

Increasing initial appointment attendance in paediatric mental health clinics: A call for theory-driven interventions

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Abstract

Initial appointment nonattendance is a serious problem for paediatric mental health services in Canada. In this paper, we report a research proposal designed to test whether a theory-based intervention can increase first-time attendance rates in paediatric mental health clinics. A mixed method approach is proposed to understand beliefs about initial appointments and nonattendance. We propose semi-structured interviews with parents/guardians, focus groups with children and youth, and a postal survey of parents and children in order to administer our intervention. The intervention is theoretically guided by the idea of Implementation Intentions, or 'if-then' plans. While results are not yet available, it is expected that the use of a theory-based, low-cost intervention will increase attendance at initial child mental health appointments. In this paper, we aim to encourage researchers and clinicians to consider the use of theory-driven interventions in their work in mental health. Theoretically-guided research may allow us to prospectively identify children and youth at greater risk of missing their initial appointment and thereby target them with measures to improve attendance.

Keywords: *Nonattendance; paediatric mental health; intervention; theory of planned behavior; implementation intentions*

Introduction

In this paper, we report a research proposal designed to test whether a theory-based intervention can increase first-time attendance rates in paediatric mental health clinics. Ultimately, we aim to encourage researchers and clinicians to consider the use of theory-driven interventions in their work in mental health.

At any given time, one in seven (15%) Canadian youth under the age of 19 have a serious mental

disorder that interferes with daily life. The Advisor on healthy children and youth noted:

“Canadian children and youth are greatly impacted by mental illness ... the mental health issues impacting them are substantive ... from the impact of bullying, mental stress over exams and getting into good schools, to psychiatric illnesses such as schizophrenia and bipolar disorder requiring the intervention of health care services” (Leitch, 2008, p. 127).

The Canadian Paediatric Society (2007) estimates that paediatric mental health issues will rise by 50% by the year 2020. No single reason is postulated for this increase, but Leitch (2008) noted that “children and youth are experiencing increasing levels of pressure and stress at a younger and younger age. A greater number of Canadian children and youth are exhibiting signs of mental distress as a result of anxiety, bullying in and out of school, low self-esteem and insecurity (p.127)”. Available epidemiological data suggests a worldwide prevalence of child and adolescent mental disorders of approximately 20% that, as in Canada, is expected to rise (World Health Organization, 2005).

Despite the substantive impact of mental disorders and their growing numbers, only one in five Canadian youth who need mental health services currently receives them (Leitch, 2008). Similarly, the World Health Organization (2005) suggests that the need for child and adolescent mental health services is growing. Currently, between five and 20% of the child/youth population in both high and low income countries cannot access mental health care (WHO, 2005).

The delivery of paediatric mental health services is variable across Canada. There is no national approach, and some provinces and territories do not have paediatric mental health care plans (Canadian Paediatric

Society, 2007). This reflects an international trend. A systematic review found that only 7% of countries worldwide (14 of 191 countries) had stand alone child and adolescent mental health policy (Shatkin & Belfer, 2004). Variation in service provision and a shortage of paediatric mental health care service providers makes accessing mental health services a challenge. The World Health Organization (2005) reports that access to child mental health resources is the number one barrier to care for the mental health needs of children and adolescents. In Nova Scotia (NS), our clinical experience reveals that parents complain of difficulty in accessing services, and referral sources (family doctors, other specialists) find it confusing to navigate the system for their clients.

Compounding access problems, a significant issue for mental health services is initial appointment nonattendance, reported at a rate of 20-57% (Benway, Hamrin, & McMahan, 2003; Hampton-Robb, Qualls & Compton, 2006; Ogrodniczuk, Joyce, & Piper, 2005). Nonattendance wastes countless hours of needed service, interfering with the optimal use of limited resources. We distinguish between initial appointments and continuation of therapy subsequent to the initial appointment. A large literature exists regarding premature termination of treatment, with few studies on initial appointments (Benway et al., 2003). This focus is warranted, however, since initial appointments are most frequently missed, less often rescheduled and have typically allocated more staff time than ongoing appointments (Sparr, Moffitt, & Ward, 1993).

In this paper, we report a research proposal designed to test whether a theory-based intervention can increase first-time attendance rates in paediatric mental health clinics. Increasing the number of youth who attend their initial appointment is important since 70% of childhood mental health problems could be solved with early diagnosis and intervention (Leitch, 2008). In our transparency, we hope to encourage the systematic use of theory in the design of interventions (Michie, 2008) targeting child and youth populations in the area of mental health.

Initial appointment nonattendance

As noted, relatively little research has investigated the factors that affect initial appointment nonattendance in child mental health settings. The minimal research in this area, however, reported contradictory results (see Benway et al., 2003, for a review). For example, some studies reported that older children were less likely to attend (Lowman, DeLange, & Roberts, 1984), while other research found older children to attend more often (Baruch, Gerber, & Fearon, 1998). Still other research reported no relationship between attendance and age (McKay, McCadam, & Gonzales, 1996). Contradictory findings were also reported with regard to symptom and diagnostic presentation. Lowman et al. (1984) found that non-attendees had behavioral as opposed to

personality problems, although it is unclear how useful this finding is given the authors did not explain how they defined “behavioral” and “personality” problems. Baruch et al. (1998) reported that a diagnosis of conduct disorder predicted nonattendance, while other research found no difference in attendance among several different diagnoses (e.g., severe child conduct difficulties, anxiety; Harrison, McKay, & Bannon, 2004). Previous psychiatric contact appears related to initial attendance. Clients who had never received psychiatric treatment were less likely to attend than those who had prior treatment, although one study found no relationship between these variables (Benway et al., 2003). One fairly consistent finding is that longer wait times led to more missed first appointments; even here, however, some research found no relationship between wait time and initial attendance (Benway et al., 2003).

Understanding nonattendance in a theoretical framework

Extant literature is contradictory, with little consensus on what variables are important to encourage initial attendance, thus making it difficult to design sustainable, effective interventions. Several different types of interventions were used with some success (e.g., reminder calls, waiting list contingencies); however, they all targeted the problem of forgetfulness, which has *not* been identified as a predictor of initial attendance in empirical research (Benway et al., 2003). Intervention research has not utilized existing research on the barriers to treatment and the specific variables related to first appointments. Thus, it is difficult to understand which interventions might work, and if they do, why. This a-theoretical approach is problematic in health services and intervention research more generally (Campbell, Fitzpatrick, & Haines, 2000). However, a theoretical approach to studying health behavior could inform the development, delivery and evaluation of interventions, as well as specify the causal mechanisms of behavior change (Campbell et al., 2000; ICEBeRG, 2006; Michie, 2008).

Experts advocate the use of a phased approach to the development and evaluation of interventions to change complex health behaviors (Campbell et al., 2000; Michie, 2008). This approach includes both qualitative and quantitative methods and the establishment of the probable active components of the intervention before a definitive randomized trial. The first two phases are theory building and modeling. In the theoretical phase, evidence is identified that suggests the intervention may have a desired effect (e.g., an intervention was effective in a closely related condition or different country). The modeling phase aims to identify relevant components of the intervention, as well as the mechanisms through which they have their effects on behavior (Michie, 2008). Qualitative methods and/or preliminary surveys

are appropriate in this phase. We situate our study within these two phases. The end result is a theoretical framework within which to design and deliver the intervention, as well as some pilot data about intervention feasibility and effectiveness.

A theoretical framework for initial appointment nonattendance

Few studies use relevant psychosocial theories to understand intentions to attend initial child mental health appointments, and there are virtually no experimental studies in this area. Our research proposal attempts to redress the paucity of theory-based interventions to increase initial attendance in paediatric mental health clinics. Social cognition models (SCM) are quite valuable in predicting a number of health behaviors and as such, are useful for the design of behavior-change interventions (Conner & Norman, 2005). We use the well-established Theory of Planned Behavior (TPB; Ajzen, 1991) to describe and predict intention to attend initial appointments prior to a theory-based intervention designed to increase attendance rates. The intervention is guided by the idea of Implementation Intentions (II), or 'if-then' plans (Gollwitzer, 1999; Gollwitzer & Sheeran, 2006; Sheeran, Aubrey, & Kellet, 2007). This approach has been successful in increasing initial appointment attendance in adult psychotherapy settings (Sheeran et al., 2007), and we hope to extend its usefulness to paediatric mental health. Further, II interventions can be administered via a mail-out, making them relatively low cost.

Applying the TPB: A theory of client intention to attend initial appointments

The TPB is the most widely used theory of the psychosocial determinants of behavior across a wide variety of healthcare settings and behaviors (see Figure 1). On average, its constructs account for about 40% of the variance in intention and about 20-30% of the variance in behavior (Armitage & Conner, 2001; Sheeran, 2002; Sutton, 1998). According to the TPB, the proximal determinant of behavior is a person's intention to engage in it (e.g., I intend to attend my initial appointment). Intentions represent the motivational factors that influence how much effort people will expend in performing the behavior (Ajzen, 1991). Intentions are determined by three factors – attitude, subjective norm and perceived behavioral control (PBC). Attitude refers to people's overall evaluation of engaging in the behavior (e.g., Attending my initial appointment would be worthwhile). Subjective norm captures people's perceptions of the social pressure from important others to engage in the behavior (e.g., 'People who are important to me think I should attend my initial appointment'). Finally, PBC not only is a determinant of intention, but affects

behavior directly. It refers to people's appraisal of their ability to engage in the behavior (e.g., I am confident I can attend my initial appointment).

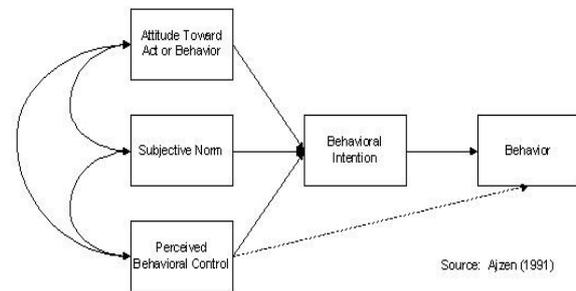


Figure 1. *The Theory of Planned Behaviour*

Although numerous meta-analyses support TPB predictions, research also suggests there is a gap between intention and behavior. Sheeran (2002) reported that up to 50% of people with the intention to perform a behavior fail to translate those intentions into action. To help understand this gap, Gollwitzer (1993) distinguished between goal intentions and IIs. Much like intentions in the TPB, a goal intention is an intention to perform a behavior or achieve a goal (e.g., I intend to exercise this week.). By contrast, IIs are explicit plans about when, where and how a goal intention will be achieved. Gollwitzer (1993, 1999) notes that by creating an II, people effectively transfer control of the behavior to the environment, establishing cues to action. Thus, an exercise II might be, "If it is 5pm on Monday, then I will walk home from work." A growing body of evidence suggests that people who form IIs are more likely to translate their intentions into actions than people who do not (Gollwitzer, 1999; Sheeran, 2002). A recent meta-analysis including 94 studies found that II formation had a medium to large effect size across a wide range of behaviors ($d = .65$; Gollwitzer & Sheeran, 2006). IIs improved attendance rates for cervical cancer screening (Sheeran & Orbell, 2000), breast screening (Rutter, Steadman, & Quine, 2006) and in a laboratory design, for attending an experimental study session (Owens, Bowman, & Dill, 2008).

Sheeran et al. (2007) correctly point out that the problem of nonattendance in mental health may not be one of forgetting to make an appointment (as would be needed for cervical or breast screening, for example), but rather one of negative affect (e.g., embarrassment, stigma). Stigma is a key factor preventing uptake of mental health services (Corrigan, 2004). Thus, the II in Sheeran et al.'s (2007) study of adult psychotherapy attendance was not designed to increase the likelihood that participants would plan how they would *make* their

appointments; rather, it aimed to help them manage attendance-related negative affect. We are unaware of any empirical research using IIs to promote paediatric mental health attendance. Based on Sheeran et al.'s (2007) findings and the well-established stigmatization of mental illness, we anticipate that our intervention will also address negative affect rather than forgetfulness. Phase 1 qualitative work will determine the exact content of our intervention.

Proposed Methods

We propose a two-phase pilot study. Phase 1 will be a qualitative study and Phase 2 will be a quantitative study. Specific proposed methods are presented. Overall, a triangulation approach utilizing semi-structured interviews, focus groups and a postal survey is proposed. Such an approach is required to fully explore complex phenomena such as attending therapy appointments and can also reduce biases associated with a single method (Shadish, Cook, & Campbell, 2002).

Phase 1 – Qualitative study.

In our qualitative phase, we intend to recruit children and youth, as well as their parents/guardians, who have upcoming mental health appointments. We have two main objectives for Phase 1: (1) To identify and describe parents' and children's beliefs and attitudes about their upcoming mental health appointments, and (2) to generate items for the postal survey using this qualitative data. Because we will use the data to inform survey construction in Phase 2, it is important to collect qualitative data from the same target audience as the survey. The postal survey containing our intervention (described in detail below) will be designed to increase initial appointment rates. As such, participants must be those with *upcoming* appointments, rather than those who have already missed an appointment.

Semi structured interviews with parents. Semi-structured interviews are flexible, allowing parents to present individual perspectives that can be probed further and new issues to arise. We will ask parents to reflect on their child's initial appointment, to walk through the decision-making process they use to decide to attend or not, and to discuss what they see as the major factors influencing their child's attendance (interview guide available upon request). We will offer a \$25 monetary incentive for participating. **Sampling.** We will recruit parents through the community mental health clinic in Halifax, NS. Clinic staff will mail a letter of invitation to eligible families who will be invited to contact the researchers if they are interested in participating. This method of contact is consistent with the local ethics committee policy. Thus, we will not randomly choose participants. Rather, parents or guardians who respond to the study invitation letter and meet eligibility criteria will be invited to participate.

Eligibility criteria include: (1) Have a child between the ages of 8-19 years who has been given an initial appointment within the next three months, and (2) speak English. We hope to interview enough parents/guardians to reach data saturation (i.e., the point at which no new information arises). Based on prior projects using this method of recruitment, we anticipate 10-15 interviews in total. We expect interviews to last between 30-40 minutes each. Interviews will be audio-taped and transcribed verbatim, and conducted by telephone or in person, whatever is most convenient for parents.

Analysis. We are interested in the personal meanings attached to initial mental health appointments; thus, we use interpretative phenomenological analysis (IPA) as our analytic method. IPA provides a detailed exploration of how people make sense of their experiences (Smith, Jarman, & Osborn, 1999). IPA begins with an initial transcript and slowly works up to more general categorization across transcripts. Transcripts are read and re-read several times. With each reading, groupings of data are identified that collect together emergent themes. In this way, clusters of themes are generated for each transcript. Emergent themes in transcripts are fed back to the analysis of subsequent transcripts so that connections across participant accounts are made until a final set of shared themes is identified.

Interview data will be analysed separately to develop a rich description of parents' views on the factors influencing attendance. Key findings will also be used to generate survey items to assess the predictor variables and determine the wording of our intervention.

Focus groups with children and youth. We follow a similar sampling and analysis plan with child and youth participants, but use focus groups as our methodology (group question guide available upon request). We will ask youth to reflect on their therapy appointments, the decision-making process they use to decide to attend or not, and to discuss the major factors influencing their attendance. Recognizing that parents sometimes make the decision to attend or not, we will run a series of focus groups: One for youth aged 14-16 years, one for those aged 17-19 years and one for children aged 8-12 years. We chose these age groupings following the suggestion of our ethics committee and subsequent discussion with two local mental health clinicians. Due to the younger children in the third group, we will run these focus groups with parents present. We recognize that including parents may affect the data; however, we feel it important that younger children be given the opportunity to participate. **Sampling.** We will again recruit children through the Halifax community clinic. Clinic staff will mail a letter of invitation to eligible families who will be invited to contact the researchers if they are interested in participating. As in the parent/guardian interviews, we will not randomly

choose focus group participants. Rather, children and youth who respond to the study invitation letter and meet eligibility criteria will be invited to participate. Eligibility criteria include: (1) Be between the ages of 8-12, 14-16 or 17-19, and have been given an initial assessment appointment within the next three months, and (2) speak English. We will run at least one focus group in each age group, expected to last about an hour with approximately 6-8 participants per group. If we do not reach data saturation, we will run additional groups. They will be audio-taped and transcribed verbatim, and we will offer a \$25 monetary incentive for participating.

Analysis. We again use IPA as our main analytic method, and group data will be used in three ways. First, data will be analysed separately to develop a rich description of children's views on the factors influencing attendance. Second, key findings will be used to generate the survey items to assess the predictor variables and determine our intervention wording. Finally, we will compare our focus group data with findings from parent interviews and the quantitative survey to evaluate any commonalities or differences that emerge, reducing threats to validity by providing a triangulation of methods (Patton, 2002).

Phase 2 – Quantitative postal survey

Sampling and procedure. The survey protocol has received approval from the IWK Research Ethics Board. We anticipate surveying both parents and children about initial appointments, depending on the age of the child. Clinical experience suggests that teens make an autonomous decision about whether or not to attend, while parents make the decision for younger children (<13 years). We would survey the teen participant in the former, but the parent in the latter. In essence, we will survey the decision-maker, and we will ask an initial screening question on the survey to direct who should complete it. Note that parents and children who have participated in Phase 1 will not be invited to the survey in Phase 2. We hope to limit any possible biasing effects of taking part in earlier interviews.

A designated staff member at the Halifax community clinic will identify eligible families and mail a survey invitation letter, along with the survey. Eligibility criteria include: 1) Be between the ages of 8 and 19, and have an initial appointment in the next three months or; 2) Be the parent/guardian of a child between the ages of 8-19 who has an initial appointment in the next three months; 3) Speak English.

Randomization: Participants will be randomized to receive the intervention or control group survey (explained in detail below) using computer randomization (e.g., <http://www.graphpad.com/quickcalcs/randomize1.cfm>). Members of the research team will assign ID numbers to surveys and administer the randomization prior to sealing the mailing envelope and forwarding surveys to the mental health clinic for mail-out. Clinic staff

members will affix mailing labels to each survey and post from the clinic office. Depending on response rate, we will administer a second mailing if necessary.

Sample size. Power calculations for multiple regression analysis depend in part on the number of cases per predictor variable. A minimum sample size of $50 + 8m$, where m is the number of predictor variables, is recommended for testing the multiple correlation (i.e., R^2), and $104 + 8m$ for testing individual predictors (Tabachnik & Fidell, 2007). We have four predictor variables (attitude, subjective norm, perceived control and intention), requiring a minimum sample size of 136 survey respondents.

Survey instrument. We follow well-established methods of design and analysis of TPB surveys (Francis et al., 2004; Gagne & Godin, 2000; Sheeran & Orbell, 2000; Sheeran et al., 2007). The survey consists of four main domains: attitude, subjective norm, perceived behavioral control, and intention, all relating to the upcoming mental health appointment. We will also include a detailed demographics section. In order to test our intervention, we will randomize participants to receive an intervention or control survey. Both surveys will measure the four TPB constructs, as well as the demographics section; however, the intervention survey will contain an additional paragraph after TPB components that administer the II intervention. We describe survey components of the parent/guardian survey in detail below. Only slight wording changes are necessary to administer the survey to youth participants.

Attitude. Attitude towards initial mental health appointments will be measured by six items on a five-point scale. The response scale consists of bipolar, evaluative adjectives (Francis et al., 2004). For example, "My child attending his/her first appointment at the mental health clinic would be: Very harmful-very beneficial; Very good-very bad; Very useless-very worthwhile" Items will be re-coded as necessary and the average of the items taken to create an overall attitude score. A higher score on the scale represents a more positive attitude.

Subjective norm. These items capture people's perception of the social pressure from important others to engage in the behavior. It will be measured by three items with 5-point Likert scales ranging from strongly disagree to strongly agree. For example, "People who are important to me think my child should attend his/her upcoming appointment." Once again, items will be re-coded as necessary and the average of the items taken to create an overall subjective norm score. A higher score on the scale represents stronger normative considerations (i.e., feeling social pressure to attend the upcoming appointment).

Perceived behavioural control. Perceived control refers to people's appraisal of their ability to engage in the behavior (i.e., their ability to attend the upcoming appointment). It will be measured by three items with 5-point Likert scales ranging from strongly disagree to

strongly agree. For example, “I am confident I can take my child to his or her appointment at the mental health clinic.” Once again, items will be re-coded as necessary and the average of the items taken to create an overall perceived control score. A higher score on the scale represents greater perceptions of control over attending the appointment.

Intention. As the dependant variable, intention will also be measured by three items on five-point Likert scales ranging from strongly disagree to strongly agree. For example, “I plan to have my child attend his or her appointment at the mental health clinic.” In keeping with scoring and analyses conventions (Francis et al., 2004; Gagne & Godin, 2000), items will be re-coded as necessary and the average of the items taken to create an overall intention score. A higher score on the scale represents a greater intention to attend the upcoming appointment.

Demographics section. Standard demographic items will be included (e.g., sex, age, education); however, we will also measure referral source and reason for the appointment, time spent waiting for the appointment, as well as past mental health service usage (e.g., ‘Has your child ever seen a family doctor for mental health issues?’).

Implementation intention intervention. Participants randomized to the intervention survey will complete one additional section that contains our intervention, likely placed immediately after TPB components and before the demographics section. Recall that IIs are explicit plans about when, where and how a behavior will be achieved. Mounting evidence suggests that people who form IIs are more likely to translate their intentions into actions than people who do not (Gollwitzer, 1999; Sheeran, 2002). It is suggested that survey wording for IIs not be finalized until the collection and analysis of qualitative data with the target audience (Sheeran, 2002; Sheeran et al., 2007); thus, we are unsure of the exact intervention wording at this stage of the study.

However, prior research suggests the problem of nonattendance in mental health may be one of negative affect (e.g., embarrassment, stigma; Corrigan, 2004; Sheeran et al., 2007). As noted, the II in Sheeran et al.’s (2007) study of adult psychotherapy attendance was not designed to increase the likelihood that participants would plan how they would *make* their appointments; rather, it aimed to help them manage attendance-related negative affect. We anticipate that our intervention will also address negative affect rather than forgetfulness, and we expect Phase 1 qualitative data will allow us to determine the exact content of our intervention. Possible wording based on Sheeran et al. (2007) would read:

Parents can sometimes feel concerned about taking their child to a mental health appointment. To help you manage these concerns, please read the statement below 3 times and repeat it silently to yourself one more time:

As soon as I feel concerned about taking my child to his or her mental health appointment, I will ignore that feeling and tell myself this is perfectly understandable.

Now please tick the box below if you have read the statement 3 times and said it to yourself once (please be honest – do not tick the box until you have read and repeated the statement).

I have read and repeated the statement.

Finally, the mental health clinic will track which participants attend their appointments using the ID numbers of completed surveys. Research team members will not have access to participant names; they will only know whether the participant (represented by a given survey number) attended or did not attend the appointment. In this way, the effectiveness of the II intervention for increasing attendance at initial appointments will be tested.

Survey Analysis. TPB surveys, as well as IIs administered via surveys, have a well-established method of analysis (Francis et al., 2004; Gagne & Godin, 2000; Sheeran et al., 2007). First, the reliability of the measures is assessed prior to the regression analyses using Cronbach’s alpha to assess internal reliability and confirmatory factor analysis to identify and discard redundant items. The construct validity of the measures is also assessed prior to analysis by examining correlations between predictor variables that are expected to be similar (convergent validity) and dissimilar (discriminant validity). Items that do not meet minimum criteria for reliability and validity (i.e., $r < 0.7$) will not be entered into main analyses. Then, the relationships between TPB predictors and dependent variables will be assessed using multiple regression analysis.

We intend to run two regression analyses. The first (Ordinary Least Squares regression) will include intention to attend the initial appointment as the dependant variable, with TPB constructs as the predictors (attitude, subjective norm and perceived behavioral control). This initial regression will assess the predictive power of TPB constructs and allow us to test the theory. The second regression will assess the effect of our intervention. We will use a behavioral measure of attendance (attended/did not attend the initial appointment) as the dependant variable in a logistic regression. Consistent with the idea of implementation intentions, we will enter TPB constructs (attitude, subjective norm, perceived

behavioural control and intention as the predictor variables). We will also include relevant demographic variables on a second step in both regressions (e.g., past usage of mental health services, referral source, sex, age, etc.). Regression analyses will assess the overall predictive power of the predictor variables, as well as the effect of our intervention (e.g., the intervention group should have a higher rate of attendance).

Anticipated outcomes. (1) We expect that youth (or their parents) who receive the II intervention on their survey will have higher rates of initial attendance than those in the control group. (2) We expect the TPB and IIs will be a viable theoretical framework within which to study this complex health behavior (i.e., predictors will behave as specified by the theory). More broadly, we expect this initial work to provide notable information for healthcare planners, professionals and policy-makers about child mental health services in Canada. We also anticipate valuable lessons learned about the design and implementation of complex health behaviour change interventions (Michie, 2008).

Conclusion

Initial appointment nonattendance is a serious problem for child mental health services in Canada and elsewhere. At the IWK Health Centre in Halifax, NS, for example, a committee has recently been established to examine the problem. We hope that by using a theory-based, low cost intervention, we can increase attendance at initial appointments. Both phases of the project have received ethical approval and recruitment is under way. We will report our results as they become available, but hope we have encouraged researchers to consider the use of theory-driven interventions in their work in mental health. Theoretically-guided research may allow us to prospectively identify children and youth at greater risk of missing their initial appointment and thereby target them with measures to improve attendance.

Acknowledgements

This project is funded through a Capacity Grant from the Nova Scotia Health Research Foundation, Halifax, NS. We thank Wendy Brunt and clinic staff for their help with study recruitment and support of the project.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and Human Decision Processes*, 50, 179-211.
- Armitage, C., & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology*, 40, 471-499.
- Benway, C., Hamrin, V., & McMahon, T. (2003). Initial appointment nonattendance in child and family mental health clinics. *American Journal of Orthopsychiatry*, 73 (4), 419-428.
- Baruch, G., Gerber, A., & Fearon, P. (1998). Adolescents who drop out of psychotherapy at a community-based psychotherapy centre: A preliminary investigation of the characteristics of early drop-outs, late drop-outs and those who continue treatment. *British Journal of Medical Psychology*, 71, 233-245.
- Campbell, M., Fitzpatrick, R., & Haines, A. (2000). Framework for design and evaluation of complex interventions to improve health. *British Medical Journal*, 321, 694-696.
- Canadian Paediatric Society (2007). Are we doing enough: A status report on Canadian public policy and child and youth health. Canadian Paediatric Society. Available from: <http://www.cps.ca/English/Advocacy/StatusReport.htm>
- Conner, M., & Norman, P. (2005). Predicting health behavior: A social cognition approach. In M. Conner & P. Norman (Eds.), *Predicting health behavior* (pp. 1-27), Berkshire: Open University Press.
- Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist*, 59, 614-625.
- Francis, J., Eccles, M., Johnston, M., Walker, A., Grimshaw, J., Foy, R., Kaner, E., Smith, L., & Bonetti, D. (2004). Constructing questionnaires based on the Theory of Planned Behavior. A manual for health services researchers. Centre for Health Services Research, University of Newcastle, Newcastle upon Tyne, UK.
- Gagne, C., & Godin, G. (2000). The theory of planned behavior. Some measurement issues concerning belief-based variables. *Journal of Applied Social Psychology*, 30, 2173-2193.
- Gollwitzer, P. (1993). Goal achievement: The role of intentions. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology* (pp. 141-185). Chichester, UK: Wiley.
- Gollwitzer, P. (1999). Implementation intentions: Strong effects of simple plans. *American Psychologist*, 54, 493-503.
- Gollwitzer, P. & Sheeran, P. (2006). Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in Experimental Social Psychology*, 38, 69-119.
- Hampton-Robb, S., Qualls, R., & Compton, W. (2006). Predicting first-session attendance: The influence of referral source and client income. *Psychotherapy Research*, 13, 223-233.
- Harrison, M., McKay, M., & Bannon, W. (2004). Inner-city child mental health service use: The real question is why youth and families do not use services. *Community Mental Health Journal*, 40 (2) 119-131.
- ICEBeRG (2006). Designing theoretically-informed implementations interventions. The Improved Clinical Effectiveness through Behavioural Research Group. *Implementation Science*, 1, 4-11.

- Leitch, K (2008). Reaching for the top: A report by the advisor on healthy children and youth. Available from: http://www.cmha.ca/data/1/rec_docs/1737_advisor-conseillere_e.pdf
- Lowman, R., DeLange, W., Roberts, T. (1984). Users and 'teasers': Failure to follow through with initial mental health service inquiries in a child and family treatment center. *Journal of Community Psychology*, 12, 253-262.
- McKay, M., McCadam, K., & Gonzales, J. (1996). Addressing the barriers to mental health services for inner city children and their caretakers. *Community Mental Health Journal*, 32, 353-361.
- Michie, S. (2008). Designing and implementing behavior change interventions to improve population health. *Journal of Health Services Research & Policy*, 13 Supp 3, 64-69.
- Ogrodniczuk, J., Joyce, A., & Piper, W. (2005). Strategies for reducing patient-initiated premature termination of psychotherapy. *Harvard Review of Psychiatry*, 13 (2) 57-70.
- Owens, S., Bowman, C., & Dill, C. (2008). Overcoming procrastination: The effect of implementation intentions. *Journal of Applied Social Psychology*, 38 (2) 366-384.
- Patton, M. (2002). Qualitative evaluation and research methods. Newbury Park, CA: Sage.
- Rutter, D., Steadman, L., & Quine, L. (2006). An implementation intentions intervention to increase uptake of mammography. *Annals of Behavioral Medicine*, 32 (2) 127-134.
- Shadish, W., Cook, DT., & Campbell, D. (2002). Experimental and quasi-experimental designs for generalized causal inference. Houghton Mifflin Company: New York.
- Shatkin, J., & Belfer, M. (2004). The global absence of child and adolescent mental health policy. *Child Adolescent Mental Health*, 9 (3) 104-108.
- Sheeran, P., & Orbell, S. (2000). Using implementation intentions to increase attendance for cervical cancer screening. *Health Psychology*, 18, 283-2893
- Sheeran, P. (2002). Intention-behavior relations: A conceptual and empirical review. In W. Stroebe, & M. Hewstone (Eds.), *European Review of Social Psychology* (pp. 1036-1059), Chichester, England: Wiley.
- Sheeran, P., Aubrey, R., & Kellett, S. (2007). Increasing attendance for psychotherapy: Implementation intentions and the self-regulation of attendance-related negative affect. *Journal of Consulting and Clinical Psychology*, 75 (6) 853-863.
- Smith, JA., Jarman, M., & Osborn, M. (1999). Doing interpretative phenomenological analysis. In M. Murray & K. Chamberlain (Eds.), *Qualitative health psychology: Theories and methods* (pp. 218-240), London: Sage.
- Sparr, L., Moffitt, M., & Ward, M. (1993). Missed psychiatric appointments: who returns and who stays away. *American Journal of Psychiatry*, 150, 801-805.
- Sutton, S. (1998). Predicting and explaining intentions and behavior: How well are we doing? *Journal of Applied Social Psychology*, 28, 1317-1338.
- Tabachnik, B., & Fidell, L. (2007). Using Multivariate Statistics (5th Ed.). New York: Harper Collins.
- World Health Organization (2005). Atlas. Child and Adolescent Mental Health Resources.
- Global concerns: Implications for the future. Available from: http://www.who.int/mental_health/resources/Child_ado_atlas.pdf

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