Communicating evidence-based mental health care to service users

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Abstract
There is a significant gap between evidence-based mental health care and patients, their family members and carers. To inform preventative mental health care among existing and potential service users, this review identifies effective methods for communicating evidence. A systematic review located 14 publications that met search criteria. Several methods can effect behavioural and/or intermediary change among existing and/or potential service users: namely, mass media; health warning labels; policy change; community interventions; school-based programs; parent programs; and psychoeducation. Robust evidence, however, is lacking. Although effective approaches are likely to be founded on several factors, the review concludes with a discussion of a research agenda, and appropriate methodologies that could strengthen the knowledge base that guides the communication of evidence-based mental health care to service users. This agenda has important implications for practitioners, policymakers, and researchers, which are also discussed.

Keywords: Development, dissemination, information processing, learning and learning strategies, mental health literacy, social influence, translation

Evidence-based practice holds a pivotal place in the mental health-care sector (Australian Psychological Society, 2007; Blewett, 2007; Center for Substance Abuse Treatment, 2007). It helps to allocate limited resources and services; it guides government policy and funding priorities; and, above all, it informs treatment options for the individual patient (McKenna, Ashton, & Keeney, 2004). Support for evidence-based practice comes from a number of organisations, all of which have been established to disseminate information on what works in health and mental health care. These include the Substance Abuse and Mental Health Services Administration’s (SAMHSA’s) National Registry of Evidence-based Programs and Practices, as well as the Agency for Healthcare Research and Quality (AHRQ) in the United States; the National Institute for Health and Clinical Excellence (NICE) in the United Kingdom; the Scottish Intercollegiate Guidelines Network (SIGN) in Scotland; and the National Health and Medical Research Council’s (NHMRC’s) National Institute of Clinical Studies (NICS) in Australia.

Despite the increasing number of evidence-based practices (Proctor et al., 2007), and the significant use of public resources towards these (Lehman, Goldman, Dixon, & Churchill, 2004), there is a significant gap between the evidence and those who might ultimately benefit from the evidence – be they patients, their family members or carers. Consequently, mental health literacy among service users, as well as potential service users, remains low (Jorm, Barney et al., 2006).

Mental health literacy

Mental health literacy refers to:
knowledge and beliefs about mental disorders which aid their recognition, management or prevention...
knowledge of risk factors and causes, of self-treatments, and of professional help available; and attitudes that promote recognition and appropriate help-seeking [Jorm et al., 1997, p. 182].

Mental health literacy is important for three key reasons. First, it helps the individual to promptly recognise poor wellbeing in the self and/or others. Second, it helps the individual to address identified issues in an appropriate and a timely manner. Third, it has the potential to reduce the stigma often associated with mental health issues (Sane Australia, 2007), and, in turn, improve outcomes for people with mental illness (Francis, Pirkis, Dunt, Blood, & Davis, 2002).

Given the prevalence of mental illness (Australian Bureau of Statistics, 1997; Kessler, 2004; Kessler et al., 1994), the importance of mental health literacy is well justified. More specifically, Jorm (2000) proposed that poor knowledge of mental health has the potential to limit the implementation of evidence-based mental health care; burden under-resourced services when inappropriate services are sought; and confine mental health care to professionals in the field, who are largely overburdened.

Some recent research indicates that, within Australia, mental health literacy (more specifically, depression literacy), is progressively rising (Highet, Luscombe, Davenport, Burns, & Hickie, 2006; Jorm, Christensen, & Griffiths, 2006b). This has been partly attributed to a national initiative (Jorm, Christensen, & Griffiths, 2005, 2006a), public activities (Hickie, 2002, 2004), and increasing access to depression treatments (Hickie, Pirkis, Blashki, Groom, & Davenport, 2004).

While the rise in mental health literacy is encouraging, the fact remains that not all members of the Australian public understand mental health and ways to nurture it. This was verified in a recent review by Jorm, Barney, et al. (2006), which offered the following conclusions: (a) “mental disorders are not well recognised by the public . . . “, (b) “there is a gap between public and professional beliefs about treatment . . . “, (c) “stigma is a barrier to help-seeking . . . “ [and] (d) “[mental health] First aid skills are deficient” (pp. 3–4).

In light of such illiteracy, it would be imprudent to suppose that current efforts towards mental health promotion and education are sufficient. This is verified by studies that demonstrate low levels of mental health illiteracy among the Australian public (Barney, Griffiths, Jorm, & Christensen, 2006; Jorm et al., 1997; Wirthlin Worldwide Australasia, 2001). While the reported levels of mental health illiteracy are alarming, recent evidence of improvement indicates that it is amenable to change (Highet et al., 2006; Jorm, Barney, et al., 2006; Jorm, Christensen et al., 2006b). With few exceptions, however (Francis et al., 2002; Tilford, Delaney, & Vogels, 1997), there is limited information that explicitly identifies effective methods to communicate evidence-based mental health care to existing and potential service users. Much of the literature pertains to the communication of healthcare information (Grilli, Ramsay, & Minozzi, 2002; Johnson, Sandford, & Tyndall, 2007; Scott, Harmsen, Prictor, Sowden, & Watt, 2003; Stephens, 2006). Therefore, “We know very little about how people acquire knowledge and beliefs about mental health” (Jorm, 2000, p. 398).

To inform policies and practices that aim to enhance mental health literacy, and build on knowledge transfer research, which is still in its infancy (Mitton, Adair, McKenzie, Patten, & Waye Perry, 2007), the aim of this review was to identify methods that help to communicate evidence-based mental health information (Drake et al., 2001) to existing and/or potential service users. This aim was achieved through a comprehensive appraisal of extant reviews.

Method

Inclusion criteria

Literature. Given its reliability (Khan, ter Riet, Glanville, Sowden, & Kleijnen, 2001), Level 1 evidence from systematic reviews and meta-analyses was synthesised (McAuley, 2002). This included studies that used well-tested methods to make reasonable comparisons, the results of which leave very little room for uncertainty (New Zealand Guidelines Group, 2006). Due to the paucity of research in this area, the evidence was complemented with literature reviews to ensure comprehensiveness.

Interventions. Reviews were considered if they examined any method that communicates evidence-based mental health care to existing or potential service users, and thus enhances mental health literacy. In accordance with the scope of the Cochrane Consumers and Communication Review Group (2007), examples included cross-cultural communication; mental health promotion; information provision; marketing/advertising; consumer education; and skills training. Although the scope of the Review Group also includes counselling, instruction, reminder systems, and social support, these were excluded given their remedial focus.

The focus of this review was mental health, which included mental health issues and substance use issues. Although mental health is multifaceted (World Health Organization, 2001), there is sound reason for narrowing the scope. First, mental health
and substance use issues are often associated with stigma (Barney et al., 2006; Sane Australia, 2007); this warrants the tactful delivery of information that is potentially sensitive in nature. Second, people who experience mental health and/or substance use issues are also likely to experience cognitive challenges (Rishovd Rund, 1998; Tarter, Mezzich, Hsieh, & Parks, 1995); this might influence the potential value of dissemination methods.

Participants. Reviews were considered if they involved existing or potential users of mental health and/or drug and alcohol services. This included direct recipients of mental health care, as well as those who care for them.

Outcome measures. Reviews were considered if they examined the effects associated with dissemination methods targeted at existing or potential users of mental health or drug and alcohol services. This included (a) behavioural changes, including: use of mental health and/or drug and alcohol services, use of self-management strategies, use of substances, skill development, and provision of support to others; and (b) intermediate changes, including knowledge about mental health and/or substance use, attitudes to mental health and/or substance use, and intentions to change behaviour.

Collectively, these measures indicate that, although communicating information is the aim of the interventions included in this review, modifying behaviour is the ultimate goal (Paglia & Room, 1999).

Search strategy. Reviews in the English language were sourced from Medline (including publications yet to be indexed); the Cumulative Index to Nursing and Allied Health Literature (CINAHL); PsycINFO; the Educational Resources and Information Center (ERIC); the Science Citation Index Expanded (SCI-EXPANDED); the Social Sciences Citation Index (SSCI); the Arts and Humanities Citation Index (A&HCI); the Cochrane Library; the Best Evidence Medical Education (BEME) Collaboration; Evidence Australia; and Google. While search strategies were modified according to data source, search terms (and variations thereof) included evidence, research, mental health, mental disorders, substance use disorders, attitude, communication, decision making, diffusion, dissemination, education, family involvement, knowledge transfer, information, instruction, media, parent participation, patient centred care, professional–patient relations, promotion, public health, and social marketing. These terms were used as key words and/or text words, depending on the database. This search occurred between December 2007 and January 2008.

Exclusion criteria

Evidence-based practice guidelines, opinion pieces and primary research were excluded from the review. So too were studies whose primary focus of which was not aligned with the aim of this review: this included reviews of risk and protective factors, examinations of therapeutic or remedial interventions, and evaluations of multiple interventions, for instance, families as recipients of interventions and families as co-therapists (Hoagwood, 2005).

Review

Excluding those from generic search engines (namely, Evidence Australia and Google), the initial search yielded approximately 1,177 citations. To ensure consistency, these were solely reviewed by the author, who identified 14 reviews that met the inclusion criteria. From the relevant reviews, the following information was extracted and tabulated for synthesis: review type; prime intervention(s); methods used within the intervention; target audience(s); key finding(s); identified problems; and opportunities for future research. Only the effectiveness of identified interventions is presented in this article.

Results

Included reviews

Of the 14 reviews identified, most were systematic reviews (57.1%). Because the reviews often included a myriad of interventions, it was not possible to apply the taxonomy used by the Cochrane Consumers and Communication Review Group (2007). Alternatively, the reviews were classified according to scope: that is, universal (which target entire populations), selective (which target subgroups considered to be at high-risk), or indicated (which are designed for subgroups that already demonstrate problematic behaviours) (Paglia & Room, 1999). This was not always possible, however, because many reviews encompassed two or three approaches. Although attempts were made to dissect these, this tended to dilute the key findings identified within the review. For this reason, the category “multiple” was added (Table I).

Similarly, the reviews often included a wide array of existing and/or potential service users; consequently, the participants could not be categorised discretely. Furthermore, some reviews did not precisely identify the target audience(s). While there is some overlap within the taxonomy used to classify the participants, the largest proportion of reviews had a youth focus (50%). This might be consequent to
increasing recognition of the benefits associated with prevention and early intervention among young people (McGorry, Purcell, Hickie, & Jorm, 2007; Spooner, Hall, & Lynskey, 2001); it might also be explained by the fact that many young people are within the education system and are therefore part of a captive audience for research purposes. The remaining reviews focused on people who experienced particular issues (21.4%), families (14.3%), or the public (14.3%).

**Interventions**

**Universal.** Two systematic reviews examined universal interventions for young people, aged 9–18 years, which communicated information about drugs and alcohol (Cuijpers, 2002; Sowden & Arblaster, 1998). In a review that included six controlled trials, Sowden and Arblaster focused on mass media interventions to prevent tobacco smoking among young people, while Cuijpers identified effective elements of school-based drug prevention programs through a review of 35 studies.

Although the availability of robust evidence was very limited, the reviews suggested that universal approaches have the potential to influence young people’s behaviours and thoughts about substance use (Cuijpers, 2002; Sowden & Arblaster, 1998). Cited outcomes included reduced substance use, improved normative expectations and attitudes towards substance use, and reduced intention to use substances.

The two reviews examined a diverse array of universal interventions (Cuijpers, 2002; Sowden & Arblaster, 1998). These included the use of mass media alone (with variations in type of medium and duration); the use of school-based programs alone (with variation in content and duration); and the combined use of interventions (e.g., mass media and a school-based educational component). Such variation made it difficult to synthesise the two reviews, particularly because of the identified weaknesses in the primary studies.

Nonetheless, it appears that effective interventions are likely to: (a) have a solid theoretical basis, preferably adopting the social influence model (Donaldson et al., 1996; Hansen, 1993) and/or the social marketing approach (Wallack, 1990); (b) be interactive; (c) be multifaceted, combining various interventions over an extended timeframe: for instance, school-based programs in addition to community interventions; (d) focus on norms, a commitment not to use, and intentions not to use; and (e) incorporate peer leaders.

Given the paucity of robust research, it was not clear which particular methods are likely to initiate behavioural and intermediary changes, if at all. In fact, some of the available research was contradictory (Sowden & Arblaster, 1998). Caution is therefore warranted when interpreting these findings.

**Indicated.** One meta-analysis examined an indicated approach to the communication of evidence-based mental health care to service users (Pekkala & Merinder, 2002). The focus of the study was psychoeducation for people with schizophrenia ($N=1,125$) and it included 10 randomised controlled trials (RCTs). Both individual and group interventions were included, the latter of which incorporated family education.

The authors concluded that psychoeducation is a useful part of treatment for people with schizophrenia and related illness (Pekkala & Merinder, 2002). Despite the paucity of data, as well as the heterogeneity of interventions and outcomes, psychoeducation can significantly reduce relapse or readmission rates. In fact, “It may be estimated that around twelve relapses can be avoided, or at least postponed, for around a year if 100 patients receive psychoeducation” (p. 9). Psychoeducation may also improve compliance with medication regimens, but the extent of this improvement was inconclusive.

The authors examined a range of other outcomes associated with psychoeducation (Pekkala & Merinder, 2002). This included knowledge, behaviour, mental state, social functioning, family members’ understanding of and attitudes to mental illness, insight, and service use. The results for these outcomes are weak, if not equivocal.

**Multiple approaches.** The largest proportion of reviews focused on the general dissemination of information on evidence-based practice to existing and/or potential service users (71.4%). They included a diverse array of interventions, irrespective of scope.

Most of these reviews were situated in the drug and alcohol sector (Paglia & Room, 1999; Pentz, 1999, 2003; Skara & Sussman, 2003; Winters, Fawkes, Fahnhorst, Botzet, & August, 2007; Wright & Walker, 2006). The remaining were situated in the mental health sector (Barsevick, Sweeney, Haney, &
Chung, 2002; Francis et al., 2002; Jorm, 2000; Peacock & Forbes, 2003; Pentz, 2003). The array of interventions reviewed in that body of work included (from universal to indicated approaches): (a) mass media campaigns; (b) health warning labels on cigarette packets and/or alcoholic beverages; (c) policy change; (d) the establishment of community organisations to implement prevention and treatment services in the wider community; (e) social contact with people who experience mental illness; (f) variations of school-based programs, including interactive programs, didactic programs, psychosocial approaches, affective approaches, brief interventions – with or without booster sessions, extensive interventions, teacher-led programs, peer-led programs, co-facilitated programs, and whole-of-school approaches; (g) parent programs; and (h) psychoeducation.

Collectively, the reviews suggested that each intervention has the potential to communicate evidence-based mental health (including drug and alcohol) information to existing or potential service users. This was evidenced by behavioural change (including reduced substance use, reduced symptomatology, and increased help-seeking), as well as intermediary change (including improved knowledge and attitudes).

The effectiveness of these interventions increases under particular conditions. More specifically, it is preferable that: (a) the intervention is based on a strong theoretical framework, particularly one that integrates personal, social–situational, and environmental levels of theory (Pentz, 1999, 2003; Winters et al., 2007): for example, social cognitive theory (Rosenstock, Strecher, & Becker, 1988), attribution theory (Weiner, 1986), and the theory of planned behavior (Ajzen & Manstead, 2007); (b) the needs, interests and experiences of the target audience are identified and accommodated (Paglia & Room, 1999; Peacock & Forbes, 2003; Winters et al., 2007): this includes cognitive capacity, social development, demographic profile, psychographic variables, as well as experience with or exposure to mental health issues or substance use; (c) there is opportunity for key stakeholders to participate in the development and implementation of the intervention (Winters et al., 2007); (d) the intervention is multi-method, including both education (which may be indirect) and support (which may be relatively more direct) (Barsevick et al., 2002; Francis et al., 2002; Paglia & Room, 1999; Peacock & Forbes, 2003; Pentz, 1999, 2003; Winters et al., 2007); (e) the intervention is multi-levelled, incorporating universal, selective and indicated approaches, and includes a consistent message from various settings and sectors (e.g., education, the family, employment, community services, and government) (Paglia & Room, 1999; Pentz, 1999, 2003; Winters et al., 2007); (f) the intervention is adjusted to correspond with the unique context of each sector or setting – “This feature involve[s] . . . more than language translation and staff selection considerations; it also include[s] . . . considerations of community and cultural factors that may influence receptiveness . . . by its participants” (Winters et al., 2007, p. 375); (g) the intervention challenges perceived social norms (Paglia & Room, 1999; Pentz, 1999); (h) there are ongoing opportunities to disseminate the information (Francis et al., 2002): this includes booster sessions following a brief program, or sequenced interventions that augment the preceding one; (i) group processes are interactive, rather than didactic (MindMatters Evaluation Consortium, 2000; Wyn, Cahill, Holdsworth, Rowling, & Carson, 2000): this extends to the use of mass media to stimulate discussion; and (j) the intervention is facilitated by individuals who are skilled and have the credibility of the target audience (MindMatters Evaluation Consortium, 2000; Wyn et al., 2000).

Among the reviews that encompassed more than one scope, several included school-based programs for young people (Francis et al., 2002). Paglia and Room (1999) for instance, reviewed an unspecified number of studies on the prevention of substance use issues among young people. They examined school-based programs that provided information only (the knowledge-only approach); those that sought to improve student self-image and ability to interact socially (the affective-only approach); and those that sought to counter social pressures (the psychosocial approach). The authors concluded that the most effective of these was the psychosocial approach, particularly when it involved interactive group processes and challenged perceived social norms. Programs based on this model were associated with significant behavioural changes, including the delay or prevention of substance use, which was typically sustained for a few years after initial program delivery. Given the wide array of strategies situated within the psychosocial approach, however, the authors were not able to identify the most effective interventions; nor could they determine the combinations that yielded the greatest change.

Pentz (1999, 2003) also reviewed literature on the prevention of substance use issues. Her first publication was a systematic review of prevention programs for tobacco use and included 23 individual studies and seven reviews. In reference to school-based programs, Pentz discovered that those founded on the psychosocial approach delayed the onset and monthly use of tobacco for at least 1 year, and lasted for up to 5 years. Furthermore, these effects were positively associated with program duration. A similar conclusion was offered in a
subsequent literature review on the prevention of substance use (number of studies unspecified).

Correspondingly, Skara and Sussman (2003) conducted a systematic review of evaluation studies that gauged the long-term effectiveness of prevention programs for young people. Of the programs evaluated in 14 quasi-experimental studies and 11 experimental studies, all but one were school-based, with the age of participants ranging from 8 to 28 years. All programs addressed the issues of social influence and included the opportunity to develop skills to resist these pressures. Most studies identified favourable outcomes, particularly in relation to tobacco use. For instance, 15 of the 25 studies reported “at least one (hypothesised) significant positive main effect for long-term (at least 24 months) smoking outcomes for experimental conditions relative to control conditions on such variables as ever, monthly, weekly, or daily smoking among baseline nonsmokers” (p. 463). Additionally, of the nine studies that examined the use of other substances, including alcohol and marijuana, six reported positive program effects. As reported by others (Paglia & Room, 1999; Pentz, 1999), the duration of these effects was positively associated with program duration. In fact, positive effects can endure for some 15 years following program completion (Vartiainen, Paavola, McAlister, & Purska, 1998).

Despite the aforementioned support for programs tailored to particular audiences, such as school students, many of the identified reviews also recognised the value of community-wide interventions (Jorm, 2000; Paglia & Room, 1999; Peacock & Forbes, 2003; Pentz, 1999, 2003; Skara & Sussman, 2003; Winters et al., 2007). Perhaps the most commonly evaluated universal intervention was the use of mass media campaigns (Francis et al., 2002).

Of the eight universal interventions reviewed by Francis et al. (2002), most had the capacity to improve mental health literacy. There was evidence of: (a) greater awareness and/or knowledge of mental illness (Barker, Pistrang, Shapiro, Davies, & Shaw, 1993; Fonno & Sogaard, 1995; Holmes, Corrigan, Williams, Canar, & Kubik, 1999; Sogaard & Fonno, 1995; Wolff, Pathare, Craig, & Leff, 1996a–c); (b) improved attitudes towards mental illness (Fonno & Sogaard, 1995; Holmes et al., 1999; Medvene & Bridge, 1990; Sogaard & Fonno, 1995) and people who experience mental illness (Wolff et al., 1996a–c); (c) increased disclosure of personal experiences with mental illness (Paykel, Hart, & Priest, 1998; Paykel et al., 1997; Priest, Vize, Roberts, & Tylee, 1996); (d) greater recognition of aetiology (Paykel et al., 1998; Paykel et al., 1997; Priest et al., 1996); (e) increased recognition of appropriate treatments (Paykel et al., 1998; Paykel et al., 1997; Priest et al., 1996); (f) better attitudes towards appropriate treatments (Medvene & Bridge, 1990; Priest et al., 1996); and (g) greater intention to seek professional support (Fonno & Sogaard, 1995; Paykel et al., 1998; Paykel et al., 1997; Priest et al., 1996; Sogaard & Fonno, 1995).

Although encouraging, findings on mass media interventions should be used with caution. Given the complexities of evaluating these approaches, the primary studies did not always involve concurrent control groups or randomisation and some simply used post-testing (Francis et al., 2002). For these reasons, the key findings remain inconclusive.

Notwithstanding the aforementioned limitations, some authors recognised the role of mass media campaigns in raising support for social policies that facilitate personal and community wellbeing (Casswell, Gilmore, Maguire, & Ransom, 1989; Zunz, 1997). Social policy constitutes another way to convey evidence-based mental health care to existing and/or potential service users. For example, a narrative review by Pentz (1999) of nine studies suggested that social policy can help to reduce the sale of tobacco to young people. Because of the multi-component nature of these studies, however, it was not possible to determine the potency of social policy per se in modifying youth behaviour.

Another universal approach is the use of health warning labels. While seldom evaluated as an intervention, some evidence indicated their role in enhancing mental health literacy (Paglia & Room, 1999). For example, a survey of Canadian youth (aged 10–19 years) discovered that most found cigarette warning labels credible and valuable (Paglia, de Groh, Rehm, & Ferrence, 1996; Paglia & Room, 1999); there was also a positive relationship between warnings that were memorable and knowledge of associated health consequences. A US study, however, suggested that the value of a health warning label is partly contingent on format (McKinnon, Pentz, & Stacy, 1993).

McKinnon et al. (1993) examined the effectiveness of a health warning label on alcoholic beverages, which was described as lengthy, printed in small type and difficult to read (Paglia & Room, 1999). Of the young people surveyed, only 40% reported seeing the label, and it did little to influence their alcohol consumption or their knowledge of associated health consequences.

Despite the disappointing findings reported by McKinnon et al. (1993), health warning labels that are readily accessible might be a useful adjunct to complementary methods of dissemination. As Paglia and Room (1999) concluded, “warning labels may not be a strong singular preventive approach. However, their use can, at least, serve to inform the
public and may enhance other approaches if used as part of a comprehensive program” (p. 22).

As noted, although communicating information is the aim of the interventions included in this review, modifying behaviour is the ultimate goal (Paglia & Room, 1999). As a means of modifying behaviour, however, universal approaches held limited value. Although they have the capacity to enhance awareness and knowledge of mental health issues, there was little evidence that they can modify behaviour. Although some studies indicated that universal approaches can increase intention to seek professional support (Fonneweber & Sogaard, 1995; Paykel et al., 1998; Paykel et al., 1997; Priest et al., 1996; Sogaard & Fonneweber, 1995), this is not synonymous with behavioural change. As an adjunct, however, universal approaches form an integral path towards mental health literacy. As Pentz (2003) explained, “A comprehensive multicomponent community program can simultaneously counteract the various day-to-day influences on youth drug use (school, media, parents/family, community environment), reinforce social norms for nonuse across the community, and provide sustained program exposure over several years” (p. 147).

The importance of multi-method, multi-levelled interventions was reinforced by the reviews cited in this section, which collectively suggested that the extent of change detected in primary research was likely to be transitory, if not negligible (Winters et al., 2007); this was especially the case if the initial positive impact of an intervention was not strong (Francis et al., 2002). For instance, the promising effects of a multi-method intervention, aimed at preventing alcohol use among adolescents, deteriorated over time (Skara & Sussman, 2003). Similarly, mass media campaigns that aimed to discourage substance use or misuse have had moderate success in shaping attitudes or modifying behaviour (Wright & Walker, 2006).

This raises economic concerns, particularly in regard to costly interventions such as mass media campaigns. Although the reported degree of audience penetration is varied (Francis et al., 2002), one campaign in the United Kingdom reached only 5% of the target population (Paykel et al., 1998; Paykel et al., 1997), suggesting that the costs associated with mass media campaigns may reap little return. At the time of writing, however, there were no reviews of cost–benefit (Shaw, 1999) or cost-effectiveness analyses (Guilkey, Hutchinson, & Lance, 2006) that were relevant to the aim of this review.

Given the dearth of robust empirical evidence, the identified findings should be used with caution. Skara and Sussman (2003) for instance, noted great variability in the level of internal and external validity across all studies. Others highlighted methodological flaws, including lack of randomisation (Paglia & Room, 1999), lack of control of potentially confounding variables (Barsevick et al., 2002), and analysis error. For instance, one study that demonstrated intervention effects for up to 6 years (Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995) had been criticised for its method of sample selection (Gorman, 1998), and its failure to report negative results (Brown & Kreft, 1998). Examples as this suggest that the overall findings have limited generalisability (Paglia & Room, 1999). Furthermore, it was not possible to distinguish those interventions, or components thereof, that were superior (Barsevick et al., 2002). Nor was it possible to identify the most effective configurations (Pentz, 1999).

Unspecified. The scope of one literature review was unclear (Murray-Swank & Dixon, 2004). While its focus was psychoeducation for family members of people with mental illness, the authors did not specify whether the scope was universal (i.e., all families), selective (i.e., families considered to be at high risk), or indicated (i.e., families already experiencing problems). Furthermore, the authors did not provide details of the primary research included in their review.

Nevertheless, the authors reported that prominent models of family psychoeducation (including multiple family programs, professionally-led programs and peer-led programs) were an effective way to improve the wellbeing of both patients and their family members (Murray-Swank & Dixon, 2004). By synthesising findings from more than 30 RCTs, they found that family psychoeducation can potentially (a) reduce relapse rates for people with schizophrenia and schizoaffective disorder; (b) facilitate recovery among people with bipolar disorder; and (c) provide support to family members and enhance their knowledge-base and sense of self-efficacy.

Discussion

Through an examination of systematic reviews, a meta-analysis and literature reviews, this article has identified the methods that help to communicate evidence-based mental health care to existing and/or potential service users. Most, if not all, of the interventions included in the reviews have the capacity to effect behavioural and/or intermediary change, although robust evidence of their effectiveness (and methods of action) is lacking. Within target audiences, change is possible in the knowledge of and attitudes towards mental health issues; the knowledge of and attitudes towards appropriate management strategies; intended behaviours, for instance intention to access appropriate services or reduce substance use; sense of wellbeing; and, to a lesser extent, observed behaviour, including service use and substance use.
Methods of enhancing mental health literacy that hold promise include: (a) the use of mass media: for example, an annual 3-week prevention media campaign, over 3 years, premised on provocative emotional appeals (Hafsted, 1997 as cited in Sowden & Arblaster, 1998); (b) health warning labels: for example, on cigarette packets (Paglia et al., 1996; Paglia & Room, 1999); (c) policy change: for example, state and community taxation policies that increase the price of tobacco and alcohol (Pacula & Chaloupka, 2001 as cited in Pentz, 2003); (d) community interventions, including the establishment of community organisations and social contact with people who experience mental illness through, for instance, informal discussion meetings (Francis et al., 2002; Wolff et al., 1996a–c); (e) school-based programs: for example, the School Education Program, (now referred to as Mental Illness Education–Australia), which involves presentations delivered to the students by volunteers who experience mental illness (Wearing & Edwards, 1994 as cited in Francis et al., 2002); (f) parent programs (Pentz et al., 2003 as cited in Skara & Sussman, 2003); and (g) psychoeducation: for example, a medication management group program (Goulet et al., 1993 as cited in Pekkala & Merinder, 2002).

Presenting the aforementioned methods as options, rather than recommendations, is prudent given the limitations of the extant empirical research in the area. There are few examples of robust research from which to draw firm conclusions.

Although the evidence on effective methods remains inconclusive, it does not suggest that particular methods be abandoned. Rather, a multi-method, multi-levelled approach is needed. Such an approach incorporates universal, selective and indicated approaches, and includes a consistent message from various settings and sectors. This position was endorsed by most reviewers (Barsevick et al., 2002; Cuijpers, 2002; Francis et al., 2002; Jorm, 2000; Paglia & Room, 1999; Peacock & Forbes, 2003; Pentz, 1999, 2003; Skara & Sussman, 2003; Sowden & Arblaster, 1998; Winters et al., 2007).

In addition to the importance of multi-method, multi-levelled interventions, effective approaches that enhance mental health literacy are likely to (a) be founded on a strong theoretical framework, which may include the social influence model, the social marketing approach, social cognitive theory, attribution theory, and/or the theory of planned behavior; (b) identify and accommodate the needs, interests and experiences of key stakeholders, including the target audience; (c) encourage interactivity, during both the development of the intervention and its implementation; (d) be contextually appropriate to each sector or setting in which the intervention is delivered; (e) focus on perceived social norms and challenge those that hinder mental health literacy; (f) provide ongoing opportunities to enhance mental health literacy; and (g) be facilitated by skilled and credible individuals.

Without a careful consideration of the aforesaid lessons, the time, effort and resources used to enhance mental health literacy among existing and/or potential service users will probably be in vain. This is primarily because the relationship between an intervention, the context in which it is delivered, and associated outcomes is complex and multifaceted (Jané-Llopis, 2007; Wright & Walker, 2006). Given the limitations, however, of this present review, the findings should be used with a degree of caution. Principally, they were not identified through a systematic review of available literature. Given the heterogeneous interventions (individually and combined) and the wide array of evaluation strategies, “These factors will need to be sorted out and evaluated before conclusions can be drawn about the most effective interventions” (Barsevick et al., 2002, p. 80). The value of the findings is further limited by the paucity of robust research in this area. An additional limitation pertains to the indexing systems used by databases to code publications. Related to this is the fact that this review is limited by its ability to identify all relevant reviews. Although a number of databases were searched (reflecting a range of disciplines), the key search terms have multiple synonyms and multiple definitions. A case in point is the term, dissemination. Woolf (2008) recently indicated that there is no consensus around the terms that adequately encapsulate the scope of translational research. Similar semantic issues are evident when sourcing literature on particular interventions. For instance, through the course of their review, Pekkala and Merinder (2002) discovered that “psychoeducational programs were given many names (counselling, program for relapse prevention, family education, psychoeducational medication training, etc) . . . it is [thus] quite possible that other trials have been missed because of the many names given to psychoeducation packages” (p. 9). Related to this is the lack of clear distinction between education and treatment. Although burgeoning technological advances, such as the informational opportunities offered by the Internet (Christensen & Griffiths, 2000), were largely absent from the identified reviews, this might be partly explained by the therapeutic aim of these interventions (Griffiths & Christensen, 2007). Nevertheless, the role of these interventions in enhancing mental health literacy warrants further consideration.

Despite the identified limitations, the aforementioned lessons have important implications for practice, policy and research. With regard to
practice, the lessons highlight the need for well-considered multi-method, multi-levelled interventions that are inclusive, comprehensive and ongoing. Meeting this need is likely to be resource-intensive, requiring adequate funding and personnel for extended periods (Francis et al., 2002). The issue of cost-effectiveness must therefore be considered in the design and implementation of any intervention.

With regard to policy, the findings suggest that the capacity of an intervention to enhance mental health literacy among existing and potential service users is not solely dependent on the type of intervention, regardless of how well resourced it is. The effectiveness of an intervention is also contingent on systemic factors that largely remain beyond the control of the intervener. This includes organisational infrastructure (e.g., in the context of school-based programs), the cooperation of regulatory bodies (such as government educational departments), and support from funding agencies (be they government, philanthropic or private).

With regard to research, given the numerous gaps in the extant literature, there is a myriad of opportunities in this field. The initial step, however, is to consider a myriad of epistemological and methodological challenges. These include: (a) the dearth of evidence to verify that improved mental health literacy is associated with improved mental health, particularly at the population level (Jorm, Barney, et al., 2006); (b) the overlap between dissemination and translation (Canadian Institute of Health Research, 2004; Turner & Sanders, 2006); (c) the myriad of appropriate theoretical frameworks that might inform future research (Pentz, 1999); (d) the difficulty of clarifying the components of and content within the interventions that are evaluated (Pekkala & Merinder, 2002); (e) the development of robust research designs that are appropriate, particularly when evaluating universal approaches or those that target marginalised groups (Peacock & Forbes, 2003; Pentz, 2003; Wright & Walker, 2006); (f) the identification of appropriate measures that gauge adherence to the intervention under investigation, behavioural and/or intermediary change within the target audience, as well as cost-effectiveness (Pekkala & Merinder, 2002; Pentz, 1999); and (g) the development of recruitment strategies that increase generalisability (Peacock & Forbes, 2003).

Following a consideration of these (and perhaps additional) issues, robust studies in this field can be planned and conducted.

**Research agenda**

This comprehensive appraisal suggests that there are many questions that empirical research is yet to answer. In addition to the common call for more research (Cuijpers, 2002; Peacock & Forbes, 2003; Pekkala & Merinder, 2002; Pentz, 1999; Skara & Sussman, 2003; Winters et al., 2007), the reviews also signal particular areas that require further examination. These are presented as topical gaps and methodological gaps for ease of clarity.

**Topical gaps.** The reviews indicated that extant literature is somewhat devoid of research on the following topics: (a) methods that enhance mental health literacy in Australia, with particular focus on subgroups of interest (Francis et al., 2002), including young people (Pentz, 1999, 2003), males and females (Winters et al., 2007), cultural minority groups (Skara & Sussman, 2003), as well as family members who have different experiences of caregiving (Peacock & Forbes, 2003); (b) the way in which particular audiences access and digest mental health information (Francis et al., 2002); (c) predictors and drivers that determine the effectiveness of interventions (Francis et al., 2002; Pentz, 1999, 2003), be they personal factors (i.e., motivation or readiness for change), social factors (i.e., community priorities or social norms) or environmental factors (i.e., supportive policies); (d) the efficacy of different interventions, and variations thereof (Barsevick et al., 2002; Pentz, 2003; Skara & Sussman, 2003); (e) the interactive effects between universal, selective and indicated approaches that incite change (Pentz, 1999); (f) the relationship between fidelity to an intervention and outcome (Skara & Sussman, 2003); (g) an understanding of what constitutes fidelity to an intervention, as opposed to reinvention (Pentz, 2003); (h) reasons that explain the apparent effectiveness of multi-method, multi-levelled interventions (Francis et al., 2002); (i) the combinations and sequence of interventions that produce the strongest and longest lasting effects (Pentz, 2003); (j) the cost-effectiveness of interventions, particularly those that can be exorbitant, such as the use of mass media (Francis et al., 2002); (k) the sunk costs (Arkes & Blumer, 1985) associated with futile interventions that are pursued simply because of the time, effort and/or funds already spent on it (Pentz, 2003); and finally, (l) the most efficient and effective way(s) to diffuse interventions that incite behavioural and/or intermediary change among audience members (Cuijpers, 2002; Pentz, 1999, 2003).

**Methodological gaps.** In addition to topics that warrant further examination, the reviews identified research designs, methodologies and methods that are seldom seen within the available literature, despite their potential value. These include: (a) the identification of discrete components within a chosen intervention, to determine those that
influence behavioural and/or intermediary change within the target audience (Barsevick et al., 2002; Pentz, 2003); (b) empirically-based outcome or summative evaluations (Winters et al., 2007), as well as process or formative evaluations that examine the development and implementation of interventions (Francis et al., 2002); (c) the use of sample sizes that are sufficiently large to detect bona fide differences between groups (Barsevick et al., 2002); (d) the use of appropriate comparative groups that are as similar as possible to the intervention group and control for effects such as attention from service providers (Barsevick et al., 2002); (e) comparative research that examines time-limited and prolonged interventions to understand the relationship between exposure to intervention and degree of behavioural and/or intermediary change (Barsevick et al., 2002; Skara & Sussman, 2003); as well as (f) longitudinal research to understand the duration of change and factors that influence this duration (Skara & Sussman, 2003, pp. 615–616).

The dearth of research identifying methods that communicate evidence-based mental health care to potential and/or existing service users is lamentable. Nonetheless, it presents opportunities for primary research in methods of evidence-based dissemination in this context.

Conclusion

Despite the importance of mental health literacy, there continues to be a gap between available evidence in mental health care and people who might ultimately benefit from this information: namely, existing and potential service users. Given that knowledge transfer research is still in its infancy (Mitton et al., 2007), this comprehensive review demonstrates that there are a myriad of ways to communicate available evidence to this group. While there is a dearth of robust research to verify the individual effectiveness of these methods, the review indicates that, under certain conditions, each holds potential. Although there is a need for further research in this area, the lessons identified in this review provide valuable guidance to policymakers, researchers and practitioners alike who want to communicate evidence in mental health care to those who might ultimately benefit it.

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