

**Do We Serve Equitably?
Services Associated with Clinical Outcomes
of Hispanic and Non-Hispanic White Youths
with Emotional and/or Behavioral Disturbances
in a System of Care**

by

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Abstract

The comparability of risk factors, clinical outcomes, and services were examined with regard to Hispanic and non-Hispanic White youths participating in a managed system of care for youths experiencing emotional and/or behavioral disturbances for at least six months. Intra- and inter-group differences were documented in the context of two distinct outcome groups: (1) Improvers - whose behavioral indices were rated within the clinical range at intake and then improved (to below the clinical range) after six months in the system of care; and (2) Deprovers - whose behavioral indices were rated below clinical range at intake and then deteriorated (to within clinical range) after six months in the system of care. The services delivered to the youths in these outcome groups by ethnicity are presented. The impact that various types of services may have had on the youths' internalizing and/or externalizing problems is discussed. Differences between the services received by the ethnic groups may provide evidence about what works in a system of care and how to serve these youths in a more culturally competent manner.

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Do We Serve Equitably?

Services Associated with Clinical Outcomes of Hispanic and Non-Hispanic White Youths with Emotional and/or Behavioral Disturbances in a System of Care

During the last 20 years, counseling research relative to the provision of mental health services to racial/ethnic minority children and families has been largely limited to the following topics: (a) descriptions of psycho-social and environmental factors that put racial/ethnic minority persons at risk for experiencing mental health problems (e.g., Rogler et al., 1987); (b) epidemiological perspectives of the prevalence of specific psychologically-based problems in ethnic minority populations (e.g., Casas, 1985); (c) documentation's of the types of interventions and service provider characteristics that are more complementary to culturally-rooted expectations (e.g., Atkinson and Lowe, 1995); (d) examinations of the effectiveness of traditional mental health interventions and approaches (e.g., Keefe and Casas, 1980); and (e) identification of factors that impact the provision and utilization of services (e.g., Knitzer, 1982; Ponterotto and Casas, 1991; Ponterotto et al., 1995).

Aside from their heuristic value, the results emanating from this research have been used for disparate purposes ranging from documentation's of ethnic minority mental health status and resource needs to promotions of stereotypic views of ethnic minorities and their culture. From a more applied perspective, the results have helped some practitioners in counseling/educational settings to design and apply more culturally-sensitive and effective policies and interventions (Atkinson and Lowe, 1995). For instance, research communities and mental health practitioners have been provided with critical information concerning cultural values, accessibility of services, and relevant socio-cultural variables

that impact the clients, their service providers, and their professional relationships. However, relative to available research, much has yet to be done with respect to the development of broader policies and intervention/service models within traditional institutional settings (e.g., county mental health services, school-based services, health maintenance organizations) that are more likely to treat a significant number of families and children from diverse racial/ethnic cultural backgrounds.

Needless to say, the development of such policies and intervention models are greatly needed given the fact that these institutions have historically provided differential treatment to such families and children (Cummins, 1986; Katz-Leavy et al., 1987; Ortiz and Maldonado-Colon, 1986; Stehno, 1982). In the worst scenarios, they have been dismal failures in helping the children grow into productive adults (Isaacs-Shockley et al., 1996).

One mental health service model presently receiving much attention at both state and federal levels for having the potential to achieve cultural sensitivity and effectiveness is commonly referred to as a comprehensive "system of care." The basic factors that cause this model to appear promising are: (a) the attention given to comprehensive, individualized, and coordinated treatment approaches delivered within the community; (b) the focus on intensive case-management and systematic outcome evaluation; (c) family partnership and strength-based focus; and, (d) the commitment to cultural competency in the provision of services (Boles III and Curtis-Boles, 1996). This model is based on the premise that it may provide the greatest likelihood of helping multi-need clients - in particular those from diverse cultural backgrounds - by maintaining the necessary balance between managing external stressors and the intrapsychic reactions, which are due to the nature of their emotional and/or behavioral disturbances, difficult socioeconomic conditions, and/or a sometimes unresponsive or inadequate mental health and education system. With respect to culture, the guiding value of the model is that a system of care should be culturally competent, with agencies, programs, and services that are responsive to the cultural, racial, and ethnic differences of the population they serve. Its guiding principle is that children with emotional and/or behavioral disturbances should receive services without regard to race, religion, national origin, sex, physical disability, or other characteristics (Stroul, 1996).

As this model is implemented and applied to persons from diverse racial/ethnic cultural groups, concomitant research previously conducted on more traditional approaches to service delivery will be needed to assess the system of care model's effectiveness (Stroul, 1996). Such research should direct specific attention towards developing an understanding of the role that culture plays in obtaining effective outcomes (Isaacs-Shockley et al., 1996). In addition, given the reality of addressing cost-effectiveness of services, special focus must be given to the outcomes that emanate from differential treatment strategies. Particular attention should be given to those services that are more preventative and supportive in nature (e.g., social services, education, mentoring, hospice) in order to impact the greatest number of individuals, to enhance their future

development, and to thwart the negative impacts of environmental risks.

Taking initial steps to address these needs, the present comparative ethnic group study was conducted with Hispanic and non-Hispanic White youths with emotional and/or behavioral disturbances who have been in a publicly-managed system of care for at least six months. By examining intra- and inter- group differences by ethnicity, this study examines comparability in three major areas of interest: (1) risk factors, (2) outcome profiles, and (3) services provided. For methodological reasons, (e.g., size of the groups and the longitudinal nature of the study) the following investigation is descriptive and developmental in nature. Information is presented that serves as a compass to help guide and set directions for future research within the context of managed care for youths with emotional and behavioral disturbances. Differences between the outcome groups and the services they received may help identify the types of services and procedures which work within a system of care as well as provide a framework for serving youths in a more culturally competent manner.

Method

Setting

This project was conducted in the central California coastal county of Santa Barbara, 100 miles north of Los Angeles, with an estimated population of 390,000. This county has a large rural, multicultural population. Approximately 91,000 children live in the county, ethnically identified as 52% Non-Hispanic White, 40% Hispanic (specifically Mexican and Central American immigrants), 5% Asian/Pacific Islander, and 3% African-American. There is a high cost of living across varied areas of the county as well as a concomitant high incidence of poverty: 15% of resident children live in families that meet the federal poverty criteria (Damery et al., 1998).

Santa Barbara County is one of dozens of sites nationwide to receive federal grants from the Center for Mental Health Services (CMHS) to assist in the development and evaluation of the Multiagency Integrated System of Care (MISC) for the purpose of serving youths with emotional and behavioral disorders and their families. MISC has coordinated services among family members, County Mental Health, Probation, Child Protective Services (CPS), Public Health, County Drug and Alcohol Program, private community-based organizations, and public schools. Some of the Santa Barbara County MISC's specific goals are that children: (a) live with their families, (b) be in school, (c) be out of trouble (i.e., reduction of school disciplinary and juvenile justice contacts), and (d) receive services in a cost-effective way. The MISC is premised on cross-agency collaboration, partnership with families, continuum of community-based services, on-going coordination of "best fit" services, and outcome evaluation.

Participants

Each partner agency involved in Santa Barbara County's system of care independently determines its own eligibility criteria for referrals into the MISC by designating youths

with greatest impairment and needs, requiring collaborative efforts to be successful. At present, over 700 youths are enrolled in the MISC representing ethnic groups in these approximate ratios: 45% Hispanic, 41% non-Hispanic White, 10% African-American, 2% Native-American, and 2% Asian-American (Wood, 1996-1998).

Participants in the present study were 162 youths (approximately 70% male) who were enrolled in the county's system of care and had completed both an initial intake assessment and a 6-month follow-up evaluation. This study examined the comparability of service and outcome data only for Hispanic and non-Hispanic White youths because these two ethnic groups had a comparable number of youths served in the system of care.

Within each of the two ethnic groups (Hispanic and non-Hispanic White), youths were classified into one of four outcome categories: (1) Improvers - those youths whose behavioral indices were rated within the clinical range at intake and then improved (to below clinical range) after six months in the system of care, (2) Deprovers - those whose behavioral indices were rated below clinical range and then deteriorated (to within clinical range) after six months, (3) Stable-Below Clinical - those whose behavioral indices were rated below clinical range at intake and remained below clinical range at the 6-month follow-up, and (4) Stable-Within Clinical - those youths whose behavioral indices were rated within the clinical range at intake and remained within the clinical range at the six month follow-up. For the purposes of this investigation, only those descriptive data associated with youths in the Improvers ($n = 34$) or Deprovers categories ($n = 10$) are described in detail.

Data Collection for Assessment and Outcome Evaluation

The data reported and analyzed here were collected as one component of the MISC comprehensive individualized assessment conducted with each youth participant and his or her family. The purpose of the MISC assessment is to identify child and family strengths and needs in order to develop appropriate service plans. The assessment also supports outcome evaluation, which is part of the Center for Mental Health Services national agenda to analyze system of care reform efforts and outcomes. The assessment is intended to drive services and to increase collaborative accountability, not to determine eligibility for system enrollment. Data collected in each individual assessment includes, but is not limited to: (a) child and family descriptives (demographics, risk factors, home environment, educational indicators, and juvenile justice indicators), (b) child behavioral and emotional functioning reported on the Child Behavior Checklist (CBCL; Achenbach, 1991; explained in more detail below), and (c) service utilization and cost information. These data, as well as a variety of other scales assessing functioning, satisfaction, and substance use, are utilized in a longitudinal, within subjects, repeated measures design in an effort to determine the level of care necessary to achieve positive outcomes.

Risk Factors

The presence or absence of child and family risk factors was documented by trained

MISC assessment staff. Child risk factors included any of the following challenges that may have been present in a youth's life prior to enrollment in MISC: residential treatment, psychiatric hospitalization, physical abuse, sexual abuse, run-away behavior, suicide attempt(s), substance use, and/or sexually abusive behavior. Family risk factors included any of the following that may have been present in a family's experiences prior to enrollment in MISC: psychiatric hospitalization of parent/caregiver, felony conviction of parent/ caregiver, institutionalization of sibling(s), sibling(s) placed in foster care, family mental illness, domestic violence, and/or family substance abuse.

Child Behavior Checklist/4-18

A general index of problem behaviors was obtained using the Child Behavior Checklist/4-18 (CBCL; Achenbach, 1991). The CBCL is the most widely used standardized checklist to record the competencies and problem behaviors of a child as perceived by a parent/caregiver (Furlong and Wood, 1997). The 113 problem-focused items were answered on a 3-point scale ("not true" to "very true"), indicating the degree of agreement between the item and the parent's perceptions of the child's behavior over the past six months. The items tap behaviors ranging from externalizing, acting-out behaviors to internalizing, withdrawn behaviors. The CBCL is comprised of the following nine syndrome scales: Withdrawn, Somatic Complaints, Anxious/ Depressed, Social Problems, Thought Problems, Attention Problems, Sex Problems, Delinquent Behavior, and Aggressive Behavior. The Internalizing index is a summary score derived from the Withdrawn, Somatic Complaints, and Anxious/ Depressed syndrome scales. Similarly, the Externalizing index is derived from the Delinquent Behavior and Aggressive Behavior syndrome scales and the Total Problem Score index is derived from all of the items and syndrome scales. It should be noted that for purposes of this study, only the Internalizing and Externalizing indexes and the Total Problem scores are used.

The CBCL Internalizing index scores, the Externalizing index scores and the Total Problem scores range from $T = 50$ to $T = 100$ ($X = 50.1$ and $SD = 9.9$ in the normative sample. Normal scores range from $T = 50$ to $T = 59$. T scores of 60-63 designate a "borderline clinical" range. T scores above 63 fall within the clinical range (Achenbach, 1991).

The CBCL was standardized by age and gender groups using data from more than 1,750 caregivers of non-referred children. One-week test-retest reliability of the syndrome scale scores averaged .89% and the 6-month stability on the scales ranged from .59% to .74%. Inter-parent agreement on syndrome scales scores ranged from .48% (Thought Problems) to .80% (Externalizing) (Achenbach, 1991).

Data Collection

Participants in the MISC project were assigned to assessment staff (trained clinicians and practitioners) who gathered data in the context of the larger MISC evaluation. For each youth, the assessment staff obtained demographic and historical information through family and child interviews and archival reviews. These data provided evidence about the

youth's family life and behavioral/emotional status. The caregivers of the MISC youths completed CBCL. These data were collected at intake (when the youth entered the system) and at a 6-month follow-up.

Service delivery and cost data were collected and analyzed from the County Department of Mental Health's billing records for the youths enrolled in MISC for six months who had concomitant follow-up data on the CBCL. The broad categories of service provided by MISC included: (1) Assessment, (2) Case Management, (3) Flexible Services (e.g., alcohol and drug counseling, family mentoring, therapeutic and recreational, intensive in-home and in-school services, and transition services), (4) Medication/Crisis Intervention (combined into one category because of their low incidence), and (5) Therapy (individual, family, and group services).

Table 1. Demographic and Referral Information as a Function of Ethnicity and Outcome Group

Variable	Category	<i>Hispanic</i>		<i>non-Hispanic White</i>	
		Improvers (n=19)	Deprovers (n=5)	Improvers (n=15)	Deprovers (n=5)
Age in Years	<i>M</i>	12.7	15.4	12.5	11.2
	<i>(SD)</i>	(2.6)	(0.6)	(3.1)	(5.0)
Gender	Male	74%	60%	80%	20%
	Female	26%	40%	20%	80%
Referral Agency	Probation	58%	60%	33%	0%
	Mental Health	11%	20%	40%	40%
	Social Services	21%	20%	20%	60%
	Public Health	11%	0%	7%	0%
Child Risks	Physical Abuse	40%	40%	30%	60%
	Sexual Abuse	50%	25%	30%	20%
	Runaway	47%	40%	53%	20%
	Substance Use	72%	80%	47%	0%
Family Risks	Hospitalization	6%	0%	13%	60%
	Felony	37%	20%	33%	40%
	Sibs. Institute	42%	20%	7%	100%
	Foster Care	37%	0%	20%	40%
	Mental Illness	26%	25%	20%	100%
	Violence	68%	80%	47%	100%
	Substance Use	100%	100%	93%	80%

Results

Descriptive Statistics

Demographics. In the Hispanic group (n = 75), 19 youths (25%), 14 males and three females, were classified as Improvers; and, five (7%) were classified as Deprovers, three males and two females. In the non-Hispanic White group (n = 87), 15 youths (17%), 12 males and three females, were classified as Improvers; and, 5 (6%), one male and four female, were classified as Deprovers. Because of the small numbers of both males and

females in both the Improvers and Deprovers groups, the genders were collapsed relative to the descriptive data that follows. As can be seen in Table 1, the mean age of Hispanic Improvers (12.7 years, SD = 2.6) and non-Hispanic White Improvers (12.5 years, SD = 3.1) were equivalent. In contrast, Hispanic Deprovers were 15.4 years on average (SD = 0.6) whereas non-Hispanic White Deprovers were a diverse age group with a younger mean age (11.2 years, SD = 5.0).

The Hispanic Improvers were composed mainly of youths referred primarily by the Probation Department (58%); however, the group also included youths referred by the Department of Social Services (21%), Mental Health (11%), and Public Health (11%). In contrast, the non-Hispanic White Improvers were composed of youths referred primarily by Mental Health (40%), Probation (33%), Social Services (20%), and Public Health (7%). Hispanic Deprovers were primarily referred by the Probation Department (60%), with Mental Health (20%) and Social Services (20%) referring the remainder; whereas non-Hispanic White Deprovers were referred by only two agencies: Social Services (60%) and Mental Health (40%).

Primary Presenting Problems

The assessment staff were asked to describe primary reasons why they referred the youths into the system of care. The most common primary presenting problems associated with Hispanic Improvers were Alcohol/Substance Abuse (21%), Physical Aggression (16%), and Non-Compliance (16%). Similarly, for non-Hispanic White Improvers, the most common primary presenting problem associated with referral into the system of care was Alcohol/Substance Abuse (21%). Among Hispanic Deprovers, presenting problems included: eating disorders (20%), anxiety (20%), physical aggression (20%), non-compliance (20%), and alcohol/ substance abuse (20%). For non-Hispanic White Deprovers, presenting problems included: depression (40%), anxiety (20%), suicide attempt(s) (20%), and attentional difficulties (20%).

Child and Family Risk Factors at Intake

The Improvers - both Hispanic and non-Hispanic Whites, had vulnerable experiences before implementation of the system of care services. Among the Hispanic Improvers, 72% were documented as having used alcohol and/or drugs prior to intake; 47% of the non-Hispanic White Improvers used substances prior to MISC. There were high incidence of physical abuse (40%), sexual abuse (50%), and runaway behavior (47%) among the Hispanic Improvers. Non-Hispanic White Improvers were also seriously challenged by these factors: 30% had been physically abused, 30% sexually abused, and 53% had run away.

Counterintuitively, the Deprovers did not always show higher percentages of child risks than the Improvers. Drug or alcohol use was documented in 80% of the Hispanic Deprovers cases but none of the non-Hispanic White cases. Hispanic Deprovers had histories of physical abuse (40%), sexual abuse (25%), and running away (40%) in equal or lower percentages than their Improvers counterparts; and non-Hispanic White

Deprovers showed a higher incidence of physical abuse (60%) but a lower incidence of sexual abuse (20%) and running away behavior (20%) than their Improvers counterparts.

Family risks were evident in high percentages in all outcome groups and ethnicities. Among the Hispanic Improvers, an alarming 100% lived in households where family substance abuse was documented, and 68% lived with domestic violence. Of equal concern, 93% of non-Hispanic White Improvers had lived in substance-abusing families and 47% in violent households. Hispanic Improvers also showed high felony convictions among family members (37%), institutionalization of siblings (42%), and sibling placement in foster care (37%). Non-Hispanic White Improvers held slightly lower percentages: 33% felony convictions; 7% sibling institutionalizations; and 20% foster care placement.

The Non-Hispanic White Deprovers documented higher percentages of family risks. Hispanic Deprovers came from families with histories of substance abuse (100%) and family violence (80%). Similarly, 80% of non-Hispanic White Deprovers lived in substance-abusing families and 100% lived in violent households. Additionally, the non-Hispanic White Deprovers also showed extremely high levels of institutionalizations of siblings (100%), mental illness in the family (100%), and psychiatric hospitalization of caregivers (60%); as compared to Hispanic Improvers, the Hispanic Deprovers exhibited lower incidence, with 20% experiencing sibling institutionalizations, 25% family mental illness, and 0% psychiatric hospitalizations.

CBCL Summary Scores

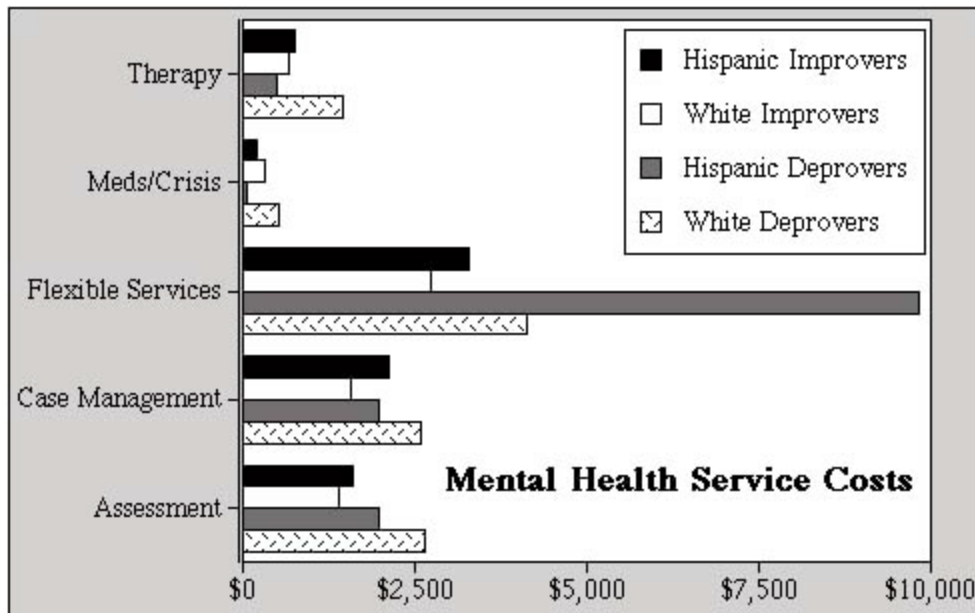
By definition of the outcome groups, Improvers were within the clinical range on Total Problem Scores on the CBCL (Total Score = 63) at intake, but substantially declined to below the clinical range at the 6-month follow-up. In contrast, Deprovers scored below clinical range at intake, but within clinical range on Total Problem Score after six months of system of care services. As demonstrated in Table 2, with both Hispanic and non-Hispanic White Deprovers, externalizing behavior (delinquency and aggression) increased into the clinical range, while their internalizing behavior (anxiety, depression, and somatic complaints), remained below the clinical range after six months.

Summary Scale	Time	<i>Hispanic</i>		<i>non-Hispanic White</i>	
		Improvers (n=19)	Deprovers (n=5)	Improvers (n=15)	Deprovers (n=5)
Total Score	Intake	70.6	48.4	68.1	57.8
	(SD)	(6.9)	(16.02)	(4.7)	(2.6)
	6 months	56.4	67.2	56.4	68.0
	(SD)	(4.2)	(6.2)	(3.4)	(2.9)
Internalizing Scale	Intake	65.6	46.6	64.7	52.4
	(SD)	(6.2)	(14.0)	(5.7)	(5.2)
	6 months	52.3	58.6	54.1	59.8
	(SD)	(6.2)	(8.0)	(4.5)	(12.1)
Externalizing Scale	Intake	70.5	51.0	68.3	61.6
	(SD)	(9.5)	(11.5)	(6.8)	(5.6)
	6 months	57.3	67.4	56.7	66.5
	(SD)	(6.8)	(9.7)	(4.2)	(9.2)

Comparability of Services

On average, both Hispanic and non-Hispanic White youths received more "flexible services" hours in their first six months of MISC participation than any other category of service. These data indicate that the system of care model encouraged the use of innovative, individualized, and family-focused services such as therapeutic aid, substance abuse counseling, and family mentoring to achieve outcomes. However, Hispanic Deprovers received slightly more than twice the number flexible service hours (M = 68 hours) as the non-Hispanic White Deprovers (M = 32 hours). Notably, Hispanic Improvers (M = 44 hours) and non-Hispanic White Improvers (M = 41 hours) received a similar amount of flexible service hours. In terms of assessment, case management, and medication/crisis intervention, Hispanics and non-Hispanic Whites showed similar patterns of service utilization in the first six months. In terms of therapy services, the groups differed: non-Hispanic White Deprovers received 21 hours of therapy on average, whereas Hispanic Deprovers received only four hours of therapy on average in their early months in the system of care.

Costs per hour of service provided were obtained from the County Department of Mental Health. As can be seen in Figure 1, average service costs during the first six months of system of care involvement for both Hispanic and non-Hispanic White Improvers followed an identical pattern. Among both of these groups, the service cost accrued in the following order: (1) flexible services, (2) case management, (3) assessment, (4) therapy, and (5) medication/crisis intervention. The most expensive service provided to any ethnic or outcome group was the category of flexible services provided to the Hispanic Deprovers (M = \$9,798), exceeding twice that of non-Hispanic White Deprovers (M = \$4,126), and substantially more than the Hispanic Improvers (M = \$3,279) or non-Hispanic Whites Improvers (M = \$2,716).



Discussion

Although systems of care in other communities may differ in design or implementation, there are numerous implications arising from this exploratory study that may pertain to other models serving a diverse population of youths and families. While previous comparative studies have concluded that managed systems of care do not lead to significantly different clinical outcomes compared to those resulting from traditional services (i.e., Salzer and Bickman, 1997), this descriptive study shows trends that system of care services may be effective for certain youths. Most importantly, the current descriptive analysis indicates that clinical outcome research based on service delivery systems may be most useful if specific profiles of youth groups (i.e., those considering ethnicity, risk factors, presenting problems) are examined (see Rosenblatt et al., 1998).

Examination of the risk factors, behavioral ratings, and presenting problems of the early referrals served in the MISC program indicated that both Hispanic and non-Hispanic White youths participating in the system of care show significant impairments that threaten their well-being and the security of their community. They live in environments characterized by multiple risks and adversity, and they experience a variety of emotional and behavioral problems that bring them into contact with community agencies. Consistent with earlier research (e.g., Casas, 1985; Rogler et al., 1987), these data on the Hispanic youths and their families provide substantial evidence that this community has complex mental health needs requiring preventative, comprehensive, and collaborative services.

These preliminary results, however, may also have disclosed bias in agency referrals of youths in need of multiple services. Examination of the youth groups as a function of ethnicity revealed that a majority of the Hispanic youths were referred to the system of care via the Probation Department, while non-Hispanic Whites were referred via mental

health. This result provokes a number of questions requiring additional research: first, what are the factors that might contribute to this discrepancy in the referral process? Are mental health services readily available and easily accessible to Hispanic families? Are the services provided perceived to be culturally sensitive and effective by these families? Do Hispanic youths have to present considerable internal distress or socio-ecological hardships before referrals to Mental Health, Social Services, or Public Health occur? Because ethnicity is a significant factor associated with the manifestations of behavioral and emotional problems (Kauffman, 1989) and the willingness to seek services (Ponterotto et al., 1995), it is critical that agencies extend their efforts to provide culturally-appropriate, easily accessible, and preventive services to youths and their families before correctional interventions are ultimately required. Given the basic factors that underlie managed systems of care, these systems are in an ideal position to extend such efforts. Future research is necessary to evaluate the effectiveness of such efforts.

A particularly striking finding of the present study was the illustration by outcome profiles of service data: it appears that more is not necessarily better. Although the Hispanic Deprovers were provided with services that were over 50% more flexible, and with the most costly service package during their first six months of system of care participation, they did not achieve desired outcomes. When a precision of fit concept (matching services and resources to specific client needs) is not achieved effectively, there will likely be over-serving and/or under-serving consequences. Although the consequences of under-serving have historically been obvious to agencies in the public arena with too few resources and too many clients, the preliminary results illustrate how over-serving via collaboration may produce the following adverse results: (a) limited positive outcomes, (b) exposure of child and family to overly intrusive and restrictive intervention, (c) unnecessary costs, and (d) client dependence on service providers that undermines child/family autonomy. Systematic outcome evaluation data - including service information (type, intensity, frequency, and duration), acknowledgment of family strengths and resources, multiple behavioral and emotional indices, and consistent communication among service coordinators - is the only way a "precision of fit" system of care can truly facilitate the greatest outcomes at the lowest risks to clients, and at the lowest costs to the public system.

The present study included preliminary data with a local system of care's early referrals and 6-month outcomes. Although it may provide persuasive arguments and insights into culturally competent service delivery, there is substantially more research necessary. Because of the volume of service data available in billing records, unwieldy quantities of service procedure codes were combined into broad categories of services that may belie the complicated, individualized nature of their design. Thus, future work demands that the service categories be further detailed and augmented to reveal more about the services Improvers and Deprovers received. Additional research is also needed to identify the critical indicators that may help to prescribe the best fit of services for producing the most positive outcomes in a system of care. Furthermore, developmental conditions and/or severe life conditions that may impact service outcomes may demand a greater duration of intervention than six months, and longitudinal data must be examined to investigate whether trends continue into 1- and 2-year follow-ups. For example, in this study the

most positive outcomes were found among those youths who primarily had behavior disorders (i.e., externalizing behaviors). It may be that systems of care are better suited to obtain rapid improvement when the presenting problems are more amenable to behavioral interventions, family support, and increased access to community resources. Improvement among youths struggling with deeply involved emotional problems (i.e., internalizing behaviors) may take longer. The data were limited to behavioral ratings as perceived by caregivers, for the sake of validation of findings, it is imperative in future research to examine data using other indicators and cross-informant measures. Given the limited psycho-social and mental health related research on both Hispanic males and females, future work must direct attention to the two genders separately. Their psycho-social profiles and, in turn, service needs may be quite different. Finally because some youths remain stable both below and within the clinical range, research is also needed to identify the psycho-social profiles of these youths in order to more effectively meet their service needs.

The focus of this investigation was whether the system of care served their Hispanic and non-Hispanic White clients "equitably." Given the discrepancies between the services received by the Hispanic and non-Hispanic White Deprovers in terms of direct therapy hours and the differential sources of referral, the preliminary answer must be a qualified "no." However, "equitable" may not be optimal. Services delivered through system of care models should be culturally-appropriate at their root as each individual family culture and set of needs are taken into account, rather than broader, stereotypical cultural prototypes. In addition, system of care programs may offer positive directions by recognizing that mental health, social service, law enforcement, and educational agencies can find a common focus on prevention and alternative intervention strategies for youths and families from diverse backgrounds. The Santa Barbara County MISC project has demonstrated that the "best fit" of individualized, comprehensive, community-based services can help some youths achieve positive behavioral and emotional outcomes. Future research endeavors relative to equity might look at how differences in service profiles result in equity relative to positive outcomes. Given the limitations inherent in this study, the results do not lend themselves to any definitive conclusions. The results do stimulate numerous questions, as noted above, that future research needs to address. Furthermore, the study serves as an example of the type of outcome research needed to assess the effectiveness of managed systems of care across and between diverse populations.

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