

# Specificity of problem-solving skills training in mothers of children newly diagnosed with cancer: a commentary on the Bright IDEAS program

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Submitted Apr 08, 2013. Accepted for publication Apr 26, 2013.

doi: 10.3978/j.issn.2224-4336.2013.04.08

View this article at: <http://www.thetp.org/article/view/1849/2597>

The diagnosis of cancer in a child is an acutely stressful event for both the child and their parents, and severely challenges the coping skills of the family unit (1). Evidence indicates that parents of a child with cancer are at risk of anxiety, depression, and post-traumatic stress symptoms, as well as a poorer quality of life (1-3). Poor coping among parents at this time can impact not only the adaptation of the child with cancer, but also their siblings. Evidence suggests that parental stress may jeopardize parents' capacity to provide the 'secure base' that is needed to buffer their children against the stress of the cancer treatment period (4,5). Left unaddressed, such parental distress can lead to both greater distress in the child with cancer (6), healthy siblings (7,8), and ongoing negative parent-child interactions even once their child's cure has been achieved (9-11).

In a recent report published in the *Journal of Clinical Oncology*, Sahler and colleagues (12) report distinct, positive effects of a problem-solving skills therapy (PSST) program called "Bright IDEAS" delivered to mothers of children newly diagnosed with cancer. This cognitive-behavioral intervention involved eight, hour-long, individual sessions delivered by a research assistant with clinical psychology or behavioral health training over a 16-week period. The Bright IDEAS intervention was compared to a nondirective support (NDS) control, which matched the intervention for frequency and amount of therapeutic contact. Immediately post-intervention, the Bright IDEAS group showed significantly greater improvements in social problem-solving skills; however, both groups showed similar reductions in negative affectivity, depression

symptoms, and post-traumatic stress symptoms. Interestingly, three months post-intervention mothers in the Bright IDEAS group showed significantly greater improvements not only in problem-solving skills, but also negative affectivity, and depression symptoms compared to mothers who had received NDS. Two things are apparent from these results: firstly, only mothers who received the Bright IDEAS intervention showed specific benefits to their problem-solving skills both immediately after, and three months following the intervention. Secondly, it was not until several months after the acquisition of problem-solving skills that the more general benefits of the Bright IDEAS intervention emerged.

These are not isolated results. They build on the growing literature supporting the benefits of skills-based intervention programs for parents, children, and young people living with cancer. Other recent reviews have indicated that such programs, typically grounded in cognitive-behavioral techniques, may improve the adjustment of parents (13,14), children (15), and adolescents and young adults (16). The unique problem-solving skills improvement seen in the Bright IDEAS group supports the teaching of specific coping skills. Even amidst the crisis of the diagnosis and early treatment period, it appears that mothers may be able to harness these skills to the benefit of their later mental health. Additionally, this supports the utility of teaching CBT skills in cases where parents do not necessarily have a formal mental health diagnosis, but simply need tools to adapt to a stressful life situation. This may have implications for the applicability of cognitive-behavioral coping skills

at other points of crisis in the cancer trajectory, such as at treatment completion, relapse, or other later milestones (e.g., transition to adult health-care providers).

Although Sahler and colleagues' results are very promising, it is difficult to determine from this report how clinically significant the findings of this trial may have been. The statistically significant advantage of receiving the Bright IDEAS intervention, relative to NDS, was a reported increase in 0.60 points in problem-solving skills, and a decrease of 11.2 and 0.42 points in negative affectivity and depressive symptoms respectively. It is unclear whether any of these improvements represent an important clinical difference. Although having 'more problem-solving skills' and 'less negative mood' are arguably desirable outcomes in their own right, these outcome measures are likely to be most significant in terms of the more direct effects they may have on individuals' day-to-day functioning. Including additional indicators of real-world functioning, such as days absent from work, ability to engage with one's healthy children as well as the child with cancer, frequency of social interactions and proactive support-seeking, and additional service use, may all have been useful adjuncts in assessing the impact of improved problem-solving skills on mothers' adjustment in a more nuanced way.

Additionally, the three month follow up is relatively brief, considering that at approximately seven months post-diagnosis, many pediatric patients would still be receiving their cancer treatment under most current protocols. Compared to the initial diagnosis period, by this point, the process of cancer treatment may have become somewhat more predictable, leading to a relative plateau in the stress experienced by the family. Longer follow-up time periods would have been useful to assess to what extent PSST inoculates mothers and families against poor adaptation in later crises and times of stress (e.g., finishing treatment, relapse, health care provider transition). This is particularly important in light of research indicating that distress can increase at later time-points, such as end-of-treatment, and last for years afterward (17) without effective, lasting intervention.

While the durability of the effects of PSST interventions remains a topic deserving of further study, it appears from Sahler and colleagues' report that the potential benefits of receiving nondirective support may be even more limited. Although the NDS group showed some immediate benefits, these did not appear to last beyond the time period of the supportive contact itself. This is an interesting finding, given that—despite not containing any of the 'specific'

ingredients contained in the Bright IDEAS intervention—this active NDS control still represented an additional, eight-session course of support, above and beyond 'usual care'. The finding that the benefits of this nondirective support waned in the period following the intervention also has implications for the end-of-treatment period, when families return home from the hospital setting. If the benefits achieved from this eight-session course of supportive contact slowed within three months of receiving it, it is troubling to consider that many parents around the world would not receive even this level of support once treatment ends, and may struggle away from the supportive staff and processes associated with the hospital environment. In fact, qualitative work has increasingly highlighted this precise finding, experienced by families during the second 'crisis' of cancer treatment completion (18-20).

Several studies, including Sahler and colleagues' report, support the efficacy of PSST among mothers of children with cancer. The active mechanism is most plausibly an increase in problem-solving skills ability, and the significant increase in problem-solving skills unique to the Bright IDEAS group in this study certainly appears to support this notion. However, the lack of mediational analyses in this report prevents the authors from unequivocally attributing the improvement in outcomes in their Bright IDEAS group to their unique increase in problem-solving skills. It is possible that mothers in the Bright IDEAS group may have achieved improved wellbeing through other mechanisms. For example, the collaborative, practical focus of the intervention sessions may have led to a sense of greater self-efficacy in navigating their family's current complex, stressful situation. Equally, incidental gains in cognitive reframing techniques may also underlie mothers' later ability to apply the skills learnt amidst challenging situations. Disentangling the mechanisms responsible for improvements in wellbeing seen from such interventions will inform their continued refinement in the future.

Sahler and colleagues' report forms part of a greater move towards more rigorous, gold-standard methodology in pediatric psycho-oncology. The use of an active 'attention control' of equivalent length and frequency to the Bright IDEAS intervention (the NDS group) within this dismantling design generates the kind of higher level evidence needed to establish evidence-based programs of psychological support and intervention such as PSST. Moreover, the ability to 'isolate' and test the specific active components of skills-based programs is a crucial step in the path to determining what elements of interventions may be

most critical to promoting adaptation, and at what points. Future studies on the cost-effectiveness of these programs will be important to investigate how these intervention elements can be best packaged and disseminated.

As evidence is gathered to support skills-based psychological interventions, attention must also turn to ways to make such evidence-based interventions more accessible to the broader population of families in pediatric oncology. This study restricted its sample to families living within a 50 mile radius of the recruiting treatment centers, limiting its generalizability. However, in several westernized nations, such as the US and Australia, significant proportions of the population live in rural areas. Disparities in both medical and psychological care accessible for rural/remote families renders these families both uniquely disadvantaged, but also uniquely placed to benefit from the potential of skills-based therapeutic interventions (21).

Online or internet-based interventions have been hailed as a way to bridge this 'tyranny of distance' (22). Evidence is also growing to support their potential effectiveness and acceptability, including an emerging literature indicating that the 'therapeutic' or working alliance developed between a therapist and client is not impaired via online media compared to face-to-face interactions (23). The availability of internet-based support need not replace the provision face-to-face supportive care when this is a possibility. However, in the context of an increasingly sparse health- and research-related funding climate internationally, online programs may form a pragmatic solution to delivering equitable support. Future reports from both Sahler and colleagues, and teams elsewhere in the world evaluating similar online, evidence-based programs (24) will be important in establishing this evidence in the near future.

As Sahler and colleagues acknowledge, the enduring question in pediatric oncology remains: how do we best engage the silent and invisible partners that travel through the cancer experience alongside children with cancer and their mothers? Fathers, siblings, and grandparents all constitute important family members that continue to fall between the cracks in their representation in pediatric psycho-oncology research studies. This phenomenon may not be unique to the oncology domain. However, there are still lessons that can be learnt from other health domains or chronic illness literatures to improve current efforts within pediatric psycho-oncology. For example, in Australia, there is a growing literature documenting the success of community-based 'men's sheds' in promoting social connectedness, self-esteem, and access to health-

related information for older men (25). Importantly, such 'men's sheds' are successful precisely because they work using a 'health by stealth' model—engaging men in their physical and mental health without using words like 'wellbeing', 'psychological', or 'coping'. The inability to engage fathers in the provision (and evaluation) of evidence-based interventions has been a systematic failure within pediatric oncology. The work of other groups, in other fields, have implications for the field of pediatric psycho-oncology, which may need to consider changes to either the content or process of its interventions to suit more marginalized populations. The significant advances that have been achieved in this field make these efforts all the more attainable, and all the more critical as a next step forward.

## Acknowledgements

*Funding:* Ms. Sansom-Daly is supported by a Leukaemia Foundation of Australia PhD Scholarship.

## Footnote

*Conflicts of Interest:* The author has no conflicts of interest to declare.

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**Cite this article as:** Sansom-Daly UM. Specificity of problem-solving skills training in mothers of children newly diagnosed with cancer: a commentary on the Bright IDEAS program. *Transl Pediatr* 2013;2(2):76-79. doi: 10.3978/j.issn.2224-4336.2013.04.08