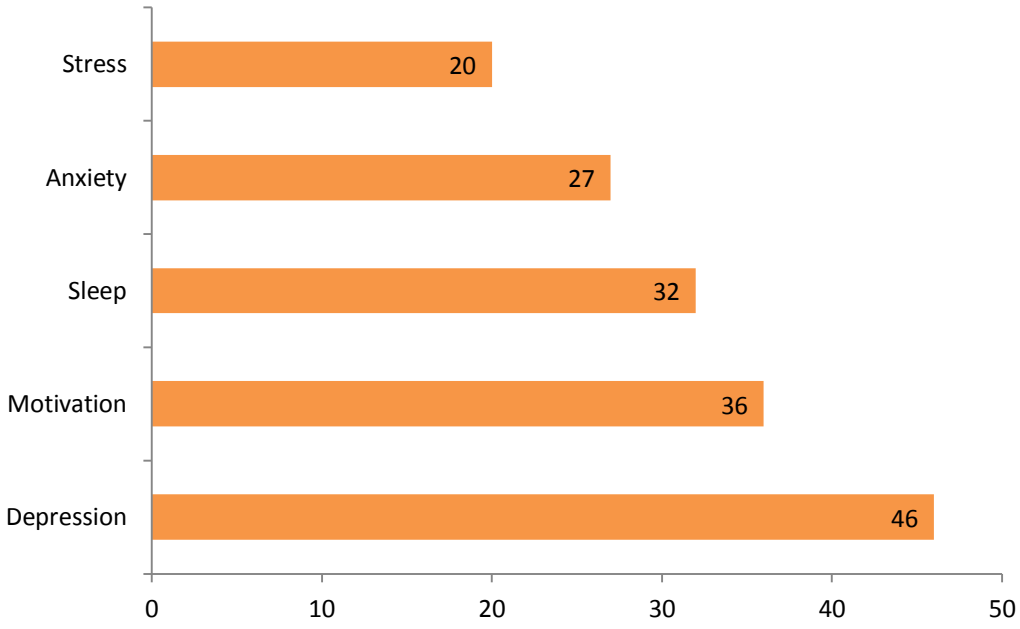
and ten times and 36.5% (n=50/4137) logged in more than ten times, while 18.2% (n=25/137) did not login again.

TABLE 13: Logins to myCompass via the website or the mobile site (N=137)

	Total		Web logins		Mobile logins	
	N	%	n	%	n	%
0 logins	25	18.2	46	33.6	62	45.3
1-10 login	62	45.3	68	49.6	49	35.8
11-20 logins	26	19.0	12	8.8	15	10.9
20+ logins	24	17.5	11	8.0	11	8.0

Figure 9 shows the five most common symptoms/moods that participants elected to monitor at registration.

FIGURE 9: Symptoms monitored by users (N=137)



Nearly three quarters of participants (74.5%; n=102/137) monitored at least once in the trial period. Table 14 shows participants' monitoring data for the five most commonly tracked symptoms/moods. Motivation levels were monitored the most often – as a group, the men monitored motivation levels a total of 471 times, followed by depression (399), sleep (323), anxiety (316) and stress (262). Monitoring reminders were scheduled by 63.5% (n=87/137) of participants, with 45 men electing to receive reminders via email and 42 by SMS

In general, the majority of participants monitored their symptoms while they were at home or at work. Other locations they nominated included: a partner, parent or friend's house; café; camping;

bush walking; park; sports venue; various appointments etc. The majority of participants were alone, or with family, while monitoring their symptoms and were most often relaxing, working or online.

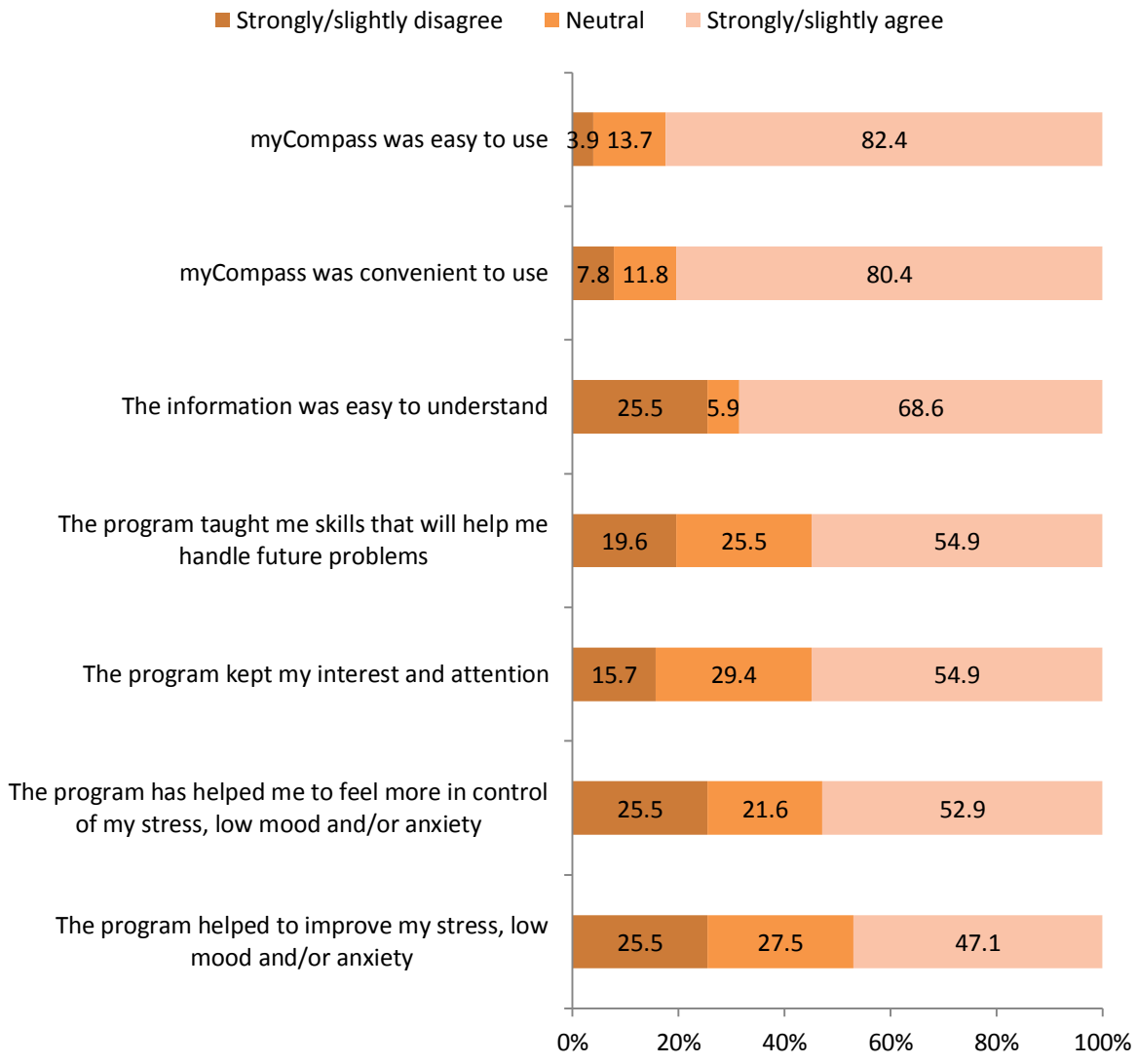
TABLE 14: Top five commonly monitored items and context data

	Depression	Motivation	Sleep	Anxiety	Stress
Number of observations	399	471	323	316	262
Where are you?	%	%	%	%	%
At home	61.9	72.8	72.4	70.9	72.4
In vehicle	3.3	2.8	2.8	4.4	2.8
At work	19.8	12.3	14.6	11.7	14.6
At shops	2.0	1.3	2.5	1.9	2.5
Place of study	0.7	1.1	0.9	0.0	0.9
Public transport	3.3	1.7	4.3	4.1	4.3
Other	9.0	8.1	2.5	7.0	2.5
What are you doing?					
Relaxing	32.1	21.0	34.7	32.3	34.7
Shopping	1.0	1.5	0.9	1.9	0.9
Working	25.6	11.5	21.4	14.2	21.4
Socialising	2.3	3.2	3.1	3.2	3.1
Online	14.0	32.3	11.8	16.1	11.8
Studying	2.0	1.1	0.9	0.3	0.9
Home duties	13.5	7.4	13.6	12.0	13.6
Commuting	3.8	2.5	5.0	4.1	5.0
Other	5.7	19.5	8.7	15.5	8.7
Who are you with?					
Colleagues	14.0	7.4	11.5	4.7	11.5
Friends	3.0	3.6	4.0	3.2	4.0
Family	38.3	18.0	29.1	49.1	29.1
Alone	40.4	64.1	51.1	40.8	51.1
People I don't know	1.5	1.1	3.7	1.6	3.7
Other	2.8	5.8	0.6	0.6	0.6

Satisfaction with myCompass

After participating in the trial 37.2% (n=51/137) of men provided data on their satisfaction with the Man Central module and other features of myCompass program. Figure 10 shows participant responses to six items regarding the ease and convenience of using myCompass, the clarity of information provided, engagement with the program and whether using myCompass and the Man Central module had helped them to develop new skills, feel more in control and helped improve their mood.

FIGURE 10: Participant satisfaction with myCompass



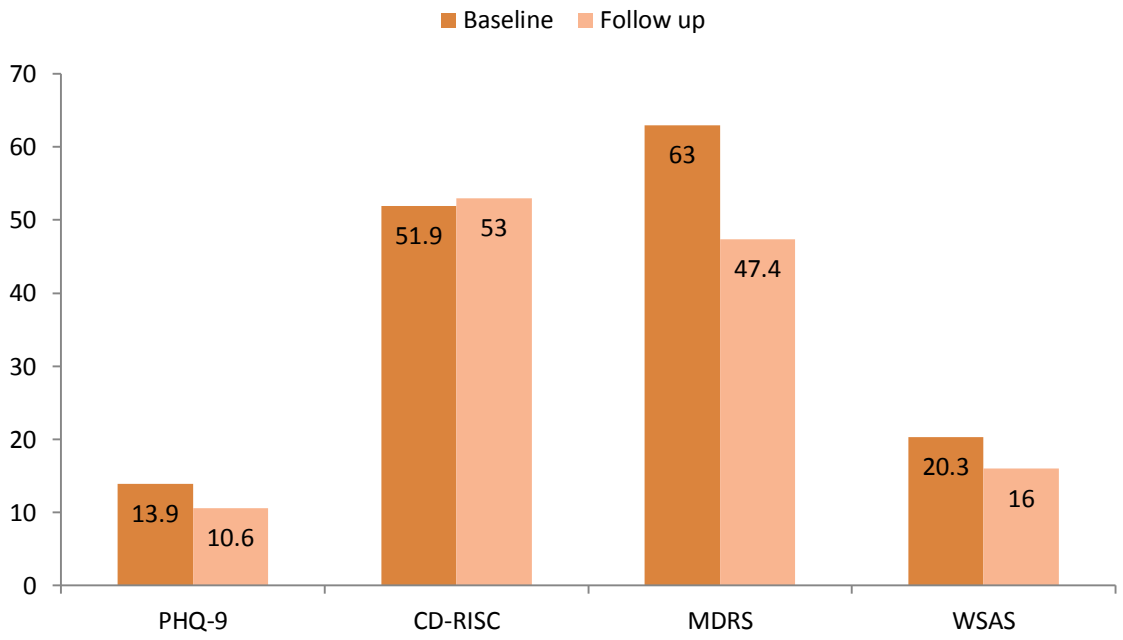
Four week follow up

Follow up data was provided by 36.1% (n=51/137). Those who did and did not provide follow up data were compared on a range of baseline measures and there were no significant differences in: age, relationship status, PHQ-9 score, MDRS scores, CD-RISC scores, and WSAS scores.

Those who provided follow up data had logged in to myCompass more times on average (21.1) than those who didn't (5.9). There was no difference with regard to starting the module, however, those who provided follow up data were more likely to have completely finished all three sessions and two homework tasks (46.2%) than those who didn't (3.3%).

Figure 11 shows baseline and follow up data on four clinical measures for those who provided data. The mean scores on the two depression measures (PHQ-9 & MDRS) and the measure of work and social impairment (WSAS) are reduced after four weeks of using myCompass and the Man Central module, while there was a minimal increase in the mean resilience score (CD-RISC).

FIGURE 11: Comparison of baseline and follow up on measures of depression (PHQ-9; MDRS), resilience (CD-RISC) and work and social impairment (WSAS)



CONCLUSION

THE MEN

The project successfully recruited men with a range of different experiences. Part One recruited men with and without previous experience with depression and help-seeking and a majority (63%) reported no current symptoms of depression. In contrast, Part Two attracted a sample of men where nearly all (93.5%) had previous experience with depression and two thirds (68%) reported mild-to-severe symptoms, while Part Three, by definition, focused on men with at least mild depression and where the majority (64%) had moderate-to-moderately-severe depression. All samples attracted men from different age groups, with the men in Part One older on average than samples in Part Two and Part Three.

In interpreting the findings, we acknowledge that the results are not representative of the Australian male population as whole. Nevertheless, they do provide important details about men from all over Australia and from many walks of life. As such, the variety of experiences reported allows confidence in the utility and applicability of the results to a range of men, in variety of contexts, and at different points on a continuum of mental health and wellbeing. Particularly given the similarity between the strategies reportedly used by men in Part One and Part Two (despite differences in depression symptom severity), it is likely that the strategies reported here do represent those strategies men find most acceptable and useful.

KEY POINTS

1. MEN USE A BROAD RANGE OF POSITIVE COPING STRATEGIES

Previous research has focused on men's use of negative coping strategies or barriers to accessing care [12-14, 21]. The key finding from this study was that rather than preferring to use unhelpful, avoidant or 'negative' strategies, the men reported using numerous different strategies to positively maintain their mental health and wellbeing. For example, in Part Two, the average number of prevention strategies used was 16.8 and the mean number of management strategies used was 15.1, indicating that men rely on having access to plenty of options to prevent or cope with feeling flat, down or depressed. There were more than ten strategies that were used by over 75% of the men.

Moreover, use of these strategies is flexible and responsive to need. The results in Part One showed that men adapt which strategy they use at different times and according to a variety of factors: convenience, mood, symptoms or problem severity. Men acknowledged certain strategies may not work for everyone and they were happiest when they had developed a personalised suite of options to suit their own needs.

2. MEN ACTIVELY ENGAGE WITH THEIR MENTAL HEALTH

Previous research has found that men take an active role in monitoring their overall health [43] and this project extends those findings, by demonstrating men's conscious engagement with understanding and monitoring their mental health in particular. In general, the men in this project did not wait until a problem arose before reacting. Rather they actively engaged in activities designed to prevent down, flat or depressed moods and conceived of mental health as something important to be invested in, or take care of. They responded proactively to problems, made choices

about when or how to take action, and for the men using myCompass, regularly keeping track of how depressed or motivated they were feeling was particularly helpful.

In particular, maintaining physical health through diet, exercise or sleep, was viewed as essential to mental wellbeing, with benefits besides simply being physically fit. During Part One, men emphasised the links between physical and mental health, which was further confirmed in Part Two, when exercise and eating healthily were used by ~80% of men. Good mental health was linked with physical health, such that physical activities were described as directly affecting mood, especially when they were halted or interrupted for a period of time.

3. MEN MAKE DISTINCTIONS BETWEEN PREVENTION AND MANAGEMENT

For optimum mental health, the men made distinctions between preventing the development of down or depressed moods and managing their moods during times of stress or adversity. Prevention was predominantly characterised by having a routine that allowed for the regular use of a combination of physical and enjoyable activities to stay feeling good or balanced. Management of down or depressed moods was characterised in the main by anticipating, or responding proactively to problems, with an emphasis on using strategies that helped men to either directly solve problems or persevere and take a fresh perspective. Distracting from problems was talked about in positive terms, and this was further reflected in Part Two. A majority of men used the following strategies for prevention or management: keeping busy, achieving something or distracting from thoughts and feelings.

Moreover, men liked using strategies that could be adapted across both prevention and management and the strategies used by men appear to be the same whether they have previous experience with depression (e.g. the majority of the sample in Part Two) or not (e.g. only half of the sample in Part One had ever been depressed and the majority had no current symptoms).

4. GOOD PREVENTION IS MULTIFACETED

We conceived of **regularly**-used strategies as those most indicative of a person's likely behavioural repertoire, rather than occasionally used strategies where use may depend on specific circumstances. The ten strategies used **regularly** by the most men in Part Two suggest that they viewed good prevention as incorporating the following factors:

- Maintaining good physical health (e.g. through eating healthily – 54%, and exercising – 45%).
- Taking action to prevent a low mood (e.g. through keeping busy – 50%, and achieving something, whether big or small – 31%).
- Having a positive external connection (e.g. through doing something to help another person – 36%, hanging out with positive people – 31%, or even spending time with a pet – 35%).
- Actively engaging with thoughts and/or feelings (e.g. through using humour to reframe thoughts/feelings – 41%, accepting having sad feelings – 33%, and noticing thoughts and trying to change perspective – 31%).

For the men in this study, these strategies featured most prominently as the positive strategies they used regularly to prevent themselves from feeling down.

5. GOOD MANAGEMENT BUILDS ON PREVENTION THROUGH ACKNOWLEDGING A CHANGE IN MOOD (AND THE NEED TO DO SOMETHING ABOUT IT)

There were some similarities to prevention in terms of the ten management strategies used **regularly** by the most men in Part Two. While maintaining physical health was still important

(exercise – 33%; eat healthily – 28%), as was engaging with thoughts/and or feelings (accept sad feelings – 33%; use humour to reframe – 33%) and keeping busy (35%); good management also incorporated the following:

- Acknowledging a problem and taking steps to solve the problem or mitigate its effect on mood (e.g. through taking time out – 36%, rewarding oneself with something enjoyable – 35%, distracting from negative thoughts and/or feelings and talking to other people about the problem - 28%).

6. STRATEGY USE VARIED ACCORDING TO GENERAL HEALTH, DEPRESSION SEVERITY, HISTORY OF DEPRESSION AND PSYCHOLOGICAL RESLIENCE

Men with higher self-rated general health or higher scores on measures of resilience reported using more strategies in total than those with poorer health or lower resilience. Likewise, men with more previous episodes of depression or more severe current depression reported using fewer strategies than those with fewer episodes or less severe depression. Given the cross-sectional nature of the data, it is not possible to ascertain whether using more strategies contributes to better general health, higher resilience, fewer episodes and less severe depression, or whether experiencing better health allows some men to use more strategies. This is true of any instance reported where use of a particular strategy varied according to general health, resilience or depression (e.g. the many prevention and management strategies in hypothesis 4).

7. MEN ARE UNCLEAR ABOUT SUICIDE

Very few men recruited to the project had personal experience with suicide. Very few disclosed making a previous attempt in Part One and about one-fifth of the men in Part Two had made a previous suicide attempt. As a result, men volunteered few strategies as useful in preventing suicide, and repeatedly expressed unfamiliarity with contributing factors, detecting suicide risk in others, or knowing what to do if they perceived someone to be at-risk. However, many expressed a desire to do something to help and appeared to view it as something society should be responsible for responding to.

8. MEN REPORT AN OPENNESS TO USING STRATEGIES THAT ARE NOT TYPICALLY 'MASCULINE'

While the Part One results show that men perceive that the stereotypical view of masculinity can sometimes have a negative effect on how they deal with feeling down or depressed, they nevertheless reported using a range of so-called 'masculine' (e.g. problem solving, goal-orientation, thought reframing) and 'feminine' (e.g. talk to others, accepting sadness) strategies to positively cope with their own moods. Similarly, their advice to other men suggests relief from stress is achieved by being open to using any strategies that help, rather than being constrained by societal expectations (e.g. talk to others, accept vulnerability).

Openness to using new strategies is particularly evident in Part Two, where men may not use a particular strategy, but large proportions report that they *'think it's a good idea'* for both prevention and management. For example, having a mentor (~58%); practising meditation, mindfulness, or gratitude (~46%), joining a group, club or team (~47%); seeing a health professional (~41%); or focusing on life's purpose (~39%). None of these strategies are particularly characterised as typically masculine and yet the men reported being open to their use.

9. MEN ARE INTERESTED IN ONLINE INTERVENTIONS

The project sought to follow only 30 men while they used myCompass to track their symptoms, mood or behaviours and do the Man Central module over a period of four weeks, yet attracted the

interest of over 250 men who visited the study website. While some were excluded by study criteria or individually decided the project was not for them, the level of interest and response was unexpected and indicates that men may be interested in using online programs for their mental health.

10. USE OF MYCOMPASS AS A BRIEF ONLINE INTERVENTION FOR MEN WITH AT LEAST MILD DEPRESSION IS PROMISING

For the men in this project, using a brief online intervention for depression which incorporated positive strategies in a strengths-based approach appears to be an acceptable option. The men used myCompass on both their mobile phones and their computers, they logged in from a variety of locations (usually from home or work), and they made use of both the monitoring functions and the Man Central module to monitor and maintain their mental health. The majority reported it was easy (82%) and convenient to use (80%) and that the information was easy to understand (68%). More than half had learned skills to deal with future problems (55%) and felt more in control of their moods (53%). For those who provided follow up data, scores on measures of depression and impairment were lower after four weeks of using the program, indicating the potential to use myCompass in the future.

10. ENGAGEMENT WITH ONLINE PROGRAMS IS AN ONGOING ISSUE

Despite the success of the mood monitoring phase of the project, 17% of participants did not login to use myCompass after initially registering with the program and 30% did not use the module at all (even if they were monitoring symptoms). Similarly, men dropped out of the pilot study at a variety of stages – whether at screening, baseline data collection, program registration, week 1, week 3, week 3, or week 4 – making it difficult to conclusively pinpoint the factors that govern men's continuing engagement with an online program.

IMPLICATIONS

IMPLICATIONS FOR CLINICAL PRACTICE AND PUBLIC HEALTH

The key points raised by results from all three phases of the study have important implications for clinical practice and public health in that they suggest viable, practical targets for the development of (1) individual treatment plans and skills development for men with depression or (2) health promotion and education campaigns in a wider community context.

For health professionals assisting men to self-manage feeling down, the following points appear to be salient:

- Building a personalised suite of options to be used during tough times appears to be crucial. Facilitating this process and developing skills for effective self-management can incorporate several stages or targets to aim for as follows:
    - Trying new strategies (even ones they are not sure of) in advance, in order to establish a personal 'toolkit' – particularly those that other men report effectively using regularly to maintain or manage their mood.
    - Appraising the usefulness of any new strategies tried in terms of their effect on mood and capacity to be easily incorporated into daily routines or existing behaviour.

- Helping men to match the use of particular strategies with particular moods (e.g. while exercise might be great prevention, taking time out might be more useful in managing a low point).
- Developing a plan or a routine to incorporate new, or most effective, strategies into daily life after appraising a range of different options. Men said 'having a plan' helped them to feel in control, rather than at the mercy of feelings, so this step seems to be a crucial aspect of self-help that lends itself continued refinement or improvement.
- Practise acceptance and understanding of changes in mood, allowing for better self-monitoring of early warning signs.
- Practise using new strategies regularly, either as a form of prevention, or in response to noticing a change in mood.

- Men emphasised the importance of practise in helping to build both perseverance and resilience. They described good management as something that they had to learn how to skillfully practise and felt that the skills worth having are the ones that take time to develop. Clearly, helping men to practise using strategies or skills they wish to learn should be an important focus.

- 'Distraction' from problems has previously been portrayed as negative or unhelpful strategy, especially in the form of excessive use of alcohol or drugs [15, 44]. However, the project found that men described distraction in positive terms and incorporated distraction helpfully into both prevention and management. Active use of distraction, particularly those strategies that helped them to 'take time out', or approach a problem differently, were viewed as highly valuable. Thus, assisting men to choose positive forms of distraction, as opposed to those that have a negative impact on mood, is clearly indicated by the results.

- Taking time out was another strategy which may prove to be a useful target for skills-building or intervention. Helping men to recognise times of stress, depression, sadness or adversity and linking that recognition with immediate action (such as taking time out) will prove to be useful in mitigating the potential negative impacts on their mood and/or behaviour.

- We found that men were open to monitoring their moods, symptoms and behaviour and when given the choice, monitored 'motivation' levels the most frequently. Thus we suggest that changes in motivation levels may be particularly salient to men and may be an especially useful symptom for those who do not readily admit to feeling sad or down. Monitoring motivation may be a useful way for men to positively frame taking action for their health, and may help them to remain engaged.

- Men are open to using strategies they don't currently use (e.g. having a mentor, practicing meditation) and these strategies may represent good starting points. For men seeking help, strategies they are already open to using are good candidates for identifying and overcoming other barriers to their use. That is, they may represent a 'quick win' in terms of feeling as though they are doing something.

- As with other research, we found that strategies which emphasised problem solving [9, 13, 14], or re-framing distress in helpful ways [19, 45, 46] were particularly important, in that men described comfort with using these strategies, which helped them to feel in control of their problems, and they did not conflict with social expectations concerning manliness [45, 46].

For health professionals, advocates and educators involved in the design public health awareness, information and education campaigns, the following points are suggested by the results:

- Men already acknowledge both the seriousness of depression and the negative effects of conforming to traditional expectations of masculinity, and for the men in this study, flexible use of strategies seen as traditionally feminine was a source of relief. Thus 'challenging masculine norms' continues to be a viable target for education and awareness. Future campaigns would do well to emphasise the gains that other men report experiencing when they admit vulnerability and ask for help when needed.

- Likewise, men of different ages, with different experiences and different strategy preferences all advocated talking to others and having a plan to handle feeling down or depressed. Future campaigns may wish to emphasise: this advice, that such advice comes directly from other men and that it is not solely the province of those with depression – i.e. men advise talking to others because they have found it works to keep them feeling good.

- The breadth of strategies used by the men in this project indicates the potential for future campaigns to build on the idea of having an 'arsenal' or 'toolbox' full of different strategies to be deployed as necessary. Being able to choose from a range of social, emotional, practical or problem-solving strategies appears to assist men to prevent and manage feeling down or depressed. This versatility and flexibility could be a key component of public campaigns in the future.

- There is still considerable room for improvement in educating men about suicide, in terms of understanding what can lead to suicide and what can be done to prevent it. Some men were concerned that intervening could make a situation worse. Future public health messages would do well to emphasise the importance of intervention, that men at-risk would like others to notice [47], and that there are resources available.

- Similarly, while family connections were cited as important to preventing suicide, future public education campaigns would need to consider that alternative strategies are particularly needed for isolated men without many family or social connections.

IMPLICATIONS FOR FUTURE RESEARCH

Several implications for future research arise from these findings, which we briefly cover as follows:

- When given the opportunity and when they feel psychologically safe, men disclose richly detailed experiences related to their mental health, and exhibit a sophisticated emotional vocabulary and a nuanced process of interpreting their private experiences. Future research which aims to support or reach men with mental health problems would do well to avoid assumptions about 'typical' men and their ability to articulate emotions, and instead should focus on creating research spaces that allow for the asking of open questions and safety in disclosing intimate experiences.

- While Part One successfully recruited men with no previous experience of depression, Part Two was not as successful in this regard. As such, men who have no experience with depression and/or suicide still represent a group who should be targeted for future research into men's use of positive strategies. Arguably, they may have further information about particularly effective strategies and represent untapped potential in finding more strategies that are particularly acceptable to other men.

- While the current results support men's use of online interventions via mobile phone, tablet or computer, further research would need to clearly establish the factors that contribute to both drop out and engagement and men's preferences for interventions delivered in this fashion. The current results imply that men enjoy monitoring their moods, symptoms or behaviours and in this study, tracking could be completed regularly in a very short period of time. Future research could consider the question of how brief an intervention needs to be for depressed men to engage with and use regularly, while still helping to improve mood.

- Given that men are open to using many strategies, but do not necessarily use them, future research could consider how best to facilitate trying new strategies or learning new skills. For example, men are open to having a mentor as a prevention or management strategy. Future research could also consider what constitutes a good mentor in men's eyes, where they might find them, and how clinical or public health practice could have a role building on use of this strategy.

In conclusion, the current research has identified a variety of positive coping strategies, which have the benefit of being endorsed and used by men who currently self-monitor and effectively manage their mental health, rather than only representing strategies that men may have learned through accessing treatment for depression. The strategies reported thus exemplify approaches to self-help that have utility and acceptability among a range of men. Taken together, these strategies may be more acceptable to men who are currently in distress and unlikely to seek professional help.

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APPENDICES

APPENDIX 1: INTERVIEW/FOCUS GROUP QUESTIONS SCHEDULE

Ice-breaking	
Q1	What are some of the words men use to describe feeling down?
Q2	How can you tell if a man is feeling *[down/participant's words]?*
Q3	Can you tell if a woman is feeling *[down/participant's words]*?
Prevention	
Q4	On a day-to-day to weekly basis, what sort of things do men do to stay feeling positive? *[Probe examples: exercise, meditation]*
Q5	Do you have any particular things that work well for you?
Early intervention	
Q6	Most people have been through a rough patch or felt [down/participants' words]. How do you know when you are getting down or starting to feel blue? [Probe examples: loss of concentration; "some of the other men have mentioned X, is that the same for you?"]
Q7	What types of things do you to nip it in the bud and make yourself feel better?
Management	
Q8	Can you think about a particular time that you or someone you know has actually been very *[down/participants' words]* or had a rough patch?
Q9	How did they/you deal with it? [Probe: What did you do to get through it?]
Q10	What are some of the more unhelpful things you've seen or heard others do when they're feeling *[down/participants' words]*?
Q11	What are some of the positive or helpful things you or other men you know have done during these times?
Suicide	
Q12	Now we want to talk about some stronger feelings that some people have when they are feeling down. If a man is really *[down/participants' words]*, how can he stop himself thinking that that life isn't worth living? [Indicator prompt: does anybody have anything else they want to add to that before we move onto another topic?]
Closing	
Q13	What advice would you give to other men who might be going through something similar?
Q14	Turning now to a time when you have been through a rough patch – either a big one or a small one. What aspect of how you dealt with this situation are you most proud of?