

Knowledge and Attitudes of Canadian Psychiatrists Regarding Fetal Alcohol Spectrum Disorders

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Background

Current reports regarding increased rates of alcohol use in women of child bearing age and the anticipated impact on the occurrence of Fetal Alcohol Spectrum Disorders (FASD) have highlighted the need to better understand the attitudes and knowledge of health care providers towards alcohol consumption and prevention of FASD. Studies have shown that physicians' knowledge, attitudes and beliefs about a health problem such as alcohol abuse can either predispose or deter them from screening, identifying and managing the problem (Diekman et al, 2000).

Surveys in Canada and the United States have found inconsistencies in diagnosis, treatment, and management of children with FASD due to gaps in physician knowledge and attitudes regarding FASD. A survey by the Michigan Medical Association found that health care professionals felt that alcohol's effect on the fetus was clear, fetal alcohol syndrome (FAS) is not being over-diagnosed, and that making a diagnosis of FAS can improve treatment plans for affected individuals (Abel and Kruger, 1998). A majority of those surveyed said that they felt it necessary to emphasize the dangers of prenatal alcohol use to their patients and that such discussion would not frighten or anger their patients. Physicians also identified that they were not sufficiently familiar with FAS or fetal alcohol effects (FAE). Surveys in Alberta in 1998 and in Saskatchewan in 1991 also provided information on physician understanding and awareness of alcohol use during pregnancy and FASD (Nanson and Bolaria et al, 1995; Alberta Medical Association, 1998; Teskey and Clarke, 1998). The two studies highlight the variation in knowledge and practice in Canada.

Therefore, more information regarding regional and provider variation is required to assist in the development of national guidelines. Psychiatrists have never been included in past FAS surveys, although the recent Canadian Psychiatric Association Practice profile survey showed that they are an important provider group since almost 60% of patients seen are female (Woodside and Lin, 2003).

Objectives

The objective of the present study was to describe characteristics of psychiatrists with regard to knowledge and attitudes of FASD according to the proportion of their practice allocated to treatment of those <16 years old and to draw some comparisons between psychiatrists and other health care providers.

Methods

A questionnaire was modified from a prior survey based upon extensive consultation and pilot testing with the National Advisory Committee on FAS and professional groups. The questionnaire consisted of 4 parts including General Knowledge, Prevention and Diagnostic Issues, and Background Information. All but two questions were a forced-choice format with response options varying depending on question content (e.g., yes/no, Likert scales). The survey package was translated into French, formatted in the Teleform data management program, and programmed in HTML for a web-based version.

A mailed survey was sent to a national random sample of 60% of all eligible Canadian psychiatrists selected from the mailing list of the professional organization between October 2001 and January 2002 (N=851/1439). The package contained a cover letter, instructions for completing paper or web-based versions, the survey, and notice of a draw for a Palm Pilot. Mailed questionnaires were followed up with 2 reminder postcards, repeat mailings, phone follow up, and an attempt to reach participants whose original contact information was incorrect. Return of the completed questionnaire was taken to signify consent to participate.

Statistical Analysis

All data were transferred into SPSS/PC version 10.0 for analysis. Descriptive analysis and bivariate comparisons (2 and 2 trend) were completed to understand psychiatrists' attitudes, knowledge and practices towards FAS by proportion of practice allocated to those aged 16 years or less. 'P' values refer to comparisons made within psychiatrists according to proportion of practice with children <16. As the questionnaire was also completed by midwives, obstetricians, family physicians and paediatricians, the overall results of this cross professional analysis are presented for comparison.

Results

Of 851 surveys distributed, 391 were returned for a response rate of 45.9%. Respondents in the Prairies may be over-represented while those in Quebec under-represented, as compared to national distributions of psychiatrists, however, the distribution of responses for the West, Ontario and the East reflect the national distribution of psychiatrists (data not shown). Of the 384 psychiatrists who completed the demographic information, only 316 indicated what proportion of their practice was allocated to children <16 (82.3%). Of these, 71.2%

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(n=225) reported that <10% of their practice was comprised of children <16 (group 1), 9.8% reported 10-49% (group 2), 19.0% reported 50-100% (group 3).

Demographics

There were no significant demographic differences between groups according to the proportion of practice with children <16 years old, years in practice, university appointment, and location of practice. However, among those in group 3, 50% of providers were female, compared to groups 1 and 2 where a higher proportion of providers were male (data not shown).

Attitudes Towards Alcohol Consumption

Over 65% of psychiatrists agreed with the practice of advising moderate alcohol consumption among non-pregnant women (Table 1). The majority of psychiatrists defined moderate as ≤ 2 drinks per occasion, ≤ 3 times per week (Table 1). There was no difference between psychiatrists' responses and those of respondent from other disciplines (Table 1).

Awareness and Attitudes

Psychiatrists were asked about awareness, attitudes and prevention of FAS with no significant differences noted between groups. Greater than 75% agreed that the effects of alcohol on the fetus were clear, that prenatal alcohol exposure is a risk factor for permanent brain damage, FAS was identifiable, and it occurs across social strata (Table 2). Over 90% of respondents believed that discussing alcohol use would not deter clients from treatment.

Level of Preparedness to Deal With Alcohol Related Problems in Practice

Psychiatrists (74%) believed it to be the physician's role to manage problems associated with alcohol use. Within psychiatrist groups, those in groups 2 and 3 were significantly more prepared to care for foster parents and affected individuals, and to access resources for pregnant women, birth mothers and foster parents (all $p < 0.05$, Table 2). Psychiatrists with a higher paediatric caseload were significantly more likely to have cared for FAS-affected individuals, have suspected FAS in their caseload, and have referred patients to confirm a diagnosis (see Table 3). Only 14.6% of providers reported using a diagnostic schema for FAS in their practices such as Institute of Medicine criteria. Among psychiatrists, 20% reported using a schema and those with more paediatric clients were significantly more likely to use a schema ($p < 0.05$). The most commonly used schema was the DSM-IV.

Over 90% of those in groups 2 and 3 compared to 58% in group 1 agreed that making a diagnosis of FAS was within their scope of practice (Table 4). Within psychiatrist groups significant differences between groups revealed that those who had the greatest contact with children <16 were most likely to indicate that lack of training was a diagnostic barrier, and to identify that diagnosis is unlikely to make a difference to the individual (Table 4). The majority of psychiatrists (15%) did not believe there should be mandatory reporting of FAS or FAE (data not shown).

As noted in Table 5, those in groups 2 and 3 were significantly more likely to recognize the facial features associated

with FAS. Psychiatrists in groups 2 and 3 were less likely than those in group 1 to indicate that FAS is associated with addictions and legal problems (secondary disabilities). Of note, psychiatrists in groups 2 and 3 were more likely than those in group 1 to recognize that inappropriate sexual behaviour is associated with FAS (40-55% versus 30%) (Table 5). Diagnostic knowledge about FAE was, in general, significantly higher among those in groups 2 and 3 compared to those in group 1. As well, those in groups 2 and 3 were more likely than those in group 1 to recognize the features of FAE (Table 6).

Over 80% of psychiatrists were able to identify delayed development, birth defects, mental disorders, learning disabilities, lowered IQ, craniofacial deformities, behaviour problems, low birth weight and growth retardation as being correctly associated with prenatal alcohol exposure (Table 7).

Knowledge

Psychiatrists were asked to identify sources of information about FAS and FAE (Table 8). In general, groups 2 and 3 were significantly more likely than group 1 to obtain information about FAS or FAE from colleagues, medical journals and books, seminars, parents and patients (data for FAE not shown).

Resources

Resources indicated to be helpful in addressing FAS and related issues by more than half of the psychiatrists included: registry of specialists, referral resources and clinical practice guidelines. Within groups, those psychiatrists in groups 2 and 3 were significantly more likely to indicate that pregnancy history checklists, materials or training on FAS/FAE, access to a psychologist, registry of specialists, clinical practice guidelines and access to telehealth would be advantageous (Table 9). Over 75% of respondents identified that access to educational material, multidisciplinary teams, outreach clinics, and CME training would be of benefit.

Discussion

This study represents the first survey of psychiatrists in the area of knowledge, attitudes and practices related to FASD. The response rate of 45.6% is adequate for a physician survey and comparable to the Canadian Psychiatric Association Psychiatric Profile (Lin et al, 2003). The distribution of responses suggests that the results are likely generalizable to most regions of Canada, with the potential exception of Quebec, which was under-represented. The majority of psychiatrists had less than 10% of their practice allocated to care of those <16 years old; only 19% of psychiatrists had 50% or more of their practice allocated to care of those <16 years old.

Psychiatrists were aware of the detrimental effects of alcohol on fetal development and agreed that it was the physician's role to manage client issues associated with alcohol misuse. Only half of providers felt prepared to do so, although a greater proportion were willing to access resources. Psychiatrists who have more paediatric clients were more likely to be prepared to access resources and care for clients in areas associated with alcohol misuse.

Psychiatrists who have more paediatric clients were also more likely to indicate that making a diagnosis of FAS was within their scope of practice and that time and training were

barriers to diagnosis. Psychiatrists with larger caseloads of paediatric clients agreed that making a diagnosis changed things for the child. They also indicated that many doctors do not make a diagnosis due to a belief that it will not make a difference for the child. The data suggests psychiatrists who have a greater proportion of paediatric patients and hence a greater likelihood of treating FASD clients have a more realistic understanding of the complexities of care and management of this population. Most psychiatrists did not employ a diagnostic schema specific to FASD, highlighting the need for the Diagnostic and Statistical Manual of Psychiatric Disorders to include specific neuropsychiatric manifestations of this diagnosis

Psychiatrists with higher paediatric caseloads were also more adept at identification of FAS and FAE, including physical, emotional and social/learning issues, however, some still lack understanding of the associated secondary disabilities including inappropriate sexual behaviour and addictions. Educational efforts in the future should concentrate on methods for early identification and management of secondary disabilities.

Psychiatrists who have more paediatric clients were more likely to have obtained information about FAS/FAE from a variety of sources, including parents, patients and traditional medical venues. Furthermore, psychiatrists, particularly those with larger paediatric practices identified the need for Clinical Practice Guidelines, access to psychologists and educational information. Over 75% of all psychiatrists indicated that, in addition to the above, access to a multidisciplinary team, outreach clinics and CME training would be of value. Less than 30% of all providers wanted training on addiction counselling, still suggesting there is a gap between the scope of practice of psychiatry and the field of addictions medicine.

This study represents the first survey of psychiatric practice in the area of FASD in Canada. There is a great need to help psychiatrists recognize the primary and secondary disabilities,

especially in affected individuals who do not have mental retardation or dysmorphic features as part of their diagnosis. There will be a great need in the future for psychiatrists to work closely with colleagues in the fields of addictions, pediatrics and neuropsychology to develop a comprehensive multidisciplinary approach to this significant and ultimately preventable condition.

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Tables

Table 1. Alcohol use, moderate consumption and preparedness to care for clients with alcohol related issues.

	Overall N (%)	Psychiatrist N (%)	Group 1 0-9%	Group 2 10-49%	Group 3 50-100%	p
Agree with telling patients to drink in moderation	1302(60.7)	255(67.8)	153(70.5)	16(53.3)	38(67.9)	.432
Moderate number of drinks per occasion among non-pregnant women <=2	1825(91.0)	324(93.4)	191(94.6)	23(92.0)	48(87.2)	.319
Moderate number of occasions per week among non pregnant women is <=3	1472(74.3)	256(74.8)	148(75.5)	19(76.0)	46(82.2)	.152
Agree physicians role to manage problems in area of alcohol use	1670(76.1)	288 (73.8)	164(72.6)	28(90.3)	42(70.0)	.641
Prepared to care in area of alcohol abuse or dependency for :						
Pregnant women**	831(54.2)	154(58.1)	83(52.2)	17(77.3)	19(57.6)	.876
Birth mothers **	879(55.6)	158(58.3)	84(52.2)	20(87.0)	23(62.2)	.068
Foster parents	789(36.2)	171(44.6)	89(54.3)	20(83.3)	32(72.7)	.007
Affected individuals	987(45.4)	210(54.6)	107(60.8)	26(92.9)	39(73.6)	.020
Prepared to access resources in area of alcohol abuse or dependency for:						
Pregnant women**	1167(70.9)	246(80.9)	137(75.7)	24(100.0)	37(88.1)	.017
Birth mothers**	1195(70.9)	247(81.8)	139(78.1)	25(100.0)	38(88.4)	.034
Foster parents	1063(49.1)	239(62.7)	129(72.1)	26(92.9)	40(83.3)	.037
Affected individuals	1273(58.7)	275(72.2)	152(78.4)	28(93.3)	45(83.3)	.229

Agreement defined as agree and strongly agree

*56.3% of all health care professionals felt that 1-2 occasions per week was moderate

**Among these who care for these patient populations

Table 2. FAS Awareness and Attitudes about Prevention (Agreement)

	Overall N (%)	Psychiatrist N (%)	Group 1 0-9%	Group 2 10-49%	Group 3 50-100%	p
Alcohol's effects on fetus are clear	1651(74.9)	296(75.9)	172(77.8)	24(77.4)	46(78.0)	.992
Prenatal alcohol exposure is a risk for permanent brain damage	2059(93.3)	360(92.1)	214(94.3)	28(90.3)	58(96.7)	.698
FAS is an identifiable syndrome	2066 (94.0)	362 (92.6)	211(95.5)	29(96.7)	54(93.1)	.522
FAS occurs in all strata of society	2107(95.4)	368(94.1)	212(94.6)	29(93.5)	59(98.3)	.289
Discussing alcohol use will not:						
<i>Deter from treatment</i>	1895 (86.1)	353 (90.5)	211(93.0)	25(83.3)	54(90.0)	.123
<i>Frighten/anger patients</i>	2065 (93.6)	374 (95.7)	218(96.0)	31(100.0)	59(98.3)	.265

Table 3. FAS Diagnosis

	Overall N (%) N=1957	Psychiatrist N (%) N=384	Group 1 0-9% N=223	Group 2 10-49% N=31	Group 3 50-100% N=60	P
Proportion who use a diagnostic schema	282 (14.6)	75 (20.0)	29 (13.2)	12 (38.7)	15 (26.8)	.003
Diagnosed any patient with FAS	690 (35.3)	141 (36.7)	63 (28.3)	18 (58.1)	42 (70.0)	.001
Cared for FAS affected individuals	991 (50.5)	176 (45.7)	84 (37.7)	20 (66.7)	48 (80.0)	.001
Suspected (not diagnosed) FAS	947 (48.6)	197 (51.4)	98 (43.8)	22 (73.3)	50 (83.3)	.001
Referred patients to confirm a diagnosis	668 (34.3)	84 (22.0)	23 (10.3)	11 (37.9)	40 (66.7)	.001

Table 4. Global issues related to Diagnosis, including Barriers.

	Overall N (%) T=2209	Psychiatrist N (%) T=391	Group 1 0-9%	Group 2 10-49%	Group 3 50-100%	P
Diagnosis changes thing for child (agree)	2007(90.9)	346(88.5)	205(94.9)	26(86.7)	53(89.8)	.100
Making a diagnosis of FAS was within scope of practice	1498(75.0)	257(65.7)	131(57.7)	29(93.5)	54(90.0)	<.001
Many doctors do not make a diagnosis of FAS in their practice due to:						
<i>Lack of time (agree)</i>	436(20.0)	50 (13.2)	20(8.8)	8(25.8)	14(23.3)	.001
<i>Lack of specific training (agree)</i>	1234(56.4)	203 (52.9)	111(48.9)	20(64.5)	46(76.7)	<.001
<i>A belief that making the diagnosis will not make a difference to the individual (agree)</i>	265(12.2)	70 (18.4)	32(14.1)	9(29.0)	20(33.3)	<.001

Some cells may not add to n=3911 as some questions were not answered by all participants.

Table 5. Diagnostic Knowledge about Characteristics of FAS

	Overall N (%) T=1901	Psychiatrist N (%) T=368	Group 1 0-9%	Group 2 10-49%	Group 3 50-100%	P
Flat Philtrum	1412(74.3)	214 (58.2)	110(51.6)	23(74.2)	49(87.5)	<.001
Thin Upper Lip	1316(69.4)	177 (48.8)	84(39.8)	25(80.6)	43(76.8)	<.001
Short Palpebral Fissures	1211(64.1)	192 (52.5)	96(45.1)	25(80.6)	38(69.1)	<.001
CNS Dysfunction	1678(87.7)	306 (82.3)	173(80.5)	27(87.1)	55(96.5)	.003
Prenatal Growth Deficiency	1536(80.4)	254 (68.8)	143(67.1)	23(74.2)	41(73.2)	.266
Combination of growth, brain and facial abnormalities provide the most accurate info about diagnosis of FAS (agree)	1084(59.7)	215 (61.4)	122(59.8)	22(75.9)	33(57.9)	.782
Secondary Disabilities						
Emotional disorders	1345 (70.8)	265 (70.5)	147(66.5)	21(75.0)	42(75.0)	.632
Disrupted school experience	1303 (67.3)	263 (69.0)	144(64.6)	19(67.9)	46(78.0)	.278
Addictions	1190 (61.7)	235 (62.0)	139(62.3)	16(59.3)	28(49.1)	.050
Legal Problems	1336 (69.2)	256 (67.4)	154(69.1)	21(75.0)	38(65.5)	.029
Inappropriate Sexual Behaviour	671 (34.8)	140 (36.8)	74(33.2)	16(55.2)	23(40.4)	.001

Table 6. Diagnostic Knowledge of FAE

	Overall N (%) T=2151	Psychiatrist N (%)	Group 1 0-9%	Group 2 10-49%	Group 3 50-100%	P
Recognized FAE is a partial expression of FAS (agree)	1508(70.1)	246(65.3)	131(60.1)	25(86.2)	50(83.3)	<.001
Recognized that FAE is not used when:						
<i>Birth defects diminish over time</i>	1269(59.2)	191(50.9)	100(45.9)	20(69.0)	44(74.6)	.126
<i>There are no IQ deficits</i>	1122(52.3)	186(49.3)	92(42.0)	24(82.8)	38(63.3)	<.001
<i>A child has birth defects but maternal alcohol use is unclear</i>	1146(53.4)	193(51.2)	105(48.2)	19(65.5)	40(66.7)	<.001
<i>A child is too young to make a diagnosis of FAS</i>	1035(48.2)	180(47.6)	87(39.5)	22(75.9)	44(73.3)	.147
<i>A less severe form of FAS</i>	310(14.4)	45(11.9)	27(17.1)	5(19.2)	8(15.4)	.829
Recognized that using the term FAE does not result in better long term outcomes than FAS	856(39.9)	151(40.2)	72(63.7)	21(84.0)	34(82.9)	.010

Table 7. Proportion of respondents who correctly identified the following as associated with prenatal alcohol exposure.

	Overall N (%) T=1901	Psychiatrist N (%) T=368	Group 1 0-9%	Group 2 10-49%	Group 3 50-100%	P
Infantile withdrawal symptoms	1404(65.4)	254(67.4)	150(68.5)	19(67.9)	36(61.0)	.523
Delayed development	2121(96.9)	366(94.3)	209(92.5)	29(100.0)	56(93.3)	.360
Birth defects	1929(88.6)	339(88.1)	193(86.2)	25(89.3)	56(93.3)	.127
Mental disorders	1939(88.9)	336(87.0)	187(83.1)	26(89.7)	55(91.7)	.120
Learning disabilities	2136(97.4)	370(95.4)	209(92.5)	28(96.6)	60(100.0)	.018
Lowered IQ	2091(95.5)	363(93.6)	210(92.9)	28(96.6)	58(96.7)	.167
Craniofacial deformities	2025(92.5)	335(86.8)	193(86.2)	27(93.1)	54(90.0)	.255
Behavioural problems	2119(96.8)	364(93.8)	208(92.0)	28(96.6)	56(93.3)	.676
Low birth weight	1968(89.9)	332(85.8)	186(82.3)	28(96.6)	53(89.8)	.052
Growth retardation	1946(88.9)	325(83.8)	182(80.5)	28(96.6)	50(83.3)	.372
Premature birth	1429(65.6)	256(66.3)	148(65.8)	23(79.3)	35(59.3)	.891
Seizures	1250(57.1)	232(59.9)	142(62.8)	18(62.1)	26(43.3)	.043
Vision problems	836(38.3)	123(31.9)	69(30.7)	12(41.4)	19(31.7)	.276
Structural brain damage	1475(67.5)	268(69.6)	156(69.6)	20(69.0)	42(70.0)	.995
Spontaneous abortion	1127(51.6)	216(55.8)	127(56.2)	20(69.0)	30(50.0)	.459

Table 8. Identification of Information Sources Regarding FAS

	Overall N (%) T=2200	Psychiatrist N (%) T=387	Group 1 0-9%	Group 2 10-49%	Group 3 50-100%	P
Gained knowledge of FAS from:						
Colleagues	1003(45.3)	176(45.0)	86(37.9)	16(51.6)	38(63.3)	<.001
Medical journals and books	1694(76.4)	306(78.3)	170(74.9)	27(87.1)	56(93.3)	.001
Medical school, residency or fellowship	1410(63.6)	205(52.4)	128(56.4)	11(35.5)	32(53.3)	.379
CME seminars or rounds	1128(50.9)	156(39.9)	73(32.2)	14(45.2)	37(61.7)	<.001
Parents or patients	535(24.1)	105(26.9)	48(21.1)	9(29.0)	31(51.7)	<.001

Table 9. Supports Perceived as Helpful for Clinical Practice

	Overall N (%)	Psychiatrist N (%)	Group 1 0-9%	Group 2 10-49%	Group 3 50-100%	P
Literature on impact of prenatal alcohol use	1087(50.0)	191(49.5)	111(49.6)	18(60.0)	28(47.5)	.872
Pregnancy history checklists including alcohol use	851(39.4)	138(35.8)	68(30.5)	14(46.7)	22(37.3)	.048
Materials or training on FAS/FAE	1119(51.7)	181(47.3)	88(39.6)	18(60.0)	38(64.4)	.002
Addiction counselling training	558(25.9)	99(26.1)	59(26.9)	5(16.7)	11(19.0)	.585
Registry of specialists for FAS/FAE consultation	1341(61.8)	227(53.9)	128(57.4)	13(44.8)	43(72.9)	.046
Referral resources for women of childbearing age with alcohol problems	1357(62.6)	226(58.7)	130(58.3)	19(63.3)	37(62.7)	.798
FAS Clinical Practice Guidelines	1323(60.8)	214(55.7)	109(49.1)	17(56.7)	44(74.6)	<.001
Assistance with diagnosis of FAS/FAE through Telemedicine	521(24.1)	81(21.1)	38(17.2)	8(26.7)	20(33.9)	.004
Access to information about FAS/FAE through Telemedicine	558(25.8)	86(22.6)	41(18.6)	9(30.0)	20(33.9)	<.001
Internet Resources	774(35.8)	127(33.4)	62(28.2)	12(40.0)	28(47.5)	.001
Access to psychologist	1077 (71.6)	204 (75.6)	100(69.4)	22(81.5)	49(89.1)	.003
Access to educational information	1367 (89.7)	256 (93.4)	134(90.5)	26(96.3)	53(96.4)	.090
Access to a multidisciplinary team	1311 (85.2)	242 (88.0)	126(84.6)	23(85.2)	51(92.7)	.138
Outreach clinic with an expert diagnostic team	1143 (75.6)	209 (77.7)	110(76.4)	21(75.0)	41(78.8)	.714
CME training	1358 (90.7)	252 (93.0)	131(89.7)	26(96.3)	50(94.3)	.077
Use of Telehealth for diagnosis by an expert diagnostic team	725 (49.1)	139 (53.9)	70(50.0)	15(53.6)	28(58.3)	.577