

# Engaging Families in Research to Determine Health Literacy Needs Related to the Use of Second-Generation Antipsychotics in Children and Adolescents

Nicole Chovil PhD<sup>1</sup>; Constadina Panagiotopoulos MD, FRCPC<sup>2</sup>

## Abstract

**Objectives:** We sought to engage parents and caregivers in research to understand their health literacy needs related to the use of second-generation antipsychotic medications (SGAs) in children and youth. **Methods:** Two focus groups with a total of 14 participants were conducted in two distinct geographical regions of British Columbia. **Results:** Participants expressed that they had numerous questions about the medications but had few reliable resources available to them. They currently obtain information from a wide variety of sources including: psychiatrists, pharmacy print-outs, pediatricians, other parents, the Internet, and books. They expressed a preference for information to be initially delivered verbally, on a 'one-to-one' basis by their medical professional (preferably psychiatrist, psychologist, pediatrician), and then supplemented by accessible, written- and video-reference materials that would also be available online from a single reputable source (e.g., BC Children's Hospital). The weight gain and other potential metabolic side effects were of great concern to parents. Educational resources that address healthy nutrition and promotion of physical activity need to address the specific issues that parents looking after children with mental health concerns face.

**Conclusions:** Families are key partners in the management and treatment of child and adolescent psychiatric disorders. The findings from this study support the value of including the "family" voice in developing educational strategies related to medications such as SGAs.

**Key words:** family engagement, health literacy, patient education, second-generation antipsychotics, side effects, children, adolescents

## Résumé

**Objectifs:** Faire participer les parents et le personnel soignant à la recherche sur les connaissances qu'ils doivent avoir sur les antipsychotiques de deuxième génération administrés aux enfants et aux adolescents. **Méthodologie:** Quatorze participants ont été répartis en deux groupes dans deux régions distinctes de Colombie-Britannique. **Résultats:** Les participants avaient de nombreuses questions à poser sur les médicaments, mais peu de ressources fiables à leur disposition. Ils s'informaient généralement auprès de diverses sources (psychiatre, pédiatre, autres parents, fiche pharmaceutique, Internet et livres). Ils préféraient les informations données oralement et individuellement par le professionnel de la santé (psychiatre, psychologue ou pédiatre). Ils complétaient leurs connaissances en consultant des documents ou en visionnant les vidéos mis en ligne par des sources fiables (British-Columbia Children's Hospital par exemple). Les parents étaient extrêmement préoccupés par la prise de poids de leurs enfants et les autres effets secondaires possibles sur le métabolisme de ceux-ci. Les informations sur la diététique et l'activité physique fournies à titre éducatif doivent répondre aux questions spécifiques que se posent les parents. **Conclusion:** Les familles sont des partenaires essentiels dans la gestion et le traitement des troubles psychiatriques des enfants et des adolescents. Les conclusions de cette étude appuient la thèse selon laquelle la famille doit avoir son mot à dire dans l'éducation sur les antipsychotiques de deuxième génération.

**Mots clés:** participation de la famille, connaissances, éducation du patient, antipsychotiques de deuxième génération, enfants, adolescents

<sup>1</sup> Director of Research and Evaluation, The F.O.R.C.E Society for Kids Mental Health, West Vancouver, British Columbia

<sup>2</sup> Assistant Professor, Department of Pediatrics, University of British Columbia and Endocrinologist, British Columbia Children's Hospital, Vancouver, British Columbia

Corresponding Email: dpanagiotopoulos@cw.bc.ca

Submitted: May 4, 2010; Accepted: May 29, 2010

## Introduction

Family involvement is integral in the treatment of child and adolescent psychiatric disorders. A diagnosis of a psychiatric disorder catapults families into an unfamiliar world where they must cope with a range of medical, home, and school issues. Family education and support are essential components in the successful treatment of child and adolescent psychiatric disorders. When medications are used as part of the treatment plan, parents and caregivers are the ones responsible for administering and monitoring medications at home on a day-to-day basis. They can also provide valuable observations of symptoms and treatment efficacy (Osher, Osher, & Blau, 2008).

Valuing the wisdom in the day-to-day experiences of families and viewing them as partners in children's mental health are hallmarks of family-inclusive, responsive approaches to mental health care. Collaborating with families is regarded as a best practice and results in better outcomes for children and youth with psychiatric disorders (DeChillo, Koren, & Shultze, 1994; Morrissey, Kane, & Prinz, 1999; Osher, van Kammen, & Zaro, 2001; Vander Stoep, Williams, Jones, Green, & Trupin, 1999; Friesen & Stephens, 1998).

### **SGA Treatment for Child and Adolescent Psychiatric Disorders**

The use of SGAs for the treatment of psychotic disorders (Armenteros & David, 2006) and other psychiatric conditions (Findling, Steiner, & Weller, 2005; Olfson, Blanco, Liu, Moreno, & Laje, 2006) in children and adolescents has become a widely accepted practice. In a survey of Canadian child psychiatrists (Doey, Handelman, Seabrook, & Steele, 2007), 94% of respondents reported prescribing SGAs, but there was wide variation in the type and frequency of monitoring. There is increasing evidence linking SGA-treatment with weight gain and other metabolic side-effects such as diabetes and dyslipidemia (Panagiotopoulos, Ronsley, & Davidson, 2009; Correll, Manu, Olshanskiy, Napolitano, Kane, & Malhotra, 2009; Shin, Bregman, Frazier, & Noyes, 2008; Correll, 2008; Correll, 2007; Newcomer, 2005; Cheng-Shannon, McGough, Pataki, & McCracken, 2004). Thus, children and adolescents who are prescribed SGAs require careful monitoring (Panagiotopoulos et al., 2009) combined with anticipatory guidance regarding healthy eating and physical activity. Parents play a key role in managing their child's medication use (Brinkman et al., 2009). Therefore, working in partnership with families helps to ensure that the child receives the most benefit from the medication while minimizing the potential risks. This partnership requires that families are knowledgeable in medication management at home and empowered to promote healthy active living within their entire family.

### **Engaging with Families to Determine Information Needs Around SGA Medication Use**

In this article, we report on an exploratory qualitative study which is part of a larger health literacy initiative targeted at both families and health care professionals to develop educational resources and programs to improve awareness of the metabolic effects of SGAs and to promote healthy active living. This health literacy initiative is a collaborative partnership between clinician researchers at BC Children's Hospital and the F.O.R.C.E. (Families Organized for Recognition and Care Equality) Society for Kids Mental Health. The F.O.R.C.E. Society is a family-based organization that provides education, support and advocacy for families dealing with child and youth mental health disorders.

Engaging parents as partners in research is a fundamental way to utilize the expertise of the family in determining services needed and outcomes that are meaningful to families. This partnership recognizes the different expertise that researchers and families bring to the table. Working collaboratively helps to ensure that educational resources will meet the needs of families and result in improved outcomes.

Focus groups offer a useful vehicle for involving users in care management and strategy development, needs assessment, participatory planning and evaluation of health promotion and nutrition intervention programs (Gregory, 1991; Duke, Gordon-Sosby, Reynolds, & Gram, 1994; Kitzinger, 1995; Higingbottom, 1998; Richardson & Rabiee, 2001; Van Dillen, Hiddink, Koelen, de Fraaf, & van Woerkum, 2003; Nichol, Retallack, & Panagiotopoulos, 2008). More specifically, within the realm of child and adolescent mental health, focus groups have been used to explore parents' decision to use stimulant medication for treating their child's ADHD disorder (Charach, Skyba, Cook, & Antle, 2006). The opportunity to be involved, to be valued as experts, and to be given the chance to work collaboratively with researchers can be empowering for many participants (Goss & Leinbach, 1996). Partnering with families enables researchers to gain a new perspective on their field of interest – that of the lived experience.

## Methods

The project was reviewed and approved by both the Children's and Women's Research Review Committee and the University of British Columbia Behavioural Research Ethics Board. Informed written consent was obtained from all study participants.

### **Recruitment**

An invitation to participate in a focus group on SGA use in children and adolescents was sent out through the F.O.R.C.E. Society network in two geographically distinct communities within British Columbia. The focus groups were held in a community center within the respective communities and were two hours in

length. Transportation and childcare costs were reimbursed for parents if needed.

### Participants

Each focus group consisted of 7 participants. All but one of the participants were mothers of children and adolescents who had been diagnosed with various psychiatric disorders including ADHD, depression, and psychosis. One participant was a caregiver for her nephew. Although it was beyond the scope of this project to collect socio-demographic data on the families, a number of mothers indicated that their child or youth had been diagnosed with more than one disorder. Most of the families indicated that they were currently using an SGA as part of their child's treatment plan. A few families had children or adolescents who were no longer on an SGA. Some mothers also indicated they were single parents and had limited finances.

### Procedures

Both focus groups were facilitated by the same individual [NC]. A research assistant from BC Children's Hospital and two F.O.R.C.E. Society support staff parents (one for each focus group) took notes during the sessions, and the sessions were also tape-recorded. The session began with an explanation of the purpose of the focus group and the link with the broader study on SGAs and the promotion of metabolic monitoring and healthy active living through the creation of educational resources. The participants were encouraged to ask questions at any point in the session. The discussion questions focused on two general areas: (1) Families' information needs with respect to SGA use with their child, and (2) Promotion of healthy eating and physical activity (barriers and facilitators).

### Data Analysis

A professional medical transcriptionist transcribed the tapes. The transcripts along with the notes taken by the research assistant and support staff formed the basis for the results.

The transcripts were reviewed in detail by the focus group facilitator [NC] who extracted re-occurring themes for each of the topics. The transcripts were reviewed until no further themes could be derived. The themes were then sent back to all of the participants who were asked to review the document for accuracy and completeness. None of the participants requested any additional changes. The principal themes that emerged from the groups are presented below.

### Results

The results are organized into five tables: (1) Families' experience in accessing information about medications; (2) Recommendations for provision of information about medications; (3) Healthy Eating: Barriers and Strategies; (4) Physical Activity: Barriers and Strategies; and (5) Recommendations on Resources for Healthy Active Living. The topics and themes that arose from the discussions are presented with examples using quotes from the participants. The parents/caregiver who attended the focus groups reported they were the ones who took on the responsibility for learning about medications. They were very pleased to participate in the research as they viewed medication management as a crucial and important component of their child's overall care.

#### 1) Families' Experience in Accessing Information about Medications

The participants received information about their child's medication from a variety of sources including: doctors, the hospital, pharmacists, family, friends, the library, mental health

**Table 1. Families' Experience in Accessing Information about Medications**

Results	Participant Quotes
Where parents get information	<p>Sources include: medical professionals, pharmacists, Internet, library, friends, family, health</p> <p><i>Yeah, our psychiatrist will tell us what he's using the medication for, but he's really not discussing side effects and so our pharmacist and the Internet have been helpful there.</i></p> <p><i>The books too – the books that you can get from the library like one about bipolar.</i></p> <p><i>I mean I'll look at books of meds in there to see because for now they wanted to introduce now another drug with the Risperidone so yeah.</i></p>
Inconsistency of information given to families	<p>Families differ in the types of information they receive about medications</p> <p><i>But you don't know it and you don't get the same information and you know somebody else has got great information and you have none and like knowing about the dry mouth or different things, it's the inconsistency of it. The information is out there, but not necessarily available to everyone.</i></p>
Concern about finding quality information on the Internet	<p>Families are cautious about the credibility of information they find; try to find trustworthy sources</p> <p><i>Yeah, I check it over for spam. I'm cynical – what are they trying to sell me? If they're not trying to sell me anything, I tend to pay more attention.</i></p> <p><i>Yeah, you Google it in and then you get some good medical sites like the Massachusetts General Medical Site or whatever.</i></p>

organizations and agencies, schools, and the Internet. Most of the participants looked to more than one source for their information.

When asked about current resources available to families, one participant commented on how each family seemed to get different bits of information. The parents/caregiver expressed concern about the quality and accuracy of information, particularly on sites that provided information on alternative therapies. Quality of information and credibility of the source were identified as important issues, and the participants tried to access information from trusted sources such as hospital websites. Table 1 summarizes the themes and examples of quotes that arose out of the discussion related to families' experience in accessing information about medications.

## 2) Parents/Caregiver Recommendations on Provision of Information to Families

The prescribing physician was seen as the one who should be (at least initially) providing information about medication to families. The participants felt it was important to have both face-to-face dialogue and printed/electronic resources that families could take home. Videos or DVDs that doctors could hand out to families to take home would also be helpful.

A number of the participants indicated that they would like to have access to a provincially based website from a reputable organization such as a hospital for information about SGA treatment in children. The following were suggestions for helpful resources to be included on the website:

- Electronic resources (that could also be printed) from a respected professional source.

**Table 2. Recommendations for provision of information about medications**

Topics	Participant Quotes	Strategies for Provision of Information
How information should be provided	<i>I do much better face-to-face talking and then paper back-up, so you've triggered something and I go home and go okay what was that and I can go look at it again.</i> <i>I'd actually like a website on medications by Mental Health. Just a website that goes through all of the things that you can access – so your child has just been given their first dose of Risperidone – what this means, what it could mean, etc, etc...so if the doctor doesn't tell you... you can at least go home and you've got it on a website. Something reputable and recognizable.</i>	<i>Prescribing physician should provide initial information to families supplemented by paper/electronic resources and DVDs.</i> <i>Credible and trustworthy internet source of information specifically geared to families where medication is recommended as part of the treatment plan.</i>
Timing of when information is given	<i>But if you were warned about right when they started taking it, you could really watch what they're eating, because I think one of the problems is they don't know they're full.</i> <i>When she put us on that she said, you've got to really watch for the weight as this can be really associated with weight and so we were just on high alert...</i>	<i>Information about weight gain and the need to monitor eating provided prior to child starting on SGAs so parents can implement a plan from the start.</i>
SGA use specifically with children and youth	<i>What I found is regardless of where I look, there seems to be an absence on anything on these sites with regards to children. It's still all off label, so what I'm finding is the adult information, but I'm not sure if that is entirely valid when I look at it for my children...</i>	<i>Resources need to include research and practices related to use of SGAs with children and adolescents.</i>
Side effects of SGAs	<i>Like if these drug companies are producing these medications, they're fully aware of all the potential and possible side effects. You know you get the print out from the pharmacy, but it's always very vague. If they would print out a really clear information pamphlet, you know – these are the potential side effects.</i>	<i>Information about side effects needs to be readily available to families</i>
Long-term effects of SGAs on children.	<i>I think I would like to know the long-term side effects, but they can't tell us. That's what I want to know. So the drugs that I'm deciding to put him on now, 10-15 years down the road or 20 years down the road, have I made the right choice.</i>	<i>Potential long effects of SGA use with children and adolescents should be addressed in resources to families.</i>
Helping young person to understand medications and their effects.	<i>...we just explained to him like how we had to be your stomach until your two weeks when you're on the other medication.. and tell you when you're full until you can learn to do it for yourself, because you're brain's going to tell you you're hungry.</i>	<i>Resources to help children and adolescents understand and benefit the most from the medication treatment.</i>
Blood tests	<i>Well would that be something helpful, because a lot of our kids don't like to get blood work, even that could be in the DVD or the information.</i>	<i>Suggestions/strategies for helping children who dislike or fear blood tests.</i>

**Table 3. Barriers and Strategies for Healthy Eating**

Themes	
Barriers	Participant Quotes
The child or adolescent's willingness to eat different types of foods	<i>Also a lot of our kids are super hyper, finicky with food.</i>
Controlling what their children ate outside of the home.	<i>Well, this is what my son was stopping at the restaurant on the way home and the ladies there really liked him. They gave him a super size double chocolate brownie, because... and he was doing this everyday.</i>
Financial barriers	<i>But by the time my rent's paid and my meds were covered, because they're not all covered by the plan, my son and I live on about \$300 a month and that's food, clothing, transportation, entertainment. You know, I end up calling the Food Bank – well what do they give you – processed foods!</i>
Strategies	Participant Quotes
Provide healthy snacks	<i>Yeah, we're not on a special diet, but I try as much as I can with fresh vegetables like carrots or celery so he can munch...when he comes home from school or when he's ravenous</i>
Limit foods with sugar	<i>...we don't keep a lot of sugar stuff in the house...We don't have pop. He'll crave. He'll climb up to my baking goods when he's going through his cravings for sugar, just like baking stuff, he'll take it all out of the cabinet and just start eating, so we don't keep a lot of that stuff</i>
Limit size of portions	<i>So now he gets a portion. I put a portion in front of him and that's what he eats and he doesn't snack a lot other than if he goes to the store and buys some candy.</i>
Have a "treat" night to manage cravings	<i>We've compromised with Phyllis' Pizza. They have like two slices of pizza and a can of pop for \$5.00</i>

- Access to a medication consultant, nutritionist and occupational therapist who have expertise in helping families and children with mental health problems (e.g., chat room with a psychiatrist or ability to email questions).
- Frequently Asked Questions (FAQ) section.
- Tools for charting changes (e.g., mental health symptoms, growth) in their child.

Participants wanted information presented in a way that was easy to understand, as currently available information on the Internet was not always comprehensible to them (ie. academic articles with medical terminology). One participant described how her doctor explained the difference between first generation antipsychotics and SGAs:

Dr. \_\_\_ explained it to me. It's an older antipsychotic so it's kind of like using a shotgun as opposed to using a bullet. The bullet is the risperidone. It hits particular receptors and works really well, because of that way. This one is a shotgun thing and it does a little bit of everything, but no problems with the ... gland and thus with the weight gain.

The participants expressed great concern about the side effects of SGAs with weight gain being the predominant one. They suggested that information about weight gain and the need to monitor a child's eating should be provided prior to a child starting the medication so that parents can implement a plan from the start.

Participants thought that families should know what to watch out for (e.g., the child seems to eat constantly and doesn't seem to know when they are full; child craves carbohydrates). They wanted to know why the weight gain occurred and the associated health risks. All were aware of the need for metabolic monitoring (e.g., measuring height, weight, waist circumference, blood pressure, blood work) but noted that it was not occurring for all children or on any regular basis. A number of participants expressed a desire to know more about long-term effects of SGAs on children.

Table 2 summarizes the themes and examples of quotes that arose in the discussion on recommendations for the optimal provision of information about medications.

In the second half of the focus groups, the discussion turned to how families manage healthy eating and physical activity or exercise with their children.

### **3) Healthy Eating: Barriers and Strategies**

A summary of the themes that emerged relating to barriers to healthy eating and strategies used by families is provided in Table 3. All the participants recognized the need for a healthy diet for their children.

Barriers to healthy eating included the child's refusal to eat certain foods, negative external influences, limited income (single parent status or need to take time off work), and dealing with

**Table 4. Barriers to a Child's Physical Activity and Strategies Used by Parents to Engage Children in Exercise**

Themes	
Barriers	Participant Quotes
Weight gain and other side effects from medication	<i>The problem that I found with my son with his weight gain is that now that he's gained the weight – he went from 70 to 105 lbs in three months, is now he's too heavy to do a lot of what he use to do. So actually getting out there and moving is really hard.</i>
Child's mental health	<i>With my son, like he's afraid of bees, it started last year, so he will not go outside. All spring and all summer he refuses to step out the door. Even to go get a Halloween costume, "the bees are hibernating, it's okay...we have to work on the bees, because otherwise he ain't going anywhere.</i>
Lack of opportunities for their child to be around other children	<i>And they're also often not able to participate in group activities or team sports because of their mental health issues.</i>  <i>I find the other kids won't let him play with them, because you know they've had a lot of problems. He can't keep up with them and they know it, so they run and they hide from him and then they tease him about being fat and yeah, it's like one more thing.</i>
Strategies	Participant Quotes
Finding activities for child	<i>I make him walk home from [school], that was the best I could do. It's a long walk.</i> <i>He has a paper route to do and school and he goes swimming every week or skating</i>
Reward for exercising	<i>We bought a walking machine for Christmas...at 8:00 o'clock every night the computer goes off and he gets on the walking machine for 20 minutes, then shower and he can have an extra hour of computer at that point if all goes well.</i>
Modeling by parents	<i>This past summer, I just let my daughter... okay you set a schedule up and then again it's an incentive, because I go on the treadmill everyday. Look, mom goes on this time and this time, so you decide when you want to go on, so she actually did a schedule when she wasn't active...and then she made herself go on the treadmill. How much she dreaded it right, but we encouraged her and she did it, so modeling.</i>

carbohydrate/sugar cravings. Within the home, participants noted that controlling how much a child would eat could be challenging, and attempting to restrict foods sometimes led to violent reactions from the child or adolescent.

Strategies to promote healthy eating included providing vegetables at home as a healthy snack and eliminating sweets as much as possible. One parent described how she limited the size of food portions. Another parent described how she dealt with her child's desire to eat junk food by compromising and having a "treat" night such as going out for pizza.

#### **4) Physical Activity: Barriers and Strategies**

The themes and examples that arose in discussions about the barriers that parents face and strategies they employ to encourage and support their child to engage in physical activity are presented in Table 4.

##### **Barriers to Physical Activity**

The side-effects of the medication created additional challenges to exercising. Weight gain, loss of energy, and sore muscles were cited as specific side-effects that made it more difficult for children to engage in physical activity. One participant noted her child's phobia made it difficult to get her child to go outside. A

number of participants noted that there seemed to be few opportunities for their child to be around other children. Others noted that children with mental health challenges often have difficulty in socializing with other children and were teased by other children.

##### **Strategies to Engage Children in Physical Activity**

Parents' strategies to get their children active included: walking home from school, exercise equipment in the home; paper route; swimming; and encouraging the child to set up their own exercise program. One participant described how modeling by engaging in regular exercise helped encourage her daughter to set up an exercise routine.

##### **5) Recommendations for Resources on Healthy Active Living**

Throughout the discussions, the participants offered a number of recommendations with respect to the development of resources on SGAs and healthy living strategies for families who have a child or adolescent with a mental illness. Examples of these strategies are presented in Table 5.

**Table 5. Recommendations on Resources for Healthy Active Living**

Themes	Participant Quotes
Strategies designed for families who have a child/youth with mental health issues	<i>I read pamphlets like that, I get really irritated when they offer blanket suggestions like the diet... like to include in it that you have to be creative about it... Like all the child raising books that I read and got frustrated with. You know, they don't seem to acknowledge that there are challenges for us as parents that your average kid isn't going to have.</i>
Access to a nutritionist who is knowledgeable about working with children with psychiatric disorders	<i>Not everybody is experienced with when you've got kids that are say Asperger's and they only eat certain foods and they don't like foods touching foods; how do you deal with that?...Because there's a level of expertise...</i>
Occupational therapist and dietician to set up a self-designed program for young person	<i>Set up a program surrounding their needs, right; start at their pace, in their home, in their comfort area.</i>
Individualized funding parents could use for exercise programs	<i>If the rest of the parents could qualify for some kind of funding, you know...families like yourself might choose to use that because the weight gain is important; so I'm going to use that towards exercise programs.</i>
Programs that teach children about healthy eating	<i>At school – they have a week program there where they plan their own healthy snacks and then they make it and then they eat and they do all kinds of activities.</i>
Programs for children who are overweight	<i>I'd probably be able to get him to go if there were other kids there his size. If I could tell him, "darling do you want to go someplace where you're going to feel normal?" You're going to feel normal at this place. Everybody else is in the exact same boat.</i>

The participants discussed how information provided in resources needed to be relevant and useful to families who face special challenges because of the mental health issue and not just the typical suggestions for healthy eating and exercise. Most of the publicly available guides and resources were seen as not being helpful as what might work for a typical child often did not work for children with mental health concerns.

Participants wanted to have access to a nutritionist/dietician and occupational therapist that were knowledgeable about working with children who had mental health problems. Individualized funding would enable parents to choose what services they needed for their child, and could, in part, support paying for exercise programs. Participants liked the idea of having programs where the children could learn how to select and prepare healthy snacks.

## Discussion

To our knowledge, this study is the first Canadian initiative where parents are participating in the development of resources for children and adolescents related to pediatric mental health. The parents and caregivers were very pleased to participate in this study, as they saw this topic as very important. One participant noted the lack of resources available when she first started to seek information surrounding the relationship between SGAs and weight gain.

It's nice that they're finally doing this study, because I remember [name], you know, when we met, when this

group first started like two years ago, and you asked me about weight gain in kids and I asked Child & Youth Mental Health and I didn't get any answers and that was, you know, two years ago.

Families expressed that they had numerous questions about medications but had few reliable resources available to them. They currently obtain information from a wide variety of sources, but are concerned about its accuracy and applicability to children and adolescents. They expressed a preference for information to be initially delivered verbally, on a 'one-to-one' basis by their medical professional (preferably psychiatrist, psychologist, pediatrician), and then supplemented by accessible, written- and video-reference materials that would also be available online from a single reputable source (e.g., BC Children's Hospital). These findings are consistent with a previous study (Jackson, Baird, Davis-Reynolds, Smith, Blackburn, & Allsebrook, 2007) where parents also expressed a preference for verbal, 'one-to-one' delivery of information by professionals that was supplemented by reference materials. Families also expressed a need for reputable information that would help them better understand both the benefits and short- and long-term risks associated with SGA use. The weight gain and other potential metabolic side effects were of great concern to parents. Educational resources that address healthy nutrition and promotion of physical activity need to address the specific issues that parents looking after children with mental health concerns face.

These findings, although preliminary, help to shed light on what these two groups of parents in separate communities in British Columbia expressed as important in order to participate effectively in their child's care. Plans are already underway to further engage families in the creation of educational resources that promote healthy active living for children and adolescents with a psychiatric disorder. This will include capturing strategies and techniques that have worked for families and providing a venue by which families can share their experiences to help others.

## Implications for Psychiatrists and Allied Professionals

- Families input into creation of educational resources is important when identifying needs.
- Families want information to be given by the prescribing physician at the time SGAs are recommended as well as access to credible resources.
- Families want information that enables them to make informed decisions about medication use, to effectively monitor their child's treatment, and to support a healthy active lifestyle for their child.

## Acknowledgements/Conflicts of Interest

Dr. Panagiotopoulos is supported by the Child & Family Research Institute and Canadian Diabetes Association Clinician Scientist Awards. This work was also funded by The Lawson Foundation.

## References

- Armenteros, J. L., & Davies, M. (2006). Antipsychotics in early onset schizophrenia: systematic review and meta-analysis. *European Child and Adolescent Psychiatry, 15*, 141-148.
- Brinkman, W. B., Sherman, S. N., Zmitrovich, A. R., Visscher, M. O., Crosby, L. E., Phelan, K. J., & Donovan, E. F. (2009). Parental angst making and revisiting decisions about treatment of Attention-Deficit/Hyperactivity Disorder. *Pediatrics, 124*(2), 580-589.
- Charach, A., Skyba, A., Cook, L., & Antle, B. J. (2006). Using stimulant medication for children with ADHD: What do parents say? A brief report. *Journal of the Canadian Academy of Child & Adolescent Psychiatry, 15*(2), 75-83.
- Cheng-Shannon, J., McGough, J. J., Pataki, C., & McCracken, J. T. (2004). Second-generation antipsychotic medications in children and adolescents. *Journal of Child and Adolescent Psychopharmacology, 14*(3), 372-94.
- Correll, C. U., Manu, P., Olshansky, V., Napolitano, B., Kane, J. M., & Malhotra, A. K. (2009). Cardiometabolic risk of second-generation antipsychotic medications during first-time use in children and adolescents. *Journal of the American Medical Association, 302*(16), 1765-1773.
- Correll, C. U. (2008). Monitoring and management of antipsychotic-related metabolic and endocrine adverse events in pediatric patients. *International Review of Psychiatry, 20*, 195-201.
- Correll, C. U. (2007). Weight gain and metabolic effects of mood stabilizers and antipsychotics in pediatric bipolar disorder: a systematic review and pooled analysis of short-term trials. *American Academy Child and Adolescent Psychiatry, 46*, 687-700.
- DeChillo, N., Koren, P. E., & Schultz, K. H. (1994). From paternalism to partnership: Family/professional collaboration in children's mental health. *American Journal of Orthopsychiatry, 64*(4), 564-576.
- Doey, T., Handelman, K., Seabrook, J. A., & Steele, M. (2007). Survey of atypical antipsychotic prescribing by Canadian child psychiatrists and developmental pediatricians for patients under 18 years of age. *Canadian Journal of Psychiatry, 52*(6), 363-368.
- Duke, S. S., Gordon-Sosby, K., Reynolds, K. D., & Gram, I. T. (1994). A study of breast cancer detection practices and beliefs in black women attending public health clinics. *Health Education Research, 9*, 331-342.
- Findling, R. L., Steiner, H., & Weller, E. B. (2005). Use of antipsychotics in children and adolescents. *Journal of Clinical Psychiatry, 66*, 29-40.
- Friesen, B. J., & Stephens, B. (1998). Expanding family roles in the system of care: Research and practice. In Epstein, M.H., Kutash, K. & Duchnowski, A. (Eds). *Outcomes for Children & Youth with Behavioral and Emotional Disorders and their Families*, Austin, TX: Pro-Ed.
- Goss, J. D., & Leinbach, T. R. (1996). Focus groups as alternative research practice. *Area, 28*(2), 115-23.
- Gregory, S., & McKie, L. (1991). The smear test: Listening to women's views. *Nursing Standard, 5*, 32-56.
- Higginbottom, G. (1998). Focus groups: Their use in health promotion research. *Community Practitioner, 72*, 360-363.
- Jackson, R., Baird, W., Davis-Reynolds, L., Smith, C., Blackburn, S., & Allsebrook, J. (2007). Qualitative analysis of parents' information needs and psychosocial experiences when supporting children with health care needs. *Health Information and Libraries Journal, 25*, 31-37.
- Kitzinger, J. (1995). Qualitative research: Introducing focus groups. *British Medical Journal, 311*, 299-302.
- Lasch, K. E., Wilkes, G., Montuori, L. M., Chew, P., Leonard, C., & Hilton, S. (2000). Using focus group methods to develop multicultural cancer pain education materials. *Pain Management Nursing, 1*(4), 129-138.
- Morrissey, K. E., & Prinz, R. (1999). Engagement in child and adolescent treatment: The role of parental cognitions. *Clinical Child and Family Review, 2*, 183-198.
- Newcomer, J. W. (2005). Second-generation (atypical) antipsychotics and metabolic effects: a comprehensive literature review. *CNS Drugs, 19*, Suppl 1, 1-93.
- Nichol, H., Retallack, J., & Panagiotopoulos, C. (2008). Cooking For Your Life! A family-centered, community-based nutrition education program for youth with type 2 diabetes or impaired glucose tolerance. *Canadian Journal of Diabetes, 32*(1), 29-36.
- Olson, M., Blanco, C., Liu, L., Moreno, C., & Laje, G. (2006). National trends in the outpatient treatment of children and adolescents with antipsychotic drugs. *Archives of General Psychiatry, 63*, 679-685.
- Osher, T., Osher, D., & Blau, G. (2008). Families matter. In Gullotta, T. and Blau, G. (Eds.): *Family Influences on Childhood Behavior and Development: Evidence-Based Prevention and Treatment Approaches*. (pp 39-61). New York, NY: Routledge.
- Osher, T. W., van Kammen, W., & Zaro, S. M. (2001). Family participation in evaluating systems of care: Family, research, and service system perspectives. *Journal of Emotional & Behavioral Disorders, 9*(1), 63-70.
- Panagiotopoulos, C., Ronsley, R., & Davidson, J. (2009). Increased prevalence of obesity and glucose intolerance in youth treated with second-generation antipsychotic medications. *Canadian Journal of Psychiatry, 54*(11), 743-749.
- Powell, D., Batsche, C. J., Ferro, J., Fox, L., & Dunlap, G. (1997). A strength-based approach in support of multi-risk families: Principles and issues. *Topics in Early Childhood Special Education, 17*, 1-26.
- Richardson, C. A., & Rabiee, F. (2001). 'A question of access' - an exploration of the factors influencing the health of young males aged 15-19 living in Corby and their use of health care services. *Health Education Journal, 60*, 3-6.
- Shin, L., Bregman, H., Frazier, J., & Noyes, N. (2008). An overview of obesity in children with psychiatric disorders taking atypical antipsychotics. *Harvard Review of Psychiatry, March-April 16*(2), 69-79.
- Vander Stoep, A., Williams, M., Jones, R., Green, L., & Trupin, E. (1999). Families as full research partners: What's in it for us? *The Journal of Behavioral Health Services and Research 26*(3), 329-344.
- Van Dillen, S. M. E., Hiddink, G. J., Koelen, M., de Graaf, C., & van Woerkum, C. M. J. (2003). Understanding nutrition communication between health professionals and consumers: development of a model for nutrition awareness based on qualitative consumer research. *American Journal of Clinical Nutrition, 77*(Suppl), 1065S-1072S.
- Wehmeyer, M., & Palmer, S. (2003). Adult outcomes for students with cognitive disabilities three years after high school: The impact of self-determination. *Education and Training in Developmental Disabilities, 38*(2), 131-144.