Universal online interventions might engage psychologically distressed university students who are unlikely to seek formal help

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ABSTRACT
University students are a high risk population for mental health problems, yet few seek professional help when experiencing problems. This study explored the potential role of an online intervention for promoting wellbeing in university students, by investigating students’ help-seeking behaviour, intention to use online interventions and student content preference for such interventions; 254 university students responded to an online survey designed for this study. As predicted, students were less likely to seek help as levels of psychological distress increased. Conversely, intention to use an online intervention increased at higher levels of distress, with 39.1%, 49.4% and 57.7% of low, moderate and severely distressed students respectively indicating they would use an online program supporting student well-being. Results suggest that online interventions may be a useful way to provide help to students in need who otherwise may not seek formal help.

Keywords: Internet, early intervention, university student, psychological distress, help-seeking

Poor mental health is a major cause of disability in Australia, found to account for 13% of the disease burden in 2005 (Australian Bureau of Statistics, 2006). For university students, mental health problems may be even more prevalent, as recent research has found that university students experience significantly higher levels of psychological distress than the general population (Bayram & Bilgel, 2008; Cooke, Bewick, Barkham, Bradley, & Audin, 2006; Stallman, 2008; Stallman & Shochet, in press). However, research on help seeking behaviour has found that more distressed individuals are less likely to seek help (Cigularov, Chen, Thurst, & Stallones, 2008; Rickwood, Deane, Wilson, & Ciarrochi, 2005). This study explores the potential of the
internet as a medium to deliver interventions to distressed students who are unlikely to access formal help. In addition we survey students’ content preference for such an intervention.

**University Student Psychological Distress**

Young adults have the highest prevalence for mental disorders, with 26% of people aged 16–24 years and 25% of people aged 25–34 years having had a mental disorder (Australian Bureau of Statistics, 2008). As the majority of university students are within these age groups (Australian Bureau of Statistics, 2007), this may provide some explanation for the high prevalence of psychological distress in university students.

In addition to age-related factors, university students face numerous stressors including academic demands, financial difficulties and the concurrent management of other commitments such as family and work (Cooke et al., 2006; Pierceall & Keim, 2007; Vaez & Laflamme, 2008). Heightened stress may exacerbate existing mental health symptoms or contribute to the development of emotional or psychological distress in university students (Royal College of Psychiatrists, 2003; Stallman, 2008).

A recent Australian study found that 83.9% of university students reported elevated psychological distress (scoring in the ‘moderate’ category or above) as measured by the Kessler Psychological Distress Scale (K10), 19.2% of which scored within the ‘very high’ category indicative of serious mental illness (Stallman, 2010), an alarming high figure in contrast with the general population estimates which indicate that just 2% usually score within the ‘very high’ range (Andrews, 2003). High psychological distress may have adverse effects on physical health, academic achievement and general quality of life for university students (Bayram & Bilgel, 2008; Vaez & Laflamme, 2008) and can have considerable ramifications for long-term health and adjustment (Rickwood et al., 2005; Van Voorhees et al., 2006). High psychological distress in university students has been correlated with impaired capacity to carry out regular activities such as work or study for between 10 and 15 days on average in a four week period (Stallman & Shochet, 2009). The high prevalence and disability associated with psychological distress highlight the importance of appropriate and timely interventions for university students.

**The Help-Seeking Behaviour Paradox**

Receiving effective treatments can reduce the detrimental effects of psychological distress (Nicholas, Oliver, Lee, & O’Brien, 2004). However, past research indicates that between 45% and 65% of university students experiencing mental health problems do not access professional help (Cooke et al., 2006; Eisenberg, Golberstein, & Gollust, 2007; urbisJHD, 2007). Paradoxically, those with serious problems such as severe depression and suicidal intent, who arguably have a greater need for professional help, may be even less likely to seek help (Cigularov et al., 2008), known as the ‘help-negation effect’ (Deane, Wilson, & Ciarrochi, 2001; Rickwood et al., 2005).

Although most Australian universities offer free health and counselling services (urbisJHD, 2007), research suggests that such services are not always utilised by those students experiencing significant problems, consistent with this help-negation effect. The same Australian study that found 83.9% of university students experienced elevated psychological distress also found that only 34.3% of those students had consulted a health professional regarding their distress (Stallman, 2010). A large-scale study of 28 Australian universities found that in 2006, only 5% of the student population accessed university counselling services (urbisJHD, 2007).

In general, people are more likely to seek ‘informal’ rather than ‘formal’ (professional) help for mental health issues (Hodges, O’Brien, & McGorry, 2007; Kelly et al., 2007; Rickwood et al., 2005). Informal help is often cheaper, more
Universal online interventions might engage psychologically distressed university students readily available and less stigmatised than seeking help from mental health professionals such as psychologists or counsellors, and might be easily obtained from sources such as family, friends, spouses, or even impersonal sources like self-help books or the internet.

**The Role of the Internet in the Delivery of Mental Health Services**

The internet is increasingly being used and accepted as a medium for mental health service delivery (Griffiths & Christensen, 2007; Hanauer, Dibble, Fortin, & Col, 2004; Lauder, Chester, & Berk, 2007), and has the potential for providing universal interventions promoting the psychological wellbeing of university students. University students are heavier users of the internet than the general population (Malaney, 2004), and generally have free access to computers and the internet provided by their university (Gordon, Juang, & Syed, 2007; Hanauer et al., 2004), making it relatively easy for all students to access online resources. University students regularly use the internet as a source of health information (Escoffrey et al., 2004). A survey of Australian university students found that 42% were interested in using a mental health information website, and that websites were the second most preferred source (after friends and family) for seeking advice for personal, emotional or mental health problems (urbi)JHD, 2007). These findings highlight the potential for the acceptance of online interventions aimed at promoting mental health in university students, an area of interest in the current study.

The anonymity of the internet allows individuals to obtain help without having to meet a health professional face-to-face, and online help is often preferred by individuals experiencing problems that they feel uncomfortable or ashamed about discussing with a health professional, or even with friends and family (Gerrits, van der Zanden, Visscher, & Conijn, 2007; Gray, Klein, Noyce, Sesselberg, & Cantrill, 2005; Richards & Tangney, 2008). The internet may also be a preferable help-seeking medium for those experiencing severe distress. Ybarra and Eaton (2005) found that computer-based intervention was preferred over face-to-face counselling by individuals experiencing suicidal ideation. Similarly, Rickwood et al. (2005) found that young people with serious depression and suicidal ideation preferred less personal forms of help-seeking. This suggests that online mental health interventions might appeal to those individuals who are both likely to need help and unlikely to seek help.

**Engagement and Utilisation Concerns in Online Mental Health Interventions**

The efficacy of online mental health interventions has been well supported (Braithwaite & Fincham, 2007; Cavanagh et al., 2006; Christensen, Griffiths, Mackinnon, & Brittliffe, 2006; Goh & Agarwal, 2008; Lauder et al., 2007); however the real-world benefits of online psychological interventions have been hampered by unusually high attrition compared with face-to-face therapy (Ybarra & Eaton, 2005). Lauder et al. (2007) found that retention rates of website interventions have been as low as 1% when there is no therapist involvement, and studies of MoodGYM (www.moodgym.anu.edu.au), an Australian, CBT-based online intervention, reported that less than 7% of participants progressed beyond the first 2 modules (Christensen, Griffiths, Groves, & Korten, 2006; Griffiths & Christensen, 2007). Factors such as the site being too difficult or demanding, the content not being engaging, or the program being too long may play a role in these high rates of attrition (Kelly et al., 2007; Lauder et al., 2007; Tate & Zabinski, 2004). In part because of these issues, Ybarra and Eaton (2005) recommended that developers of online interventions should conduct research with target populations to more effectively tailor programs to the needs of the recipients, a major aim of the current study.
THE CURRENT STUDY

Online mental health interventions have the potential to be the best of both worlds – to counter some of the barriers that prevent some people from seeking formal professional help by providing anonymity and easy access, while providing more in-depth and evidence-based information and guidance than might be received from other informal sources such as friends or family members. University students are an ideal target population for an online psychological wellbeing intervention for a number of reasons. First of all, a large proportion of university students experience high psychological distress, so many could benefit from the help that a universal wellbeing intervention could provide. Furthermore, rates of access for professional help are low among highly distressed individuals, indicating that many students are not seeking support and that another approach may be more effective. Finally, use of an online intervention would be congruent with current behaviour as students are high volume users of the internet, and already use the internet to obtain mental health information.

It has been established that interventions can be delivered online in an efficacious manner, however in practice, rates of access of online interventions can be quite low (Crutzen et al., 2008). Creation of a student intervention would ultimately not be feasible if students were not likely to use it. To this end, there were three major goals of this study: first, establishing the need for intervention in the university student; second, establishing student interest in using an online program designed to support university student wellbeing; and third, exploring the content that university students would like to access in an online intervention (as a starting point for potential future development of such a program).

With regards to the first goal of establishing a need for intervention, it was expected that the student sample would have a higher average level of psychological distress than the general population, and would report stronger intentions to consult informal sources of help than formal sources, and that individuals who were more distressed would also be less likely to seek help. Regarding the second question of whether students are interested in using an online program designed to support university student wellbeing, it was hypothesised that between 40% and 50% of students would report an intention to use an online student program, and that students with higher psychological distress would be more likely to express intentions to use an online program for promoting student wellbeing. With regards to the final research goal, to discover what students would like to see in an online program designed specifically to promote student wellbeing, no specific hypotheses were made regarding the findings as this part of the study was largely exploratory.

METHOD

Participants

The participants were 254 students attending a large Queensland university. The mean age of participants was 23.74 (SD = 8.16), with ages ranging from 16–66 years. More than three-quarters of participants (77.6%, n = 197) were female. First year undergraduate students made up 37.8% (n = 96) of the sample, followed by 34.3% (n = 87) other year undergraduates, 13.4% (n = 34) honours year students, and 14.6% (n = 37) postgraduate students. The majority of participants were studying full-time (85.8%, n = 218), while 13.8% (n = 35) were part-time students, and 1 (0.4%) was studying externally.

Measures

Demographics: Demographic questions included age, gender, course of enrolment, level of study (first year undergraduate, other undergraduate, Honours or post-graduate), and mode of study (full-time, part-time or external).

Psychological distress: The Kessler Psychological Distress Scale (K10; Kessler et al., 2003) is a brief, 10-item scale that measures current, non-specific psychological distress. Questions ask how often the respondent has experienced particular
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moods or physical symptoms in the last 4 weeks (for example, ‘In the past four weeks, about how often did you feel restless or fidgety?’), with five response options – all of the time, most of the time, some of the time, a little of the time, and none of the time. Scores can range from 10–50, with a score of above 30 (obtained by 2% of the general population) indicating a high level of distress probably meeting the criteria for a DSM-IV anxiety or depressive disorder (Andrews, 2003). The mean score for Australian populations according to the National Survey of Mental Health and Wellbeing in 1997 is 14.2 (Andrews & Slade, 2001). The K10 has high internal consistency reliability, with previously published Cronbach’s alpha of .92 (Kessler et al., 2002), and Cronbach’s alpha achieved in the current sample was .88. Several group cut-offs have been developed, however those used in this study are those published by the Clinical Research Unit for Anxiety and Depression, which divides scores into low (scores of 10–15), moderate (scores of 16–29) and high (scores of 30 and above) distress groups (Andrews, 2003; Australian Bureau of Statistics, 2003).

Intention to seek help: The intention to seek help for future problems was measured with the General Help-Seeking Questionnaire (Deane et al., 2001; Wilson, Deane, Ciarrochi, & Rickwood, 2005), which asks the respondent to rate on a Likert scale from 1 (extremely unlikely) to 7 (extremely likely) how likely they would be to seek help for a personal or emotional problem from a list of sources such as parents, partner, doctors and health professionals. Previous research indicates that help-seeking intentions measured by the questionnaire correlate with actual help-seeking behaviour (Wilson et al., 2005). Responses can be divided into two scales of help-seeking intention, from informal and formal sources, with scores generally ranging from 5–7 for informal sources, and 1 and 3 for formal sources (Wilson et al., 2005).

Intention to use an online student program: Participants responded to the question, ‘If there was a program available online that was designed to promote the wellbeing of university students, how likely would you be to use it?’ on a Likert scale from 1 (very unlikely) to 5 (very likely).

Desired content in a universal online student program: Participants were asked, ‘If there was a program available online designed to promote the well-being of university students, which topics would be of interest to you?’ Participants selected topics from a list of items generated from topics covered in existing early intervention resources including the MoodGYM program (Centre for Mental Health Research, 2000), the Resourceful Adolescent Program (Shochet, Holland, & Whitefield, 1997), and the QUT Counselling Services website (Queensland University of Technology, 2008). Participants could also suggest other topics using a free text box.

Procedure
Ethics clearance for the study was received from the Queensland University of Technology and was within the guidelines of the National Health and Medical Research Council. At the beginning of semester 2, 2008, an invitation to participate in the study was emailed to students by the department heads of the faculties that had agreed to participate. The email contained information about the study and a hyperlink to the online survey, with instructions to click on the hyperlink if they wished to participate. The first page of the survey provided detailed information about the study. Participants were required to check a box after the reading the information to indicate informed consent, which allowed them to progress to subsequent pages of the survey.

RESULTS
Psychological distress
The mean total score on the K10 was 20.24 (SD = 6.14) was significantly higher than the general population average of 14.2 (Andrews & Slade, 2001), t(253) = 15.66, p < .001, η² = .49. Level of psychological distress was not found to vary
systematically with age, $F(5, 248) = .335, p = .89$; or gender, $t(252) = -.31, p < .99$. Using the previously described categories of psychological distress, 24.4% ($n = 62$) were in the low distress category, 65% ($n = 165$) were in the moderate distress category, and 10.6% ($n = 27$) were in the high distress category.

**Help-seeking intentions of students**

A paired samples $t$-test found that participants scored significantly higher on the 'Informal' subscale ($M = 4.97, SD = 1.34$) than on the 'Formal' subscale ($M = 2.00, SD = .82$), $t(253) = 31.36, p < .001$, $\eta^2 = .80$, indicating that students expressed significantly higher intention to seek help from informal rather than formal sources.

**Relationships between psychological distress and help-seeking intentions**

Table 1 presents the means and standard deviations for help-seeking intentions from formal and informal sources as a function of level of psychological distress. Results of a $3 \times 2$ ANOVA demonstrated that formal help-seeking intentions did not differ significantly as a function of level of distress, $F(2, 251) = 1.45, p < .24$, partial $\eta^2 = .01$, whereas there was a significant difference in intention to seek informal help at different levels of psychological distress, $F(2, 251) = 5.17, p < .01$, partial $\eta^2 = .04$. Simple main effects of psychological distress for informal help-seeking were examined using a Bonferroni correction, and indicated that those in the high distress category differed significantly from both the moderate and the low distress category, suggesting that highly distressed individuals were significantly less likely to seek informal help than those who were less distressed.

**Intent to use an online student program**

The data indicate that 47% of university students would be either quite likely or very likely to use an online program, 30.3% were not sure, and 22.7% were either very unlikely or quite unlikely. A one-way ANOVA found that students with higher psychological distress were significantly more likely to use an online program, $F(2, 248) = 4.80, p < .01$, partial $\eta^2 = .04$. Pairwise comparisons conducted using a Bonferroni correction found significant differences in intention between the low and both the moderate and high distress categories, indicating that moderately or highly distressed participants were significantly more likely to express intention to use an online student program than those with low distress levels.

The percentages of response categories for intention to use a student program as a function of level of psychological distress are presented in Table 2. These data show that of those experiencing high psychological distress, 57.7% indicated they were quite likely or very likely to use an online student program; while of those who were moderately distressed, 49.4% were likely to use the program; and 36.1% of those in the low distress category were likely to use the program.

**Topics of interest to students in an online program**

The topics that participants indicated they would like to see in an online program for university students are summarised on Table 3. As highly distressed individuals were more likely to use an online student program, topics and

<table>
<thead>
<tr>
<th>Psychological distress (K10 category)</th>
<th>Formal help</th>
<th>Informal help</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>1 – Low distress ($n = 61$)</td>
<td>1.91</td>
<td>0.78</td>
</tr>
<tr>
<td>2 – Moderate distress ($n = 164$)</td>
<td>1.99</td>
<td>0.80</td>
</tr>
<tr>
<td>3 – High distress ($n = 26$)</td>
<td>2.23</td>
<td>0.99</td>
</tr>
</tbody>
</table>
level of distress were cross-tabulated to see whether topic interest varied as a function of level of psychological distress, also presented on Table 3. Work–life balance emerged as a topic of importance for the majority of individuals regardless of their level of psychological distress. Time management was a priority for those with a low or moderate degree of distress, and stress management was important for those with a moderate or high degree of distress. Diet and exercise was of high importance to individuals in the lower stress group, whereas for more highly distressed individuals, relaxation/keeping calm was the most highly endorsed topic, and depression and anxiety were also of high interest.

### TABLE 2: PERCENTAGES FOR STUDENT PROGRAM INTENT RESPONSES AS A FUNCTION OF PSYCHOLOGICAL DISTRESS

<table>
<thead>
<tr>
<th>Psychological distress (K10 category)</th>
<th>Very unlikely</th>
<th>Quite unlikely</th>
<th>Not sure</th>
<th>Quite likely</th>
<th>Very likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Low distress (n = 61)</td>
<td>19.7</td>
<td>9.8</td>
<td>34.4</td>
<td>32.8</td>
<td>3.3</td>
</tr>
<tr>
<td>2 – Moderate distress (n = 164)</td>
<td>3.0</td>
<td>17.7</td>
<td>29.9</td>
<td>40.9</td>
<td>8.5</td>
</tr>
<tr>
<td>3 – High distress 3 (n = 26)</td>
<td>7.7</td>
<td>11.5</td>
<td>23.1</td>
<td>38.5</td>
<td>19.2</td>
</tr>
</tbody>
</table>

### TABLE 3: TOPICS OF INTEREST TO UNIVERSITY STUDENTS WITHIN K10 CATEGORY AND TOTAL POPULATION (%)

<table>
<thead>
<tr>
<th>Topic</th>
<th>K10 Cat. 1 Low (n = 61)</th>
<th>K10 Cat. 2 Moderate (n = 165)</th>
<th>K10 Cat. 3 High (n = 26)</th>
<th>Total (N = 252)</th>
<th>n (Yes responses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work–life balance</td>
<td>73.8</td>
<td>66.7</td>
<td>73.1</td>
<td>69.0</td>
<td>174</td>
</tr>
<tr>
<td>Time management</td>
<td>73.8</td>
<td>67.3</td>
<td>53.8</td>
<td>67.5</td>
<td>170</td>
</tr>
<tr>
<td>Stress management</td>
<td>57.4</td>
<td>64.2</td>
<td>73.1</td>
<td>63.5</td>
<td>160</td>
</tr>
<tr>
<td>Procrastination</td>
<td>59.0</td>
<td>58.2</td>
<td>69.2</td>
<td>59.5</td>
<td>150</td>
</tr>
<tr>
<td>Diet and exercise</td>
<td>67.2</td>
<td>57.0</td>
<td>57.7</td>
<td>59.5</td>
<td>150</td>
</tr>
<tr>
<td>Relaxation/Keeping calm</td>
<td>52.5</td>
<td>54.5</td>
<td>76.9</td>
<td>56.3</td>
<td>142</td>
</tr>
<tr>
<td>Coping skills</td>
<td>44.3</td>
<td>50.9</td>
<td>53.8</td>
<td>49.6</td>
<td>125</td>
</tr>
<tr>
<td>Anxiety</td>
<td>36.1</td>
<td>46.7</td>
<td>73.1</td>
<td>46.8</td>
<td>118</td>
</tr>
<tr>
<td>Positive thinking/Self-talk</td>
<td>39.3</td>
<td>44.8</td>
<td>57.7</td>
<td>44.8</td>
<td>113</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>37.7</td>
<td>41.2</td>
<td>53.8</td>
<td>41.7</td>
<td>105</td>
</tr>
<tr>
<td>Communication skills</td>
<td>39.3</td>
<td>40.6</td>
<td>38.5</td>
<td>40.1</td>
<td>101</td>
</tr>
<tr>
<td>Relationships</td>
<td>36.1</td>
<td>35.2</td>
<td>38.5</td>
<td>36.5</td>
<td>92</td>
</tr>
<tr>
<td>Social skills and support</td>
<td>34.4</td>
<td>36.4</td>
<td>42.3</td>
<td>35.7</td>
<td>90</td>
</tr>
<tr>
<td>Optimism</td>
<td>27.9</td>
<td>35.8</td>
<td>42.3</td>
<td>34.5</td>
<td>87</td>
</tr>
<tr>
<td>Depression</td>
<td>21.3</td>
<td>33.3</td>
<td>73.1</td>
<td>34.5</td>
<td>87</td>
</tr>
<tr>
<td>Problem solving</td>
<td>41.0</td>
<td>31.5</td>
<td>34.6</td>
<td>34.1</td>
<td>86</td>
</tr>
<tr>
<td>Self-doubt</td>
<td>23.0</td>
<td>33.9</td>
<td>50.0</td>
<td>32.9</td>
<td>83</td>
</tr>
<tr>
<td>Perfectionism</td>
<td>19.7</td>
<td>27.3</td>
<td>42.3</td>
<td>27.0</td>
<td>68</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>32.8</td>
<td>25.5</td>
<td>23.1</td>
<td>27.0</td>
<td>68</td>
</tr>
<tr>
<td>Conflict resolution</td>
<td>34.4</td>
<td>22.8</td>
<td>30.8</td>
<td>26.2</td>
<td>66</td>
</tr>
<tr>
<td>Self-awareness</td>
<td>21.3</td>
<td>23.6</td>
<td>34.6</td>
<td>24.2</td>
<td>61</td>
</tr>
<tr>
<td>Resilience</td>
<td>26.2</td>
<td>20.0</td>
<td>19.2</td>
<td>21.4</td>
<td>54</td>
</tr>
<tr>
<td>Tolerance</td>
<td>27.9</td>
<td>13.3</td>
<td>19.2</td>
<td>17.5</td>
<td>44</td>
</tr>
<tr>
<td>Eating disorders</td>
<td>8.2</td>
<td>16.4</td>
<td>26.9</td>
<td>15.5</td>
<td>39</td>
</tr>
</tbody>
</table>

Note: Figures highlighted in bold represent the top three most endorsed topics for that K10 category. Category 3 has five highlighted topics as four topics were ranked equally according to percentage.
**DISCUSSION**

This study aimed to assess whether an online wellbeing program might be an effective way of delivering early mental health intervention to university students, by examining whether there is a need for intervention, whether students are interested in using an online intervention, and what content they were seeking in such a program.

**Establishing the need for intervention**

Consistent with previous findings (Bayram & Bilgel, 2008; Cooke et al., 2006; Stallman, 2008, 2010; Stallman & Shochet, 2009), on average university students had significantly higher psychological distress than the Australian general population (Andrews & Slade, 2001). The high prevalence of psychological distress reaffirms that university students are a high-risk population for mental health issues.

Students reported higher intentions to seek help from informal sources than formal sources for psychological issues, which is consistent with previous findings from the general population (Hodges et al., 2007; Jorm & Griffiths, 2006; Kelly et al., 2007; Rickwood et al., 2005). A possible explanation is that seeking informal help is easier because such activities are often already in the repertoire of the individual, whereas consulting a professional is an unfamiliar behaviour (Jorm & Griffiths, 2006). It bodes well for a student website then, that high use of the internet for mental health information is already a common behaviour in the university student population (Escoffrey et al., 2004; urbisJHD, 2007).

This study also found that participants were significantly less likely to seek informal help at higher levels of distress than at low levels of distress, which is consistent with previous findings that individuals with more severe problems are less likely to seek even informal help (Cigularov et al., 2008; Rickwood et al., 2005). No significant difference was found with relation to formal help-seeking at higher levels of distress, and overall formal help-seeking intention was very low.

**Intention to use an online student program**

Given that university students are at higher risk than the general population of experiencing high psychological distress, and that intention to seek help was low for highly distressed students, the provision of universal prevention or early intervention measures for university students could be beneficial. A key question of this study is whether university students were likely to use an online program designed to promote student wellbeing if such a program was provided. The finding that 47% of students intended to use such a program was within the hypothesised range of 40–50% and was similar to a previous estimate that 42% of Australian university students would use a mental health website (urbisJHD, 2007), and suggests that the internet might be a suitable medium for providing interventions to support the wellbeing of university students.

An important finding was that students who were more distressed were significantly more likely to express intention to use an online student program. In this sample, 57.7% of students in the high distress category were likely to use an online student program, as opposed to 36.1% in the low distress category. This finding is in contrast to the earlier finding that highly distressed students were less likely to seek informal help and that formal help-seeking intentions were uniformly low regardless of level of distress, and implies that an online intervention for students might particularly be utilised by those individuals who are both more in need of help and less likely to seek it from other sources. The internet appears to be a source of help that highly distressed individuals are more likely to accept, consistent with past research that individuals with more severe problems have a preference for seeking more anonymous forms of help (Rickwood et al., 2005).

**Desired content in an online student program**

The findings regarding desired topics for an online program provide some useful direction for
Universal online interventions might engage psychologically distressed university students. Topics of interest were found to vary according to individual level of psychological distress. Because those who are more highly distressed are both more likely to need the program and to use the program, the inclusion of topics of more interest to highly distressed students (which included relaxation, depression and anxiety) seems appropriate. Alternatively, if the program aims to be more universally relevant, topics of interest to all groups such as work-life balance, time management and stress management might be prioritised to prevent the development of more serious mental health problems.

**Limitations**
The results of this study should be considered in light of the limited sample of students who participated. The invitation to participate was emailed to students in only two disciplines at one university. Furthermore, there were almost three times as many females as there were males in this study. Although the sample was representative in many other respects, it would be useful to conduct this survey with a larger, gender-balanced sample to improve generalisability.

It must also be considered that the online collection, although unlikely to have introduced selection bias as all university students have internet access, may have influenced the measurement of internet-related variables in the survey. For example, it might be that students who enjoyed using the internet more were both more likely to respond to the survey and also more likely to express intention to use an online student program. It might be advisable to seek confirmation of these findings through pencil and paper questionnaires.

Finally, it should be remembered that the GHSQ measures help-seeking *intention*, not actual help-seeking, although past research has found that help-seeking intention measured by the GHSQ does correlate positively with actual rates of help-seeking (Wilson et al., 2005). Likewise, the question regarding online student program use measured intention to access a student well-being intervention. Although it would have been more useful to measure actual rates of access, this was not possible as the program in question does not yet exist. It should be considered that actual rates of access of an online student wellbeing intervention might be lower than intentions expressed by students.

**Conclusions**
The findings that students experience more psychological distress than the general population concur with a growing body of research (Bayram & Bilgel, 2008; Cooke et al., 2006; Stallman, 2008, 2010; Stallman & Shochet, 2009,) and demonstrate that university students are a high risk population for mental health issues, suggesting a need for universal early intervention programs for university students. Early intervention could help prevent development of more serious mental health problems and is likely to result in better physical health, more chance of academic success and better long-term outcomes (Hodges et al., 2007; Stallman, 2008; Vaez & Laflamme, 2008). This study provides evidence that the internet may be an acceptable medium for psychological intervention for university students. Furthermore, the use of consumer consultation in this study, emphasised by previous researchers, (Kelly et al., 2007; O’Kearney, Gibson, Christensen, & Griffiths, 2006; Ybarra & Eaton, 2005) provides clear direction for developers to create a program which is relevant and engaging for students, and thus more likely to be utilised.

One of the most important implications of this study is that an online program may reach students who would be unlikely to seek other forms of help. Rates of access for student counselling services reported previously have been as low as 5% (urbisJHD, 2007), whereas this study found that almost 50% of students would use an online program, indicating that such a program could reach a much higher proportion of students than services currently provided by universities. Furthermore, almost 60% of students with...
high levels of psychological distress, who are both more likely to need treatment and less likely to seek help, expressed an intention to use an online program. Overall the findings indicate the valuable role that online interventions could play in supporting university student wellbeing.

References
Universal online interventions might engage psychologically distressed university students


