Usefulness of a guided self-help manual in strengthening resilience in people diagnosed with moderate depression and their family caregivers in Thailand: a randomised controlled trial

ABSTRACT
The growing incidence of depression in developing countries, such as Thailand, is placing increasing pressure on public mental health services, and those living in rural areas have limited access to mental health services and specialised support. Resilience is integral to the recovery of people with depression and to caregivers. This parallel group randomised controlled trial evaluated the effectiveness of a guided self-help manual in improving resilience in adults diagnosed with moderate depression and their primary caregivers in Thailand. Our findings indicate that the approach is an accessible and low-cost approach to increasing resilience in adults with depression and their caregivers.

Keywords: bibliotherapy, cognitive behaviour therapy, depression, guided self-help, resilience
Introduction

Globally, depression is now the leading cause of disability (World Health Organization, 2017a), and its adverse effects occur across countries and cultures in every continent (Kessler & Üstün, 2008; Wang et al., 2007). Almost half the 322 million people living with depression worldwide live in the South-East Asia and Western Pacific regions (World Health Organization, 2017b). In Asia, depression is recognised as a major but treatable health challenge (World Health Organization, 2016). Thailand in particular is experiencing a marked increase in the prevalence of depression (from 233-346 per 100,000 population between 2008 and 2013) (Department of Mental Health, 2014), and this trajectory is predicted to continue, with the disorder set to become the predominant mental health problem in the country in the near future (Prukkanone, Vos, Bertram, & Lim, 2012). With this increasing prevalence there is mounting pressure on public mental health services to provide effective support to people with depression (PwD) and their families. Unmet needs for depression are especially dire in developing countries (Wang et al., 2007). Public expenditure on mental health services is usually limited in low- and middle-income countries, with most funding being directed to inpatient mental health care (World Health Organization, 2014). Mental health services are frequently located in psychiatric hospitals in large cities, while PwD and their families living in rural areas have limited access to these services and specialised support (Prukkanone et al., 2012; Songprakun & McCann, 2012a; Wang et al., 2007). In developing countries, there is often also a lack of mental health clinicians with psychotherapeutic and cognitive behavioural therapy (CBT) skills (Prukkanone et al., 2012; Wang et al., 2007). Limited mental health resources must be used effectively to provide the best possible support to those in need. Community-based services and support are widely considered to be effective in supporting PwD (Wiley-Exley, 2007). Importantly, low-cost interventions for depression are also often the most efficient (Chisholm, 2005). One of those interventions is guided self-help (GSH) bibliotherapy (Songprakun & McCann, 2012a).
Mental health nurses and other mental health clinicians are well placed to incorporate GSH bibliotherapy as an adjunct to standard support provided to adults diagnosed with depression and their caregivers in outpatient departments and in the community.

Increasing PwDs’ and caregivers’ resilience may be one way of helping them cope with their depression and their caregiving role respectively. Resilience is the ‘process of coping with adversity, change, or opportunity in a manner that results in the identification, fortification, and enrichment of resilient qualities or protective factors’ (Richardson, 2002, p. 308). It is a protective factor that facilitates successful coping in difficult circumstances (Fergus & Zimmerman, 2005), and has beneficial effects on the person’s health status. Few studies have been undertaken into PwD and caregiver resilience within the context of mental disorder. Those undertaken report it has favourable effects on caregivers of individuals with schizophrenia (Fan, Chen, Lin, Bai, & Wei, 2014), first-episode psychosis (McCann, Lubman, & Clark, 2011b), individuals with depression and caregivers’ coping (McCann, Songprakun, & Stephenson, 2016; Songprakun & McCann, 2012).

CBT is an efficacious — and the most studied — psychotherapy treatment for adults with depression (Cuijpers et al., 2013). CBT focuses on challenging unhelpful thoughts and behaviours, has lower relapse rates, and helps people to build their resilience against future episodes of depression (Anderson et al., 2005; Spangler, Simons, Monroe, & Thase, 1997). It can be combined with bibliotherapy (self-help therapy in book-form (Campbell & Smith, 2003; Jorm, Christensen, Griffiths, & Rodgers, 2002)) to treat depression. Hence, CBT based bibliotherapy is a potentially useful approach to strengthening PwDs’ and their caregivers’ resilience. The principles of bibliotherapy are to supply information, facilitate insight, promote discussion, learn how others adapt in similar situations, provide a variety of realistic ways of dealing with problems, and enable resolution of problems (Pantalon, Lubetkin, & Fishman, 1995). Bibliotherapy for depression provides a general structure to strengthen PwDs’ resilience.
to cope with the negative feelings and thoughts accompanying the disorder, and, for their caregivers, helps sustain them in their caregiving role. Similar to face-to-face forms of CBT, bibliotherapy provides information, offers solutions to problems and encourages practice in everyday life. Typically, bibliotherapy text incorporates the foundational elements of a cognitive conceptualisation of depression, while exercises help the reader overcome negative feelings associated with depression (e.g., guilt, sadness, helplessness, hopelessness, loneliness) (Gregory, Canning, Lee, & Wise, 2004).

Guided self-help (GSH) can be differentiated from other forms of (unguided) self-help therapy, whereby a clinician or coach provides a modest level of support to facilitate the person to complete the therapy. In comparison to conventional face-to-face therapy, the level of contact with a clinician or coach is considerably less with GSH (2010). The efficacy of GSH (including bibliotherapy) compared to conventional face-to-face psychotherapy therapy for depression has been assessed in a systematic review and meta-analysis of 21 studies, by Cuijpers et al. (2010). The authors concluded that both approaches had similar effects and there were no differences in drop-out rates, and bibliotherapy could be used as an adjunct to conventional face-to-face therapies for depression.

In light of the increasing prevalence of depression in Thailand, limited access to community-based mental health services, and possibility of increasing resilience, CBT-based bibliotherapy is a potentially useful alternative to hospital-based services. The present study was nested within a larger study assessing the effectiveness of CBT based bibliotherapy in reducing moderate depression in individuals diagnosed with the disorder (Songprakun & McCann, 2012b) and improving the experience of caring in their caregivers (McCann, Songprakun, & Stephenson, 2015). In this study we aimed to evaluate if a GSH manual was effective in increasing resilience in adults diagnosed with depression and their primary caregivers. A primary caregiver is the main individual ‘(aside from health, social, or voluntary
care provider) responsible for assisting with activities of daily living, supporting and advocating on behalf of” (McCann et al., 2011b, p.382) a person with depression.

**Methods**

A randomised controlled trial (RCT) parallel-group study was conducted in accordance with the CONSORT guidelines for selection, recruitment, randomisation, follow-up and analysis (CONSORT, 2013). Computerised random allocation was carried out to allocate PwD and their caregivers randomly, utilising block allocation, 1:1 to intervention (PwD: GSH manual plus standard care and treatment; caregivers: GSH manual plus standard support) or wait-list control (PwD: standard care and treatment; caregivers: standard support) groups. Allocation was undertaken off-site and concealed, in Australia, by a researcher who was not involved directly in recruitment. Data were collected between October 2007–April 2008; no change in the original trial protocol took place after recruitment began.

**Clinical trial registrations**

- Australian and New Zealand Clinical Trials Registry: ACTRN12611000905965 (retrospectively registered 24 August 2011) and ACTRN12614000774628 (retrospectively registered 21 July 2014).

- Ethical approval: Approved, No. HRETH 07/155, Victoria University Human Research Ethics Committee, Melbourne. Approved, No. IRB 17/07, Mental Health Department, Public Health Ministry of Thailand, Bangkok.

**Participants and recruitment**

Participants, who lived in Chiang Mai Province in northern Thailand, were recruited through the outpatient department of Suan Prung Psychiatric Hospital in Chiang Mai City. The
department’s mental health nurses provided brief information about the study to prospective participants. Those expressing interest in participating were referred to the researcher, who, subsequently, gave detailed information about the study.

Adults with moderate depression

Inclusion criteria were: (1) diagnosis of moderate depression (World Health Organization, 2000); (2) current hospital patient; (3) aged 18-60 years; (4) able to read and write Thai; and (5) contactable at home by telephone. Exclusion criteria were: (1) history of psychosis or developmental disability; and (2) experiencing suicidal thoughts/intent prior to entry to, or during, the study.

Primary caregivers

Inclusion criteria were: (1) primary caregiver of an adult receiving outpatient department treatment for moderate depression; (2) aged 18 years or more; (3) able to read and write in Thai; and (4) contactable at home by telephone. Exclusion criterion: currently receiving treatment for an acute episode of mental disorder.

Sample size and power

Based on a repeated measures ANOVA, a power analysis for the study was conducted using IBM® SPSS® SamplePower Version 2.0. This indicated that, for a power of 80% and an alpha of .05, and a confidence interval of 95% for identifying an effect size of 0.8 (Munro, 2005), the study could detect such an effect size with a sample of 52, with a type I error probability of 0.05. Meta-analyses of bibliotherapy for depression indicated an effect size of .77 (Gregory et al., 2004). Therefore, an effect size of .80 was considered an appropriate estimate for this study. To make provision for some attrition (approximately 8%), the sample size was increased to 56.
Instruments

Two self-report instruments were used: (i) Demographic data comprising 9 items, including gender, age, marital status, occupation, education, length of treatment for depression, current treatment, frequency of outpatient department attendance, and frequency of home visits by clinical staff. (ii) The Resilience Scale (G. M. Wagnild & Young, 1993), which assesses a person’s level of resilience, was used with PwD and their caregivers. It contains 25 items, each rated on a seven-point Likert scale, with scores ranging from 25 to 175 (higher scores are suggestive of higher levels of resilience) (G. M. Wagnild & Young, 1993). High internal reliability has been reported with the Resilience Scale in almost all the studies reviewed involving participants from a number of racial/ethnic groups (African American, American Indian, Asian, Hispanic), with Cronbach’s alpha coefficient ranging from 0.85 to 0.94 (G. Wagnild, 2009). In the current study, Cronbach’s alpha was used to assess the scale’s internal reliability at baseline, indicating good reliability (PwD: $\alpha = 0.94$; caregivers: $\alpha = 0.87$). The Resilience Scale was used because it is fairly robust and has good internal reliability and has been used in several studies with participants from various racial/ethnic backgrounds. As there was no Thai version of the Resilience Scale, the instrument was translated into Thai, with author’s permission, in line with the WHO Process of translation and adaptation of instruments guidelines (World Health Organization, n.d.).

Each participant was assessed at baseline (Week 0), post-test (Week 8) and follow-up (Week 12) (time-points 1, 2 and 3 respectively).

Procedure

The study was conducted in participants’ homes. The intervention comprised an eight-week CBT based GSH bibliotherapy manual, the Good Mood Guide: A self-help manual for depression (Bilich, Deane, Phipps, Barisic, & Gould, 2008; Phipps et al., 2004). The manual
was developed in Australia by Lifeline South Coast (NSW) and translated into Thai, with the authors’ permission. It contained eight modules (Table 1) presented in a workbook format, and each module contained reading, writing and activities to be accomplished over a one-week period, for a total of eight weeks. Originally developed for PwD, the manual could also be used by their caregivers. The manual was chosen because it is comprehensive yet easy to read, and because of its emphasis on CBT-based self-help. Homework assignments were incorporated in the manual as, in CBT, they are an indispensable method of shifting the focus of the therapy from subjective, abstract conceptualisations to achieve more realistic, objective outcomes (Neukrug, 2000). In carrying out assignments, participants are encouraged to challenge negative thoughts and behaviours and strengthen their resilience. Treatment gains may be reinforced as participants are able to re-read the manual to review strategies previously learned.

***Insert Table 1 about here***

All participants received a short weekly telephone call (approximately 5 minutes’ duration) from the researcher. The objectives of the call were to answer questions, give brief support, and for intervention group participants, provide basic coaching about the manual. Coaching included, for example, answering questions about using the manual. Treatment fidelity was also assessed during the calls, where each participant was asked pre-set questions to ascertain that the content of the respective module had been finished that week. Control group participants were given standard support. For PwD, this encompassed attendance at the outpatient department for direct consultations and prescription of antidepressant or combined antidepressant and anti-anxiety medication. For caregivers, this included accompanying the PwD to the outpatient department and being given minimal support and
information from mental health nurses and psychiatrists about how to support the PwD. After data collection was finished, control group participants were given a copy of the manual.

Data analyses

All analyses were undertaken by original assigned groups, using IBM® SPSS® Statistics (Vers. 22.0), by a researcher who was blind to group allocation. Data screening was carried out prior to statistical analyses. The combined sample (PwD and caregivers) was summarised descriptively. A mixed between-subjects and repeated measures analysis of variance (ANOVA) was conducted on resilience scores data using the three assessed time-points as the repeated measures factor. Initially screening analyses, including one between-subjects factor at a time, were conducted. Any factor showing no relationship with the outcome was deleted from further consideration. A multiple model was then derived, including all between-subjects variables considered to be of some substantive importance, and first-order interactions. A parsimonious final model was derived from this model by deletion of non-significant main effects and interactions. In all models, sphericity was assessed using Mauchly’s test and correction factors applied, if appropriate. This test indicated no evidence for violation of the sphericity assumption in the final model. Marginal mean plots were derived for significant between-subjects factors and inspected for parallelism, levels and flatness. Resilience scores were assessed for the presence of linear trends over time. Effect sizes were assessed using the partial eta squared, based on Cohen’s d (standardised mean difference) (Cohen, 1992) criteria: .2 equates to a small effect, .5 a medium effect, and .8 equates to a large effect.

Results

Socio-demographic data
Seventy-nine PwD were assessed as eligible to participate in the study (Fig. 1), and of these, 23 were excluded because they did not meet the inclusion criteria or declined to participate. Subsequently, 56 PwD were randomised to the intervention (n=27) or control (n=29) group. Due to non-completion of the study, one participant from each group was excluded at final analysis. This left 26 PwD in the intervention and 27 in the control group. Fifty-six caregivers met the inclusion criteria for the study (Fig. 1), and of these, two were excluded because they were unwilling to participate. As a consequence, 54 were randomised to the intervention (n=27) or control (n=27) group; no caregiver participants withdrew.

***Insert Fig. 1 about here***

In total, almost 63% of participants were female, and just below 70% were married or in a *de facto* relationship. Their average age was just under 42 years, and just over 78% were employed. More summary statistics of demographic variables within the two participant types, and the full cohort, are presented in Table 2.

***Insert Table 2 about here***

*Between and within group comparisons*

As expected from a randomisation process, participants in the intervention and control groups had similar levels of resilience at baseline (Fig. 2). However, summary statistics of resilience scores at baseline, post-test and follow-up indicated that the mean resilience scores were higher in caregivers than in PwD at all three time-points (Table 3). Both sets of scores increased gradually over time at all time-points, especially for caregivers. While the gap in resilience
scores between PwD and caregivers narrowed slightly over time, by the follow-up time-point PwDs’ scores had not yet reached the baseline levels of caregivers.

***Insert Table 3 about here***

Mixed ANOVA indicated that the main effect of resilience was significantly different at all time-points ($F_{2,208}=35.8$, $p<0.001$), and the magnitude of the difference between the mean scores (i.e., effect size) was moderate ($\eta^2=0.256$). Participant type (PwD versus caregiver) was associated with significant differences in resilience scores ($F_{1,104}=46.4$, $p=0.001$), and the size of the difference between the mean scores of both participant types was moderate ($\eta^2=0.309$). Participant group (Intervention versus control) was also associated with significant difference in resilience scores ($F_{1,104}=6.47$, $p=0.012$), though the magnitude of the differences between the mean scores of both groups was small ($\eta^2=0.059$). There was a significant interaction between participant type and time-point ($F_{2,208}=4.07$, $p=0.019$), indicating that the effect of participant type was not the same at all time-points. However, the size of the difference between the means of both participant types was small ($\eta^2=0.038$). There was a significant interaction between participant group and time-point ($F_{2,208}=3.91$, $p=0.022$), indicating that the effect of participant group was not the same at all time-points, and the magnitude of the difference between both groups’ mean scores was small ($\eta^2=0.036$).

The existence of the significant interactions is indicated by the non-parallelism in the marginal plots (Figs. 2 and 3). The significance of the between-groups factor is indicated by the differing levels, notably at baseline for data partitioned by participant type, and at post-test and follow-up analysis time-points for data partitioned by participant group. (It is to be expected from a process of effective random allocation that no difference between the control and intervention
groups should be apparent at baseline.) The significance of the within-groups factor is indicated by the presence of gradients in the lines on the profile plots; particularly marked between baseline and post-test analysis time-points in PwD and caregiver recipients of the intervention.

***Insert Fig. 2 and 3 about here***

The data were also assessed for the presence of linear trends. The analysis revealed a linear trend in time-dependent resilience data partitioned by participant group (F{1,104}=7.44, p=0.007), indicating that this effect appears to steadily increase with time. However, the magnitude of the effect was small (partial-\(\eta^2=0.067\)).

**Treatment fidelity**

All intervention group participants (PwD and caregivers) finished the reading component — the main requirement — of the manual, and varying proportions re-read sections after completing the final data collection time-point (PwD: n=9, 34.6%; caregivers: n=2, 7.4%). Regarding completion of the written component, treatment fidelity was lower and variable: the entire written requirement (PwD: n=10, 38.5%; caregivers: n=8, 29.6%), approximately three-quarters of the written requirement (PwD: n=11, 42.3%; caregivers: n=6, 22.2%), approximately half of the written requirement (PwD: n=6, 23.1%; caregivers: n=9, 33.3%). All intervention group participants took part in the weekly telephone call.

**Discussion**

The aim of this study was to assess the efficacy of a GSH bibliotherapy in strengthening resilience in people diagnosed with moderate depression and their primary caregivers, in comparison to recipients of routine outpatient department support only. The main findings
indicated that caregivers reported higher levels of resilience at all time-points than PwD. The difference at baseline is understandable as the latter had a formal diagnosis of depression, and the disorder is associated with low levels of resilience (Hjemdal, Vogel, Solem, Hagen, & Stiles, 2011). The difference between PwD and caregivers was moderate sized, the strongest of all the comparisons assessed. While the gap between PwDs’ and caregivers’ resilience levels decreased slightly over time, by follow-up time-point the formers’ levels had not reached the latters’ baseline levels. There was also evidence for linear trends in resilience data measured over time, albeit of a small magnitude. As anticipated, participants in the intervention and control groups reported similar levels of resilience at baseline; thereafter, the intervention group reported higher levels of resilience than the control group. The most rapid improvements in resilience scores took place between baseline and post-test; improvements between post-test and follow-up still occurred, but were less marked. Improvements in resilience in the control group may have been due to this group of PwD and their caregivers learning to cope with their depression and their caring role correspondingly, as well as the formers’ progress in recovering from the disorder (Zauszniewski, Bekhet, & Suresky, 2009). Overall, these findings accord with systematic reviews and meta-analyses supporting the use of GSH bibliotherapy for depression (Cuijpers et al., 2010; Gellatly et al., 2007). There is an integral relationship between a PwD’s depressive symptoms and a caregiver’s psychological distress (Scazufca, Menezes, & Almeida, 2002) and burden (Heru & Drury, 2011; Heru & Ryan, 2004) which, as a consequence, can have adverse effect on the former’s recovery from depression and the latter’s resilience and well-being. Low resilience can have unfavourable effects on caregiver coping and can amplify family stress. The implications of this are it may increase the length of the period of depression in, and result in adverse consequences for, the PwD (McCauley et al., 1993). Hence, resilience serves as a shield to help protect people from detrimental physical and psychological effects during stressful life situations (Yi, Vitaliano, Smith, Yi, & Weinger, 2008). Within the setting
of the current study, it can be concluded that, for PwD and caregivers, GSH bibliotherapy acted as a protective influence to increase their resilience and, therefore, their coping with depression and caregiving role respectively.

Generally, even though the outpatient department-provided standard support had beneficial effects on the resilience levels of both groups, PwD and caregivers in the intervention group reported greater increases than those in the control group. A conceivable explanation for the favourable effect of GSH bibliotherapy is that by strengthening resilience participants also increased their positive emotions, which, consequently, assisted PwD to cope with the disorder and emboldened caregivers to cope with their caregiving role. This finding is consonant with the results of several studies assessing the influence of positive emotions on the development of resilience (Ong, Bergeman, Bisconti, & Wallace, 2006; Tugade, Fredrickson, & Barrett, 2004). Furthermore, individuals with high resilience scores are likely to experience low levels of depression (Bonanno, Galea, Bucciareli, & Vlahov, 2007; Songprakun & McCann, 2014) and psychological distress (Songprakun & McCann, 2014). While GSH bibliotherapy was beneficial in the present study, and was combined with a short weekly telephone call to support and coach participants to finish the self-help manual, it is unclear if telephone contact had any effect on participants’ resilience levels. Elsewhere, Cuijpers (Cuijpers, 1997), in a meta-analysis of the use of bibliotherapy in unipolar depression, concluded that participants gained from having weekly telephone communication with a health professional.

Concerning treatment fidelity, adherence rates for reading the manual in the present study were greater than those in Taiwan study by Liu et al. (Liu et al., 2009), which reported that participants finished reading an average of 7.8 (SD = 3) out of 10 chapters. Our results suggest that PwD and their caregivers found it helpful to read the manual, which helps explain why they all finished the required reading. Furthermore, the finding about participants re-reading parts of the manual is consistent with the results of a study by Scogin et al. (Scogin,
Jamison, & Gochneaur, 1989), who reported that nearly 50% of participants re-read parts of their book after concluding the study. The lower adherence rates for the written components of the manual in the present study may be attributable to some participants finding it time-consuming and/or challenging to complete this component in addition to the reading requirement, the major component of the manual.

Overall, our findings are comparable with the similar sized Liu et al. (Liu et al., 2009) study, which reported that bibliotherapy was helpful for adults with depression, although these authors did not include caregivers in their study. Nevertheless, both studies have established that this is an efficacious way of treating depression in Asian countries. Although few bibliotherapy studies for depression have been carried out in Asian countries, the findings of the current study indicate that the method is beneficial, low-cost, convenient and assessable, especially in Thailand where people residing in rural settings have considerably less access to mental health services than those living in large cities (Prukkanone et al., 2012; Songprakun & McCann, 2012a).

This exploratory study has several limitations. First, the decision to use outpatient department mental health nurses to recruit participants may have resulted in a sample of participants who were not representative of the broader spectrum of PwD or caregivers. However, this approach was used to minimise risk to PwD in the study. Future studies might consider recruiting participants through primary care settings. Second, the researcher who undertook the assessments was not blinded to participant allocation to groups. It is our view that this did not have a detrimental effect on the study findings, though it remains a potential limitation. Third, the GSH bibliotherapy was only provided to participants for eight weeks. This may explain why the most rapid improvements in resilience scores took place between baseline and post-test, while improvements between post-test and follow-up were less marked.
Conclusion
To our knowledge, this is the first study to be conducted in Thailand and other Asian countries to evaluate if a GSH manual was effective in improving resilience in adults diagnosed with moderate depression and their primary caregivers. Our study provides preliminary evidence that GSH bibliotherapy is effective in increasing PwDs’ and their caregivers’ resilience. An important strength of the study is its practical implications in terms of its low-cost, penetration and reach in developing countries such as Thailand, but it also has relevance for those in developed countries. Our results indicate the potential for GSH bibliotherapy to be incorporated by mental health nurses and other mental health clinicians as an adjunct to standard support provided to adults with a diagnosis of moderate depression and their caregivers in outpatient departments and in the community. Our findings highlight the need for a larger and more representative sample, and to extend the follow-up period for six months or more to identify significant long-term benefits of GSH bibliotherapy. One way of doing this is to introduce periodic booster sessions of GSH bibliotherapy, which can help reinforce the benefits of the approach over a longer timeframe. Another approach is to introduce an outpatient department or primary care unit based facilitator or telephone contact person to answer PwDs’ and caregivers’ questions about the bibliotherapy, help address current depression-related difficulties, and provide emotional support. There is also scope for using GSH bibliotherapy for PwD and their caregivers in community-based primary care units in rural settings, but this requires further research.

Abbreviations
PwD, people with depression; GSH, guided self-help; CBT, cognitive behavioural therapy;
RCT, randomised controlled trial
References


