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Use of Community and School Mental Health Services by Custodial Grandchildren

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Abstract

We examined patterns and predictors of the perceived need, use, and unmet need for mental health services by custodial grandchildren within both the school-based and community-based delivery sectors. Data were self-reported by a national sample of 610 custodial grandmothers providing full-time care to grandchildren ages 6 to 17 in the absence of biological parents. Although overlapping use of services across both sectors was common, the overall use of school-based services (51%) was higher than that of community-based services (37%). Using theAndersen Social and Behavioral Model (1995) the following shared predictors of mental health service use across both sectors by custodial grand-families emerged: grandchildren's externalizing symptoms, having other grandchildren in the household with medical or psychiatric diagnoses and corresponding use of services in the other sector. Predictors were largely the same regardless of whether analyses were conducted with families recruited by probability or convenience based sampling methods. Findings suggest the necessity to coordinate and integrate the availability and implementation of mental health services for custodial grandchildren across different delivery sectors.

Keywords

custodial grandparentsm; grandchild mental health; family caregiving; service use

The number of grandparents providing care to grandchildren has increased substantially over the past two decades. According to the U.S. Census Bureau (2003), approximately 6 million grandparents lived with their grandchildren in 2000, and about 2.4 million of these grandparents had primary responsibility for their co-resident underage grandchildren (Simmons & Dye, 2003). Furthermore from 2000 to 2008 the number of custodial or "skipped generation" grandparents providing full-time care to grandchildren in total absence of the child's biological parents increased by 8%, in particular during 2007 to 2008 at the initial years of the economic recession (Livingston & Parker, 2010). In comparison to those caregiving grandparents who reside with a grandchild's birth parents, custodial grandparents generally experience more strain and family vulnerability because they face heavier child-

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care responsibilities, less social support, and more adverse life-style changes (Jooste, Hayslip, & Smith, 2008).

Children's externalizing behaviors, including aggression, non-compliance, and oppositional behaviors are relatively common among young children. If untreated, such behavioral difficulties are associated with a wide range of negative outcomes and often have effects that last into adulthood, such as substance abuse, unemployment, and relationship difficulties (McKee, Colletti, Rakow, Jones and Forehand, 2008). Moreover, the custodial grandchildren cared for by grandparents have greater risk for psychological difficulties than do children in the general population (Smith & Palmieri, 2007). The importance of the present study was clearly suggested over a decade ago in an article published in this journal by Landry-Meyer (1999). Within a sample of 270 randomly selected grandparents raising grandchildren in Ohio, she found that 83.4% were concerned about their grandchild's emotional health; more than 70% were concerned with behavioral issues and problems; and over two-thirds ranked counseling services for grandchildren as important with almost an equal number ranking information about the availability of services as important. However, we have been unable to identify any published studies on factors associated with the use of mental health services by custodial grandchildren.

Although numerous studies exist on the overall quality of life experienced by custodial grandparents (see for reviews, Grinstead, Leder, Jensen, & Bond, 2003; Hayslip & Kaminski, 2005), much less attention has been devoted to the mental health status and school-related functioning of their grandchildren. Yet, factors such as poverty, stress, and limited access to medical and mental health services among custodial grandfamilies may contribute to their grandchildren's emotional, behavioral, and medical problems. In particular, the psychological distress and chronic illnesses common among custodial grandparents, combined with such stressors as inadequate support; social stigma; isolation; disrupted leisure/retirement plans; age-related adversities; anger toward grandchildren's parents; and financial strain (Whitley, Kelley, & Sipe, 2001), can disrupt their parenting behavior which then impacts their grandchildren's adjustment adversely (Smith, Palmieri, Hancock, & Richardson, 2008; Smith & Hancock, 2010).

Clinicians report that custodial grandchildren often have intense adjustment problems at home, as evidenced by attempts to defy authority and strain limit setting, while pushing their grandparents because others had abandoned them (Brown-Stradridge & Floyd, 2000). Many custodial grandchildren feel unwanted, presume that they are a liability to their grandparents, fear abandonment, and dread a parent's return given its ensuing instability (Bratton, Ray, & Moffit, 1998). Thus, it is understandable why custodial grandchildren are at greater risk for psychological difficulties than children in the general population (Smith & Palmieri, 2007). These risks include exposure to prenatal toxins; traumatic early childhood experiences; little or no appropriate interaction with parents; family conflicts; uncertainty about their future; and societal stigma (Smith, Savage-Stevens, & Fabian, 2002).

Despite the high risk for psychological problems among custodial grandchildren, there is virtually no research on the extent and type of mental health services they receive. In addition to receiving mental health care through traditional community-based services (e.g., mental health centers; family service agencies; private practitioners), it is likely that custodial grandchildren also receive psychological services in schools given that the educational system frequently serves as a point of entry and delivery site for children's mental health services. Indeed, it is well documented that of the small percentage of all children who receive needed mental health services, schools are the most common setting in which this care is accessed (Paternite, 2005; Stephan, Weist, Kataoka, Adelsheim, & Mills, 2007). There is a current need for expanding mental health services for children and

adolescents, since for example in 2005–2006, only 15 percent of U.S. children aged 4–17 had parents who talked to a health care provider or school staff about their child's psychological difficulties (Simpson, Cohen, Pastor, & Reuben, 2008).

There are reasons why custodial grandchildren may be especially likely to receive psychological services through the educational sector. For example, Edwards (1998) noted that custodial grandchildren often display unacceptable school behavior, below average school work, low motivation, and non-compliance with rules, poor study habits, inferior attention spans, and low concentration skills; all of which may prompt interventions from school-based mental health workers. However, schools may not be viewed favorably by grandparents as potential mental health service providers to grandchildren. Many custodial grandparents are unaware of school resources (Silverstein & Vehvilainen, 2000); experience tense relationships with school personnel that prohibit them from viewing schools as a mental health resource; and do not regard schools as user-friendly (Pinson-Millburn, Fabian, Schlossberg, & Pyle, 1996). Therefore, it is critical to investigate the extent to which custodial grandchildren use mental health services in schools; the variables associated with this use; the extent to which use of school-based services overlaps with use of community-based mental health services by custodial grandchildren; and whether similar or different factors are related to service use in these two sectors.

A first aim of the present study is to examine the perceived need, use, and unmet need for community and school-based mental health services by custodial grandchildren as reported by their custodial grandmothers. Consistent with prior research on mental health service use by children in the general population (Paternite, 2005; Stephan et al., 2007), we hypothesize that use of services in the community and school delivery sectors will overlap significantly. Also, because past research indicates that most children who receive mental health services are males (Simpson et al., 2008), we hypothesize that overall higher levels of mental health service use by custodial grandsons will be reported by their grandmothers.

A second aim is to identify the main factors associated with the use of mental health services within each delivery sector. Our analyses are guided by the stress process model of family caregiving (Pearlin, Mullan, Semple, & Skaff, 1990) and by the Andersen Social Behavioral Model (ASBM) of service utilization (Andersen, 1995). Family caregiving is experienced by most caregivers as an ongoing process of stress and adaptation, in which family members attempt to ameliorate the effects of primary stressors (e.g., behavioral and emotional troubles) by using an array of personal and social resources (informal support, socioeconomic status). From this perspective, family decisions about the use of services represent an attempt to adapt to stressors (Zarit, Stephen, Townsend, Greene, & Leitsch, 1999). Also recently studies to understand child mental health service use have focused on the role that parents can serve in obtaining services for troubled children and adolescents, and have highlighted the importance of viewing mental-health service-seeking as a multistep process where support, caregiver distress or family function play a critical role (Thompson Lindsey, English, Hawley, Lambert, & Browne, 2007; Logan & King, 2001). Thus, we would expect that grandparents caring for their grandchildren with emotional and behavioral problems may solicit mental health services for their custodial grandchildren as an endeavor to adapt to primary stressors.

There are various models of service utilization that attempt to examine influential predictors of health services, however the Andersen's behavioral model has been subject to considerable application and revision over the past four decades (Andersen, 2008). Although originally developed to examine use of medical services, this model has been applied to investigate patterns of support service use by family caregivers (Kosloski & Montgomery, 1994), to examine use of social services by caregivers from diverse racial and ethno-cultural

groups (Montoro-Rodriguez, Kosloski, & Montgomery, 2003); to study access/utilization for individuals with developmental disabilities (Harrington & Kang, 2010); and more recently to examine predictors of attending support groups by custodial grandmothers and their grandchildren (Smith, Montoro-Rodriguez, & Palmieri, 2010). This model is also said to be useful for professionals who seek strategies and information to influence health care use by custodial grandfamilies (see Roberto, Dolbin-MacNab, & Finney, 2008). Thus, the ASBM is a fitting conceptual framework for examining the use of mental health services by custodial grandchildren.

The ASBM views predictors as predisposing (socio-demographic, social structure, health beliefs), enabling (family resources, community services) or need factors (illness, disability), and it postulates that the need factors should be the most relevant for service utilization. However, studies have identified conditions other than need that seem to act as potential barriers to accessing services. For example, Harrington and Kang (2010) demonstrated that, controlling for need, young children with developmental disabilities had less access to paid personal care services than older age groups, and racial and ethnic minorities received fewer hours of personal care than Caucasians.

Hypothesized Predictors of Mental Health Service Use According to the ASBM

Predisposing factors reflect aspects that influence the inclination to use mental health services. Our model includes gender of grandchild, grandmother's race, as well as the age of both as predisposing factors, because access to mental health services and use of school mental health professionals by children in general varies significantly across these particular demographic variables (Burns, Costello, Angold, Tweed, Stangl, Farmer, & Erkandi, 1995; Gonzalez, 2005). Based on past studies with children in the general population we hypothesize that those grandchildren who are male and of older age will be more likely to use mental health services (Brannan & Heflinger, 2005). Likewise, since grandchildren of older grandmothers are more inclined to use support groups (Smith et al., 2010) we anticipate that those grandchildren will similarly be more likely to use mental health services.

Enabling factors encompass the ability and resources of individuals and families to use services. In view of past research indicating that greater educational attainment facilitates the use of mental health services (Steele, Dewa, Lin, & Lee, 2007), we hypothesize that greater use of mental health services by custodial grandchildren will be positively associated with the educational level of their grandmothers. We further hypothesize that low income families, those living in urban areas (where low income and minority families are prevalent), and those residing in unsafe community environments will use fewer mental health services due to diminished access (see, for discussion, Gonzalez, 2005). Other enabling conditions hypothesized to be related to greater service are when grandparents report higher levels of (a) support from family members and friends; (b) physical health status; and (c) general satisfaction with community services (see, for discussion Thompson et al., 2007).

We also predict that greater service use by custodial grandchildren will be related to their grandmothers' having formal legal arrangements in place, because grandparents with ties to the formal legal system have greater access and referrals to support services; and mental health services are sometimes suggested for continuation of foster parenthood (Baird, 2003). Formal legal arrangements include custody, foster care, adoption, or guardianship (for a review of legal issues see Albert, 2000). In fact, custodial grandchildren under the care of grandparents with foster parent status were previously found to be more likely to use support groups than those cared for by grandparents without such status (Smith et al., 2010).

Need factors represent objective and subjective health characteristics of the caregiving situation. Our hypotheses include perceived needs for service use, in particular variables addressing the level of distress or strain in the caregiver role, such as the grandmother's level of depression, feelings of shame, and perceived role captivity. Past research has shown that greater use of mental health services by children is related to subjective strain associated with caring for children with behavioral and emotional disorders (Brannan & Helfinger, 2005) and to a vulnerable family environment represented by poor family functioning and caregiver psychological distress (Thompson et al., 2007). Prior research has also documented an inverse relationship between general stigma and use of mental health services, treatment and specifically concerns about the use of psychiatric medication for children (Pescosolido, Perry, Martin, McLeod, & Jensen, 2007). In turn, we hypothesize those custodial grandmothers experiencing high levels of stigma over their non-normative caregiver role will be less inclined to seek mental health services for their grandchildren. Other need variables in the model include the grandchildren's emotional and behavioral difficulties, the presence in the household of other children with medical or psychiatric diagnoses, and the use of other mental health services.

The Potential Influence of Sampling Method

A final aim is to investigate if predictors of service use vary across families recruited by two different sampling strategies: convenience and population-based. Because custodial grandparents sampled via both techniques were required to meet identical eligibility criteria, we are able to examine if there are differences in the predictors of service use by custodial grandchildren in both the community and school delivery sectors that are attributable to sampling strategy. There is concern in family caregiving research that participants recruited via convenience are biased toward greater levels of psychological distress and service use (Pruchno et al., 2008). The present study will help determine if samples derived from convenience versus population-based strategies represent different populations. Any differences found may be attributable in part to the effects of sampling technique, whereas similarities found across sampling techniques may be held with greater confidence (Karney, Davila, Cohan, Sullivan, Johnson, & Bradbury, 1995).

Method

Participants

Participants were 610 custodial grandmothers (M age = 56 years, SD = 7.9) providing full-time care to a target custodial grandchild age 6 to 17 in total absence of the biological parents for at least three months who were recruited for a larger study on custodial grandparents stress and well-being (see for recruitment details Montoro-Rodriguez & Smith, 2010). This sample was derived from a larger study of 733 custodial grandmothers recruited across the 48 contiguous states through a combination of convenience (e.g., social service agencies; Internet, radio, and newspaper ads) and population-based methods. Population-based sampling involved recruitment letters sent to randomly generated lists (purchased from Survey Sampling, Inc.) of the approximately 38 million U.S. households containing children under age 18. Although the original sample included target custodial grandchildren between ages 4–17, only those ages 6–17 are included here because children of these ages can access mental health services in schools.

Quota sampling was used to recruit a sample, half of which consisted of Black custodial grandmothers and half of which consisted of Caucasian custodial grandmothers. Blacks were over sampled because the probability of custodial care is much higher among Blacks than Caucasians (Bryson & Casper, 1999). Other racial and ethnic populations were excluded because they comprise a smaller percentage of the population of grandparents

(Bryson & Casper, 1999). Otherwise, the sample was diverse regarding marital status, education, geographical locale, work status, and income. Table 1 shows demographic information regarding the sample and descriptive data for all predictors in our version of the ASBM model. If custodial grandmothers cared for multiple grandchildren, then a target grandchild was selected using the most recent birthday technique (Kish, 1965). The target grandchildren were 317 girls and 293 boys (*M* age = 10.9 years, *SD* = 3.1). Most grandmothers (53%) provided care to a target grandchild who was born to a daughter. Multiple reasons for providing full-time care were reported by the majority of grandmothers, most of which involved crisis or tragedy within the parent generation (e.g., substance abuse: 57%; incarceration: 41%).

Measures

As part of a larger telephone survey conducted by trained interviewers at a public research university in Northeast Ohio, custodial grandmothers were read a list of 27 services that provide support to custodial grandfamilies. This list was developed with input from professionals at national organizations providing advocacy and services for grandparent-headed households. After each service was read, grandmothers answered “yes” or “no” regarding if their family had respectively “used” or “needed” that service within the past year. Unmet need was deemed to occur if a grandmother reported a need for the service but did not report using it within the past year. Grandmothers were asked if they had used any of the services of the 27 on our list. They were not asked if anyone in particular had used them. The two services examined in this paper were phrased as “mental health services for grandchildren” and “school guidance counselors and psychologists for grandchildren.” All variables included as service use predictors in our model are shown in Table 1, and only those for which measurement is not obvious are described below.

Enabling Variables—Income Level was measured by asking grandmothers “What is your approximate total yearly household income after taxes?” with responses ranging from 1 (*under $10,000*) to 10 (*more than $125,000*). We use the variable “locale” to measure urban *versus* rural environments. If grandmothers were living in a large or small city, suburb and/or small town were considered to be in an urban environment (0) versus those who reported living in a rural area (1). The legal status of the grandmothers was assessed by using a categorical variable indicating if grandmothers have current legal rights over their grandchildren, including custody, adoption, guardians, or foster status (1) or not legal arrangements at all (0). Perceived Social Support was measured by the 8-item Expressive Support Scale (Pearlin et al., 1990). Items were rated from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating more support (α = .88). Satisfaction with Community Services was measured by seven items (α = .78) asking about the level of satisfaction with various service systems (e.g., social, school, health, clergy, community, legal) and rated from 1 (*strongly disagree*) to 4 (*strongly agree*). Grandmother’s health and health of the target grandchild, respectively, were assessed by two items that were rated by grandmothers from 1 (*poor*) to 5 (*excellent*). Neighborhood Risk was scored dichotomously in terms of whether respondents expressed agreement (0) or disagreement (1) with the statement: “My neighborhood provides a safe, clean, and comfortable environment for raising my grandchild”.

Need Variables—The variable other children with medical and psychiatric diagnoses was measured dichotomously based on whether or not there were grandchildren in the household other than the target grandchild with a specific diagnosis. Role Captivity was assessed by adapting three items (e.g., “How often have you felt trapped by caring for your grandchild?”) originally developed by Pearlin et al. (1990) for use with family caregivers of Alzheimer’s patients. Items were rated from 1 (*never*) to 5 (*very often*), with higher scores

indicating higher levels of role captivity (α = .75). Grandmothers' Depression was assessed with the 20-item Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) (α = .90). For each item participants endorsed the response that best described how often they had felt a particular way in the past week, from 0 (*rarely or none of the time - less than 1 day*) to 3 (*most or all of the time -5 to 7 days*). Grandmothers' Shame/Embarrassment was assessed by five-items (e.g., "I'm ashamed to tell people the reason why I'm caring for my grandchild") developed specifically for this research that was pilot tested with 44 custodial grandparents. Each item was rated from 1 (*strongly disagree*) to 4 (*strongly agree*), and items were summed to yield a potential range of 5 -20 with higher scores indicating greater shame (α = .81).

The Strengths and Difficulties Questionnaire (SDQ) was used to assess the grandchild's psychological difficulties (Goodman, 1997). Grandmothers were asked to rate their target grandchild on each item using a 3-point scale that ranges from 0 (*not true*) to 2 (*entirely true*). Internalizing Difficulties are represented by the emotional and peer problem subscales (10 items; α = .79), and Externalizing Difficulties are represented by the hyperactivity and conduct problems subscales (10 items; α = .86). The SDQ demonstrates good psychometric properties and structural validity when administered to CGMs (Palmieri & Smith, 2007).

Analytic Plan

Logistic regression was used to identify predisposing, enabling, and need variables predicting use of mental health services in the community and school sectors, respectively. Analyses were conducted separately by sample type, as well as for the combined sample with sampling strategy included as a control variable. Statistically significant odds ratios greater than 1.00 reflect higher likelihood of use; those below 1.00 reflect lower likelihood. An alpha level of .05 was used for all statistical tests. The analyses were conducted with SPSS software.

Results

Descriptive Findings

Data on the frequency of use of mental health services by custodial grandchildren as reported by their grandmothers are summarized in Table 2. Half of the families used services in the school sector (50.8%), whereas over one third used community-based services (37.2%). In addition, 30.5% of the families had used mental health services in both sectors. Twenty percent used only school-based services, while 7% used community-based services only. Table 2 further reveals that almost all the families using mental health services in the community sector also used services in the school sector (186 of 227, 82%), and that the use of services in both sectors was significantly higher for families where the target grandchild was male (37.2%) rather than female (24.3%) (Chi-Square (1) = 11.9, $p < .01$). Similarly, the number of families using no mental health services was significantly greater when the grandchild was female (47.6% *versus* 36.9%) (Chi-Square (1) = 7.2, $p < .01$).

Table 2 also contains information about grandmothers' reports on the need and unmet need regarding use of mental health services for their grandchildren. A higher percentage of need in both sectors was reported by grandmothers of male grandchildren, 50.2% *versus* 40.1% (Chi-Square (1) = 6.2, $p < .001$), and 62.5% *versus* 47.9% (Chi-Square (1) = 12.9, $p < .001$) for community and school sectors, respectively. The unmet need for community services was less than 23% and was not significantly different between grandmothers of male and female grandchildren, 19.9% *versus* 25% (Chi-Square (1) = 1.1, $p < .18$). Likewise, the unmet need for school services was less than 16% and was not significantly different by gender of the target custodial grandchild, 13.3 *versus* 17.1 (Chi-Square (1) = 0.9, $p < .19$).

Logistic Regression Findings

Results of the logistic regressions for use of community-based services are presented in Table 3. Regardless of sample type, greater likelihood of mental health service use was related significantly to use of service in the other delivery sector (school). In the convenience sample only, greater likelihood of use was also related significantly to the presence of at least one custodial grandchild in the household having a medical or psychiatric diagnosis, and to higher levels of perceived role captivity among grandmothers. On the other hand, in the probability sample only, greater likelihood of use was also related significantly to increased age of the grandmother, being Caucasian grandmothers, and with higher levels of externalizing symptoms reported by grandmothers for the target custodial grandchild.

Results of the logistic regressions for use of school-based services are presented in Table 4. Regardless of sample type, greater likelihood of use was related significantly to use of service in the other delivery sector (community) and the presence of at least one custodial grandchild in the household having a medical or psychiatric diagnosis. In the convenience sample only, greater likelihood of use was also related significantly to higher levels of externalizing symptoms reported by grandmothers for the target custodial grandchild. In the probability sample only, greater likelihood of use was also related to higher levels of perceived role captivity among grandmothers.

Discussion

Patterns of Use, Perceived Need, and Unmet Need

One aim of this study was to identify patterns of use, perceived need, and unmet need for mental health services by custodial grandchildren. Our findings suggest that schools are the frontline source of mental health services for custodial grandchildren. Half (50.8%) of the grandchildren were reported by their grandmothers to be using mental health services in the schools, while a smaller percentage (37.2%) were using community services. The predominance of service use in schools is further evidenced by the finding that just 6.7% of the custodial grandchildren were reported to be using community services only, in contrast to the 20.3% who were solely using school-based services. In addition, a higher percentage of the grandmothers (54.9%) perceived a need for mental health services in the school sector than in the community sector (44.9%). Nevertheless, the percentage of unmet need for community-based services (22.3%) was higher than that for school-based services (15.1%).

Our results are consistent with numerous studies showing the significant role that schools play in providing mental health services to children in the general population (Stephan et al, 2007). As Burns et al. (1995) documented, among children using mental health services, about 70% received them from schools, 11% from the health sector, about 16% from the child welfare sector, and about 4% from the juvenile justice sector. For nearly half the children with serious emotional disturbances who received services, the public school sector was the sole provider (Burns et al., 1995). Farmer, Mustillo, Wagner, Burns, Kolko, Barth, & Leslie (2010) similarly found in their national study of children that schools were central in providing mental health treatment for high-risk youth with reports of maltreatment. Thus, one important strategy for improving mental health services for custodial grandchildren is to increase professional mental health resources in schools where they can more readily benefit from them. Indeed, the New Freedom Commission on Mental Health established by George W. Bush in 2002 to analyze the state of the country's mental health system "unequivocally recognized that mental health services in schools are a critical component in rebuilding our mental health system for children" (p. 1330; Stephan et al., 2007). Likewise, more recently President Obama has signed into law legislation reauthorizing the State Children's Health

Insurance Program (2009) and has been supportive of the Department of Education's grant program to increase student access to quality mental health care, linking school systems with local mental health systems.

Given the present findings, it is instructive to consider the advantages and disadvantages that may be associated with the use of school-based mental health services by custodial grandfamilies. For instance, there are many potential advantages of providing mental health services to custodial grandchildren in schools. Edwards and Taub (2009) described how schools can uniquely provide activities designed to enhance grandchildren's confidence as well as their social, cognitive, and academic competence, and maintained that such broad-based interventions enhance both the psychosocial and psycho-educational development of grandchildren. One major advantage of school-based services, then, is that they can promote diverse strengths of the grandchildren in a manner that far exceeds a primary focus on pathology. Additional advantages of mental health intervention within school versus community-based settings especially relevant to grandchildren include the ability to (a) reach children in rural communities where families have in general less access to medical and mental health services for their children; (b) reach children from ethnic minority groups and students with less obvious problems, such as depression and anxiety, who are unlikely to access services in specialty mental health settings; (c) reduce stigma associated with seeking mental health support; (d) increase opportunities to promote generalization and maintenance of treatment gains; (e) screen for and prevent comorbid mental health and substance abuse problems; and (f) capitalize on the interrelationship between academic success and psychological health (Paternite, 2005; Stephan et al., 2007).

At the same time, however, potential disadvantages also exist regarding the use of school-based services by custodial grandchildren. For example, Edwards (1998) maintained that the disparate manner in which teachers and custodial grandparents view custodial grand-families is a likely barrier to ameliorating the school problems of the grandchildren. He observed that school behaviors of custodial grandchildren were rated significantly better by their grandparents than by teachers, suggesting that grandparents and teachers do not communicate effectively with each other and that custodial grandparents may lack sufficient awareness of their grandchildren's behavioral problems in schools. Edwards (1998) also found that school personnel (teachers, counselors, principals, school psychologists) often feel that custodial grandchildren take up disproportionate amounts of their time. At the same time, grandparents may lack the knowledge and ability to communicate with school personnel and may prefer to be less assertive when interacting with teachers and school staff. Thus, although our findings clearly point to the prominence of school-based mental health services in the lives of custodial grandchildren, investigating the appropriateness, quality, and effectiveness of these services for this population are critical goals of future research.

Our findings reinforce prior recommendations of necessary changes in schools that would help foster the emotional well-being of custodial grandparents and grandchildren alike. These encompass: a) including discussion of grandparent family issues within school in-service training and continuing education programs; b) appointing grandparents as members of parent-teacher councils; c) providing school-based support groups for custodial grandparents; and d) having school professionals disseminate information for custodial grand-families on how to prevent substance abuse (see, for discussion, Silverstein & Vehvilainen, 2000). Along these lines the creation of demonstration programs for identifying best-practice techniques for serving grandparent families in the schools are needed. For example, Rogers and Henkin (2000) describe a model school-based program ("Grandma's Kids") conducted at Temple University's Center for Intergenerational Learning that was designed to increase students' academic performance, attachment to

school, knowledge of harmful effects of drug and alcohol use; problem solving skills; social support and access to community services. The program was also designed to decrease the mental health problems and negative behaviors of participating students. A further goal was to increase the capacity of schools to meet the special needs of these families. Comprehensive programs like “Grandma’s Kids” illustrate how school-based programs can foster positive development of custodial grandchildren in addition to meeting the specific psychological difficulties they may experience.

It is both informative and alarming that the rates of reported use for community-based (37.2%) and school-based (50.8%) mental health services in our national sample of custodial grand-families are remarkably high in comparison to the five percent of all U.S. children age 4–17 who received mental health treatment other than medication in 2005–2006 (Simpson et al., 2008). Similarly, Ghuman, Weist and Shafer (1999) observed that 22% of 233 youths attending an inner-city community mental health center for treatment of psychological difficulties were cared for by custodial grandparents. This apparently disproportionate use of mental health services is not surprising, however, given that custodial grandchildren are far more likely than children in the overall population to be viewed by caregivers as having high levels of psychological difficulties (Smith & Palmieri, 2007). Yet, it is somewhat reassuring that under one fourth of the custodial grandchildren in our sample were reported to have unmet needs for mental health services. This is considerably lower than the estimated 50% or more of children in general with untreated mental health problems (Power, Eiraldi, Clarke, & Mazzuca, 2005).

As expected, the use of both community and school-based mental health services was higher for male than female custodial grandchildren. These gender differences align with past population studies showing that the majority of children receiving mental health services are males (Simpson et al., 2008). Despite the fact that boys appear to have greater need for treatment than girls, the granddaughters in our sample had higher levels of unmet need for both school and community mental health services than grandsons. Practitioners who serve custodial grandfamilies should realize that the mental health needs of female custodial grandchildren, like those of girls in general, may be insufficiently addressed (Power et. al, 2005).

Shared Predictors of Service Use across Both Sectors

The use of services in one sector consistently emerged as a significant correlate of service use in the other sector, which provokes the question of whether or not using services in one sector precipitates use in the other. One possibility is that custodial grandchildren receiving psychological diagnosis or treatment in schools are also referred to mental health providers outside the school when appropriate. Because past research indicates that many custodial grandparents are unaware of the existence of relevant services (Ross & Aday, 2006), the role of school professionals in helping them to access needed services for their grandchildren seems vital in this regard. It is also imperative to realize that schools cannot do all of the work alone, and in many cases may be overburdened with demands related to custodial grandchildren’s mental health needs that are better addressed in other community systems (Paternite, 2005).

Having other grandchildren in the household with any medical or psychiatric problem was related to greater likelihood of service use in the school sector, and it was associated although not statistically significant ($p < .06$ for the convenient sample) with use of mental health services in the community. This suggests that when one family member becomes an identified client or patient, the mental health needs of other family members become apparent to professionals as well. Another possibility is that shared genetic and environmental predispositions may account for the overlapping of use of mental health

services by custodial grandchildren from the same household. There is compelling evidence that custodial grand parenting yields new stressors that add to psychological distress in an already vulnerable population (Minkler, Fuller-Thomson, Miller, & Driver, 1997; Strawbridge & Floyd, 1997; Szinovacz, DeViney, & Atkinson, 1999). In turn, diminished parenting among custodial grandparents caused by stressful circumstances can become a risk factor that interacts with a grandchild's predispositions to facilitate, maintain, or exacerbate adjustment difficulties (Johnson & Mash, 2001). It is also relevant that one major impact of the managed health care movement was to make primary care physicians the initial point of entry for mental health services by removing incentives to refer children to mental health specialists (Power et al., 2005). Thus, primary care physicians and school professionals are likely to be the front line initiators of mental health services for all children, including custodial grandchildren.

Differential Predictors of Service Use

Overall, apart from the use of service in the other delivery sector and having a custodial grandchild in the household with a medical or psychiatric diagnosis, considerable variation was found among the predictor variables between the two sample types for both types of service use.

A greater likelihood of use in the school sector was associated with higher levels of externalizing symptoms in the target grandchild (convenience sample only) and greater role captivity perceived by grandmothers (probability sample only). Thus, from the perspective of the Andersen's social and behavioral model all of the identified predictors for use of school-based services fell within the categorization of need factors. A likely explanation for this pattern is that service use in the schools is initiated by school professionals whenever a *prima facie* need exists irrespective of extraneous considerations. In this regard, our findings support the principle that mental health services in schools should be provided to all custodial grandchildren who need them and not affected by such factors as income, race, gender, age, or locale. In contrast, a broader array of predictors from the perspective of the Andersen's model was related to a greater likelihood of using community-based services. For example, with the probability sample only, greater likelihood of use was associated with grandmothers being older, with being Caucasian custodial grandmothers, and with higher levels of externalizing symptoms reported for the target grandchild. In a prior study (Smith et al., 2008), older custodial grandmothers were found to report higher levels of *challenged parenting* behavior than younger custodial grandmothers, suggesting that older grandmothers may find it difficult to engage in parenting effective practices due to their advancing age. Thus, as custodial grandmothers grow older they may become more inclined to seek professional assistance in dealing with a custodial grandchild's adjustment problems. In turn, older custodial grandmothers are also likely to be caring for an older grandchild.

The results of the probability sample for community mental health services regarding the significant effect of race of the grandmothers confirm the findings of previous studies indicating the importance of racial and ethnic differences in access and use of child mental health services. For example, a review of eleven studies of mental health care for African American adolescents found that most of the studies report that Caucasian adolescents receive higher level of mental health treatment, such as outpatient care, than African American adolescents (Elster, Jarosik, Van Geest, & Fleming, 2003). Minority older adults also report more mental distress and are less likely than Caucasians to use mental health services (Sorkin, Pham, & Ngo-Metzger, 2009). Some potential barriers that may contribute in preventing minorities from using mental health services could be attributed to the stigma associated with personal distress and mental illness, the mistrust of professional providers and the mental health system.

That higher levels of externalizing difficulties among target custodial grandchildren was related significantly to greater likelihood of using community-based services within the probability sample and a greater likelihood of using school-services within the convenience sample is in line with previous findings that children's externalizing behaviors are associated with caregiver distress and referral, and that this relationship is not as strong for internalizing difficulties (Brannan & Heflinger, 2005). This may be due to the fact that it is difficult for lay observers like custodial grandparents to recognize children's internalizing symptoms because they are less outwardly apparent than externalizing symptoms (Simpson, Bloom, Cohen, Blumberg, & Bourdon, 2005). Likewise, externalizing difficulties may be more visible to teachers and regarded as being disruptive to classroom activities, thereby prompting referrals to school psychologists and counselors.

The higher amounts of perceived role captivity among custodial grandmothers was associated with a significantly greater likelihood of using school-based services by grandchildren in the probability sample, as well as significantly greater likelihood of using community-based services by custodial grandchildren in the convenience sample. These findings are consistent with previous studies where increased caregiver burden was associated with service use among custodial grand-families (Smith et al., 2010) as well as among children in general (Brannan & Heflinger, 2005). In fact, caregiver burden has been found elsewhere to overshadow children's symptoms in predicting mental health service use (Angold et al., 1998). Thus, practitioners who serve custodial grandchildren need to be cognizant of the psychological distress that is experienced by the custodial grandparents and make referrals as needed and/or provide family-based interventions.

Our findings regarding the above comparisons between the convenience and population-based samples imply that data on support group use obtained solely from convenience samples may be misleading with respect to different predictors of service use than those occurring in population-based samples. This is very similar to our past finding of different predictors for support group utilization among population-based versus convenience samples (Smith et al., 2010). Thus, it appears that any findings regarding service use obtained solely with convenience samples should be interpreted cautiously until they are either replicated across multiple convenience samples or validated against a population-based sample. Even samples of custodial grandfamilies obtained via population-based strategies, however, are not necessarily representative of the population because not everyone who is approached will agree to participate, and refusal may vary across different types of individuals (Hultsch, MacDonald, Hunter, Maitland, & Dixon, 2002). Given that population-based samples are generally more representative of the overall population than convenience sample, we have greater confidence in the findings for the population-based sample of the present study. We also conclude that those variables that were not found here to be significant in either the convenience, population-based, or combined samples are not meaningful predictors of support group use.

Study Limitations

Although our sample of Caucasian and Black custodial grandmothers was large and heterogeneous with representation from across the U.S., generalization is restricted by non-representation of other minority groups, by focusing only on grandchildren between ages 6–17, and by a constrained number of potential predisposing, enabling and need factors. Our measures of use are basic and did not address such issues as the duration of use, and the specific type of treatment received. Likewise, our assessments of need and unmet need were reported by custodial grandmothers rather than derived from objective determinations of need. Future studies are needed using such measures as the Child and Adolescent Services Assessment (Ascher, Farmer, Burns, & Angold, 1996), which examines mental health use across a wider array of services. Finally, both the cross-sectional nature of this study and its

focus on 'current' service use, may underestimate the overall rates of service use as well as of multisector use. Also, longitudinal data are needed to determine causal relationships between predictors and service use and to examine patterns of predictors and service use across time. Another caveat is that our outcome variable encompassed the use of mental health services by any custodial grandchild in the household, and thus the findings do not necessarily pertain to the target custodial grandchild only. We decided to focus on this outcome because it better reflects the reality that many custodial grand-families include multiple custodial grandchildren. Also, statistical power and cell sizes for certain predictors would be limited by restricting the sample to families with one custodial grandchild. The household composition of custodial grandfamilies is an important factor to consider in future research.

Despite these limitations, this study makes an important contribution by examining conditions affecting the likelihood of use of mental health services in the community and the school sectors by custodial grandchildren within a large national sample. Research in this important area is embryonic, and the present investigation sets the stage for future investigations. In addition to studies that more comprehensively examine factors predicting the use of mental health services by custodial grandchildren, work is needed to examine (a) what other types of services that families may receive to address the mental health issues of custodial grandchildren (e.g., those directed at grandparents; family preservation; family counseling); (b) how these different services are best coordinated to meet the needs of custodial grandchildren; and (c) the overall effectiveness of these services.

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Table 1

Sample Characteristics (N=610)

	N	%[a]	Mean	SD	Minimum	-Maximum[b]
Sample Strategy						
Convenience Sample	331	(54.3)				
Population-Based Sample	279	(45.7)				
Predisposing Variables						
Gender Grandchildren						
Grandson	293	(48.0)				
Granddaughter	317	(52.0)				
Race Grandmother						
Caucasian	302	(49.5)				
African American	308	(50.5)				
Age Grandchildren			10.8	(3.1)	6	17
Age Grandmother (years)			57.1	(7.6)	32	92
Enabling Variables						
Grandmother's Education						
Less than High School	106	(17.4)				
H.S. Graduate	167	(27.4)				
Some College	212	(34.8)				
College Graduate or higher	125	(20.5)				
Locale						
Urban	515	(85.0)				
Rural	91	(15.0)				
Neighborhood Type						
No Risk	533	(87.4)				
At Risk	77	(12.6)				
Legal Status of Adoption						
Legal Custody	504	(82.6)				
Non Custody	106	(17.4)				
Grandmother's Marital Status						

	N	%[a]	Mean	SD	Minimum	-Maximum[b]
Married	292	(47.9)				
Not Married	318	(52.1)				
Grandmother's Physical Health						
Poor	43	(7.0)				
Fair	156	(25.6)				
Good	207	(33.9)				
Very Good	147	(24.1)				
Excellent	57	(9.3)				
Grandchild's Physical Health						
Poor	7	(1.1)				
Fair	36	(5.9)				
Good	115	(18.9)				
Very Good	162	(26.6)				
Excellent	290	(47.5)				
Family Income [1 =<10,000 to 10 =>125,000]			3.9	(2.1)	1	10
Grandmother's Expressive Support			26.2	(3.7)	10	32
Grandmother's Satisfaction Community Services			21.2	(3.7)	7	28
Need Variables						
Grandmother's Depression			10.7	(9.7)	0	48
Grandmother's Feelings of Shame			9.4	(2.6)	5	20
Grandmother's Role Captivity			5.2	(2.1)	3	12
Grandchild's SDQ Externalizing Difficulties			7.1	(4.9)	0	20
Grandchild's SDQ Internalizing Difficulties			5.2	(4.1)	0	18
Other Grandchildren with Medical/Psychiatric Diagnoses						
None	318	(52.4)				
One or more	289	(47.6)				

[a] Valid percentages.

[b] Minimum & Maximum are observed scores.

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Table 2

Patterns of Use, Need and Unmet Need for Mental Health Services by Custodial Grandchild Gender

	Grandson (N= 293)		Granddaughter (N=317)		Total (N=610)	
	N	%	N	%	N	%
SERVICE USE						
Community Services [a]						
Yes	125	42.7	102	32.2	227	37.2
No	168	57.3	215	67.8	383	62.8
School Services [b]						
Yes	169	57.7	141	44.5	310	50.8
No	124	42.5	176	55.4	300	49.2
Combined Use of Community and & School Services [c]	109	37.2	77	24.3	186	30.5
Community Services Only	16	5.5	25	7.9	41	6.7
School Services Only	60	20.5	64	20.2	124	20.3
Neither Community nor School Services [d]	108	36.9	151	47.6	259	42.5
NEED						
Community Services [e]	147	50.2	127	40.1	274	44.9
School Services [f]	183	62.5	152	47.9	335	54.9
UNMET NEED						
Community Services	31	19.9	34	25.0	65	22.3
School Services	26	13.3	29	17.1	55	15.1

***Significant* X^2 results for Grandson x Granddaughter Cross-tabulations**:

[a] X^2 (1) = 7.1, $p < .01$;

[b] X^2 (1) = 10.6, $p < .01$;

[c] X^2 (1) = 11.9, $p < .01$;

[d] X^2 (1) = 7.2, $p < .01$;

[e] X^2 (1) = 6.2, $p < .01$;

$f_{\chi^2}(1) = 12.9, p < .01.$

Table 3

Predictors of Custodial Grandchildren Use of Community-Based Mental Health Services by Recruitment Source

	Convenience (n = 326)		Probability (n = 277)		Combined (n = 603)	
Predictors	**Odds Ratio**	**95% CI**	**Odds Ratio**	**95% CI**	**Odds Ratio**	**95% CI**
Recruitment Source						
Convenience					1.44	0.92 – 2.25
Probability					1.00	
Predisposing Variables						
Age GC (years)	1.10	0.99 – 1.21	0.87	0.75 – 1.00	1.03	0.96 – 1.11
Gender GC						
Male	1.01	0.56 – 1.83	0.97	0.43 – 2.17	0.99	0.64 – 1.55
Female	1.00					
Race Grandmother						
Caucasian	0.91	0.47 – 1.76	4.60 **	1.84 – 11.52	1.62	0.99 – 2.65
African American	1.00					
Age GM (years)	1.02	0.98 – 1.06	1.08 **	1.02 – 1.14	1.03	1.00 – 1.06
Enabling Variables						
GM Education Level	0.99	0.72 – 1.35	0.96	0.63 – 1.47	1.02	0.81 – 1.30
Locale						
Urban	0.65	0.30 – 1.43	1.53	0.45 – 5.17	0.88	0.48 – 1.61
Rural	1.00					
Neighborhood Risk						
No Risk	0.78	0.33 – 1.81	0.34	0.10 – 1.16	0.66	0.34 – 1.29
Risk	1.00					
Formal Legal Status						
No	0.49	0.19 – 1.27	0.68	0.27 – 1.71	0.65	0.35 – 1.21
Yes	1.00					
GM Marital Status						
Married	1.05	0.58 – 1.90	0.91	0.42 – 1.96	1.03	0.66 – 1.59
Not Married	1.00					
GM Physical Health	1.11	0.81 – 1.51	1.25	0.86 – 1.82	1.08	0.87 – 1.36

	Convenience (n = 326)		Probability (n = 277)		Combined (n = 603)	
Predictors	**Odds Ratio**	**95% CI**	**Odds Ratio**	**95% CI**	**Odds Ratio**	**95% CI**
GC Physical Health	0.83	0.60 – 1.16	1.02	0.65 – 1.60	0.94	0.73 – 1.21
Family Annual Income	1.12	0.96 – 1.30	1.03	0.83 – 1.29	1.09	0.97 – 1.23
Expressive Support	1.06	0.97 – 1.15	0.98	0.87 – 1.11	1.03	0.96 – 1.10
Service Satisfaction	1.05	0.96 – 1.14	1.09	0.96 – 1.24	1.05	0.99 – 1.13
Need Variables						
GM Depression	1.01	0.97 – 1.05	1.04	0.99 – 1.08	1.02	0.99 – 1.04
GM Feelings of Shame	0.93	0.83 – 1.04	1.04	0.88 – 1.22	0.96	0.88 – 1.04
GM Role Captivity	1.26**	1.08 – 1.46	1.03	0.83 – 1.29	1.17**	1.04 – 1.31
GC Externalizing	1.04	0.96 – 1.12	1.15**	1.04 – 1.28	1.08**	1.02 – 1.15
GC Internalizing	0.98	0.90 – 1.08	1.01	0.90 – 1.14	1.00	0.94 – 1.07
Other GC Med/Psych Dx						
None	0.27***	0.14 – 0.49	0.47	0.21 – 1.04	0.35***	0.22 – 0.56
≥ 1	1.00					
CG Use School Services						
No	0.19***	0.10 – 0.34	0.08***	0.03 – 0.19	0.16***	0.10 – 0.25
Yes	1.00					
Pseudo R^2 values	.45		.57		.48	

Note. Categories with odds ratio = 1.00 are reference categories. GM = Custodial Grandmother; GC = Custodial Grandchild.

* $p < .05$;

** $p < .01$;

*** $p < .001$

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Table 4

Predictors of Custodial Grandchildren Use of School-Based Mental Health Services by Recruitment Source

	Convenience (n = 326)		Probability (n = 277)		Combined (n = 603)	
Predictors	**Odds Ratio**	**95% CI**	**Odds Ratio**	**95% CI**	**Odds Ratio**	**95% CI**
Recruitment Source						
Convenience					1.07	0.71 – 1.61
Probability					1.00	
Predisposing Variables						
Age GC (years)	1.04	0.95 – 1.14	1.05	0.95 – 1.17	1.04	0.97 – 1.11
Gender GC						
Male	1.58	0.91 – 2.74	1.19	0.63 – 2.25	1.34	0.91 – 1.99
Female	1.00					
Race GM						
Caucasian	0.80	0.43 – 1.50	0.67	0.34 – 1.32	0.74	0.48 – 1.15
African American	1.00					
Age GM (years)	0.97	0.93 – 1.01	0.97	0.94 – 1.02	0.98	0.95 – 1.01
Enabling Variables						
GM Education Level	1.11	0.83 – 1.47	1.09	0.78 – 1.53	1.08	0.88 – 1.34
Locale						
Urban	0.99	0.47 – 2.06	0.72	0.29 – 1.76	0.87	0.50 – 1.53
Rural	1.00					
Neighborhood Risk						
No Risk	1.52	0.66 – 3.51	2.36	0.84 – 6.57	1.63	0.87 – 3.04
Risk	1.00					
Formal Legal Status						
No	1.52	0.63 – 3.64	1.08	0.54 – 2.16	1.13	0.67 – 1.89
Yes	1.00					
GM Marital Status						
Married	0.88	0.50 – 1.54	0.95	0.52 – 1.75	0.88	0.60 – 1.31
Not Married	1.00					
GM Physical Health	1.28	0.96 – 1.72	0.81	0.59 – 1.09	1.02	0.83 – 1.25
GC Physical Health	1.10	0.80 – 1.52	0.85	0.60 – 1.20	0.97	0.78 – 1.22

	Convenience (n = 326)		Probability (n = 277)		Combined (n = 603)	
Predictors	**Odds Ratio**	**95% CI**	**Odds Ratio**	**95% CI**	**Odds Ratio**	**95% CI**
Family Annual Income	1.00	0.87 – 1.15	0.94	0.79 – 1.12	0.98	0.89 – 1.09
Expressive Support	0.98	0.91 – 1.07	0.98	0.89 – 1.08	0.99	0.93 – 1.05
Service Satisfaction	1.02	0.94 – 1.10	1.02	0.93 – 1.12	1.02	0.96 – 1.08
Need Variables						
GM Depression	1.00	0.97 – 1.03	0.98	0.94 – 1.02	0.99	0.97 – 1.02
GM Feelings of Shame	1.01	0.91 – 1.13	0.99	0.87 – 1.13	1.01	0.93 – 1.09
GM Role Captivity	0.96	0.83 – 1.11	1.23*	1.01 – 1.49	1.05	0.94 – 1.17
GC Externalizing	1.10*	1.02 – 1.18	1.06	0.97 – 1.17	1.09**	1.03 – 1.15
GC Internalizing	1.06	0.97 – 1.16	1.01	0.92 – 1.11	1.03	0.96 – 1.10
Other GC Med/Psych Dx						
None	0.54*	0.30 – 0.98	0.47*	0.24 – 0.91	0.53**	0.35 – 0.81
≥ 1	1.00					
GC Community Service Use						
No	0.19***	0.10–0.34	0.10***	0.04–0.22	0.16***	0.10–0.25
Yes	1.00					
Pseudo R^2 values	.36		.42		.37	

Note. Categories with odds ratio = 1.00 are reference categories. GM = Custodial Grandmother; GC = Custodial Grandchild.

* $p < .05$;

** $p < .01$;

*** $p < .001$