

ORIGINAL ARTICLE

# Strengthening the social relationships of mothers with learning difficulties

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## Accessible summary

- Many mothers with learning difficulties want help with meeting people and making friends, and ‘getting out and about’ in their community.
- We worked with mothers with learning difficulties and family support workers to create a programme, the ASLP, to help mothers achieve their goals to get out and about in the community.
- This programme involves mothers meeting, talking and learning together over a 12-week period. Mothers also receive one to one support to work on their individual goals.
- We tested the programme with 32 mothers and most mothers achieved their goals and now feel better about themselves and more confident about being in the community.
- This programme is now available for other service workers to use to support mothers with learning difficulties in their communities.

## Summary

Mothers with learning difficulties are often isolated within their local communities. They also report low levels of social support. Social disconnection is associated with high levels of stress and poorer mental health, and in turn, adverse parenting and child outcomes. In the study reported here, a multi-site, intervention group only, repeated measures research design was employed to determine the efficacy of a group-based, adult-learning programme designed to strengthen the social relationships and improve the psychological wellbeing of mothers with learning difficulties. Thirty-two mothers with learning difficulties completed the programme across six sites in Australia. The effects of the programme on perceived social support and psychological wellbeing were substantially greater than established benchmarks for parent-training and family support programmes. These promising findings warrant further investigation, ideally employing a randomised-controlled trial design.

**Keywords** *Adult learning, community, empowerment, mothers, social support, wellbeing*

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## Introduction

Mothers with learning difficulties tend to have smaller social networks than other mothers and report lower levels of social support (Feldman *et al.* 2002; Llewellyn & McConnell 2002; Stenfert-Kroese *et al.* 2002). This social disconnection is associated with high levels of stress and generally poor mental health, which in turn is associated with adverse parenting and child outcomes (Aunos *et al.* 2004; Feldman *et al.* 2002; McConnell *et al.* 2008; Stenfert-Kroese *et al.* 2002). In this paper, we report findings from an evaluation of a group-based programme designed to strengthen the social relationships and improve the psychological wellbeing of mothers with learning difficulties.

## Social relationships, maternal-child health and wellbeing

The support networks of mothers with learning difficulties typically include multiple service workers, who may compensate for the absence of friends and neighbours (Llewellyn & McConnell 2002). These mothers also report wanting more help with meeting people and making friends and accessing resources and opportunities in their local communities (Llewellyn *et al.* 1998; Walton-Allen & Feldman 1991). The mothers' need for social connection may be overlooked by service workers who tend to focus on the need for parenting education (Booth & Booth 2003; Llewellyn *et al.* 1998).

In the general population, significant associations have been found between aspects of mothers' social relationships and maternal and child outcomes. For example, links have been made between aspects of mothers' social relationships and perinatal complications (Klaus *et al.* 1986); birthweight and foetal growth (Feldman *et al.* 2000); pre- and post-natal depression (Collins *et al.* 1993; Cutrona & Troutman 1986; McConnell *et al.* 2008); parenting stress and sense of competence (Adamakos *et al.* 1986; Feldman *et al.* 2002; Stenfert-Kroese *et al.* 2002); maternal warmth and responsiveness (Crnic *et al.* 1983; Feldman *et al.* 2002; Pascoe *et al.* 1981); security of attachment relationships (Jacobsen & Frye 1991); risk of child abuse and neglect (Bishop & Leadbeater 1999; Garbarino & Crouter 1978; Kotch *et al.* 1999; Wandersman & Nation 1998); and, child cognitive, emotional and social development (Melson *et al.* 1993; Pianta & Ball 1993; Sameroff *et al.* 1993).

## Processes underlying social support and integration

Why mothers with learning difficulties are so socially disconnected has received little research attention. That said, most of these mothers have to contend with family poverty, and many live in unsafe neighbourhoods, which

are both known risk factors for social isolation (Klebanov *et al.* 2007). They are also more likely than their peers to suffer poor physical and mental health, which are both causes and consequences of tenuous social relationships (Feldman *et al.* 1997; Llewellyn *et al.* 2003; Mickelson 1947; Tymchuk 1994). In addition, many mothers with learning difficulties have limited social skills and low self efficacy. And without some degree of self-efficacy or psychological empowerment they are unlikely to engage in the community (Itzhaky & Schwartz 1998; Peterson *et al.* 2005; Speer *et al.* 2001; Zimmerman & Rappaport 1988).

The relationship between psychological empowerment and social integration has a strong evidence base (e.g. Itzhaky & Schwartz 1998; Peterson *et al.* 2005; Speer *et al.* 2001; Zimmerman & Rappaport 1988; Zimmerman *et al.* 1992). For example, Zimmerman *et al.* (1992) interviewed a probability sample of 916 adults, incorporating measures of organisational involvement and community activities and three measures of personal control. Using cluster analysis, the sample was split into three groups representing different levels of participation. The analysis showed that the combined variance of the three measures of personal control formed a single discriminant function that distinguished between groups defined by their level of participation.

## Approaches to strengthening social relationships

Three approaches to strengthening the social relationships of individuals and/or groups are evident in the literature. One approach focuses on enhancing existing social supports. An example of this approach is the 'circles of support' initiative, as described by Willer *et al.* (1993) and Wertheimer (1995), and successfully implemented in various community settings (e.g. Rowlands 2001). Another approach involves the provision of compensatory support to isolated and/or at risk individuals and families. One example of this type of intervention is professional or volunteer home-visiting. Randomised controlled trials of professional/nurse home visiting have demonstrated significant short term effects in high-risk populations (Fraser *et al.* 2000; Olds *et al.* 1997). Support groups are another example of a compensatory support intervention. Although frequently implemented, the evidence base for support groups is limited and research findings equivocal (Cohen *et al.* 2000).

The third approach to strengthening social relationships is adult learning. This approach focuses on developing awareness and understanding as well as skills for strengthening social relationships. Two studies in England have piloted group-based, adult learning programmes aimed at strengthening the social relationships of mothers with learning difficulties and reducing their reliance on social services for support (Booth & Booth 2003; McGaw *et al.* 2002). Both programmes demonstrated positive effects,

including for example, improved self-concept, stronger social ties, increased confidence in accessing resources, and mothers gaining more enjoyment out of life. However neither of these programmes were designed or intended for widespread dissemination. The supported learning project (SLP), evaluated by Booth & Booth (2003), involved a local collaboration with the Sheffield Women’s Cultural Club. The group based programme developed and evaluated by McGaw et al. (2002) employed a cognitive-behavioural approach, limiting its usefulness to professionals with the necessary training.

### Australian Supported Learning Program—Me and My Community

Building on the success of these studies, and on the work of educational philosopher, Paolo Freire (1993, 1998), we set out to develop and evaluate a group-based, adult learning programme intended for widespread dissemination. The development of this programme, the *Australian Supported Learning Program—Me and My Community (ASLP)*, occurred through action-based research, such that information gathered during the development process was incorporated in iterative fashion into further development (Dick 2000; Kemmis & McTaggart 1988). The development of the ASLP, including a Guide for Facilitators and Participant Workbook, is described in detail elsewhere (see Australian Supported Parenting Consortium, 2007).

The ASLP is a 12-week programme, incorporating an 8–10 week group work phase supplemented by individual support. Each group session is approximately 2 h in duration. Discussion topics include, for example, ‘places I know and love’, ‘places for children and families’, and ‘helping out in my community’. Participating mothers also complete weekly ‘home challenges’. These are designed to reinforce learning during the group work phase and to encourage further reflection and internalisation of strategies for negotiating the community as a mother with learning difficulties. Individual support (phone contact and home visits) is provided to assist each mother with her personal goals.

The ASLP employs a problem-posing approach to adult learning to increase the psychological empowerment of

mothers with learning difficulties (see Figure 1). There is no curriculum of skills to be learned or information to be imparted by an expert. The confidence and awareness of the participants is raised through an iterative process of critical reflection on their own (past and present) experiences and working together with the facilitator to plan a course of action to achieve their goals and putting those plans into action. The ASLP employs three main devices to facilitate this process. These are the creation of a ‘discussion object’, a three-step questioning strategy, and a stepping stones activity for action planning.

Freire (1998) proposes creating discussion objects that he refers to as ‘codes’ or ‘codifications’ to give focus to a problem-posing dialogue. A code is a concrete physical representation of an issue in any form, for example, a role play, photos, collage, etc. Each code represents the community reality back to discussion participants. It enables them to project their emotional and social responses into the object for a focused discussion. In the ASLP, group participants create a mural of their community. This mural is used throughout the group-work programme as a discussion object. The mural represents specific places of interest or challenge to participants in a tangible way through the use of pictorial representations such as photos, drawings, and clippings. In each session, the participants place a photograph or image of themselves on different parts of the mural to indicate, for example, places in the community that made them feel either secure and happy, or uncomfortable and threatened.

The discussion object alone however is not sufficient to facilitate critical, reflective dialogue. In the ASLP, this dialogue is facilitated by a three-step questioning strategy. The first question calls for description. Participants are invited to share their experiences, to describe what happened when and where. Common or shared experiences are identified. The second question elicits critical reflection. Participants are asked to consider ‘why does this happen?’ The third question moves the dialogue forward to planning and action. Together, participants identify strategies to overcome obstacles and achieve their goals. These three steps structure each group session.

Action and reflection upon action are integral aspects of problem-posing education. Throughout, the ASLP

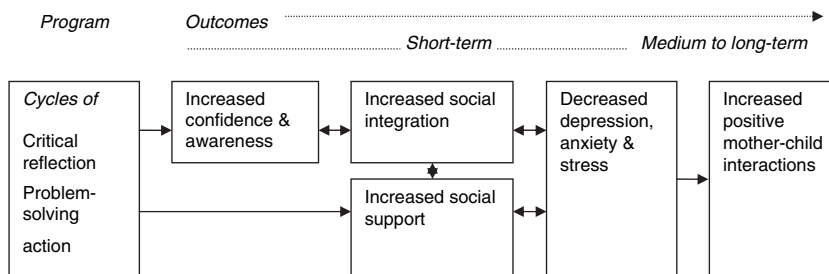


Figure 1 ASLP logic model.

participants are supported to go out in their community and to begin working towards achieving their goals. They are encouraged to share and reflect upon their experiences in doing so with the group. This iterative process leads to deeper awareness and understanding (Wallerstein & Bernstein 1988). In the ASLP, the process of planning for action is facilitated by the use of a 'stepping stones' activity. The purpose of this activity is to break down a strategy for action into concrete, feasible steps. Together the mothers identify steps they can take to overcome certain constraints, and these are written down on cardboard stepping stones. Placed in sequence, these stepping stones create a metaphorical pathway to fuller involvement and participation in their community.

## Method

A multi-site, 'treatment' group only, repeated measures design was employed to evaluate outcomes of the ASLP. We hypothesised that participation in the ASLP would strengthen the social relationships and improve the psychological wellbeing of mothers with learning difficulties. The ASLP was piloted by family support professionals who had participated actively in the development of the ASLP (see Australian Supported Parenting Consortium, 2007). These professionals were all experienced group work facilitators with qualifications in psychology and/or social welfare. Their experience in the disability field however varied from 0 to >20 years. The active participation of these professionals in the development of the ASLP together with the ASLP Guide for Facilitators and Participant Workbook promoted commonality in the way that the programme was implemented across pilot sites. There was one pilot site in metropolitan New South Wales (NSW), three in regional NSW, one in metropolitan Victoria and one in regional Victoria. One site was a government service provider; the other five were in the not-for-profit community sector. At two sites the ASLP was piloted with pre-existing groups of mothers with learning difficulties. New groups were established at each of the other four sites. The number of participating mothers at each site varied from five to ten.

## Recruitment

Potential participants were identified by ASLP facilitators based on their prior knowledge, agency database and contact with colleagues. Only mothers with learning difficulties with at least one child under 5 years were eligible to take part. Mothers with learning difficulties were identified by ASLP facilitators on the basis of (i) diagnosis of intellectual disability; and/or (ii) history of special education; and/or (iii) receipt of a disability support benefit or specialist service for adults with cognitive limitations; and/or (iv) identified by service providers as experiencing

learning difficulties because of cognitive limitations. Mothers meeting these criteria were invited to participate in the pilot by the ASLP facilitators who provided verbal and written information about the ASLP. A brief informed consent questionnaire was used to check for understanding. Those willing to participate gave their written informed consent, and these forms were returned to the project team.

## Procedures and data collection

Approximately one fortnight prior to the first group-work session, the ASLP facilitator met with each mother to discuss her expectations of the programme, document her goals, and complete a demographics questionnaire and baseline standard measures of psychological wellbeing and social relationships. Within 1 month of completing the group-work programme, each facilitator met individually with the mothers from her group to review and rate progress toward achieving their goals and to re-administer the standard measures. All data was sent by mail to the project team. A number of standard measures were employed, each of which had been successfully used by the researchers in previous studies involving mothers with learning difficulties. Program Goal Achievement and Personal Goal Attainment Scales were also developed to evaluate group and individual outcomes.

## Social relationships

The Tilden Interpersonal Relationships Inventory (IPRI) – Short Form (Tilden *et al.* 1990) was employed to obtain a measure of social relationships. This self report measure has 26 items yielding two subscale scores, one for perceived social support and the other for conflict in interpersonal relationships. This measure has demonstrated high internal consistency and good test-retest reliability (Kane & Day 1999; Tilden *et al.* 1994). Chronbach Alpha coefficients of 0.91 and 0.81 are reported for the support and conflict subscales respectively. A high score on the support scale indicates people that can be trusted and turned to for help when needed. A high score on the conflict scale indicates people cared about are pushy, insensitive to their needs, expect too much of them and/or cannot be trusted.

A Personal Goal Attainment Scale was used to obtain a measure of programme efficacy in promoting the social integration of mothers with learning difficulties. In the pre-group phase the mothers were asked to consider how they would like to be (more) involved in their community. They were then asked to specify up to five personal goals and to rank these in order of priority. Facilitators were given guidelines to support the mothers in setting good goals. Following the group-work phase of the programme the mothers were asked to evaluate their progress toward

achieving each of their personal goals on a three point scale from 'not close at all' to 'I (fully) achieved this goal'.

### Psychological empowerment

The Scales of Mastery and Constraints (Lachman & Weaver 1998) were employed to obtain a general measure of psychological empowerment. The Mastery Scale includes four items that tap sense of efficacy or effectiveness in achieving goals. These items include, for example, "I can do just about anything I really set my mind to", and "what happens to me in the future mostly depends on me". The Constraints Scale includes eight items that tap the extent to which there are obstacles or factors beyond one's control that interfere with reaching goals. Examples include "I often feel helpless in dealing with the problems of life", and "Other people determine most of what I can and cannot do". Respondents indicate on a seven point scale, the extent to which they agree with each item. Higher scale scores reflect greater perceived mastery or constraints. Both scales have been used extensively in research, including the large Midlife in the United States survey which had a probability sample of 3485 people aged 25 to 75 years (Hailey Maier & Lachman 2000). Chronbach's alpha coefficients of 0.70 and 0.86 are reported for the mastery and constraints scales respectively (Lachman & Weaver 1998).

The ASLP Program Goal Achievement Scale was developed to obtain a measure of psychological empowerment more specifically related to programme learning objectives and social relationships. This scale is comprised of ten items that tap confidence and awareness. The items, listed in Table 2, were derived from three sources. These were the nomological network of psychological empowerment developed by Zimmerman (1995); findings reported by Booth & Booth (2003) and McGaw *et al.* (2002) from their evaluations of group-based programmes for mothers with learning difficulties; and, consideration of the ASLP programme content. When administered in the pre-group phase of the ASLP, mothers are asked to indicate the extent to which they want to achieve each goal on a three point scale, from 'not at all' through to 'a lot'. Post-programme, mothers evaluate their progress using a three-point scale, from 'not close at all' through to 'I fully achieved this goal'.

### Psychological distress

The Depression, Anxiety and Stress Scales (DASS-21) (Lovibond & Lovibond 1995) is a well-validated 21 item self report measure for which Australian and English norms have been published. The DASS-21 taps the negative emotional states of depression, anxiety and stress. Several studies with clinical and non-clinical samples have confirmed the factor structure of the DASS-21 and demonstrated acceptable test-retest reliability (Antony *et al.* 1998;

Brown *et al.* 1997; Nieuwenhuijsen *et al.* 2003). Chronbach's alpha coefficients of 0.91, 0.84 and 0.90 are reported for the depression, anxiety and stress scales respectively (Lovibond & Lovibond 1995).

### Data analysis

The data were analysed in two steps. The first step involved analysis of baseline data to describe the participants and compare their scores on each of the standard measures with test normative group data. Comparisons were possible for the measures of psychological wellbeing, including the Scales of Mastery and Constraints (Lachman & Weaver 1998) and the Depression, Anxiety and Stress Scales (Lovibond & Lovibond 1995). There is currently insufficient data to make statistically valid population comparisons on the Interpersonal Relationships Inventory (IPRI) (Tilden *et al.* 1990).

The second step examined differences between pre- and post-scores on the standard measures, and percentages for Program and Personal goals partially or wholly achieved were computed. Following the recommendations made by Valentine & Cooper (2003), and the statistical procedures detailed by Thalheimer & Cook (2002), we report raw mean difference scores for each of the standard measures, that is, the average difference between pre- and post-measures, and Cohen's *d* for standardised effect size. Cohen's *d* was calculated by dividing the mean difference between pre- and post-ASLP scores by the pooled standard deviation. These effect sizes were then benchmarked against those typically obtained by family support programmes and those obtained by parent-training programmes.

The first benchmark comes from a large meta-analysis of family support programmes (Layzer *et al.* 2001). This analysis included 665 studies representing 260 programmes. The average length of family support programmes included in the meta-analysis was 15 months which is substantially longer than the 12 weeks of the ASLP. The meta-analysis calculated effect size benchmarks for nine possible outcomes. One of these outcomes is labelled 'parent mental health', which combines programme effects on parent's social support networks as well as their psychological wellbeing. The meta-analysis found that the average effect size of family support programmes on 'parent mental health' was 0.14. This finding suggests that parent mental health is one area where family support programmes typically struggle to make an impact.

The second benchmark comes from the recent Cochrane review of the effects of parent-training programmes on maternal psychosocial health (Barlow *et al.* 2007). In this meta-analysis, treatment effects on maternal psychological wellbeing and social support/relationships were examined separately. This analysis showed that parent-training approaches had an averaged effect size of 0.26 for depression, 0.42 for stress and anxiety, and 0.04 for social support/

social relationships. These findings suggest that while parent-training approaches have a positive effect on maternal psychological wellbeing, their effect on maternal social support/relationships is negligible.

## Results

A total of 42 mothers with learning difficulties commenced the programme. Of these, five withdrew prior to completion of the group-work phase. Two mothers completed the pre-group phase but could not attend the group at the time it was running because of other commitments. Another mother pulled out after week 1 because she felt that she was too advanced for the group. The fourth mother withdrew when she moved with her family to another city, and the fifth was asked to withdraw from the programme- because of disruption and conflict with others mothers in her group. A further five mothers completed the group-work phase of the ASLP, but outcome measures could not be obtained. Two of these mothers moved out of the area before the outcome measures could be completed, and facilitators were unable to complete the outcome measures with three other mothers within 1 month of completing the group programme because of competing work demands. Demographic data for the 32 mothers who completed the outcome measures is displayed in Table 1. This table shows that the majority were lone mothers with low educational attainment and a history of supported school education. Most relied on a government pension/benefit as their primary source of income, and more than three quarters lived in rental housing.

At baseline the participating mothers' scores on each of the standard measures demonstrated low levels of psychological wellbeing by comparison with test norm and large probability sample data sets. Figure 2 shows 95% confidence intervals for the mean scores for the mothers with learning difficulties pre- and post-ASLP, and for the general population (test norms) on the Scales of Mastery and Constraints, and the Depression Anxiety and Stress Scales. Visual inspection of the graphs reveals that the confidence intervals do not overlap indicating a statistically significant difference at baseline. This suggests that the mothers with learning difficulties had little confidence in their ability to achieve goals that mattered to them, and perceived that there were obstacles outside of their control that interfered with their goal achievement. The graphs also reveal high levels of psychological distress by comparison with population norms for depression, anxiety and stress.

### Personal goal attainment

The participating mothers set a range of personal goals. Some were clearly relevant to the programme with 34% of all goals related to community involvement/participation. Others were less relevant, for example, to eat well, or smoke

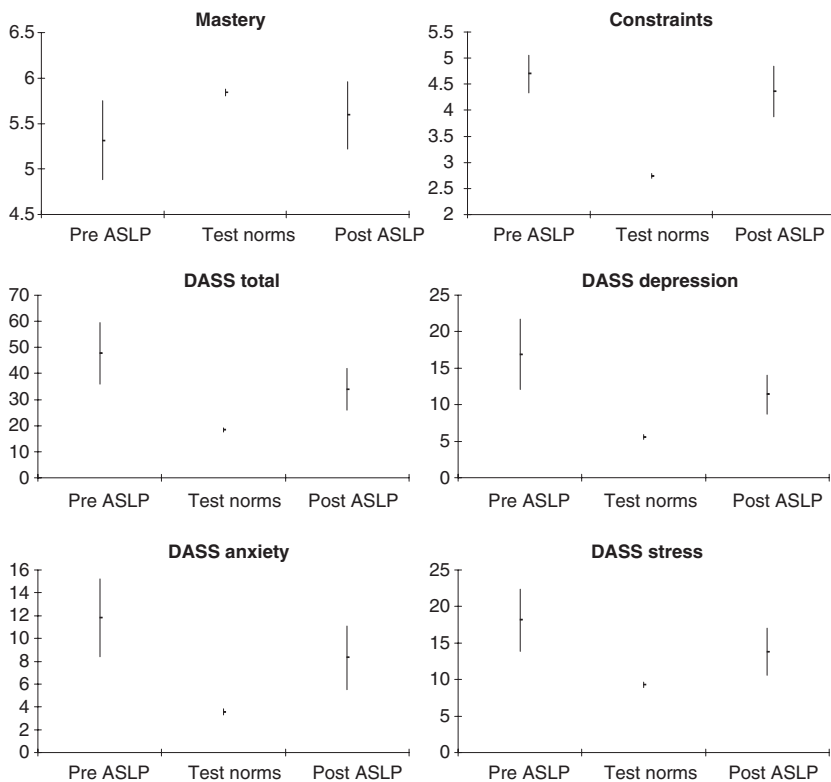
**Table 1** Participant demographics

Participants completing the ASLP	<i>n</i> = 32
Age	
Mean	34.1 years
Range (SD)	16.9–48.0 years (8.13)
Marital status	
Single	12 (37.5%)
Partner not married	6 (18.8%)
Married	6 (18.8%)
Divorced/sep	8 (25%)
Ethnicity	
Aboriginal/torres strait islander	2 (6.3%)
Country of birth	
Australia	29 (90.6%)
Other	3 (9.4%)
Language other than english spoken at home	7 (21.9%)
Education attainment (years)	
≥12	5 (15.6%)
11	3 (9.4%)
10	14 (43.8%)
10	10 (31.3%)
Support with learning at school	
Attended special school	5 (15.6%)
Attended special class in regular school	10 (31.3%)
Teacher aid support in regular class	5 (15.6%)
Primary source of family income	
Wages/salary	3 (9.4%)
Government benefit/pension	27 (84.4%)
Other	2 (6.2%)
Housing	
Purchasing	7 (21.9%)
Private rental	14 (43.8%)
Public housing	11 (34.4%)
Children	
Mean number of children (range)	2.0 (0–6)
Families with one or more children in out-of-home care	10 (31.3%)

and gamble less. Some were short term achievable goals and others were longer term projects. Examples of clearly relevant personal goals related to community involvement or social integration included 'to get out more often (e.g. to the movies, local shops)'; 'to meet with other mums and mix socially outside of group'; 'to help other people through volunteering'; 'to meet other people and feel ok'; 'to do a course (e.g. sign language, literacy, computer skills, hand-icrafts)'; 'to join the library for myself and my child'; 'to join a gym'; and, 'to get a job'. The majority of participating mothers at least partially achieved their personal goals. Eighty-four per cent partially or fully achieved their Priority One goal. For Personal Goal priorities two to five, the rate of attainment was 70%, 88%, 82% and 86% respectively.

### Program goal attainment

Almost all the participating mothers wanted to achieve each of the pre-specified ten programme goals. 'Getting



**Figure 2** Psychological wellbeing: 95% confidence intervals for the mean.

more enjoyment out of life’ and ‘learning more about my own strengths and things that I am good at’ were the most popular goals with 87.5% wanting to achieve these goals ‘a lot’. Table 2 shows the number and percentage of mothers wanting to achieve each goal, as well as the number and percentage of mothers who reported either partially or fully achieving each goal after the ASLP. Between 90.6% (‘learn more about things that I can do to help out in my community’) and 100% (‘feel more confident about participating in groups’, ‘Learn more

about things I can do to help out in my community’, ‘Learn some things that will help me get out and about’) of participating mothers achieved their goals at least partially. For any one goal, at least 16% of the participating mothers felt that they had come somewhat close but still had further to go to fully achieve it. Following the ASLP at least half the mothers indicated that they wanted to ‘learn more about my strengths and things that I am good at’ (50%), and ‘learn more about things I can do to help out in my community’ (59%).

**Table 2** Programme goal setting and achievement

Goal	Rate of Setting <i>n</i> (%*)			Rate of Achievement <i>n</i> (%*)		
	I want this a little	I want this a lot	Total (%)	No. achievement	Partially or fully achieved	Want to achieve more
1 Meet people and make new friends	8 (25.8%)	22 (68.8%)	<b>30</b> (97%)	1 (3%)	28 (97%)	9 (31%)
2 Feel more confident about participating in groups	11 (35.5%)	20 (64.5%)	<b>31</b> (97%)	0 (0)	31 (100%)	5 (16%)
3 Learn more about places I can go to for help	7 (21.9%)	23 (71.9%)	<b>30</b> (94%)	1 (3%)	29 (97%)	10 (33%)
4 Learn more about places my whole family can go...together	4 (12.5%)	26 (81.3%)	<b>30</b> (94%)	2 (7%)	30 (93%)	10 (33%)
5 Find out where I can go to do things I like doing	6 (18.8%)	24 (75%)	<b>30</b> (94%)	1 (3%)	29 (97%)	12 (40%)
6 Learn more about my own strengths and things I am good at	4 (12.5%)	28 (87.5%)	<b>32</b> (100)	3 (9.4%)	29 (90.6%)	16 (50%)
7 Learn more about things I can do to help out in my community	13 (36.0%)	16 (52.0%)	<b>29</b> (91%)	0 (0)	29 (100%)	17 (59%)
8 Feel more confident about going places in my community	12 (37.5%)	18 (56.3%)	<b>30</b> (94%)	1 (3%)	29 (97%)	10 (33%)
9 Learn some things that will help me get out...	8 (25%)	21 (66%)	<b>29</b> (91%)	0 (0)	29 (100%)	10 (34%)
10 Get more enjoyment out of life	3 (9.4%)	28 (87.5%)	<b>31</b> (97%)	2 (6%)	29 (94%)	9 (29%)

\*Excluding missing cases.

**Table 3** Effect of the ASLP on mother's psychological wellbeing and social relationships

Measure	Pre-ASLP mean (SD)	Post-ASLP mean (SD)	Post-pre, mean (SD)	Cohen's <i>d</i>
Mastery and constraints				
Mastery	5.31 (1.20)	5.62 (1.03)	0.31 (1.22)	0.25
Constraints	4.64 (1.00)	4.36 (1.30)	-0.29 (1.40)	0.25
Depression, anxiety and stress				
DASS (total)	47.29 (31.52)	33.87 (21.76)	-12.29 (27.81)	0.50
Depression	16.90 (12.61)	11.38 (7.37)	-5.3 (10.64)	0.54
Anxiety	11.73 (9.48)	8.32 (7.61)	-3.4 (9.46)	0.40
Stress	18.13 (11.36)	13.81 (9.05)	-4.13 (10.8)	0.43
Interpersonal relationships				
Social support	49.22 (9.27)	52.09 (7.07)	2.88 (7.55)	0.35
Perceived conflict	44.77 (11.42)	43.91 (9.78)	-0.77 (8.91)	0.08

### Measured effects of the ASLP on social relationships and psychological wellbeing

Table 3 shows the mean and standard deviation for pre- and post-measures of psychological empowerment, psychological distress and social relationships, the raw mean difference between pre- and post-measures, and Cohen's *d* for standardised effect size. The observed effect sizes ranged from a negligible 0.08 to a high of 0.54. The largest observed effects were seen on measures of psychological distress. The single largest effect size was for depression, with an average decrease of 33% from pre- to post-ASLP. Smaller effect sizes were calculated for Social Support, Mastery and Constraints, but these were nonetheless large by comparison with those typically attained by family support and parent-training programmes as demonstrated in the findings of the meta-analysis and Cochrane review reported earlier (Barlow *et al.* 2007; Layzer *et al.* 2001).

Inspection of Figure 2 shows that post-ASLP measures of psychological wellbeing were, on average, much closer than baseline measures to the population means. On the Mastery Scale, there was no statistically significant difference between post-ASLP scores for mothers with learning difficulties and scores observed in the general population. On each of the other measures however, statistically significant mean differences remained. In sum, the ASLP made a substantive contribution to closing the gap, however the participating mothers continued to report comparatively poor psychological wellbeing.

### Discussion

Few programmes have demonstrated empirically validated success in strengthening the social relationships and improving the psychological wellbeing of isolated mothers. In this context, the development of the *Australian Supported Learning Program – Me and My Community* was an ambitious undertaking. We approached this task by bringing together

knowledge from research with the experience of practitioners and mothers with learning difficulties through several cycles of programme development (see Australian Supported Parenting Consortium, 2007, available from the first author upon request, for discussion of modifications that were made to the programme through this iterative development and evaluation process). The outcome, the ASLP, is a group-work programme supplemented by individual support which applies a problem-posing approach to adult learning.

The ASLP demonstrated positive effects on mother's social relationships and psychological wellbeing. The measured effects on social support and psychological wellbeing were greater than the established benchmarks for parent-training and family support programmes. These findings are reinforced by the high level of personal and programme goal attainment. The participating mothers are now more confident about 'getting out and about' within their respective communities, they are more aware of opportunities and resources available there, and some are now taking advantage of these, for example, joining other groups and enrolling in courses.

### Scope and limitations

The multi-site, treatment group only, repeated measures design employed in this study was an appropriate, albeit limited, first step in evaluating a new intervention. The positive findings now warrant further investigation, ideally employing a double-blind randomised controlled trial with cross-over design to control for any potential halo effect and eliminate any potential assessor bias in the administration of the outcome measures. The participation of fathers in future trials of the ASLP programme could also be considered. One important question is whether the positive effects observed in this study are because of the potentially compensatory effects of bringing the mothers together in a group and/or supporting them individually, and/or to the specific problem-posing approach to adult learning underpinning the ASLP. This question could be addressed by including 'support group +/- home visits only' comparison groups in future trials. Longitudinal data is also needed to evaluate the medium and long terms effects of the ASLP. The ASLP approach is designed to be empowering, therefore we hypothesise a scaffolding effect with increasing effect sizes over time with mothers' social relationships going from strength to strength. This hypothesis needs to be tested. There is now conclusive data linking aspects of social relationships to parenting and child outcomes, however it is not clear what effect sizes are needed to produce these so-called downstream benefits (Crnic *et al.* 1983; Feldman *et al.* 2002; Pascoe *et al.* 1981; Wandersman & Nation 1998). This too requires further investigation.

## Conclusion

The ASLP did not fully close the gap between the psychosocial health of mothers with learning difficulties as a group and that observed in large probability or test norm samples. This is hardly surprising given the influence of social and structural barriers such as poverty and stigma which contribute to their social isolation. The findings suggest however that the ASLP may function as a step on the ladder to building stronger social relationships and complement other support initiatives that directly address social and economic disadvantage. Matching programmes and supports with parent and family needs remains critical in ensuring a sound investment in the future of mothers with learning difficulties and their children.

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