Evaluation of a mental health course for stigma reduction: A pilot study

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Paul W. C. Wong1, Gizem Arat2,*, Martina Rehnu Ambrose1, Kathy Xie Qiuyuan1 and Monica Borschel1

Abstract: Enhanced mental literacy may lead to lesser public and self-stigmatisation and improve help-seeking behaviour. This pilot study examines the efficacy of a mental health course for undergraduate students in a Hong Kong university aiming to enhance mental health literacy and reduce stigma against mental illness in Hong Kong. An uncontrolled pre-post evaluation was conducted to investigate the students’ attitudes towards people with mental health issues, their knowledge about mental health and intended and reported behaviours. Among 111 enrolled students, 49 students completed both the pre- and post-surveys. Improvements yielded some items on knowledge about mental illness, while some items on attitudes towards mental illness had statistically significant differences but only a few items on intended behaviours towards people with mental illness. The positive findings show that teaching mental health knowledge at the university settings as a universal prevention strategy may be a good option for mental ill health stigma reduction when the mental health status of university students, especially those who are reluctant to seek for help, are sometimes overlooked.

ABOUT THE AUTHOR
The combination of the authors is a multidisciplinary team with a combination of anthropologist, clinical psychologist, post-graduate student, and social workers who are all passionate about the enhancement of mental health among university students.

PUBLIC INTEREST STATEMENT
Poor mental health and help-seeking behaviours among university students are growing concerns. The impact of unresolved mental health issues may continue into adulthood, further resulting in occupational, financial, and social difficulties. Universities provide a unique opportunity to address this significant public health problem among late adolescents and young adults. This study reports the development, implementation, and evaluation of a university-based 12-week mental health course for enhancing mental health literacy and reducing stigma against mental illness among undergraduate students in Hong Kong. Our aim is not only for the enhancement of mental health literacy but also to enhance their mental health, health-seeking behaviour, and improved mental health status. The results of the evaluation are encouraging but limited by its small sample size and short measurement period. This is an encouraging start to promote mental health related undergraduate courses offered as a universal strategy to tackle this public health issue.
1. Introduction and review of literature

Young people aged 10–24 years represent about 27% (1.8 billion) of the world’s population (Sawyer et al., 2012). In particular, 15% of the world’s young population resides in high-income countries (HICs) which are challenged by non-communicable diseases, i.e., poor mental health, and worsening income inequality (Sawyer et al., 2012). One in five young adults worldwide is estimated to experience poor mental health each year (Patel, 2007). Many of those experiencing these symptoms are unwilling to seek help. Poor mental health among young people is associated with reduced academic performance, social dysfunction, high-risk sexual behaviours, and physical ill-health (Merry, McDowell, Wild, Bir, & Cunliffe, 2004). The impact of unresolved mental health issues may continue into adulthood, further resulting in occupational, financial, and social difficulties (Gladstone & Beardslee, 2009).

The mental health status among university students, especially in the United States, appears to be declining assessed the prevalence of Axis I and Axis II DSM-IV disorders among an estimated 43,000 young people in fifty US states (Blanco et al., 2008). Within the past year, half of the college-aged individuals experienced mental health issues such as alcohol abuse and personality disorders. Despite educational status, most of these college-aged students did not seek treatment in the previous academic year (Blanco et al., 2008). Mental health requires more attention and action to reduce young people’s stigmatising attitudes and to enhance their self-awareness towards mental health issues (Yamaguchi et al., 2013).

Barriers to mental health services can be categorized into (a) knowledge-based barriers (e.g., lack of understanding about the illness, inability to recognize symptoms, not aware of services that are available); (b) structural barriers (e.g., financial cost and lack of transport); and (c) attitudinal barriers (e.g., stigma-related concerns and fears or embarrassment about revealing personal details) (Thompson, Hunt, & Issakidis, 2004). A systematic review conducted including 144 studies with 90,189 participants found that the median association between stigma and help-seeking was $d = -0.27$. Reduced help-seeking behaviour was highly correlated with treatment and internalised stigma (Clement et al., 2015). In regards to university students, Thompson et al. (2004) stipulated that barriers to seeking help for mental health issues also include stigma, lack of understanding of the issues and availability of services (Storrie, Ahern, & Tuckett, 2010). Although there are a number of mental health courses are available on the reduction of stigma against the people with mental illnesses, such as in Canada (e.g., Papish et al., 2013), United States (e.g., Bamgbade, Ford, & Barner, 2016). However, a recent systematic review (Lo, Gupta, & Keating, 2018) showed that existing research studies mostly focus on the short-term change in university students’ perception on stigma with respect to the course duration in the West. In contrast, there is a dearth of research studies on this topic in the Asian context.

1.1. The Hong Kong context

Among the 7.3 million, 10.4% comprised of young people between 15 and 24 years of age (Census and Statistics Department, 2016). Poor mental health within this vulnerable population is related to Hong Kong’s competitive education system, academic pressure, over-parenting (Shek & Yu, 2012), physical inactivity, and family crisis (Cheung et al., 2016). According to one of the most extensive Hong Kong studies on mental health among university students, 7,915 first-year undergraduate students’ rates of depression, anxiety and stress symptoms of moderate severity or above were 20.9%, 41.2% and 26.5%, respectively. These symptom rates were higher than international and local general population samples (Wong, Cheung, Chan, Ma, & Tang, 2006). Moreover,
the existence of stigma and discrimination associated with mental health issues among the general public in Hong Kong is high (Chau & Mak, 1998; Siu et al., 2012; Tsang et al., 2007).

A wide range of courses on mental health has been globally reported and taught to undergraduate students to reduce both young people’s stigma and self-stigma towards mental ill-health issues and help-seeking behaviours (Eisenberg, Golberstein, & Gollust, 2007; Sharp, Hargrove, Johnson, & Deal, 2006). The existing stigma reduction courses, have generally been focused on nursing students (Happell et al., 2014; Jakubec, Mascaro, Nordstrom, Judd, & Weimand, 2012) in Western populations (Friedrich et al., 2013; Penman, Papoulis, & Cronin, 2013) and on enhancing awareness of mental health problems (Penman et al., 2013; Wood & Wahl, 2006) and reducing stigma against mental health issues (Papish et al., 2013; Pingani et al., 2016). Only a few of such programmes have been conducted in a handful of non-western societies such as the United Arab Emirates (Sheehan, Giddens, & Sheehan, 2014) and Brazil (Villela, Maftum, & Paes, 2013). Hence, very little is known by way of how such courses on psychoeducation may help undergraduate students reduce stigmatisation towards people with mental health issues in Asian university settings.

1.2. Objectives
Accordingly, this pilot study reports the development, implementation, and evaluation of a university-based 12-week mental health course for enhancing mental health literacy and reducing stigma against mental illness among undergraduate students in a university in Hong Kong. The primary objectives of the course were to (a) deepen students’ knowledge of and attitudes towards mental health issues and people with such issues; (b) educate students on the importance of striving for stable mental health, and (c) promote anti-stigma education.

2. Methods

2.1. About the course
This 12-week course is named “Journey into Madness: Conceptions of Mental Health and Mental Illness”. This course has been taught by the first author since 2010 as one of the mandatory undergraduate courses across the 10 faculties of the university. This course was developed to introduce students to multiple perspectives on mental health and mental illness. From 2010–2014, the course was mainly lecture-based adopting a blended teaching and learning approach and the psycho-educational materials were mainly delivered by the first author. In 2015, with the introduction of a university-based experiential learning fund, the teaching team included a direct contact activity as the main graded assignment based on existing literature which suggests that interpersonal contact with members of a stigmatised community helps to reduce prejudice, lower self-stigma, and change behaviour (Corrigan, Morris, Michaels, Rafacz, & Rüsch, 2012).

Since 2015, there were two primary teaching and learning activities: psycho-education and contact-based learning. The psycho-education component of the course was designed to include a total of 11 lectures and four tutorials spanning 2 hours each. As part of these lectures and tutorials, students were introduced to historical, biological, psychological, sociological, Chinese medical and cultural perspectives of mental health and mental ill-health issues, as well as the daily barriers that confront people with mental health issues, both within a global and local cultural context. Creative multimedia resources were also created specifically for the course to supplement students’ understanding of key concepts discussed in lectures.

As for the learning activities, there were two major parts in executing the contact-based component consisting of (1) a group of 10 former service users which were trained by one of the non-governmental organisations which highly emphasise the recovery and strength-based models for mental health, visited the students in the lecture about recovery; and (2) students were grouped into 18 sub-groups of six or seven persons each within their tutorial classes and were tasked to plan and conduct two main types of activities. First, students organized a 2-hour-long service activity or workshop ranging from enhancing well-being (e.g. games and
food carnival and a photo-frame making workshop) to therapeutic activities (e.g. yoga and mindfulness-based sessions) directly benefiting mental health service users at a designated mental health agency setting. Second, students developed and implemented a 3-hour-long outreach activity creating awareness about mental health promotion to the public. Students were coached to distribute self-designed educational brochures and pamphlets and administered empirically validated mental health scales or checklists to the passersby. Engaging games and activities were also used as tools to create awareness about the prevalence, causes, symptoms, treatments, myths and facts of some common mental health issues. More information about the common core course in the studied university can be found here: https://commoncore.hku.hk/introduction/.

2.2. Participants

In 2016, there were 16,809 undergraduate students enrolled at the studied university, and 3,488 (21%) of them were international students. In this academic year, 111 students from the 10 faculties of the university enrolled in the course and were invited to participate in this pilot evaluation study.

2.3. Study design

A pre-post study design using quantitative methods as the main data collection was adopted to examine changes in students’ knowledge of and attitudes towards mental health issues and people with such issues. Pre-intervention data was collected in September 2016 and the post-intervention data were collected during the last class of the course at the end of November 2016. Those who missed the last class were reminded to fill in the post-intervention survey online. Consent forms were collected from the participants before data collection. The participants were informed about the scope of this study. We also utilised the written feedback of the students via journals regarding the experiential learning including outreach and service groups to explore insights during the course. The Human Research Ethics Committee of the University of Hong Kong (EA1606003) approved this study.

2.4. Instruments

Three questionnaires were used to measure the students' attitude towards people with mental health issues, their knowledge about mental health and intended and reported behaviours in this study as follows. Because the official teaching language of the university is English, no translation of the measures was required.

2.4.1. Mental Health Knowledge Schedule (MHKS)

The knowledge about mental health was measured by Part A of the Mental Health Knowledge Schedule (Cronbach’s alpha = 0.65) (Evans-Lacko, Henderson, & Thornicroft, 2013). Part A consists of six items that cover employment, help-seeking, recovery, recognition, support and treatment. Examples of “true” or “false” items on the survey consist of “Medication can be an effective treatment for people with mental health problems.”

2.4.2. Community Attitude Towards Mentally Ill Questionnaire (CAMI)

The Community Attitude Towards Mentally Ill Questionnaire was a 27-item questionnaire (Cronbach’s alpha = 0.87) (Mehta, Kassam, Leese, Butler, & Thornicroft, 2009). The original 40-item Community Attitude Towards Mentally Ill Questionnaire was designed to measure community contact with those suffering from symptoms of a mental illness and mental health facilities (Taylor & Dear, 1981). Respondents were asked to rate on a scale ranging from 1 (strongly disagree) to 5 (strongly agree) including items such as “People with mental illness are a burden on society.”

2.4.3. Reported and Intended Behaviour Scale (RIBS)

Mental health-related reported and intended behaviour was measured by the Reported and Intended Behaviour Scale (Evans-Lacko et al., 2013). The overall internal consistency of the scale was 0.85 (Cronbach’s alpha). This scale assesses four actual and four intended behaviour
outcomes (domains comprised: living with, working with, living nearby, and having or continuing a relationship with someone with a mental health problem), including items such as “Are you currently working with or have ever worked with someone with a mental health problem?” Answer choices ranged from yes, no or don’t know for the Reported Behaviour Scale. A sample item of intended behaviours is: “In the future, I would be willing to work with someone with a mental health problem.” Respondents chose from agree, agree slightly, neutral, disagree slightly, disagree, and don’t know in the Intended Behaviour Scale.

2.5. Data analysis
Basic descriptive statistics for participant characteristics and all knowledge, attitude and behaviour items were conducted. Chi-square test, t-tests and paired t-tests were conducted to examine if there were statistically significant changes in students’ knowledge, attitude and behaviour after the course. These were performed only for students whose information was available at both measurement time points. Subgroup analysis was conducted to compare the difference between those who attended the outreach activity and group work in their experimental learning assignments. All analyses were performed by SPSS 19.

3. Results
Among the 111 enrolled students, 23 declined to participate in the study. Among the 88 participated students, 39 pre- or post-questionnaires were incomplete. Hence, only 49 (55.7%) completed pre- and post-paired questionnaires were included in the analysis. Of the 49 participants, there were 21 males. Over half of them (57.1%) were first-year, 10.2% were second-year and 32.7% third-year students. The majority of the participants were from the Faculty of Social Sciences (n = 15), and the Faculty of Science (n = 11). Among them, 23 were involved in a mental health promotion group, 25 were in a group activity with a service users group, and the details of one participant are missing. There were no statistically significant differences regarding gender (p = 0.56), grade (p = 0.40) and year of study (p = 0.41) among students who completed both questionnaires and dropouts or incomplete questionnaires were observed. However, differences were found in the type of group activities students that they participated in (p < .01).

Table 1 shows that there were improvements in the knowledge about mental illness at the post-measurement time point. Students obtained more knowledge about professional assistance in mental health and also could offer advice to friends in need (p <.001). Moreover, more students agreed that patients with mental illness could fully recover (p <.01) and accepted that medication can be an effective treatment for people with mental health problems (p < .01).

As shown in Table 2, the results reflected the expected trends of changes in the CAMI items. However, among the 27 items, only a few statistically significant changes on items were observed. There was a statistically significant increase in knowing that there are sufficient existing services for people with mental illness (item number 14, 95% CI: −0.79 to −0.07; p =.02). There was a statistically significant decrease in the belief that we have a responsibility to provide the best possible care for people with mental illness (item number 10, 95% CI: 0.001 to 0.407; p =.004) and a reluctance to have a neighbour with mental illness (item number 17, 95% CI: 0.070 to 0.597; p =.014).

Table 3 shows that among the participants, 17 (34.7%) reported that they had a close friend with a mental health issue, seven (14.3%) reported having lived with someone with a mental health issue, and eight (16.3%) stated that they were either currently working with or had previously worked with someone with mental health issues. Regarding the changes in intended behaviour between the pre and post questionnaires, there was an increase in students’ willingness to work with people suffering from mental health issues (shown in Table 4, item 2 in the Intended Behaviour Scale, 95% CI: −0.45 to 0.04; p =0.02).
We then conducted a sub-group analysis comparing the potential differences between the two main experiential learning groups to examine if there were any differences in the measured outcomes between those who ran service groups for people with mental health issues and those who implemented outreach mental health promotion activities. No statistical significance was found in the scores of the items in the three chosen scales, except in the Intended Behaviours Scale. Specifically, more students in the outreach groups claimed that they would be willing “to work with someone with a mental health problem” than their counterparts who engaged in service activities ($p = 0.02$).

### 4. Discussion

This study adopted a pre-post study design in evaluating a course on mental health issues with opportunities to interact with individuals recovering from mental health issues. The development of the course was the logical step in a locality where (a) a high prevalence of depression, anxiety, and stress symptoms are found among first-year tertiary students; and (b) a relatively small number of mental health professionals are readily available, thus limiting the provision of selective and indicated prevention initiatives and interventions (Saxena, Sharan, Garrido, & Saraceno, 2015).

There were, generally, positive changes in the students’ knowledge, attitude, and behaviour towards people with mental health issues. In particular, the post-test findings revealed that the student participants identified the need for more community-based services and were less reluctant to have a neighbour suffering from mental health issues compared to the pre-test surveys. However, if we are to adapt to the suggestions made by Yamaguchi, Mino, and Uddin (2011) on a review study’s criteria that effectiveness is shown only when statistically significant differences in the means of proportions were observed in more than half of the items in each measurement, the present study was only effective in enhancing students’ knowledge towards mental health issues but not in enhancing positive attitudes nor the intended behaviour towards people with mental health issues. Moreover, unlike the findings of a study conducted by Corrigan et al. (2012) which found that direct contact was the most effective approach for adults, the direct contact component within this course did not seem to have a strong influence on the participants.

In regards to the qualitative feedback of the participants, their feedback was relatively positive based on their written feedback assignments to evaluate the efficacy of the experimental learning component.
Table 2. Comparison between the Pre- and Post-Course Mean score on the Community Attitude Towards Mentally Ill Questionnaire (n = 49)

| Item/statement                                                                 | Pre-test M (SD) | Post-test M (SD) | 95% CI         | t    | Cohen's d |
|--------------------------------------------------------------------------------|-----------------|------------------|----------------|------|-----------|
| 1. One of the main causes of mental illness is a lack of self-discipline and will-power | 2.29 (.79)      | 2.37 (.92)       | [−.32,.15]     | .49  | .09       |
| 2. There is something about people with mental illness that makes it easy to tell them from normal people | 2.76 (.77)      | 2.78 (.96)       | [−.34,.30]     | .90  | .02       |
| 3. As soon as a person shows signs of mental disturbance, he should be hospitalised | 1.96 (.67)      | 2.02 (.77)       | [−.28,.15]     | .57  | .08       |
| 4. Mental illness is an illness like any other.                                  | 3.02 (1.14)     | 2.90 (1.04)      | [−.18,.43]     | .42  | .10       |
| 5. Less emphasis should be placed on protecting the public from people with mental illness | 3.04 (1.11)     | 2.92 (.94)       | [−.18,.43]     | .41  | .11       |
| 6. Mental hospitals are an outdated means of treating people with mental illness | 3.06 (.94)      | 3.14 (.84)       | [−.32,.15]     | .49  | −.08      |
| 7. Virtually anyone can become mentally ill                                      | 4.29 (.61)      | 4.14 (.61)       | [−.06,.35]     | .16  | .24       |
| 8. People with mental illness have for too long been the subject of ridicule     | 3.53 (.89)      | 3.63 (.69)       | [−.34,.13]     | .39  | −.12      |
| 9. We need to adopt a far more tolerant attitude toward people with mental illness in our society | 4.14 (.64)      | 4.12 (.43)       | [−.17,.23]     | .83  | .03       |
| 10. We have a responsibility to provide the best possible care for people with mental illness | 4.12 (.66)      | 3.92 (.64)       | [.00,.40]      | .04* | .31       |
| 11. People with mental illness don't deserve our sympathy                        | 1.67 (.66)      | 1.77 (.55)       | [−.29,.08]     | .26  | −.16      |
| 12. People with mental illness are a burden on society                           | 2.04 (.89)      | 2.06 (.92)       | [−.27,.23]     | .87  | −.02      |
| 13. Increased spending on mental health services is a waste of money             | 1.67 (.59)      | 1.88 (.85)       | [−.44,.03]     | .09  | −.28      |
| 14. There are sufficient existing services for people with mental illness        | 1.86 (.64)      | 2.29 (1.11)      | [−.79,.07]     | .02* | −.47      |
| 15. People with mental illness should not be given any responsibility            | 2.00 (.76)      | 2.18 (.63)       | [−.42,.05]     | .12  | −.25      |
| 16. A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered | 1.77 (.69)      | 1.94 (.72)       | [−.46,.13]     | .26  | −.24      |
| 17. I would not want to live next door to someone who has been mentally ill     | 2.77 (.69)      | 2.44 (.76)       | [.07,.59]      | .01* | .45       |
| 18. Anyone with a history of mental problems should be excluded from taking public office | 1.88 (.66)      | 2.00 (.67)       | [−.37,.12]     | .32  | −.18      |
| 19. No-one has the right to exclude people with mental illness from their neighbourhood | 3.90 (.74)      | 4.00 (.70)       | [−.32,.11]     | .34  | −.13      |
| 20. People with mental illness are far less of a danger than most people suppose to | 3.51 (.71)      | 3.63 (.63)       | [−.32,.08]     | .22  | −.16      |
| 21. Most women who were once patients in a mental hospital can be trusted as babysitters | 3.12 (.72)      | 3.08 (.75)       | [−.25,.33]     | .78  | .05       |
For instance, 19 students who undertook the service activities reported that the experience had changed their perspectives about people with mental health issues for the better and there was an appreciation for the course for providing them with the opportunity to learn more about the strengths and abilities of mental health service users. Similarly, where the outreach activities were concerned, 14 students noted from their conversations with members of the public that there was indeed a high level of stigma attached to people with mental health issues in Hong Kong.
5. Conclusion

The present study only showed the efficacy of enhancing students’ knowledge of mental illness. Therefore, regarding research implications, further studies may wish to adopt large sample sizes with control groups, with a longer follow-up period and with a more rigorous mixed-methods research design to reduce stigma towards individuals with mental health problems. Next, future studies should target undergraduate students from diverse educational backgrounds given that medical and nursing students may have the edge over their counterparts regarding exposure to mental health issues and this added advantage may influence the outcomes. Further research should incorporate a pre- and post-assessment of the student’s own mental health, self-stigma, and actual help-seeking behaviour when possible. It might be also useful to evaluate the effect of a role model or celebrity’s contact with people with mental illnesses studied by Ferrari (2016) and found that it could be an effective way of reducing public stigma against mental illness among undergraduate students.

This study was limited by its small sample size and the relatively high incomplete rates of the pre-and-post surveys. Second, we suspect that because a large proportion of the participated students had a social sciences background, there might be a possibility of a spill-over effect regarding the measurable outcomes. Additionally, high levels of previous lived-experiences of people with mental health issues might also be another factor. Many of the young participating students reported having had previous contact with people with mental health issues, and this might also have impacted the findings of the study.

In conclusion, we suggest that more evidence-based strategies to reduce social inequality and promote human rights among the vulnerable and disadvantaged groups in our society, many more high-quality studies with larger sizes, longer terms, and different creative teaching approaches are much needed.

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Table 4. Comparison between the pre- and post-course mean score on the intended behaviours (n = 49)

| Intended Behaviours                                                                 | Pre-test Response M (SD) | Post-test Response M (SD) | 95% CI   | t       | Cohen’s d |
|-----------------------------------------------------------------------------------|--------------------------|---------------------------|----------|---------|-----------|
| 1. In the future, I would be willing to live with someone with a mental health problem. | 3.47 (.89)               | 3.63 (.80)                | [−.48, .15] | .30     | −.18      |
| 2. In the future, I would be willing to work with someone with a mental health problem. | 3.78 (.58)               | 4.02 (.77)                | [−.45, .04] | .02*    | −.35      |
| 3. In the future, I would be willing to live nearby to someone with a mental health problem. | 3.73 (.67)               | 3.84 (.89)                | [−.37, .16] | .44     | −.13      |
| 4. In the future, I would be willing to continue a relationship with a friend who developed a mental health problem. | 4.08 (.57)               | 4.18 (.72)                | [−.31, .10] | .32     | −.15      |

Note. *Statistically significant p < .05 as indicated in bold

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Page 10 of 12
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