EVIDENCE-BASED PRACTICE KNOWLEDGE, USE, AND FACTORS THAT INFLUENCE DECISIONS: RESULTS FROM AN EVIDENCE-BASED PRACTICE SURVEY OF PROVIDERS IN AMERICAN INDIAN/ ALASKA NATIVE COMMUNITIES

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Abstract: Data from the Evidence-based Treatment Survey were used to compare providers serving families in American Indian and Alaska Native communities to their counterparts in non-American Indian/Alaska Native communities on provider characteristics and factors that influence their decision to use evidence-based practices (N = 467). The findings suggest that providers affiliated with American Indian/Alaska Native communities are similar to their non-AI/AN community-affiliated counterparts in terms of familiarity, knowledge and use of evidence-based practices, and only differ slightly on the factors considered when deciding to use an evidence-based practice with a child and family.

With increased pressure to provide efficient and cost-effective mental health services to all children, the use of evidence-based practices (EBP) to serve children with emotional and behavioral problems has gained increased attention in recent years (Burns, 1999). In recent years, governments and communities have struggled to meet the diverse needs of children with emotional and behavioral problems and their families, resulting in an increasing call for the implementation of practices with proven outcomes (Burns, 1999; Hoge, 2002; Hoge, Jacobs, Belitsky, & Migdole, 2002; Sleek, 1997). However, many challenges exist for communities attempting to adopt EBP, and a unique set of challenges appear to be associated with the adoption of EBP in American Indian and Alaska Native (AI/AN) communities, including

a dearth of information related to the mental health needs of AI/AN children, a dearth of information on effective treatments to meet those needs, and the discontinuity between typical children's mental health service approaches and AI/AN culture (Coll, Mohatt & LeMaster, 2004; Hyde, Falls, Morris, & Schoenwald, 2003; U.S. Department of Health and Human Services [DHHS], 2001; Costello, Farmer, Angold, Burns & Erkanli, 1997).

In 1990, an assessment conducted by the U.S. Congress, Office of Technology Assessment found scarce evidence of existing data regarding the mental health needs of AI/AN children (U.S. Congress, 1995). Although Federal initiatives such as the National Evaluation of the Comprehensive Community Mental Health Service for Children and Their Families Program (Center for Mental Health Services [CMHS], 1999) and the Circles of Care Initiative (Freeman, Iron Cloud-Two Dogs, Novins, & LeMaster, 2004) have increased the amount of available data on AI/AN children and their mental health needs, still little information exists. However, what data do exist suggest that certain mental health issues are more common among AI/AN children compared to non-AI/AN children (e.g., Bains, 2005; Cross, Fox, Becker-Green, Smith, & Willeto, 2004; Freeman et.al., 2004; Mezzich et al., 1999; Indian Health Service, 1998-1999; Costello et al., 1997; Beals et al., 1997; Sack, Beiser, Baker-Brown, & Redshirt, 1994). Similarly, research related to AI/AN mental health care provision has also been limited, and what evidence does exist shows that many mental health needs of AI/AN children go unmet (DHHS, 2001, Costello, et al., 1997). Given the limited availability of information about whether AI/AN children receive needed mental health treatment, the lack of information about specific types of treatment––including the use of EBP in AI/AN communities––is also not surprising (Burns, Hoagwood & Mrazek, 1999). However, there is a growing body of literature calling for cultural considerations in the treatment of AI/AN children, which is often at odds with literature calling for the use of EBP (Huang, Hepburn & Espiritu, 2003). This increasing call presents unique challenges for AI/AN communities, such as whether practices developed and studied in Western cultures are appropriate for AI/AN children (Bains, 2005). Much of the research conducted on treatments for children with mental health issues does not include racially diverse populations, which brings into question whether research results are generalizable to AI/AN populations, in addition to whether cultural adaptations of those practices will result in the same outcomes (Huang et al., 2003; Bains, 2005).

Given these distinctive challenges, it is important and useful to investigate treatment practices of mental health providers serving AI/AN children with emotional and behavioral problems and of those serving children in non-AI/AN communities. Because so many questions exist regarding the appropriateness of EBP use in AI/AN communities, it is important to explore whether mental health providers serving children in AI/AN communities differ from those serving children in non-AI/AN communities in terms of their knowledge, use and approach to EBP. The current study was designed in part to gain a better understanding of these issues. Better understanding the context in which EBP is implemented in AI/AN communities will assist in more appropriately framing the issues at the policy and program level. Accordingly, this study of providers in Federally funded system-of-care communities working with children with emotional and behavioral problems explored relationships between these provider groups (i.e., those working in AI/AN communities and those working in non-AI/AN communities) and:

- provider demographic and employment characteristics;
- factors that influence providers' decisions to use an EBP with a child and family; and
- provider knowledge, perceived effectiveness, and use of specific EBP.

Some have suggested in the literature that the use of EBP developed in Western cultures may be at odds with AI/AN culture, as EBP has not been studied in AI/AN communities (Huang, et al., 2003) and protocol-drive EBP is counter to more traditional holistic approaches (Bains, 2005). As such, it was hypothesized that providers working with children in AI/AN communities would differ from those working with children in non-AI/AN communities in their knowledge and use of EBP, as well as their considerations when deciding to use an EBP.

Methods

Data Source: The Evidence-based Treatment Survey

The Evidence-based Treatment Survey (EBT Survey; Walrath, Sheehan, Holden, & Blau, 2006) was conducted as part of the congressionally mandated national evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program (Comprehensive Community Program; CMHS, 1999). In short, the Comprehensive Community Program, initiated in 1993, provides Federal funding to support communities in their efforts to develop and

implement coordinated community-based cross-agency networks of services to children with emotional and behavioral problems and their families, and to ensure that these services are culturally appropriate and family driven. The national evaluation of this initiative was designed, in part, to gather data on the descriptive characteristics and outcomes associated with children and families served, the services received by children and families, and the practices of providers serving these children. Holden, Friedman, and Santiago (2001) provide additional detail about the Comprehensive Community Program and the purpose and protocol of the national evaluation.

The EBT Survey was a 65-item Web-based survey (with paper copy available) of direct mental health service providers. As described in more detail by Walrath and colleagues (2006), the survey was developed in conjunction with academic consultants and included a list of 33 evidence-based treatments compiled through a comprehensive review of the literature on evidence-based treatments in community settings (Burns & Hoagwood, 2002). The compiled list was then reviewed by multiple independent expert consultants who provided feedback. In addition, several widely used promising practices with a growing evidence base (e.g., wraparound) were also included in the survey list. Given the obvious prevalence of use, these practices were included in the current study. The survey also included questions about providers' knowledge and use of evidence-based treatments, as well as factors that influence providers' use of EBP. Early in the EBT Survey––prior to the items described in subsequent sections––respondents were instructed to consider the following definition of evidence-based treatment when responding to the survey:

> *A treatment that has been developed through research protocol, is supported by the results of controlled treatment studies, and has guidelines and procedures for its implementation.*

Variables included in the current study, and their associated survey items, are described later in this section.

Potential provider respondents for the EBT Survey were selected through a modified snowball approach. Project directors of those communities funded in 1997 and 1998 were contacted to obtain a comprehensive list of provider agencies affiliated with the funded community. Of the 23 grants awarded in 1997 and 1998, 4 were awarded to AI/AN tribal entities/sovereign nations and 19 were awarded to non-tribal communities. In addition, 2 non-funded communities (neither of which were AI/AN) that participated in the national evaluation as

comparison sites were also contacted to provide potential respondents. Contacts yielded a list of local agencies serving children with mental health issues, each of which was subsequently contacted. These agency contacts resulted in the compilation of a contact list of direct children's mental health service providers that served as the respondent list for this study.

A five-stage mailing process (Dillman et al., 2001) was used to recruit selected potential respondents (N = 1,402) for the EBT Survey. Survey data were collected during an approximately five-month period (September 2003 through January 2004), resulting in a response rate of 44% (n = 616/1,402), which is comparable to similar Web-based response rates (Dillman et al., 2001; Fraze, Hardin, Brashears, Smith, & Lockaby, 2002; Ladner, Wingenbach, & Raven, 2004). Twenty-seven percent of respondents completed a paper copy of the EBT Survey, while 73% completed the survey online via a Web-based administration. On average, respondents completed the EBT Survey in approximately 20 minutes. Additional detail on the survey sampling, respondent recruitment and survey administration is described elsewhere (Walrath, Sheehan, Holden, & Blau, 2006).

Participant Rights and Confidentiality

The survey instrument and procedure were reviewed and approved by a Federally registered institutional review board. Potential respondents were informed of the mechanisms to ensure confidentiality and informed of their rights as participants. They were also informed that completion and submission of the survey implied voluntary study consent.

Provider demographic characteristics

Race, education level, and primary field categories were collapsed due to underrepresentation of respondents within categories provided on the survey. Similarly, highest degree earned was dichotomized into advanced degree (i.e., graduate-level) vs. less than advanced degree (i.e., undergraduate or associate degree). Primary field of degree was collapsed into four categories (i.e., psychology, social work, counseling, and other) and race was collapsed into three categories (i.e., White, American Indian or Alaska Native, and other).

Provider workforce characteristics

Primary position and primary employer were collapsed due to underrepresentation of respondents within categories provided on the survey. Primary position was collapsed into three categories (i.e., clinician or therapist, clinical social worker, other) and primary employer into three categories (i.e., mental health agency, residential treatment facility, and other). Other workforce characteristics included years in the current service system, years as a mental health service provider, and years as a children's mental health service provider.

Factors that influence decision to use EBP

Respondents were asked about the extent that certain factors influence their decision to use an EBP, based on a 5-point Likert scale (i.e., 1 = *never*; 2 = *almost never*; 3 = *sometimes*; 4 = *almost always*; 5 = *always*). These factors included child's age, gender, race, cultural background, caretaker, diagnosis, home situation, and treatment setting. For the purposes of this question, respondents were asked whether each factor was considered when making a general decision about whether to use an EBP (not necessarily a particular EBP). Questions around use of particular EBP for specific diagnoses were asked on the survey, results of which are beyond the scope of the current study. For the purposes of this study, a 3-point Likert scale was created for each factor (i.e., 1 = *always/almost always*, 2 = *sometimes*, 3 = *never/almost never*).

Familiarity and Perceived Effectiveness Factors

As described earlier, the EBT Survey included a list of 33 existing EBTs and promising practices, for each of which respondents were asked to indicate whether they believed the treatment resulted in positive outcomes for children and families. Response options included *yes* (1), *no* (2), *familiar with the treatment but do not know if it is effective* (3), and *not familiar with the treatment* (4). Provider knowledge of EBT was assessed by a two-category variable "familiar with EBT" (response options 1, 2, and 3) vs. "unfamiliar" (response option 4). Perception of EBT effectiveness variable was assessed with a three-category variable of "effectiveness" (response option 1), "not effective" (response option 2), and "unknown" (response option 3 and 4). Respondents also completed an open-ended item in which they identified up to three evidence-based treatments,

other than medication, that they used in the course of their work. Open-ended responses for EBT used in the course of work were collapsed into one of 33 EBTs (not including medication).

Participants

Of the total group of 616 providers who responded to the survey, 76 or 12% were affiliated with the four AI/AN communities funded as part of the Comprehensive Community Program. Respondents affiliated with the AI/AN communities were providers who worked directly for, or were contracted by, the funded program to serve AI/AN children as part of the program. As such, these respondents were not necessarily of AI/AN background, but provided services to AI/AN children and their families. The response rate was 42.0% for providers in AI/AN communities and 44.2% for providers in non-AI/AN communities. Ninety percent (n = 556) of the total group of respondents identified themselves as direct mental health service providers and 76% (n = 467) of these providers indicated they use EBP in the course of their work. Of the 76 providers in AI/AN communities, 67 (88%) were direct service providers and 59 (78%) indicated they used an EBP in the course of their work. The current study was limited to those providers who indicated using EBP in the course of their work. The reason for excluding providers who did not use EBP from the analyses was twofold. First, the purpose of the current study was to explore whether differences exist between provider groups in what factors they consider when using EBP, as well as their familiarity and use of specific EBP. Second, an overwhelming majority of respondents utilized EBP, making comparisons between providers who used EBP and providers who did not use EBP difficult. In addition, the focus of this particular study was on providers in AI/AN communities and only 8 providers serving children in AI/AN communities reported no use of EBP, making any comparisons by provider group difficult. Although only a small percentage of providers in AI/AN communities indicated not using EBP, analyses indicated that this non-use of EBP was similar among providers in other communities (n = 556) ($x^2(1)=2.81$, p=.09).

The current study sample, accordingly, was comprised of the 467 direct service providers that indicated they used an EBP in the course of their work. Analyses indicated that the study sample of direct service providers did not differ from the full set of respondents with regard to any of the following variables: age ($t_{(461)}=.332$, p=.74); gender ($x^2_{(1)}=1.1$, p=.29); race ($x^2_{(7)}=6.2$, p=.51); level of education ($x^2(3)=1.2$, p=.80); field in

which degree was received ($x^2_{(7)}$=4.8, p=.68); number of years worked as a mental health service provider ($t_{(457)}$=1.13, p=.26); and current position ($x^2_{(7)}$=3.9, p=.79).

Table 1 summarizes the demographic and workforce characteristics of the current study sample. The majority of respondents were female (67.9%), White (83.7%), and had an average age of 42.2 (SD=10.8) years. Fields of study were concentrated in social work (28.5%), psychology (29.8%) and counseling (19.3%), and the majority had completed a graduate degree (71.7% had a master's and 17.5% had a doctoral degree). The majority were licensed mental health providers (76.2%), employed by a mental health agency (57.7%), worked an average of 6.0 (SD=5.7) years in their current service system, 9.1 years (SD=7.4) serving children, and 11.3 years (SD=8.4) as mental health providers.

Table 1
Demographic and Workforce Characteristics of Current Study Sample (N = 467)

Characteristic	Percent
Female (n = 424)	67.9%
Education Level (n = 428)	
Doctoral	17.5%
Master's Degree	71.7%
Bachelor's Degree	10.0%
Less than Bachelor's Degree	0.7%
Field of Study (n = 393)	
Social Work	28.5%
Psychology	29.8%
Counseling	19.3%
Education	2.5%
Psychiatry	3.8%
Other Social Sciences Degree	5.1%
Nursing	1.0%
More than one degree with mental health	9.9%
Licensed Mental Health Provider (n = 428)	76.2%
Employer (n = 426)	
Mental health agency	57.7%
Private mental health practice	17.8%
Hospital	5.9%
Education or schools	4.5%
Child welfare or social services	4.9%
Juvenile justice	1.4%
Residential treatment	3.1%
Other	4.7%
Characteristic	**Mean (SD)**
Age (n = 425)	42.2 (10.8) years
Years with Current Employer (n = 408)	6.03 (5.7) years
Years as Mental Health Provider (n = 423)	11.3 (8.4) years
Years as Mental Health Provider for Children (n = 420)	9.1 (7.4) years

Data Analysis

Using data available from the current study sample, bivariate analyses were conducted to explore the nature of relationships between providers' community affiliation, their demographic and workforce related characteristics, and factors influencing their decision to use an EBP with a child and family, including the child's age, gender, race, cultural background, caregiver, diagnosis, home situation, and treatment setting. Next, factors that resulted in a significant bivariate relationship ($p < .05$) with community affiliation were entered into a logistic regression model to generate a parsimonious model of factors and characteristics significantly related to provider community affiliation. Finally, bivariate analyses were conducted to explore the relationships, if any, between providers' knowledge, perceived effectiveness, and use of EBP and their community affiliation.

Results

Bivariate Analyses

Table 2 summarizes results from the bivariate analyses of demographic and workforce characteristics for EBP Survey respondents and factors considered when deciding to use an EBP. Providers in AI/AN communities differed significantly from providers in non-AI/AN communities on the variables of gender and race. Females accounted for a smaller percentage of providers in AI/AN communities compared to their counterparts and, not surprisingly, a higher percentage of providers in AI/AN communities were of AI/AN backgrounds. The provider groups differed significantly by primary employer, with more providers in AI/AN communities employed by Residential Treatment Facilities. However, the provider groups did not differ significantly by age, education level, field of discipline, and primary position; the majority in both groups was highly educated, possessed degrees in psychology or social work, and served as clinicians or therapists. Table 2 indicates that providers in AI/AN communities had significantly more years as mental health providers, were licensed as mental health providers at a significantly higher rate, but were required by their agency to provide EBP compared at a significantly lower rate.

Interestingly, providers in AI/AN communities did not significantly differ from their provider counterparts regarding the extent to which child factors (i.e., child's age, gender, race, cultural background,

caretaker, diagnosis, home situation, and treatment setting) were considered when deciding when to use an EBP, with the exception of home situation and treatment setting (see Table 2). Although it would be reasonable to hypothesize that providers in AI/AN communities would consider the child's race or cultural background to a greater extent than their counterparts, neither comparison yielded a statistically significant difference. However, significant differences were found related to consideration of the child's home situation and treatment setting, with just over 73% and 71%, respectively, of providers always/almost always considering the child's home situation and treatment setting compared to 55% and 50%, respectively, of their counterparts.

Table 2
Comparison of Demographic and Workforce Characteristics Related to Provider Affiliation with AI/AN and non-AI/AN Communities

	Providers Serving AI/AN Communities	Providers Serving non-AI/AN Communities	Statistical Tests
Provider Characteristics			
Race (n = 425)			
White	82.40%	85.60%	$X^2 = 8.550$ (2)*
American Indian or Alaska Native	3.90%	0.30%	
Other or Not Specified	13.70%	14.20%	
Gender (n = 424)			
Female	54.90%	69.70%	$X^2 = 4.513$ (1)*
Male	45.10%	30.30%	
Primary Employer (n = 426)			
Mental Health Agency	58.80%	57.60%	$X^2 = 15.841$ (2)***
Residential Treatment	11.80%	1.90%	
Other	29.40%	40.50%	
Advanced Degree (n = 428)			
Yes	88.50%	89.40%	ns
Primary Field of Discipline (n = 393)			
Psychology	36.70%	28.80%	ns
Social Work	15.20%	27.60%	
Counseling	10.20%	20.60%	
Other	18.40%	23.00%	
Primary Position (n = 370)			
Clinician/Therapist	57.50%	50.90%	ns
Clinical Social Worker	17.50%	13.00%	
Other	25.00%	36.10%	
Agency Requirements (n = 376)			
Yes	23.10%	40.20%	$X^2 = 5.653$ (1)*
Licensed Mental Health Provider (n = 376)			
Yes	94.20%	73.70%	$X^2 = 10.639$ (1)***
Age (n = 425)	44.8 (9.2)	41.8 (11.0)	ns
Years as a mental health service provider (n = 423)	14.2 (8.4)	10.9 (8.3)	F = 3.3 SE = 1.17**
Years as a mental health service provider for children (n = 420)	10.9 (8.3)	14.2 (8.5)	ns
Years in the current delivery system (n = 408)	7.4 (7.0)	5.8 (5.5)	ns

Table 2, continued

Factors Considered when Deciding to Use an EBP			
Child's Age (n = 432)			ns
Always / almost always	56.90%	60.60%	
Never / almost never	13.70%	15.20%	
Child's Gender (n = 429)			ns
Always / almost always	16.00%	17.70%	
Never / almost never	58.00%	59.60%	
Child's Race (n = 430)			ns
Always / almost always	23.50%	19.50%	
Never / almost never	41.20%	52.50%	
Child's Cultural Background (n = 430)			ns
Always / almost always	23.50%	23.50%	
Never / almost never	33.30%	37.70%	
Child's Caregiver (n = 431)			ns
Always / almost always	54.90%	47.40%	
Never / almost never	15.70%	18.20%	
Child's diagnosis (n = 432)			ns
Always / almost always	76.50%	68.50%	
Never / almost never	7.80%	13.10%	
Child's home situation (n = 431)			$X^2 = 6.072$ (2)*
Always / almost always	72.50%	55.30%	
Never / almost never	5.90%	15.00%	
Child's treatment setting (n = 428)			$X^2 = 8.295$ (2)*
Always / almost always	71.40%	49.60%	
Never / almost never	10.20%	19.00%	

*p < .05, **p<.01, ***p< .001

To further identify whether provider affiliation was associated with a unique set of demographic characteristics, employment characteristics, and factors that influence their EBP use, a backward stepwise logistic regression analysis was performed. Only cases with complete data (n = 381) and the variables and characteristics that resulted in a significant bivariate relationship between provider groups (at the p <.05 level) were entered into the regression model. These variables included age, gender, race, primary employer, agency requirements, licensed mental health, years as a mental health provider and consideration of the child's home situation and treatment setting when deciding whether to use an EBP (see Table 2).

As shown in Table 3, providers who were AI/AN were 18% more likely to be affiliated with AI/AN communities when White was used as the reference category (SE = 1.30, p < .05). In addition, providers working in residential treatment facilities were more than 5 times as likely to be affiliated with AI/AN communities when mental health agency was used as the reference category, and licensed mental health providers were more than 4 times as likely to be AI/AN affiliated. Providers in AI/AN communities also had more years as mental health service providers than providers in non-AI/AN communities. Finally, as shown in Table 3, providers who always/almost always considered the child's treatment setting when deciding to use an EBP were 3 times as likely to be affiliated

with an AI/AN community compared to a non-AI/AN community, using never/almost never considering the treatment setting as the reference category.

Table 3
Logistic Regression Model of Demographic and Workforce Characteristics Significantly Associated with Community Affiliation (n = 381)

	B (SE)	Odds Ratio[a]	*p*
Provider Characteristics			
Race			
White	Reference		
American Indian or Alaska Native	2.914 (1.30)	18.44	< .05
Other or Not Specified	0.097 (0.53)	1.10	ns
Primary Employer			
Mental Health Agency	Reference		
Residential Treatment	1.679 (.71)	5.36	< .05
Other	-.485 (.393)	0.62	ns
Licensed Mental Health Provider			
Yes	1.533 (.76)	4.63	< .05
Years as a mental health service provider	.040 (.021)	1.04	0.054
Factors Considered when Deciding to Use an EBP			
Child's treatment setting			
Always / almost always	Reference		
Sometimes	1.135 (.592)	3.11	ns
Never / almost never	.277 (.671)	1.32	0.055

[a] All estimates are adjusted by variables included in the model. 95% CI.

Bivariate differences between providers working in AI/AN communities versus those working in non-AI/AN communities in terms of knowledge and perceived effectiveness and use of EBP were explored. The results indicate that respondents exhibited a high level of familiarity with the listed EBP and a high level of perceived effectiveness, which did not differ greatly between groups (with a few exceptions). Significant differences between provider groups in treatment familiarity were found with 4 of the 33 listed EBP: Providers in AI/AN communities indicated less familiarity with brief strategic family therapy (81.1% vs. 91.8%) ($x^2 = 6.22$ (1), $p < .05$), Webster Stratton's parent-child series (5.7% vs. 19.8%) ($x^2 = 6.31$ (1), $p < .05$), systematic desensitization (85.2% vs. 93.3%) ($x^2 = 4.06$ (1), $p < .05$), and functional family therapy (62.3% vs. 75.3%) ($x^2 = 4.06$ (1), $p < .05$).

Significant differences between provider groups in perception of effectiveness were obtained for wraparound and stimulant medication for ADHD, with a smaller percentage of providers in AI/AN communities

endorsing the treatments' effectiveness. Specifically, 64.2% of providers in AI/AN communities reported wraparound to be effective compared to 77.5% of providers in non-AI/AN communities (x^2=4.5 (1), $p < .05$), and 81.5% of providers in AI/AN communities reported stimulant medication for ADHD to be effective compared to 86.8% of their counterparts (x^2=6.53 (2), $p < .05$). However, neither provider group reported wraparound to be ineffective; rather, a higher percentage of providers in AI/AN communities indicated not knowing the treatment's effectiveness (35.8%). Also, while 18.5% of providers in AI/AN communities indicated not knowing the effectiveness of stimulant medication compared to 9.1% of their counterparts, 0% of providers in non-AI/AN communities found it to be ineffective compared to 4.1% of providers in AI/AN communities. No other significant differences between provider groups were found.

Finally, only a few significant differences between provider groups were found related to EBP use. For example, a higher percentage of providers in AI/AN communities reported using assertiveness training (8.5% vs. 2.9%) (x^2=4.50 (1), $p < .05$) and exposure therapy (6.8% vs. 1.5%) compared to providers in non-AI/AN communities (x^2=4.5 (1), $p < .01$). In addition, a significantly higher percentage of providers in AI/AN communities reported using solution-focused therapy (13.6% vs. 5.4%) (x^2=5.72 (1), $p < .05$) and respite compared to their counterparts (3.4% vs. 0.5%) (x^2=5.10 (1), $p < .05$). Conversely, a higher percentage of providers in non-AI/AN communities reported using wraparound (19.1%) compared to providers in AI/AN communities (6.8%) (x^2=5.42, (1), $p <.05$).

Discussion

The minimal availability of information related to the mental health needs of AI/AN children, the services available to meet those needs, and the utilization of EBP, underscores the importance of continued research into the mental health services and practices delivered to this population. Few studies documenting mental health issues among AI/AN children have been done; the studies that do exist have limited sample sizes, do not fully represent the diversity of the AI/AN population, and have been questioned in terms of cultural appropriateness (DHHS, 2001; Bains, 2005).

This study examined differences between providers serving children in AI/AN communities and providers in non-AI/AN communities in terms of demographic and workforce characteristics, but also in terms of their knowledge and use of EBP and factors they consider when

making decisions about using EBP. It was hypothesized, given calls in the literature for cultural considerations in children's mental health treatment and the lack of research in racially diverse populations, that provider knowledge and use would differ by whether the provider was treating AI/AN children versus non-AI/AN children. Study results indicated some demographic differences between provider groups, but few differences in terms of the factors providers consider when making decisions about EBP use and provider knowledge and use of EBP. The lack of differences in these areas was somewhat surprising given the uncertainty about what role EBP has in AI/AN culture and whether EBP developed in Western cultures are even appropriate for AI/AN children (Bains, 2005). It has been argued that the adoption of EBP in AI/AN communities usually necessitates that traditional holistic healing approaches be abandoned in favor of fragmented Western approaches to health care (Bains, 2005). As such, the similarities found in the current study around the use of EBP by providers in AI/AN communities compared to providers in non-AI/AN communities were somewhat surprising, with a few notable exceptions. For example, providers in AI/AN communities indicated at significantly higher rates than their counterparts uncertainty about whether wraparound and medication for Attention Deficit Hyperactivity Disorder (ADHD) were effective. A significantly higher percentage of providers in non-AI/AN communities (19%) reported wraparound use compared to providers in AI/AN communities (7%). These findings suggest that providers in AI/AN communities may be more skeptical of medication and, not surprisingly, given the greater uncertainty about the effectiveness of wraparound, tend to use it less. Even with these few exceptions, familiarity and use across most of the 33 EBP listed on the survey did not differ between provider groups. It should also be noted, however, that the low response rate of 44%, although similar to other Web-based surveys, was a potential confounding factor. These findings suggest incongruity between the wishes of AI/AN communities to implement EBP in a culturally appropriate manner and the reality of provider perception and use in the AI/AN communities in the study sample (Bains, 2005).

Study Limitations

Several limitations must be considered when interpreting these study findings, including how well the survey sample represents providers affiliated with Native American communities. The reader should be reminded that the providers working in Native American communities

were identified through their affiliation with the Federally-funded system of care program in those communities. In short, this provider group represents those professionals who provide mental health treatment to children being served in systems of care in Native American communities. In addition, the extent to which the characteristics of children being served within a given community (e.g., diagnoses, age) influenced the use of specific EBP. This factor may have affected the selection of EBP that was endorsed by providers. It should also be noted that the factors considered when selecting an EBP in the current study refer to selection of any EBP – not a specific EBP. This is a limitation given that certain practices are inextricably linked to certain factors (such as diagnosis) that may be relevant to certain practices but not others. However, better understanding the factors considered when choosing to use any EBP is still useful when assessing the context in which providers work.

A modified snowball sample is certainly an appropriate choice of sampling technique for this type of survey study. However, it should be noted that snowball samples typically rely on relationships between people who know each other (or at least know of each other). This type of referral process presents a small potential problem: People who refer others to the investigator may be quite likely to refer people who are very similar to themselves and/or who hold similar opinions. Although the effect of this issue is difficult to assess when using snowball samples, it is a potential limitation of the design. Finally, certain question structures should be considered when interpreting results. For example, the high levels of knowledge and use of EBP among survey respondents may have been biased by an attempt on the part of the respondent to demonstrate a desired knowledge and/or use of EBP. In addition, the questions related to considerations when deciding to use an EBP were general and not specific to one particular practice. As such, certain considerations may be appropriate for certain practices but the respondent was only asked to respond in general.

Study Implications

Allowing for study limitations, there are several substantive and interesting study results that have broad implications. The similarities between both groups of providers in EBP familiarity, perceived effectiveness, and use have broad implications for the importance of culture in AI/AN service settings. The low rate of providers considering race and ethnicity in their decisions to use EBP with a particular child, as stated earlier, was somewhat surprising, particularly given the emphasis

on cultural competency in public mental health treatment (Holden et al., 2001). This finding suggests that a potential cultural disconnect exists between providers and the AI/AN children and families they serve, which is inconsistent with the call for cultural considerations in the treatment of AI/AN children (Bains, 2005). Perhaps the relative appropriateness of implementing specific treatments with families of different races or ethnicities needs to be more clearly defined for mental health providers.

Although the differences in provider groups that were expected were not found (i.e., in familiarity and use of EBP and factors considered when making a decision about using an EBP), the differences that did emerge between groups also have interesting implications. For example, it was somewhat surprising that so few AI/AN-affiliated providers reported using wraparound – a holistic treatment approach that focuses on flexibility and individualized care. Again, this may be due to a number of factors, such as the higher representation of providers in AI/AN communities employed by residential treatment facilities that may require a more structured treatment approach, or the fact that a higher percentage of these providers did not know whether wraparound was effective, which may indicate they would be less willing to accept it as a treatment approach. In addition, the higher percentage of assertiveness training use among providers in AI/AN communities was somewhat surprising considering that assertiveness is generally not a highly emphasized attribute within AI/AN cultures. Similarly, the higher use of solution-focused therapy among these providers is somewhat surprising given that AI/AN cultures are somewhat more non-linear in approach, whereas solution-focused therapy emphasizes short, direct interventions. Such findings may indicate that providers in AI/AN communities must be educated in practices that have an evidence base or are promising, but must also be educated about the cultural implications of these practices.

Overall, the similarities between provider groups are encouraging in terms of treatment consistency and EBP use for both AI/AN children and non-AI/AN children, but less encouraging when considering AI/AN cultural implications. Retraditionalization, defined by LaFromboise, Trimble, & Mohatt (1990) as the reliance on cultural beliefs and customs to overcome problems and achieve self-determination, has been identified as essential to the revitalization of AI/AN communities (Morris, Crowley, & Morris, 2002). Similarly, in the practice of transcultural psychiatry, modification of treatments in accordance with cultural variation is promoted (Bains, 2005). The small percentage of providers in both

groups (23%) who considered the cultural background of the child and family when deciding to use an EBP is contrary to the premises of retraditionalization and transcultural psychiatry. The implications of these findings are far-reaching for service agencies attempting to implement EBP in AI/AN communities. When serving AI/AN children and families, it is critical to achieve a proper balance between cultural values and implementation of proven, effective treatments.

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