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Opinions about evidence: A study of social workers' attitudes towards evidence-based practice

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Abstract

- *Summary:* This article reports on a large survey of Australian Social Workers regarding their attitudes to evidence-based practice (EBP) and thoughts on factors affecting its implementation in human service organisations.
- *Findings:* Findings from a national survey of Australian social workers found a degree of support for EBP with the majority of respondents reporting changes in practice due to the influence of research. A sample size of 364 social workers formed the basis of the final analysis. Both the support for EBP and the reported changes in practice due to new evidence was highest among social workers in management positions and those with between 10 and 30 years post-qualifying practice experience. The survey also found, however an unsophisticated understanding of evidence and EBP and 'inadequate' skills in the critical appraisal of research.
- *Applications:* Despite the level of support for EBP, responses to open-ended questions reflected reservations about the formalisation, relevance, useability, and applicability of the EBP practice agenda among social workers. Given that the issues relating to the transfer of research to practice appear far more complex than EBP suggests, this study sought to understand the complex dynamics of the research transfer process in social work and the human services.

Keywords

Evidence-based practice, implementation, social work, evidence, barriers

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Background to the study

There are a number of interpretations and critical debates surrounding the formalisation of evidence and evidence-based practice in social work. The perspective taken in this study is the mainstream view that EBP is a clinical decision-making process that emanates from evidence-based medicine (Sackett et al., 2000) and is distinct from related developments in psychology concerning empirically-supported interventions or treatments (ESIs or ESTs) pioneered by the Division 12 – Society of Clinical Psychology – Task Force of the American Psychological Association (APA). Since US social work continues to draw heavily on intervention-based effectiveness research, one area of debate has been whether ‘empirically-supported interventions’ should be regarded as constituting evidence-based practice. For example, Rubin (2008) is critical of ESIs which are only called ‘evidence based’ if the practitioner is providing a specific intervention that appears on a list of appropriate interventions ‘whose effectiveness has been supported by a sufficient number of rigorous experimental outcome evaluations to merit their “seal of approval” as an evidence-based intervention’ (p. 6). For Rubin and Parrish (2007), evidence-based practice involves a combination of the ‘process perspective’ that leads to locating and appraising credible evidence as part of the evidence-based practice decision-making approach as well as the ‘intervention perspective’ emphasised by ESIs.

The confusion of EBP with practice evaluation and notions of ‘what works’ has also derailed understanding of EBP as a clinical decision-making process (Gibbs & Gambrill, 2002; Thyer & Myers, 2011; Webb, 2001, 2002). As a decision-making approach, EBP’s ambit is assessment, diagnosis, prognosis, and intervention, and it has never been limited only to effectiveness questions (Sackett et al., 1997).

Given EBP is a model designed to increase practitioner uptake of research evidence, past research on social workers' use of research conveys a pessimistic outlook for EBP implementation and repeatedly shows that 'practitioners are more likely to use pragmatic indicators than empirically-based approaches' (Baker & Ritchey, 2009, p. 377) though Mullen (2004) believes such claims have yet to be tested empirically. A central question in this respect is whether the use of indicators as heuristic devices actually constitute evidence-based practice or whether we are instead dealing with something more accurately described as 'information-based practice' (Gray, Plath, & Webb, 2009). In the USA, Bellamy, Bledsoe, and Traube (2006) found that EBP was underutilised by social workers, while Burke and Early (2003) reported that many practitioners relied on practice wisdom or intuition or collegial advice in their selection of interventions. In the UK, Sheldon and Chivers (1995) reported that social workers valued direct practice experience over other forms of knowledge and Gabbay et al. (2003) found that social workers relied heavily on tacit, experiential knowledge. Garrison and Anderson (2003) noted that, for the most part, social workers' learning centred on experience generated through practice contexts. LaMendola et al. (2009) found that social workers preferred face-to-face communication and 'satisfied their information needs through verbal communication with colleagues' (p. 712). In Australia, Murphy and McDonald (2005) found that social workers had the lowest levels of knowledge and application of EBP in a rural healthcare team:

The qualitative data revealed a fundamental incompatibility between social work practice approaches and the science of EBP. The key themes identified were: how undergraduate and professional training shapes practitioner perspectives around EBP; divergent knowledge of EBP and how this influences team

perceptions around the validity of social work practice; the ways EBP validates and reinforces existing power hierarchies, frequently to the exclusion of social work practitioners; the power of EBP as a mechanism for practice legitimisation; the marginalisation of social work as a discipline resisting the science of EBP; and the way the rural context shapes the impact of EBP in the practice setting (p. 127).

Murphy and McDonald (2005) found that, as a discipline, social work was struggling to make sense of EBP; social workers were experiencing problems in accessing information, mainly due to a poor technology infrastructure; the lack of social work research evidence made it difficult for them to position themselves in the interdisciplinary team; and most had not been trained in EBP either at university or as part of ongoing professional development. Social workers rated their discipline as non-scientific and saw their profession as built around clinical experience: ‘Consequently, within a multidisciplinary health team, the social worker is operating from a philosophy that is fundamentally at odds with the science of the medical model that informs the practice of the other health disciplines’ (Murphy & McDonald, 2005, p. 131).

Prior research into the implementation of EBP has found that the attitudes, skills, and knowledge of human service professionals play an important role in the uptake of evidence-based practice (Barratt, 2003; Bellamy et al., 2006; Bellamy et al., 2008; Booth, Booth, & Falzon, 2003; Burke & Early, 2003; Collins-Camargo, 2007; Jones et al., 2007; LaMendola et. al, 2009; Murphy & McDonald, 2004; Stevens et al., 2005; Straussner et al., 2006). There have been heated debates about what Sackett et al. (1996) meant by ‘best evidence’ when they called for the:

... conscientious, explicit, and judicious use of *current best evidence* in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the *best available external clinical evidence* from systematic research (p. 71 emphasis added).

This has been a matter of some controversy within the social sciences – and medicine where it originated. What evidence types counted as ‘current best evidence’? Is it really evidence-based practice we are dealing with or information-based practice? Did this include a range of evidence types or was it restricted to randomised controlled trials, which have been favoured as the ‘gold standard’ on the evidence hierarchy. We see value in calls for research to be systematic though social workers seem more inclined to take a broader view of evidence. Evidence-based practice, as a client-focused, clinical decision-making process in which the clinician’s search for, and critical analysis of, evidence is driven by the individual client’s situation, values, preferences, and interests nevertheless seems a goal worth pursuing even though we do not necessarily agree on the nature of evidence. We thought it offered a valid starting point for further study.

In order to contribute to the knowledge base for understanding the implementation of EBP in the Australian human services, a national survey was undertaken to examine views on evidence-based practice held by social workers. Over 400 social workers responded to the survey, providing new insights on attitudes toward EBP implementation in Australian human services. The findings from the survey, presented in this paper, indicate largely positive and welcoming support for EBP among Australian social workers. Most of the social work respondents also reported recent changes in practice due to research findings. Questions remain, however, about how social workers are making sense of evidence-based practice both conceptually and

methodologically and about the capacities of social workers to engage in the critical appraisal, synthesis, and application of research to practice.

Defining the research parameters

A national survey explored the perspectives of social workers on a range of issues relating to EBP and its implementation in the Australian human services. For the purpose of this paper, qualitative data has been extracted to address two significant questions: (i) what is the level of support for EBP among Australian social workers? (ii) to what degree are social workers reporting the use of EBP approaches in practice? Specifically, we were interested to know whether social workers were experiencing changes in practice arising from pressures around an implementation agenda regarding EBP and if so, the nature of these changes, types of evidence informing their practice, and how they were engaging with the evidence-gathering process. We also sought to explore the complexity of factors that supported and impeded social workers to engage with EBP.

Research method

Survey design

A survey questionnaire was developed to generate data on Australian social workers' attitudes toward EBP and its implementation, together with their self-reported level of skill with, and use of, particular practices associated with an EBP approach. The survey design built on earlier studies examining practitioners' attitudes toward EBP and capacities to locate and appraise evidence (McColl et al. 1998; Newman et al., 2000; Waters et al. 2009). McColl et al. (1998) surveyed the attitudes of general practitioners toward evidence-based medicine (EBM) and gave us permission for replication of the

survey with the Australian social work population. Some adaptations were made to the existing questionnaire to better suit the social work field of practice and to incorporate open-ended questions. The survey was amended so that the words ‘evidence-based practice’ replaced ‘evidence-based medicine’ and ‘general practice’ or ‘practitioners’ were replaced with ‘social work’ or ‘social workers’ throughout. We also dropped the use of the term ‘clinical practice’ as, unlike US social workers, Australian social workers are less likely to use this language to describe their interventions. Building on its predecessors, the questionnaire covered attitudes, literature searching and research appraisal, familiarity with the terms and language of EBP, and demographic information. Items on the questionnaire comprised visual analogue scales for determining attitudes; closed questions to assess levels of awareness and use of resources for literature searches; and open questions with free text sections. An ‘other’ category was included for closed questions to ensure that responses outside of the pre-established categories were captured. Open question asked for comments on the meaning of ‘evidence’, practice changes, evidence influencing practice change, databases searched, other sources of information used, and EBP training undertaken. Additional questions relating to the barriers to the implementation of EBP and the impact and extent of client input into social work decision making in the context of EBP were also included in the questionnaire.

Two sets of scales from a UK study, reporting on the self-rated competencies of healthcare professionals to search and appraise research literature, were also incorporated into the questionnaire (Newman et al., 2000). The scales required a self-rating of ability with respect to searching literature and critical appraisal skills. The sets of scales included between five and nine items measured on a five-point Likert scale

with anchor point '1' indicating 'very little or no ability' and '5' a 'good level of ability'. Newman et al. (2000) reported their results as an average of the self-rated scores, with a mean score of 3.0 used to indicate an 'adequate' level of skill.

The questionnaire was prepared for online completion and piloted with five social work graduates known to the chief investigators. Some minor changes to wording in the survey questions were made following piloting. The final document was designed as a 51-item online, self-completed, voluntary, anonymous survey hosted on Survey Monkey (Webb, Gray, Plath, & Joy, 2010).

The Australian social worker population

The population of Australian social workers is diverse in terms of fields of practice intervention and employing agencies, including government and nongovernment organisations. Unlike the UK, social work is not a registered profession in Australia so there is no central register for contacting all social workers. Many social workers with accredited social work qualifications, in fact, have a title other than 'social worker' but still associate with the social work profession. While university social work programs are accredited by the Australian Association of Social Workers (AASW) and graduates are eligible for membership of the professional association, individual social workers are not required to take out membership. Though it is difficult to gauge the exact number of social workers in Australia since the main information source available – the Australian Bureau of Statistics – relies on self-reporting of occupation, the 2006 Census reported that there were about 12,440 social workers while the most reliable estimate of the number of people who have completed an accredited social work degree is the Department of Education, Employment and Workplace Relations (DEEWR, 2008) based on the ANZSCO classification (ABS, 2006), which estimated there were 19,300

qualified social work professionals in Australia based on qualifications. The voluntary membership of the AASW represents approximately 7000 social workers, but the majority, of over 12,000, practice outside the jurisdiction of the professional association which sets ethical, educational, and practice standards (see also Healy & Lonne, 2010).

Sampling and survey distribution

The situation described above presents difficulties in attempts to obtain a representative sample of social workers. While membership of the AASW did not provide a fully representative group, this source provided ready access to over 7000 social workers. Hence, as the peak professional body for social workers in Australia, the AASW was chosen as the best and most appropriate vehicle for the dissemination of the survey questionnaire and gaining a semblance of representativeness.

An invitation to participate in the survey was emailed by the AASW to members on the Association's email list who had agreed to receive surveys (7231). Of these, 614 emails bounced back as 'undeliverable', resulting in 6617 social workers who received the invitation to participate in the study. The invitation to participate included a statement from the AASW endorsing the study; the link to the survey; and an Information Statement with details about the chief investigators, funding source (Australian Research Council Discovery Project), background to and aims of the study, voluntary participation and anonymity of responses, as per ethical clearance granted for the study by the University Human Research Ethics Committee. A brief version of the Information Statement was also included as part of the survey proper. Electronic submission of the completed survey was considered an indication of consent to participate. On the basis of the information sought, it was not possible to identify respondents (or non-respondents). Follow-up requests to complete and submit the

survey were placed in AASW national and state branch newsletters over the three months following the initial call for participants. All aspects of the research design and data collection methods were approved by the University Human Research Ethics Committee.

Data analysis

Survey responses were analysed using a combination of descriptive and inferential statistics. Categorical survey responses were downloaded directly from Survey Monkey into SPSS (originally the Statistical Package for the Social Sciences). Text from the open-ended survey questions were summarised primarily using a content analysis method for coding qualitative data. The data was initially entered into spread sheets and hand coded to separate the change to practice from the type of evidence. The initial codes for each part were then imported into NVivo and sorted using a word frequency query. The frequencies are indicative only. A number of responses did not address both parts of the question and were coded discreetly to distinguish them from missing and not applicable. Twenty-one respondents did not provide an example of a specific change to practice.

Respondents were asked about their understanding of the word ‘evidence’ in the term evidence-based practice. This was an open-ended question generating qualitative data. The data was imported into NVivo and a word count (including root) and tag cloud generated to gain an overview of the most commonly used words (see Figure 1). The tag cloud is a visual representation of text data generated from the qualitative questions. We found this format useful for quickly identifying the most prominent terms and for locating a term to determine its relative prominence.

As can be gleaned immediately from the tag cloud most respondents understood that evidence has something to do with *research* (research, researched, researcher, and researching). The researchers did not provide a definition of EBP and so respondents were very much drawing on their own frame of reference and understandings in answering this question. Researchers were not concerned to rate responses in accordance with some predetermined ‘hierarchy of evidence’, which, in any case, would not have proven fruitful. What was most noticeable by its absence was how few respondents mentioned other components of evidence aside from research evidence: clinical expertise, practice wisdom and client values. Only four respondents mentioned all three in combination.

Figure 1: Common words associated with ‘evidence’

Results

Profile of respondents

The online questionnaire was completed by 428 AASW members, providing a response rate of 6.5% which, though low, constituted the largest sample of social workers studied in Australia with respect to EBP implementation. This sample, though unrepresentative of Australian social workers in general, due to the low response rate, nevertheless was considered adequate enough to provide a reasonably robust indication of social workers' opinions on evidence-based practice given it was the largest sample ever studied on this topic in Australia. Once invalid cases with incomplete surveys were excluded, an eventual sample of 364 valid cases remained for data analysis. Characteristics of the respondents are summarised in Table 1. Though a larger, more targeted sample of respondents representing a variety of workplaces or services would have yielded more valid and generalisable data, this was not possible within the parameters of this study and is a valid area for future research.

As shown in Table 1, the sample comprised 81% females and 19% males. There were 76% over the age of 40 and 50% over the age of 50, with a mean age of 48, indicating a sample bias toward older social workers, accurately reflecting the aging social work population profile in Australia (Healy & Lonne, 2010). The sample included social workers from all six Australian states and two territories working in a broad cross section of social work fields of practice. The main client groups nominated by respondents were children and families (n=96, 26%) and people with mental health concerns (n=87, 24%). The third most popular response was 'Other' (n=85, 23%) for which responses were analysed and coded as far as possible into additional categories,

but 35% of these resisted categorisation and were labelled ‘miscellaneous’. This reflects the diverse fields in which Australian social workers practice. Nearly half of the respondents (48%) nominated ‘frontline worker’ as the term that best described their level of practice. The professional work title was ‘social worker’ for 42% of respondents, with the remaining 58% holding a plethora of titles. ‘Counsellor’ was the second most frequently used title (9.1%) followed by a range of management, direct service, educational, and development roles.

Table 1: Characteristics of survey respondents

AASW members who completed online survey		% (n=364)
Age		
	20 - 29	9
	30 - 39	15
	40 - 49	26
	50 - 59	35
	Over 60+	15
Mean number of years in human services		19
Sex		
	Females	81
	Males	19
Level of Highest Qualification		
	Undergraduate degree	62
	Master degree	25
	PhD	6
	Other	7
Team relationship:		
	Works mainly alone	31
	Works as part of a team	68
	Other	2
Frontline workers		48

Attitudes to evidence-based practice

The survey items measuring perceptions toward EBP were presented as a ten-point rating scale. Scores anchored at '1' represented a positive response (extremely welcoming, extremely useful, or strongly agree) and those anchored at '10' represented a negative response (extremely unwelcoming, not useful, or strongly disagree). A summary of responses is provided in Table 2.

Table 2: Level of Support for EBP among Australian Social Workers

1. How would you describe your attitude toward EBP?	80%
2. How would you describe the attitude of your colleagues toward EBP?	61%
3. How useful are research findings in your day-to-day work?	82%
4. Implementing EBP improves client care	85%
5. EBP is of limited use to social work	76%*

*reverse scored: 6-10 on 10 point scale

As shown in Table 2, respondents reported a welcoming attitude toward the promotion of EBP (80% selected a score of '4' or less). While less positive than their self-assessment, respondents also thought that the attitude of social work colleagues toward EBP was welcoming (61% selected '4' or less). Most (82%) thought research findings were useful in their everyday activities, with over a quarter (27%) rating research as extremely useful (scoring '1'). The majority agreed that 'implementing evidence-based practice improved client care' (85% scored '4' or less). Respondents generally

disagreed that EBP was of limited value because social work lacks a scientific base (30% strongly disagreed by scoring '10', a cumulative 76% scored '6' or higher).

The opportunity to provide a free response at the end of the questionnaire was taken up by only 80 respondents (17%). After coding to identify the main themes, approximately half of the responses were grouped into three categories relating to support for EBP: positive, mixed, and negative. The following quotes, reproduced verbatim, reflect the range of responses. The positive responses tended also to identify the necessity for social workers to develop capacities in EBP:

Have always felt that EBP was important but very little SW support for it.

Agree some of our work is hard to apply EBP to. SW needs to develop tools to help busy practitioners who are too overworked to cope with the task of trying to do research (R88)

I think this is a really important area for social workers to improve in. ... The ability to utilise evidence in our practice is essential to remaining relevant and accountable to our clients, our employers and our profession. We need to learn how to speak to the 'warm fuzziness' of our profession in a language that our political environment understands (R102).

I think it is really important for social workers to have more time to access research, and that more research is available to inform their practice with evidence. I also think it is vital that critical reflection, theoretical knowledge and an awareness of the unique experiences of each client are used alongside evidence based studies (R217).

The mixed responses identified support for EBP in association with other factors, but with some reservations, particularly in relation to how ‘evidence’ is defined and the unique and context-bound circumstances of social work practice:

EBP has a certain ‘ick’ factor, and is generally associated with the health field. Having said that, I think it probably plays a significant role in the training, supervision and other PD activities of social workers, we just don’t always realise it! (R225)

I use EBP (as far as I understand the concept) in my practice where possible. I believe it is important ... however, the broad and varied nature of SW practice (and more-so for clients who fall between ‘gaps’) does not always lend itself to a rigid interpretations or measurements (R229).

I would happily engage and [sic] encourage evidence based practice if we could extend what we take to be ‘evidence’ (R258).

I think there is value in EBP but ... a lot of social work is with unbounded problems- where there is no clear answer ... some of this is science – but much of this art and communication and relationship skills and knowledge about policy and structures. Human beings are not completely quantifiable. There needs to be room for flexibility and intuition and art in helping. (R271)

Although I find some aspects of EBP useful, it dominates the working culture of the organisation that I currently work for, and therefore does not allow for other ways of working that are not considered ‘EBP’ . (R312)

Comments coded as negative tended to be critical of EBP for being biased, narrow, and simplistic or presented EBP as a flavour of the month agenda:

I think EBP has become a travesty a band-wagon that people have to jump on board although it has some significant wheels missing: the research in question is often of dubious value but has been marketed well (R93).

Evidence generation has been interpreted in a very reductionist manner not taking into account the broader interpretation of what constitutes evidence in human services enquiry (R290).

Social work practice changes informed by research

In response to a 'Yes or No' question, most respondents (65%) reported that a significant change had occurred in their social work practice within the last two years due to the impact of research findings. Not surprisingly, those who held more positive opinions of EBP (as measured by questions 1, 3, 4, and 5 in Table 2) were significantly more likely to report a change in practice due to their uptake of research findings ($p < 0.01$). Tests of association were also undertaken to determine whether any demographic groups of social workers were more inclined to report changes in practice due to research. While no differences were found in terms of area of practice, level of qualifications, geographic location, or gender, significant relationships were found for level of employment and age. Specifically, with collapsed categories, those in executive and middle-management roles were significantly more likely to report changes in practice due to research findings than those in frontline, team leader, consultant, and other roles ($p < 0.05$). Significantly more social workers who had been in practice for

over 10 years, but less than 30 years, reported changes in practice due to research than did those with less than 10 years practice experience.

In order to provide evidence for and illustrate their responses, the respondents were asked to give an example of a change in practice influenced by research and to explain the evidence base on which the change was made. Responses were varied and included a number of different types of changes: the adoption of a new therapeutic intervention or program (e.g., Acceptance Commitment Therapy); ceasing a particular practice (e.g., interviewing children about traumatic events); the use of different principles to guide practice (e.g., a family partnership approach); using evidence-based best practice guidelines that had been developed for the practice setting; the adoption of a different assessment tool or process; and conceptual changes in the way a client issue was understood and approached. The responses to this survey question were generally brief, but it was clear that the relevance of research evidence was shaped by the practice context in which social workers work. The interdisciplinary nature of evidence was also apparent.

Literature review of factors impacting on failure to thrive in relation to children (child protection work) – meant that I assessed a broader range of issues.

Nutrition and swallowing screening tools for use with clients with intellectual disability in NSW, based upon evidence, indicating much malnutrition and many deaths were preventable by implementing such tools.

Respondents were asked to identify the type of evidence that had informed the change in practice. Responses to this open question were analysed thematically and grouped into categories. Of those who identified a change in practice due to research, 27% did not

state the evidence that informed this change. Those who did refer to the evidence mostly gave brief and general responses. Very few respondents indicated acceptance of a hierarchy of evidence or of the strength of particular methodologies or systematic reviews. Empirical research was referred to predominantly in generic terms or as a single source (e.g., journal article, website, training workshop, or conference) and the proportion of respondents who indicated that they appraised a range of research to inform a change in practice was small (6%).

Evidence-gathering practices and skills reported by social workers

In response to questions regarding literature searching and appraisal practices, a large majority (93%) reported that they had searched literature or conducted a literature review but only 63% claimed to have received formal training in a literature search strategy.

As shown in Figure 2, of those who had undertaken a literature search, 35% (117) claimed that the last search that influenced their practice was within the last month. The next most common response to this question was 'over a year ago' (22%), which was closely followed by 'one month' (20%). Only 8% reported it was 'too long to remember.'

In response to a question asking about the databases most often searched, 213 valid responses were obtained. The most used databases were Medline (40%), Social Work Abstracts (17%), and the Cochrane Collaboration (15%). The respondents indicating that they had not used any electronic database in the last three months to conduct a literature search comprised 38%. On the other end of the spectrum, 12% claimed to have used electronic databases at least 10 times in the prior three months.

The self-reported skills in literature searching and critical appraisal of research were assessed by calculating mean scores for the sample group on the Newman et al. (2000) competencies scales. Following the scoring standard where 3 represents an adequate skill level, the mean score was better than adequate for all of the literature searching skills: formulating a searchable question (3.5), identifying key terms (3.7), selecting relevant information (3.9), keyboard skills (4.1), accessing the required databases (3.4), and familiarity with search terms (3.4). The mean scores for skills in critical appraisal of types of research studies were, however, mostly below 'adequate': studies within their area of practice (3.1), randomised controlled trials (2.5), systematic reviews (2.7), meta-analyses (2.5), and qualitative studies (2.9).

Discussion

While the survey captured a sample of 364 valid cases from a good cross section of social work fields of practice in Australia, and this was the largest sample of social workers studied in Australia on EBP, the response rate was low (6.5%, i.e., 364 respondents from 6617 online surveys distributed). Though the survey findings indicated a degree of support for EBP among Australian social workers, with over 80% regarding EBP as useful for social work and a means to improve client care, some qualification is warranted. Given the sample's lack of representativeness, the findings cannot be generalised and some biases are likely. Data on the characteristics of the sample suggest a bias toward older social workers and, given the title of the survey, a bias toward those social workers actively engaged and interested in or supportive of EBP could also be expected. In presenting these findings, the authors acknowledge that there are reservations about EBP within the Australian social work profession. These reservations are reflected in some of the responses to the open-ended questions presented above and include concerns about narrow interpretations of evidence and limits to the applicability of evidence to complex and varied social work practice situations.

The survey findings nevertheless indicate that social workers are making changes to their practice interventions as a result of research findings, with 65% reporting a change in practice in the last two years due to research. The self-reporting nature of the survey is likely to have inflated this statistic to some degree, however the request for respondents to provide evidence of their claim with an example of a practice intervention change and associated evidence was used to minimise this bias.

Significantly more managers were found to report research-based changes to practice.

This perhaps is a reflection of the capacity of managers to effect more changes in practice or alternatively to access research findings more readily. Statistical analysis also revealed that significantly more social workers with between 10 and 30 years of practice experience reported changes in practice due to research than those with either less or more experience. This finding challenges the view that recent graduates are likely to be more innovative, critical of traditional practices, or likely to make changes as implied by the strong thrust toward educating social work students to apply EBP (Howard, Allen-Meares, and Ruffolo, 2007; Howard, McMillen, and Polio, 2003; Rubin, 2010; Shlonsky, 2009; Shlonsky and Stern, 2007; Soydan, 2007).

The findings reported here raise some questions about the ways in which social workers conceptually frame evidence and its methodology. The EBP implementation agenda in social work would benefit greatly from insights in recent sociological literature on the implementation of new practices and technologies. This is often referred to as normalisation process theory which focuses on implementing, embedding, and integrating organisational innovations. Developed primarily by Carl R. May (2009), the theory is a contribution to the field of science and technology studies (STS) and is the result of a program of theory building by May and his co-researchers (2007). It fits well with the case-study approach to empirical investigation used in STS. Insights into the necessity of the process involve: (i) coherence work (sense making); (ii) engagement work with practitioners (cognitive participation), (iii) the work of enacting a practice (teamwork), and (iv) the work of understanding and appraising the effects of new practices. Taken together these dimensions constitute the frame of implementation in normalisation process theory, whereby the implementation of new methods and

technologies is regarded as part of a complex and dynamic process. This framework is particularly relevant to the EBP agenda in social work.

Respondents' statements about the research evidence that informed their reported changes in practice tended to be general and lacked recognition of the range and strength of available research evidence, or the broader context in which it is embedded. In addition, while self-reported literature searching skills were scored at an 'adequate' level and over one third of respondents reported doing a literature search within the prior month, mean scores for skills in critical appraisal of research were below 'adequate'. This further supports the finding that social workers have an unsophisticated grasp of research evidence and its methodology and could benefit from skill or professional development in assessing the strength and application of research findings. Alongside this, however, responses to the open questions showed that some social workers were also critical of confining the definition of 'evidence' to published research. This negative attitude is likely to impact on motivation to acquire skills in the critical appraisal of research.

At best, this study must be seen as exploratory in light of its limitations. Although it is the largest study of its nature in terms of the number of social workers surveyed, the low response rate likely resulted in a sample biased toward an older, more experienced group of social workers, or those with a particular interest or involvement in EBP implementation. While some respondents identified barriers to EBP implementation in terms of a poor match between the expectations of EBP and the nature of social work practice, a more representative sample might have identified this as a more significant barrier given debate regarding the basis for effective practice, in terms of evidence versus relationships, remains current within social work.

Conclusion

In light of past research in this area and given a strong critical theory bent in the Australian social work literature (Allen, Briskman, & Pease, 2009; Fook, 2002; Healy, 2000; Pease, 2002, 2009), the finding that the social workers who responded to our survey were well-disposed toward EBP was a little surprising. There was some evidence that this was a function of the context in which they practised and supports broader research on the embedding of EBP as a function of organisational culture. Findings suggest acknowledgement by social workers of the need to forge strong links between research and practice and of the potential for research findings to inform better social work outcomes for clients. Evidence-based practice is a widely accepted approach to strengthening research-practice connections among those surveyed, but it appears that the application of the EBP approach by social workers is currently unsophisticated and limited by inadequate skills in the critical appraisal of research and by continuing reservations about the nature and applicability of research evidence for the complex and varied practice of social work. Within the Australian context the verdict is out on whether we are actually witnessing shifting attitudes towards a more formal evidence-based agenda in social work or simply an affirmation of the value of research as an information source for supporting decisions in social work.

Ethics approval

The University of Newcastle Human Research Ethics Committee granted ethical approval for this study.

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