

Research use in children's mental health policy in Canada: Maintaining vigilance amid ambiguity

Charlotte Waddell^{a,*}, John N. Lavis^{b,c}, Julia Abelson^{b,c}, Jonathan Lomas^d,
Cody A. Shepherd^a, Twylla Bird-Gayson^a, Mita Giacomini^b,
David R. (Dan) Offord^e

^a*Mental Health Evaluation and Community Consultation Unit, Department of Psychiatry, University of British Columbia, 2250 Wesbrook Mall, Vancouver, BC, Canada V6T1W6*

^b*Centre for Health Economics and Policy Analysis, Department of Clinical Epidemiology and Biostatistics, McMaster University, 1200 Main Street West, Hamilton, ON, Canada, L8N3Z5*

^c*Department of Political Science, McMaster University, Hamilton, ON, Canada*

^d*Canadian Health Services Research Foundation, 1565 Carling Avenue, Suite 700, Ottawa, ON, Canada K1Z8R1*

^e*Offord Centre for Child Studies, Department of Psychiatry and Behavioural Neurosciences, McMaster University, 1200 Main Street West, Hamilton, ON, Canada L8N3Z5*

Available online 26 April 2005

Abstract

Many researchers hope to see the best available research evidence used in policy-making to address important public problems. However, policy often appears to be based on anything *but* the research evidence, as the problem of conduct disorder (or severe antisocial behaviour in children) shows. In Canada, few children receive effective prevention or treatment programs, and incarceration is overused, despite evidence that it is ineffective and potentially harmful. Using the example of conduct disorder, we investigated *why* policy-making has not reflected the research evidence, examining research use in the context of competing influences on the policy process. Qualitative methods were used to analyze data from interviews with thirty-two politicians and senior civil servants. Our allegiance to rationality wavered as we listened to policy-makers who contended with the inherent ambiguity in the policy process. They told us that they managed institutional constraints including fragmentation across levels and sectors of government, and the long-term effects of fiscal restraint. They also reconciled the competing interests of stakeholders' priorities, the public's response to negative events involving children and the media's role in shaping this response. Ideas about youth violence were morally charged, but policy-makers remained committed to improving children's lives. Day-to-day, policy-makers obtained most of their information internally and informally. Research evidence *was* valued and used, but as just one source of ideas and information among many. In this environment of ambiguity, creative civil servants formed partnerships with trusted researchers in order to change policy. Our findings suggest that the use of research evidence in policy-making could be enhanced if researchers learned about the competing influences on the policy process, formed research-policy partnerships, challenged the incentives within research institutions, and engaged in public debates about important problems, such as child antisocial behaviour.

© 2005 Elsevier Ltd. All rights reserved.

Keywords: Health policy; Knowledge transfer; Knowledge utilization; Children's mental health; Antisocial behaviour; Canada

*Corresponding author.

E-mail address: charlotte.waddell@ubc.ca (C. Waddell).

Introduction

Many researchers hope, perhaps quixotically, to see the best available research evidence used in policy-making to address important public problems. However, policy often appears to be based on anything *but* the best available research evidence, despite large public investments in research (Davis, & Howden-Chapman, 1996; Shulock, 1999; Davies, Nutley, & Smith, 2000). Researchers have begun to explore the apparent disconnect between research and policy in a range of fields including health, business, education, agriculture and the environment (Huberman, 1994; Rogers, 1995; Lomas, 1990, 2000; Sabatier, & Jenkins-Smith, 1999).

In the health field, incorporating research evidence into clinical practice was a priority for much of the last decade. Numerous clinical research-practice gaps were documented and interventions developed to bridge these gaps (Oxman, Thomson, Davis, & Haynes, 1995; National Health Service, 1999). However, lessons from *clinical* policy may not apply elsewhere. Consequently, researchers have begun to investigate research use by politicians and civil servants involved in *legislative* and *administrative* policy. Recent reviews have summarized factors that facilitate research use at this level, such as personal contact between researchers and policy-makers, and timely communication of relevant research findings (Innvaer, Vist, Trommald, & Oxman, 2002; Hanney, Gonzalez-Block, Buxton, & Kogan, 2003). However, few empirical studies have examined research use in the context of the competing influences on the health policy process (Lavis, Ross, Hurley, Hohenadel, Stoddart, Woodward et al., 2002). No empirical studies have examined these issues for children's mental health in Canada.

Conduct disorder, or severe antisocial behaviour in children, illustrates the challenge of using research evidence in policy-making. Conduct disorder is a leading public health problem in Canada and elsewhere, affecting over 4% of children at any given time (Hill, & Maughan, 2001; Waddell, Offord, Shepherd, Hua, & McEwan, 2002). There is good research evidence on both prevention and treatment. Nurse home visitation and early child development programs for high-risk families are both effective prevention approaches (Schweinhart, Barnes, & Weikart, 1993; Olds, Henderson, Cole, Eckenrode, Kitzman, Luckey et al., 1998). Parent training is an effective treatment (Webster-Stratton, & Hammond, 1997). In contrast, there is good evidence that incarceration is ineffective and potentially harmful (Dishion, McCord, & Poulin, 1999; MacKenzie, Wilson, & Kider, 2001). Unfortunately, Canadian public policies do not reflect the research evidence. Most children in need do not receive effective prevention *or* treatment programs (Waddell, Lomas, Offord, & Giacomini, 2001). Furthermore, incarceration is over-

used. Canada has higher incarceration rates for children than any other developed country, including the US (Justice Canada, 2002).

Many of the policy challenges in children's mental health involve Canada's federalist institutional arrangements. Federal, provincial and local governments share responsibility for the health, education, social service and justice sectors where children's mental health services are delivered. The federal government generally takes an arms-length role, transferring public funds to the provinces where programs are administered. Some funds are further redistributed to the local level where front-line services are provided. All public services have been affected by fiscal restraint in the past decade as federal and provincial governments responded to their growing debt by cutting budgets and programs. These retrenchments have cascaded from federal to provincial to local governments, straining the relationships among the different levels of government.

Canadians have also heatedly debated policies for dealing with children with antisocial behaviour. Groups such as *Invest in Kids* have argued that we should invest in early child development in order to reduce child antisocial behaviour. In contrast, groups such as *Canadians Against Violence* have sought harsher punishments for children who commit crimes. In the late 1990s, there appeared to be widespread public support for dealing with antisocial children through the justice system. Media coverage fuelled the debate by focusing on high-profile youth crimes and the distress of victims and their families. In response, the federal government rewrote Canada's legislation dealing with youth crime, the *Young Offenders' Act*, adding tougher sentences for violent crimes while also encouraging alternatives to incarceration for non-violent crimes (Justice Canada, 2002). Canada's new *Youth Criminal Justice Act* was proclaimed in 2003, so the impact of this compromise solution is still unknown.

Given the seriousness of conduct disorder, and given the availability of good research evidence on prevention and treatment, we decided to investigate *why* policy does not reflect the research evidence. As Weiss observed, "few ideological commitments in modern Western societies are stronger than the ideas of rationality and intelligent choice" (Weiss, 1983, p. 233). We began this study committed to rationality and intelligent choice in public policy-making, although we recognized that political factors will always weigh heavily in the policy process. We were also interested in the policy applications of research, although we recognized that curiosity-driven research will always be essential. For the problem of conduct disorder, we believed that more research use in policy-making would benefit children in need and improve public health.

Qualitative methods were chosen to obtain rich descriptions of the competing influences on the policy

process. We used conduct disorder as the *content* focus to allow us to explore the overall policy *process*. Politicians and senior civil servants were chosen as participants because both groups make significant legislative and administrative decisions pertaining to children's mental health and child antisocial behaviour. We did not focus on clinical policy as this has been well researched by others.

Methods

We purposively selected politicians and senior civil servants who were directly involved in policy-making regarding children's mental health or child antisocial behaviour in Canada. To ensure participation from all relevant areas, we included policy-makers from three levels of government (federal, provincial, local), four sectors (health, education, social services, justice) and four geopolitical regions (eastern, central, prairie, western). We used a snowball sampling strategy, identifying participants based on our knowledge of the field, then asking participants to identify others. Ethical approval was obtained from McMaster University and the University of British Columbia for procedures to obtain informed consent and to protect participants' confidentiality.

Data collection comprised semi-structured interviews with participants (Miles, & Huberman, 1994; Denzin, & Lincoln, 2002). We inquired about the overall influences on policy-making using open-ended questions, then probed about the influence of ideas and the use of research evidence. *Ideas* were broadly defined as beliefs or values that contributed to policy-making. *Research evidence* was defined as empirical information that may inform ideas, produced by researchers in universities or other independent settings. Participants were not presented with any particular framework to organize their responses. We asked about policy-makers' experiences in aggregate, not about specific decisions or stages of the policy process.

The lead author (or research assistants trained by her) interviewed participants in their own settings for 60–90 min. All interviews were taped and transcribed verbatim. Field notes and interview transcripts were organized using secure file systems and qualitative research software (Gahan, & Hannibal, 1998). Three authors (CW, JNL and JA) reviewed transcripts as the study proceeded to identify preliminary concepts and to reformulate interview questions as needed. We stopped collecting data when conceptual saturation was reached, and when participants were included from the specified levels, sectors and regions.

Three authors (CW, CS and TBG) conducted the main data analysis. We independently reviewed each transcript, identified basic concepts discussed by parti-

cipants and created an electronic database with codes for each concept. We then explored our different interpretations and together identified themes as they emerged from the data. Throughout, we made constant comparisons with the interview transcripts and the coding to ensure that the themes were broadly representative, were particularly compelling or lent coherence to the overall thematic analysis. Two other authors (JNL and JL) independently reviewed several transcripts to verify the thematic analysis. The entire team then reviewed the analysis, explored different interpretations and reached consensus on a final selection of themes.

Finally, we compared the themes to the extant literature in the interdisciplinary fields of knowledge utilization and policy analysis, again exploring different interpretations before agreeing on our findings. Throughout the study, our interdisciplinary research team ensured a diversity of theoretical and methodological perspectives including child psychiatry, health policy, political science and the social sciences more generally. This diversity enabled us to continually challenge our assumptions.

Findings

All participants were directly involved in children's policy-making in Canada. Politicians comprised provincial premiers, mayors and city councillors. Federal and provincial civil servants comprised deputy ministers (top-ranking civil servants in a department), assistant deputy ministers (second-from-top), directors (third-from-top) and policy analysts. Local civil servants comprised police chiefs, heads of school boards and school board officials. Thirty-two policy-makers were interviewed.

We have organized the themes that constitute our findings according to the flow of a typical interview. While policy-makers told us that they used and valued research evidence, they insisted on first explaining the overarching influences on the policy process: inherent ambiguity; institutional constraints; and competing interests. A thorough description of these influences typically preceded any discussion about ideas or research evidence. We have then highlighted the creative research-policy partnerships that some policy-makers described. Throughout, we have selected quotes from participants that provided the clearest expression of each theme.

Inherent ambiguity

Policy-makers contended with inherent ambiguity in the policy process, where there were always many different ways to perceive policy problems and solutions. They recognized that policy-making was fundamentally

a *non-rational* process: “Facts and logic are not the deciding factors in political life.” Seemingly rational considerations were secondary when policy-makers were often inundated with information: “It’s just phenomenal what you have to learn in a short period of time.”

The first thing you have to realize is that decision-makers have an immense amount of competing information coming at them on an immense range of subjects. So if you ask about my views on children at risk, I would say they weren’t on my radar screen when I took office. I was a lot more worried about plants closing down and what was happening in the economy. *Politician A*

The relationships between politicians and civil servants added ambiguity. Civil servants needed to earn the trust of politicians, but often found it difficult to establish trust early in a government’s mandate. Most civil servants gave the traditional definition of their role: to provide their best advice to politicians, then to implement the politicians’ decisions. Yet they struggled to reconcile their responsibilities with the politicians’ priorities.

The minister of the day almost decided that we weren’t going to have any more wilderness programs, because of the perceived risk to kids, part of that political reaction to critical incidents. This had the potential to create great difficulty for us. We use these programs as an alternative to custody, so if we shut them down, we’d have hundreds of kids we needed to put somewhere. *Civil Servant A*

Politicians, meanwhile, needed to collaborate with civil servants. However, politicians often found the permanence of the bureaucracy to be an impediment: “If they want to stop something, if they want to slow something down, eventually they’ll win, because they’ll be there forever.” Politicians struggled to reconcile their perceptions of public needs with the advice they received from civil servants.

We’re like the meat in the sandwich, as political representatives. We have the community’s demands and needs, and staff with the expertise and training. Then it’s up to us to finally say ‘yes’ or ‘no.’ *Politician B*

Institutional constraints

While contending with ambiguity, all policy-makers managed institutional constraints, particularly fragmentation across federal, provincial and local levels of government. Federal policy-makers discussed enticing their provincial and local counterparts to implement unpopular initiatives (such as prevention programs), using “gentle persuasion, with money.” They suggested

that emotional public reactions to child antisocial behaviour often compelled front-line service providers to make swift and tough decisions. In contrast, federal policy-makers claimed to be uniquely positioned to respond “more contemplatively” because of their distance from the front line.

That’s the big hope for the crime prevention strategy. \$30 million spread across the country is not a lot of money and it certainly was designed to leverage funds from communities and provinces and territories. Hopefully, through our investment and through these good partnerships, we can encourage a shift, even a small shift. *Civil Servant B*

Meanwhile, provincial policy-makers resisted unilateral federal decisions that had dramatic consequences for their jurisdictions: “The feds chopped the hell out of social programs.” At the same time, local policy-makers argued that unilateral provincial decisions were often ineffective or irrelevant. Furthermore, local policy-makers in the education and justice sectors suggested that they deserved more influence because they provided front-line services and dealt with victims of youth violence.

Our own [provincial] justice minister said she’d like to have a police officer in every school. Well, hey, so would I. But I’ve got 750 schools. Are you going to give me 750 additional officers to put one in every school? Besides, do you really think putting a cop in every school is going to solve the problem? I don’t think so. *Civil Servant C*

Fragmentation across health, education, social service and justice sectors was also common. Many civil servants expressed frustration with barriers to communication, since they were all responsible for the same children whose problems cut across government departments. Others admitted their bewilderment with the variation in children’s policies: “As the chief of police, I’m confused.” Recently, several provinces had tried to reduce cross-sectoral fragmentation by creating dedicated children’s ministries or inter-ministerial bodies. However, civil servants argued that integration rarely succeeded because frequent restructuring further destabilized the policy-making environment.

Right now, if I had a child in conflict with the law, I’d really have a hard time as a parent. It’s almost like going to the phone book, where all these programs are listed. How do I know which one is the most appropriate one? *Civil Servant D*

Past policies of fiscal restraint affected every aspect of institutional life for both politicians and civil servants. Policy-makers had weathered a decade of budget cuts at every level, and many expenses had been downloaded

from federal to provincial to local governments. Some policy-makers told us that in-house research capacity was one of the first things cut, while others suggested that the push for efficiency could encourage research use. Increasingly, policy-makers had to demonstrate to finance departments and treasury boards that programs were effective and efficient. Therefore, they were compelled to “do things better and smarter, with fewer resources.”

Unfortunately, in the last five years when government was forced to ‘downsize, right-size, restructure,’ whatever you want to call it, the dollars spent on research were often the first to go because they don’t have an immediate public impact. So the research arm of my department was cut to the bone. The good news is I’ve packaged it differently, into an ‘indicators unit.’ I’ve gone from one to three people and we’re getting back to where we should have been.
Civil Servant E

Competing interests

While contending with ambiguity and managing institutional constraints, policy-makers also reconciled competing interests. All policy-makers considered the public to be an important influence but few articulated *how* public opinion influenced the policy process. One politician suggested that the elderly, for example, were “trying to tell us that they do not feel secure any more in their community.” Policy-makers used an array of informal measures to assess public opinion: media coverage; constituency meetings; personal interactions; and even “word on the street.” Politicians were particularly attentive to the changing preferences of their constituents.

I have no doubt that my failure to take a harsher line on crime and punishment—because I don’t believe in it, I just think it’s all bullshit—I think that attitude on my part was politically costly, because my successor identified *quite* astutely that in fact the public was worried about these issues. *Politician A*

Extraordinary or negative events could galvanize public opinion. Many policy-makers told vivid stories of violent incidents involving children under their jurisdiction. Some civil servants “lived in terror” that a violent incident might happen on their watch. Civil servants spent much of their time anticipating and mitigating the impact of negative events: “we try to systematically reduce the probability that something bad will happen.” Despite their reservations about policy as a reaction to the worst-case scenario, policy-makers admitted that it often “takes a crisis for politicians to respond.”

You can have one horrendous incident in a school, and all of a sudden, all kids are bad. We’ve got to change the legislation, we’ve got to be stricter, we’ve got to put kids in jail. *Civil Servant C*

For policy-makers, the news media was inextricably linked with the public’s response to extraordinary or negative events. Policy-makers decried the effect of sensational coverage on public opinion. They appreciated that the media brought problems to the public’s attention, but they argued that the media failed to contribute solutions: “they help and they hurt.” Negative events provided an opportunity for media to capture readers’ attention and for advocacy groups to advance their own interests. If media and advocacy groups could make the case that a widespread problem existed, then negative events could become catalysts for change. Therefore, managing media coverage was a constant concern for policy-makers.

At the graduation ceremony last year, we invited the media and they didn’t show up. The superintendent of schools was bitterly disappointed that they weren’t there. The chief of police was equally disappointed. I jokingly said, ‘If we phoned in a knife call right now, they’d be here in a flash.’ *Civil Servant F*

Policy-makers also reconciled the competing interests of many stakeholder groups concerned about child antisocial behaviour. Policy-makers consulted with stakeholders to identify problems and gain support for proposed solutions. Consultation provided a forum for *individuals*, such as parents and employees, to organize and have more influence by becoming identified as *stakeholders*. Stakeholders often came bearing research evidence that supported their causes. Policy-makers routinely managed stakeholder interactions and brokered compromises when there was conflict.

Finally, a bell went off inside me. Why don’t we get the neighbours on the street involved in a committee? Bring a few of them on board and help us to find a solution. The next thing I knew, I had about a dozen residents who said ‘fabulous!’ And they weren’t coming to crucify me. *Politician B*

Ideas and research evidence

Along with inherent ambiguity, institutional constraints and competing interests, several overarching ideas were widely influential. Most policy-makers believed that children were inherently good and deserving, no matter how troubled. Many were passionately committed to improving the lives of disadvantaged children. Many were convinced that investing in early child development was a way to improve the health and wellbeing of all children. Ideas such as safe schools and

community policing were also prominent in the education and justice sectors. No one spoke unsympathetically about children.

There are no bad kids. There are kids who are in bad circumstances, who have made bad choices. If you help change their circumstances and show them better choices, you can do good things with these kids. *Civil Servant G*

Conflicting ideas, however, could make it difficult for policy-makers to use research evidence: “It’s tricky where there’s no consensus.” In fact, many policy-makers observed a disconnect between research evidence that youth crime rates were stable and public perceptions that youth crime was increasing. They suggested that public opinion fuelled demands for harsher punishments. Politicians, in particular, recognized that safety and security were fundamental public values. They suggested that ideas about crime and punishment were so morally charged that they were not amenable to rational influences such as research evidence.

It defies statistics. Punishment is an expression of moral outrage at the crime that has been committed. Whether or not a particular punishment has an effect or acts as a deterrent is irrelevant. What was really objected to in the *Young Offenders’ Act* was that there was not enough punishment. *Politician A*

Policy-makers also revealed their sources of day-to-day information. Universally, policy-makers obtained most of their basic information from their own organizations. They relied on internal reviews of policies and services, and on internal tracking of expenditures and demographic trends in the populations they served. Data on the *outputs* of existing services were plentiful, but data on the *outcomes* for children and families were scarce. Policy-makers regularly drew comparisons with similar organizations in other jurisdictions, and in a crisis, they occasionally imported “canned policy” from other jurisdictions, including the US. For most policy-makers, informal networks of colleagues were the main conduit for ideas and information.

Education is rife with information about demographics, how many boys, how many girls, how many rural, how many urban, how much money has been spent, how many students are transported over how many kilometers. I could go on and on. But we are poor at providing data on what the result of that has been. *Civil Servant E*

In a context where a few ideas were widely influential and where information was accessed internally and informally, civil servants used and valued research evidence as yet another source of ideas and yet another kind of information. The accumulation of research on a

topic could reinforce the notion that an idea’s time had come, as happened with early child development. Policy-makers attested that “academic research has a very strong role in keeping you abreast of major developments.” Federal and provincial civil servants often sought advice from academics and awarded program evaluation contracts to researchers, especially when they were “under pressure to deliver a quality product in a short period of time.” Given the constraints on their time and their methodological knowledge, civil servants preferred receiving critical *syntheses* of research evidence. Politicians, in turn, relied on civil servants to vet research evidence for them.

When we were given this portfolio, I was very anxious about our ability to assess this demonstration project. We’re not academics. We don’t have the methodological knowledge. So we convened a research panel and we will be relying on them very heavily. *Civil Servant H*

Research evidence *was* valued and used. However, policy-makers rejected the slow pace of university-based research and the academic penchant for “immaterial detail.” Policy-makers acknowledged that “research of an esoteric nature is necessary,” but they complained about researchers who paid little attention to the “public resonance” for their ideas. One politician simply concluded: “The academy is talking to itself.” Others exhorted researchers to engage in public policy debates, especially when contentious issues such as youth crime were on the agenda, and when policy-makers needed help to counteract negative media coverage and public perceptions of children.

Academics could be more vocal. When we have hot issues to deal with, they aren’t at the forefront. When government is getting tough on crime, academics need to take responsibility, to get out front and say, ‘There are other ways of doing business here.’ Because it’s very hard for us to do that. *Civil Servant I*

Research-policy partnerships

The traditional role of a civil servant was to advise politicians and implement their decisions. However, some civil servants went beyond this traditional role to creatively “shape the opportunity” presented by events such as the emergence of a crisis or the election of a sympathetic politician. These civil servants strategically positioned research evidence and arranged meetings between researchers and the politicians whom, they claimed, “often do what we recommend.” Research evidence enabled these civil servants to advocate more effectively for policy change from inside the bureaucracy. Some allowed the research evidence to inform

their positions; others sought research evidence to support their positions.

The politicians told us, ‘You will develop this.’ We know it’s not the right thing to do for correctional services. But it sounds great in public, and for the most part, the public’s fairly ignorant about what works and what doesn’t work. So our job is to take what we know to be effective services, and to try to influence the politicians in such a way that they can still say they’re being tough on crime. *Civil Servant I*

Most of these creative civil servants also cultivated long-term partnerships with a small number of “trusted expert” researchers. These trusted experts were generally senior academics who sought policy-makers out, then assumed the tasks of synthesizing research evidence, applying research findings to local problems or marketing findings to politicians and the public. Politicians in turn valued their non-partisan approach. Both civil servants and politicians appreciated their ability to communicate superbly with many different audiences: “More than most, he makes the connection with the community.” Policy-makers noted that few researchers were willing or able to play this policy-friendly role, but that those who did had extraordinary influence.

The key is identifying people who really understand both research and policy, and who have credibility in both cultures. How does anyone do it? (Researcher A) is a good example: she’s persistent, she gets to know people and she brings people together. There are very few people who have her skill set. *Politician A*

Discussion

Using the example of conduct disorder, we investigated *why* policy-making did not reflect the research evidence, examining research use in the context of competing influences on the policy process. Our allegiance to rationality wavered as we listened to policy-makers who contended with the inherent ambiguity in the policy process. They told us that they managed institutional constraints including fragmentation across levels and sectors of government, and the long-term effects of fiscal restraint. They also reconciled the competing interests of stakeholders’ priorities, the public’s response to negative events involving children and the media’s role in shaping this response. Ideas about youth violence were morally charged, but policy-makers remained committed to improving children’s lives. Day-to-day, policy-makers obtained most of their information internally and informally. Research evidence *was* valued and used, but as just one source of ideas and information among many. In this environment of ambiguity, we found creative civil servants who

formed partnerships with trusted researchers in order to change policy.

Our findings overlap with elements of the knowledge utilization literature. In particular, policy-makers need to receive *syntheses* of cumulative bodies of research evidence that they can act upon with confidence, not just the single specialized studies that many researchers produce (Lomas, 1990; Lavis et al., 2003). The knowledge utilization literature also distinguishes between using research evidence directly, using it for general enlightenment, and using it symbolically to legitimate decisions (Weiss, 1979; Beyer, & Trice, 1982). Our findings suggest that all three uses of research are important and intertwined, since participants referred to all three and did not privilege one over another.

The “two communities” hypothesis has been postulated in the knowledge utilization literature to explain the lack of research use in policy-making (Caplan, 1979). This hypothesis suggests that researchers and policy-makers work in different cultures and that increasing the personal contact between them may increase the use of research evidence in policy-making. A recent systematic review (Innvaer et al., 2002) and subsequent studies (e.g., Landry, Lamari, & Amara, 2003) have supported this hypothesis. In our study, policy-makers criticized researchers who did not understand the policy process, suggesting that important cultural differences *do* exist. That aside, our findings provide only qualified support for the “two communities” hypothesis. Personal contact between policy-makers and researchers is likely a precursor for research use. However, our findings suggest that contact is only one factor in a complex process that includes inherent ambiguity, institutional constraints, competing interests, as well as ideas and research evidence. The notion of “two communities” may therefore, be necessary but insufficient as an explanatory hypothesis (Lavis et al., 2002).

We also compared our findings to the policy analysis literature, which draws upon political science and its emphasis on competing influences in policy-making. Here, we found considerable overlap. Political scientists generally recognize three categories of influence—institutions, interests and ideas—and generally hold that all three should be considered in any comprehensive policy analysis (Lavis et al., 2002; Lavis, 2004). Although we did not impose this framework on our interviews or data analysis, we found that it nevertheless respected the way policy-makers responded to our questions. The political science categories map onto our themes of institutional constraints, competing interests, and ideas and research evidence. Like others, we found that vertical fragmentation (across levels of government) and horizontal fragmentation (across sectors) inhibited progress on crosscutting health and social problems (Pierson, 1995; Lavis, & Sullivan, 1999). As with many salient policy problems, the public interest

loomed large, perhaps because extraordinary or negative events involving children easily captured the public's attention (Glynn, Herbst, O'Keefe, & Shapiro, 1999).

Our findings about the creative civil servants (*and* the equally creative trusted researchers) add to the richness of the political science framework by illustrating how individuals "shape the opportunity" to change policy. These findings are consistent with work on agenda-setting and the function of "entrepreneurs." Entrepreneurs, who may be experienced members of the policy community or effective advocates from the research community, anticipate opportunities to couple problems, policies and politics and thereby set the policy agenda (Kingdon, 1984). Recent work emphasizes ambiguity as the condition that permits entrepreneurial creativity: "Effective leaders thrive on ambiguity, since it creates choices and opportunities for them to portray their issues in different ways" (Baumgartner, 1989, p. 132; Oliver, & Paul-Shaheen, 1997; Zahariadis, 1999). Our study supports this body of work, since our participants described a policy process characterized by ambiguity. The problem of child antisocial behaviour may be portrayed in different ways by civil servants and politicians, by federal, provincial or local governments, and by stakeholders, media and the general public. Policy-makers must remain vigilant amid this ambiguity if they are to choose the best course for children.

Why is it that children's mental health policy does not reflect the best available research evidence? We found that policy-makers do use research evidence, but only as one source of ideas among many competing influences. What can researchers do to *enhance* the use of research evidence in policy-making? Several suggestions arise from our findings. Researchers should make the effort to learn about the competing influences on the policy process and should develop more realistic expectations about the use of research evidence (Shulock, 1999). Researchers can then follow the lead of the "trusted experts" in our study and form creative research-policy partnerships (although not everyone can or should do this, as our participants recognized). For partnerships to be sustainable, researchers must challenge their own institutions to create incentives for working with policy-makers, and to encourage policy-relevant approaches to creating new knowledge (Davis, & Howden-Chapman, 1996; Lomas, 2004). Finally, as our participants suggested, researchers can engage in public debates about important problems such as child antisocial behaviour. By engaging in public debates, researchers can contribute constructively to the media coverage and public perceptions that are so influential in the policy process. In these ways, researchers can assist policy-makers to maintain vigilance amid ambiguity.

Acknowledgments

We thank the study participants for their generosity and their commitment to public service. Charlotte Waddell thanks George McLaughlin for the title, and for always maintaining vigilance amid ambiguity. Funding for this study was provided by Health Canada, the Michael Smith Foundation for Health Research and the Human Early Learning Partnership. Charlotte Waddell is supported by a Scholar Award from the Michael Smith Foundation for Health Research. John Lavis holds the Canada Research Chair in Knowledge Transfer and Uptake. Julia Abelson is supported by a New Investigator Award from the Canadian Institutes of Health Research (CIHR). Mita Giacomini is supported by a National Health Research Scholar Award from the CIHR.

References

- Baumgartner, F. R. (1989). Strategies of political leadership in diverse settings. In B. D. Jones (Ed.), *Leadership and politics* (pp. 114–134). Lawrence, KS: University Press of Kansas.
- Beyer, J. M., & Trice, H. M. (1982). The utilization process: A conceptual framework and synthesis of empirical findings. *Administrative Science Quarterly*, 27(4), 591–622.
- Caplan, N. (1979). The two communities theory and knowledge utilization. *American Behavioral Scientist*, 22(3), 459–470.
- Davis, P., & Howden-Chapman, P. (1996). Translating research findings into health policy. *Social Science & Medicine*, 43(5), 865–872.
- Davies, H. T. O., Nutley, S. M., & Smith, P. C. (Eds.). (2000). *What works? Evidence-based policy and practice in public services*. Bristol, UK: The Policy Press.
- Denzin, N.K., Lincoln, Y.S. (Eds.). (2002). *Handbook of qualitative research*. (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Dishion, T. J., McCord, J., & Poulin, F. (1999). When interventions harm. Peer groups and problem behavior. *American Psychologist*, 54(9), 755–764.
- Gahan, C., & Hannibal, M. (1998). *Doing qualitative research using QSR NUD*IST*. Thousand Oaks, CA: Sage Publications.
- Glynn, C. J., Herbst, S., O'Keefe, G. J., & Shapiro, R. Y. (1999). *Public Opinion*. Boulder, CO: Westview Press.
- Hanney, S. R., Gonzalez-Block, M. A., Buxton, M. J., & Kogan, M. (2003). The utilisation of health research in policy-making: Concepts, examples and methods of assessment. *Health Research Policy and Systems*, 1(2), 1–28.
- Hill, J., & Maughan, B. (Eds.). (2001). *Conduct disorders in childhood and adolescence*. Cambridge, UK: Cambridge University Press.
- Huberman, M. (1994). Research utilization: The state of the art. *Knowledge and Policy*, 7(4), 13–33.
- Innvaer, S., Vist, G., Trommald, M., & Oxman, A. (2002). Health policy-makers' perception of their use of evidence: A systematic review. *Journal of Health Services Research & Policy*, 7(4), 239–244.

- Justice Canada. (2002). *The Youth Criminal Justice Act: Summary and background*. Retrieved September 30, 2003, from <http://canada.justice.gc.ca/en/ps/yj/legis/explan.html>
- Kingdon, J. W. (1984). *Agendas, alternatives, and public policies*. Boston, MA: Little, Brown.
- Landry, R., Lamari, M., & Amara, N. (2003). The extent and determinants of the utilization of university research in government agencies. *Public Administration Review*, 63(2), 192–205.
- Lavis, J.N. (2004). A political science perspective on evidence-based decision-making. In L. Lemieux-Charles, Champagne, F. (Eds.), *Using knowledge and evidence in health care: Multidisciplinary perspectives*. Toronto, ON: University of Toronto Press.
- Lavis, J. N., Ross, S. E., Hurley, J. E., Hohenadel, D. M., Stoddart, G. L., Woodward, C. A., & Abelson, J. A. (2002). Examining the role of health services research in public policymaking. *Milbank Quarterly*, 80(1), 125–154.
- Lavis, J.N., Robertson, D., Woodside, J.M., McLeod, C.B., Abelson, J.A., Knowledge Transfer Study Group. (2003). How can research organizations more effectively transfer research to decision makers? *Milbank Quarterly*, 81(2), 221–248.
- Lavis, J. N., & Sullivan, T. (1999). Governing health. In D. Drache, & T. Sullivan (Eds.), *Market limits in health reform: Public success, private failure* (pp. 313–328). London, UK: Routledge.
- Lomas, J. (1990). Finding audiences, changing beliefs: The structure of research use in Canadian health policy. *Journal of Health Politics, Policy and Law*, 15(3), 525–542.
- Lomas, J. (2000). Connecting research and policy. *ISUMA: Canadian Journal of Policy Research*, 1(1), 140–144.
- Lomas, J. (2004). Understanding evidence-based decision-making or why keyboards are irrational. In Lemieux-Charles, L., Champagne, F. (Eds.), *Using knowledge and evidence in health care: Multidisciplinary perspectives*. Toronto, ON: University of Toronto Press.
- MacKenzie, D. L., Wilson, D. B., & Kider, S. (2001). Part II: Research findings from prevention and intervention studies: Effects of correctional boot camps on offending. *The Annals of the American Academy of Political and Social Science*, 578, 126–143.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- National Health Service. (1999). *Effective health care. Getting evidence into practice*. Plymouth, UK: Latimer Trend & Company.
- Olds, D., Henderson, C. R., Jr., Cole, R., Eckenrode, J., Kitzman, H., Luckey, D., Pettitt, L., Sidora, K., Morris, P., & Powers, J. (1998). Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized controlled trial. *Journal of the American Medical Association*, 290(14), 1238–1244.
- Oliver, T. R., & Paul-Shaheen, P. (1997). Translating ideas into actions: Entrepreneurial leadership in state health care reforms. *Journal of Health Politics, Policy & Law*, 22(3), 721–788.
- Oxman, A. D., Thomson, M. A., Davis, D. A., & Haynes, R. B. (1995). No magic bullets: A systematic review of 102 trials of interventions to improve professional practice. *Canadian Medical Association Journal*, 153(10), 1423–1431.
- Pierson, P. (1995). Fragmented welfare states: Federal institutions and the development of social policy. *Governance*, 8(4), 449–478.
- Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). Toronto, ON: The Free Press.
- Sabatier, P. A., & Jenkins-Smith, H. C. (1999). The advocacy coalition framework: An assessment. In P. A. Sabatier (Ed.), *Theories of the policy process* (pp. 117–166). Boulder, CO: Westview Press.
- Schweinhart, L. J., Barnes, H. V., & Weikart, D. P. (1993). *Significant benefits: The High/Scope Perry Preschool Study through age 27*. Ypsilanti, MI: High/Scope Press.
- Shulock, N. (1999). The paradox of policy analysis: If it is not used, why do we produce so much of it? *Journal of Policy Analysis and Management*, 18(2), 226–244.
- Waddell, C., Lomas, J., Offord, D. R., & Giacomini, M. (2001). Doing better with “bad kids:” Explaining the policy-research gap with conduct disorder in Canada. *Canadian Journal of Community Mental Health*, 20(2), 59–76.
- Waddell, C., Offord, D. R., Shepherd, C. A., & McEwan, K. (2002). Child psychiatric epidemiology and Canadian public policy making: The state of the science and the art of the possible. *Canadian Journal of Psychiatry*, 47(9), 825–832.
- Webster-Stratton, C., & Hammond, M. (1997). Treating children with early onset conduct problems: A comparison of child and parent training interventions. *Journal of Consulting and Clinical Psychology*, 65(1), 93–109.
- Weiss, C. H. (1979). The many meanings of research utilization. *Public Administration Review*, 39(5), 426–431.
- Weiss, C. H. (1983). Ideology, interests, and information: The basis of policy decisions. In D. Callaghan, & B. Jennings (Eds.), *Ethics, the social sciences, and policy analysis* (pp. 221–245). New York, NY: Plenum Press.
- Zahariadis, N. (1999). Ambiguity, time, and multiple streams. In P. A. Sabatier (Ed.), *Theories of the policy process* (pp. 73–93). Boulder, CO: Westview Press.