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Behavioral and Emotional Problems Among Turkish Children at Ages 2 to 3 Years

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Abstract

Objective—Within the framework of the Mental Health Surveys of Turkey, the authors investigated the distribution and prevalence of parent-reported behavioral and emotional problems in a nationally representative sample of 2- to 3-year-old children.

Method—A cross-sectional population-based survey from October 1996 through March 1997 using a self-weighted and equal probability sample of Turkish toddlers ($N = 638$) was conducted. The Child Behavior Checklist Total Problem scores and Household Questionnaire reports by parent informant source (response rate 94.3%) were examined for the effects of child gender, age, urban/suburban/rural residence, and geographic region using multiple regression analyses.

Results—Overall, the total problem scores placed 11.9% of the children in the clinically significant range and 18.6% of the children in the borderline range. Urban residence was significantly correlated with the Total Problem scores, Internalization and Externalization scores, and six Child Behavior Checklist syndrome scale scores. The child's age, gender, or parental employment status did not affect Total Problem scores. With respect to the Child Behavior Checklist syndrome scale, girls had higher Anxious/Depressed scores than boys, and 2-year-olds had higher Somatic Complaints scores than the 3-year-old children. None of the children with reported emotional and behavioral problems were referred to any mental health services.

Conclusion—As part of a national mental health policy in Turkey, there is an urgent need to develop early childhood intervention services that emphasize home visits, center-based child care in the community, and caregiver and provider education and training.

Keywords

epidemiology; CBCL/2–3; prevention

In the past two decades, there has been an increasing interest in research by mental health professionals to identify young children at risk of behavioral and emotional disorders. An encouraging development has also been the gradual recognition by enlightened policy-makers in developed and some developing countries that young children so identified stand to receive the greatest benefit from early intervention. There is obviously still a long road

ahead, and the evidence base of early emotional and behavioural problems among 2- to 3-year-old children in developing countries in particular is severely lacking.

We need to improve the detection of early precursors of psychopathology that may adversely affect young children's development and mental health. Conceptually, this approach is consistent with a developmental and psychobiological framework that suggests that the origins of later psychopathology can be identified in behavioral and emotional characteristics that are present in the early years of a child's life (Carter et al., 1999; DelCarmen-Wiggins and Carter, 2001; Lieberman, 1993; Mesman and Koot, 2001; Shaw et al., 2001; Zeanah, 2000). Defining signs of emotional distress is also requisite for planning and assessment of early intervention models. Addressing mental health needs in preschool years, which requires the parents' awareness of the importance of the mental health of their children, is also essential (Salyers, 2001). These issues are particularly salient in developing countries where there is an important need for mental health policy, plans and programs to urgently address these issues, as in highly developed societies with a greater degree of preparedness.

Efforts to identify toddlers who are at risk in developing countries can employ epidemiological research using standardized assessment instruments in a cost-effective and practical way. Nevertheless, assessment needs to be guided by the awareness that infants and toddlers are active participants in relationships. These relationships exist usually within families who themselves are part of the larger communities and cultures (Zero to Three, 1994). Empirically based assessments can provide a foundation for effective intervention before deviations become consolidated into maladaptive patterns of functioning. The prototype of such an informed approach remains the population-based study that enables the examination of unselected subjects including those who do not receive treatment for a range of mental health problems under natural conditions (Bird, 1996; Verhulst, 1995). The assessment of behavioral and emotional profiles in young children often relies on reports by parents, who are universally the key caregivers in their children's lives. The perceptions of parents, however, are influenced by their own child-rearing beliefs and specific cultural practices. The population studies of children, nevertheless, provide a useful approach for distinguishing between the universal and the culturally specific aspects of perceived problems in children across differing national settings (Verhulst et al., 2003). We need to continue to enhance our understanding of varying cultures and their differential impact on the behavioral, emotional, and developmental needs of young children.

Unfortunately data on the prevalence and correlates of behavioral and emotional problems specific to toddlers worldwide is still limited (Campbell, 1995; Koot and Verhulst, 1991). The proportion of behavioral problems, depending on severity varies between 1% and 12% in this age group (Jenkins et al., 1980; Larson et al., 1988; Sourander, 2001; Uljas et al., 1999). To date, there has been no previous national survey of the behavioral and emotional problems of 2- to 3-year-old Turkish children. Furthermore, the world literature on early child mental health lacks systematic data from regions other than Western Europe and North America (Tomlinson and Swartz, 2003). Our study was carried out within a robust, empirically based framework of the larger Mental Health Surveys of Turkey that investigated the prevalence, characteristics, and consequences of common mental health disorders and competencies (Erol and Simsek, 2000). The aim of this study was to select a nationally representative sample of 2- to 3-year-old children from the general population and to obtain data on the prevalence of behavioral and emotional problems by means of an empirically derived rating scale that explore the effects of demographic variables. The overall aim of this child component of the Mental Health Survey of Turkey was to provide baseline systematic data for implementation of programs promoting the mental health of children and families.

METHOD

Organization and Planning

The child component of the Mental Health Survey was carried out by the Turkish Ministry of Health through the collaboration of the Child Psychiatry Department of Ankara University and the Institute of Population Studies at Hacettepe University, Ankara, from October 1996 through March 1997. The financial support of the survey was provided by Health Project General Coordination Unit of the Ministry of Health (World Bank and UNDP) and World Health Organization.

Sample

We conducted a cross-sectional population-based survey. A self-weighted, multistage, stratified and cluster sampling plan with a large number of households was designed. Two stratification criteria were used: the region (Western, Southern, Central, Northern, Eastern Anatolia) with five categories and the residence (urban, suburban, rural) with three categories, constituting 15 strata. The selection was done at various stages in which staging was determined by the existence of sampling frames. Cluster selection was done from household records kept and updated every year by the Ministry of Health. It contained a list of dwelling units with their whole addresses (quarter, area, avenue, street, building, and door number). A sampling list was created from these records. Systematic random selection was employed at every stage. A household was defined as a person or a group of persons living together and sharing a common source of food (Unalan and Hancıoğlu, 1994). A total of 3,889 households were selected for the survey, 673 of which were identified as having children between the ages of 2 and 3. At the time of the survey, households were considered available for interview if they were occupied. Of the 673 parents in the sample, 19 refused to participate for various reasons and 16 could not be interviewed. The field teams were unable to interview some households if the listed dwelling units were found to be vacant on the interview date or the residents were away for an extended period after repeated visits (a minimum of three) to the household. For 638 children, usable information on the Child Behavior Checklist for Ages 2–3 (CBCL/2–3) was obtained with a response rate of 94.8%. Because the data were matched with the demographic variables, 37 cases that lacked demographic data were excluded. Thus, a total of 598 CBCLs were analyzed: 95.4% of CBCLs were completed by mothers, 2% by fathers, and 2.5% by other caregivers. Distributions of age, gender, gender ratio, and ratio of individuals from different regions in the current Mental Health Survey were compared with the 1990 Turkish General Census, the 1989 Demographic Survey of Turkish State Planning Organization, and the 1993 Turkish Demographic and Health Survey of Hacettepe University Institute of Population Studies. Taking the natural trend of change in these background variables into consideration, the sample of the Mental Health Survey was found to be consistent with the surveys cited (Ulusoy, 1998).

Fieldwork and Data Processing

Data collection of the study was carried out by 21 local supervisors and 171 field staff who were selected according to the sampling plan from among the Ministry of Health staff, which included psychologists, social workers, nurses, and midwives. All interviewers participated in a week-long theoretical and practical training course in Ankara. Subsequent fieldwork activities were completed in two separate stages (November 1995 to January 1996 and March to May 1996) of data collection and reporting to coordinators in Ankara. All questionnaires were returned to the Primary Health Care Directorate of the Ministry of Health where they were edited by study supervisors.

A permission letter describing the survey was presented to each respondent, followed by a copy of the Household Questionnaire and the CBCL. The interviewer then asked each question on the CBCL and recorded the respondent's replies. Most interviews were conducted on weekdays, and to avoid biasing the sample against working parents, interviews were also conducted on weekends or after 5:30 P.M. during the week for working parents.

Instruments

Household Questionnaire—A structured survey questionnaire was used to collect information on social and demographic variables such as age, gender, education, and employment status of household members.

CBCL/2–3—The CBCL/2–3 is designed to obtain ratings of behavioral/emotional problems from parents; it consists of 99 main items rated on a three-step response scale. Respondents rate the child on each item that describes the child now or in the previous 2 months.

Turkish Translation—Back translation, bilingual retest method, and pretest field study were used for the translation of the CBCL/4–18 (Erol et al., 1995). Fifty-nine of the items from the 4–18-year version of the CBCL had identical counterparts in the 2–3-year version. Thus, new items of the CBCL/2–3 were translated into Turkish (NE). Translations were reviewed by two psychologists, changes in the items were made, and the discrepant items were rewritten. A pretest field study of the translation was carried out to examine the comprehensibility and acceptability of the checklist. It was administered to 10 lower socioeconomic status parents referred to Ankara University Child Psychiatry Department. Items that were not clear for the respondents were rewritten. To assess the reliability of the CBCL/2–3 syndrome scales, the instrument was completed twice by 110 mothers. We computed Pearson correlations (Erol and Simsek, 1997) of the ratings for 51 boys and 59 girls over a mean interval of 7 days. The test-retest reliability of the CBCL/2–3 scores ranged from $r = 0.94$ for the Total Problems to $r = 0.86$ for the sleep problems syndrome in boys. The correlations ranged from $r = 0.95$ for the sleep problems syndrome to $r = 0.76$ for the destructive behavior in girls (mean $r = 0.94$, all $p < .001$). The internal consistency was tested with Cronbach's α (Erol and Simsek, 1997) and was .77 for Internalizing, .76 for Externalizing, and .82 for Total Problems. The α coefficients were .82 in urban, .85 in suburban, and .80 in rural areas for Total Problems.

To assess the inter-parent rating agreement, in 37 cases for referred children both parents filled out the CBCL/2–3 independently. Correlations between scores ranged from 0.76 for Withdrawn to 0.49 for Anxious/Depressed. The correlations were 0.68 for Internalizing, 0.67 for Externalizing and 0.69 for Total Problems (the z transformed computation of the mean; all significant at $p < .001$). These results showed that test-retest reliability, the internal consistency and interrater agreement were satisfactory for the checklist and could be used for research and clinical purposes in Turkey.

RESULTS

Description of Samples and Characteristics of Households/ Respondents

The average age of mothers was 28.8 (SD = 5.8) and of fathers was 32.5 (SD = 6.5). A great majority of mothers (84.8%) were housewives, and compared with 87.7% of fathers, only 15.2% of mothers were employed. The educational status of parents was as follows: primary school (5 years) (58.9% mothers, 57.9% fathers); middle school (3 years) (7.9% mothers, 10.8% fathers); high school graduates (3–4 years) (9% mothers, 13.6% fathers); and university (2–4 years) (1.7% mothers, 6% fathers). Overall, 22.6% of the mothers were illiterate compared with 11.6% of the fathers. Only 5-year primary school education was

compulsory in Turkey at the time of data collection. More recently, a new bill has mandated 5 years of primary and 3 years of middle school education for all children.

The average household size was 5.3. At the time of the study, only 1% of the marriages ended in divorce, with 5% of marriages dissolved due to natural causes (i.e., death). In terms of family residence, 43.5% lived in urban, 21.6% in suburban, and 34.9% in rural areas. In terms of regional population distribution, 32.1% of respondents lived in the West, 15.7% in the South, 9.7% in the North, 25.9% in the East, and 16.6% in the Central Anatolia region.

Scale Scores

The effects of gender, age, type of settlement, and region on the CBCL Total Problem Scale scores were examined using multiple regression analyses. All independent variables were entered simultaneously. Statistical Package for Social Sciences (SPSS 10.0 for Windows, SPSS Inc., Chicago) was used for analyses. Table 1 displays the scale means and SDs of raw scores (with $p < .05$) for the sample according to gender, age, family residence, and region. Because significant effects can be quite small due to the large sample size, we applied Cohen's criteria (1988) for judging effect sizes for analyses of variance. These criteria are as follows: effects accounting for 1% to 5.9% of the variance are considered small, 5.9% to 13.8% are considered medium, and more than 13.8% are considered large.

Gender—As Table 1 shows, the mean Total Problems score on the CBCL was 38.3 (SD = 20.6) for boys and 40.1 (SD = 22.1) for girls. No significant gender effect was found on the Total Problems score ($p > .05$). However, gender was significantly related to Anxious/Depressed scores (multiple $R = 0.169$), reflecting more problems for girls than for boys, although the size of the effect was small, accounting for 3% of the variance. No significant gender effects were found on the other Internalizing/Externalizing scores and the five syndrome scales.

Age—The mean Total Problem score was 39.5 (SD = 22.4) for younger and 39.6 (SD = 21.5) for older children. No significant age effect was found on the Total Problem score. Age was significantly related to Somatic Complaints score (multiple $R = 0.220$). This effect indicated more problems for younger than for older children, accounting for 5% of the variance. No significant gender effects were found on the other scale scores.

Urban Residence—The mean Total Problems scores were 44.5 (SD = 21.1) for urban, 32.2 (SD = 21.1) for suburban, and 37.9 (SD = 20.16) for rural residence. Type of settlement was found to be significantly related to the Total Problems (multiple $R = 0.168$), Internalizing (multiple $R = 0.132$), and Externalizing scores (multiple $R = 0.130$). This variable accounted for 3% of the variance for Total Problems scores and 2% for Internalizing and Externalizing syndromes. Children from the urban areas obtained higher problem scores than children from suburban and rural residence for all scale scores ($p < .05$).

Region—As Table 1 shows, children in the North region obtained lower Total Problems scores (multiple $R = 0.111$) compared with those of other regions.

Employment—There were no significant effects of employment status on scale scores ($p > .05$).

Prevalence Rate

Scale scores may also be used in a categorical way to describe the prevalence of behavioral/emotional problems. The prevalence rate of Total Problems according to borderline and clinical range was also examined. The lower limit of the borderline range was defined by

approximately the 85th percentile, and the lower limit of the clinical range was defined by the 90th percentile on Total Problems. In our community sample, the prevalence rate of Total Problems was 11.9% in the clinical range and 18.6% in the borderline range. It was 11.1% for boys and 12.6% for girls in the clinical range, which was not statistically significant. The clinical ranges varied according to child residence (16.2% urban, 7% suburban, and 9.6% rural); cross-comparison significantly differed ($p < .05$), with suburban children having the lowest rate. Using the 98th percentile of the distribution of scores as the cutoff point, 8.8% of the Turkish children had one or more deviant scores from the six syndrome scales.

DISCUSSION

Several conclusions can be drawn from this research. First, the prevalence of the CBCL Total Problems Scale scores examined categorically for children at ages 2 to 3 years was 11.9% using the 90th percentile clinical cutoff and 18.6% using the 85th percentile borderline cutoff criterion. The prevalence of moderate disorder among 3-year-olds was 7.3% in an outer London borough (Richman et al., 1975), 12% in a Welsh sample (McGuire and Richman, 1986), and 25% in a North American population study (Barron and Earls, 1984). Despite much variability, there is agreement that approximately 10% to 15% of preschoolers show mild to moderate problems (Campbell, 1995).

Second, 8.8% of the 2- to 3-year-old Turkish children had parent-reported CBCL syndrome scale scores using the 98th percentile cutoff criterion compared with 12.6% of Dutch children (Koot and Verhulst, 1991) and 11.1% of children living in Montreal, Quebec (Larson et al., 1988). Achenbach (1992) had also reported 12% of the U.S. children as having one or more syndromes with the 95th to 97th percentile as the cutoff point.

Third, although cross-national comparisons of studies ought to be considered cautiously as they are also tempered by differences in study design and sampling methodology, nonetheless, it is of interest in the current study that the mean Total Problems score of 39.5 (SD = 21.4) for 2- to 3-year old Turkish children was higher than that of the European and North American children in the same age group. The mean Total Problems score for 420 Dutch children was 33.4 (SD = 16.8) (Koot and Verhulst, 1991), for 368 U.S. children, it was 34.4 (SD = 19.8) (Achenbach, 1992), and for 756 Quebec children, it was 32.9 (SD = 18.8) (Larson et al., 1988). Studies in Finland (Uljas et al., 1999) and Iceland (Hannesdottir and Einasdottir, 1995) even reported lower mean Total Problems scores of 30 and 27, respectively.

Fourth, the mean scores on the CBCL Internalizing scales were 10.7 (SD = 6.5) for Turkish, 8.2 (SD = 5.2) for North American, and 4.4 (SD = 4.0) for Dutch children. The tendency for Turkish children to score higher on Internalizing Scales and markedly higher on the Anxious/Depressed scale compared with Dutch peers is consistent with findings using the CBCL/4–18, Teacher Report Form (TRF) and Youth Self-Report (Arslan et al., 1997). High levels of anxiety and depression in the preschool years leading to high levels of internalizing problems in later childhood and adolescence need to be seriously addressed in Turkey.

Fifth, the mean scores on the CBCL Externalizing Scale were 13.0 (SD = 8.5) for Turkish children compared with 12.9 (SD = 8.2) for North American children and 17.0 (SD = 9.2) for Dutch children. The Dutch children, in fact, had higher scores than Turkish and North American children for the Externalizing scale, a finding also consistent with that observed on the CBCL/4–18, TRF and Youth Self-Report (Arslan et al., 1997), providing further support for the finding of higher Internalization scores in the Turkish children. This could be explained in two ways. On the one hand, differences in scores could reflect real behavioral

differences, which could result from differences in child-rearing practices that may involve familial or biological factors. On the other hand, the differences in scores may reflect attributional variation among parents of their children's problems. One study that compared the parent-reported problems in different cultures found that cultural variation accounted for different effect sizes for the CBCL syndrome scales (Crijnen et al., 1999). Weisz et al. (1997) suggested that cultural factors might directly change the likelihood of childhood problems by suppressing or facilitating the behaviors that were considered to be acceptable in that particular society. The authors emphasized that culture might also influence the adults' attitudes toward child behavior. In this study, we could only speculate about the reason for the higher Total Problems and Internalization Problems scores because specific data concerning these possibilities were not collected.

Sixth, whereas reports from parents of children aged 4–18 have revealed significantly higher Total Problems scores for boys than girls and higher scores for younger than older children, in the current study, there were no significant differences by gender in terms of Total Problems, Internalizing, and Externalizing scores except for the Anxiety/Depressed scale, on which girls scored significantly higher than boys. This is of interest in the light of former studies that also reported higher Aggressive Behaviors and Destructive Behavior scores in male subjects (Koot and Verhulst, 1991; Sourander, 2001). The only significant age-related difference was for the Somatic Complaints Scale, on which younger children scored significantly higher than older children. Urban residence was found to be a significant factor leading to higher Total Problems, Internalizing, and Externalizing scores, accounting for 3% of the variance in the Total Problems scores and 2% of the variance in the Internalizing and Externalizing scores. Our results were consistent with the results of previous studies that indicated that the risk of psychopathology might be higher in individuals living in urban areas (Offord et al., 1987). Despite the significance of the demographic effects, they were small according to Cohen's criteria.

Limitations

The results of this study should be viewed in the light of a number of limitations. The study was predominantly based on maternal parent reports. As, at the time of the study, only 3% of children in Turkey attend nursery schools, teacher reports were not available. The ability of parents to attend to the needs of their young children is influenced by various personal factors such as their own emotional health, educational status, and intelligence, as well as extrinsic factors such as the immediate family environment, social networks, and economic security. Despite the limitations of the study's cross-sectional design, the national sampling frame attempted to generate empirical knowledge to describe the “mental health profile” of a representative group of 2- to 3-year-old children. The research contributes to a dearth of published data on early child mental health in developing countries. The imbalance of knowledge of global child mental health, although it remains an important priority, continues to hold back our scientific understanding of early child mental health factors (Tomlinson and Swartz, 2003; Weisz et al., 1997).

Conclusions

Implications for Practice and Policy—This study supports the view that the CBCL/2–3 is a reliable instrument for the identification of 2- to 3-year-old children at risk of emotional and behavioral problems in a developing country. An alarming finding was that none of the children had been referred to any mental health services. This result underscores the urgent need for implementation of a national mental health policy emphasizing the establishment of early childhood education and intervention services for children younger than 3 years of age including home visits, center-based child care, and parent and provider education and training. Despite an important knowledge base in early childhood intervention

(Shonkoff and Philips, 2001), there is an important practice gap between developed and developing countries.

The results of this study are pertinent for the training of a broad range of professionals interested in child mental health in developing countries. The coverage of early care and education in Turkey is infinitely small compared with that of the European Union countries. Although not a requisite condition for European Union accession, the issue needs to be considered in the context of the country's child development index and mental health reform. Early group-based experiences of young children contribute to the optimal development of children as cooperative and social beings who foster tolerance among neighborhoods. Currently, Turkish children enroll in grade school at 6 years of age when it is relatively late to identify emotional and behavioral problems. A review of policies in European Union countries by Kamerman (2000) found that Denmark had the highest coverage of child care for 3-year-olds followed by France. Finland offers child care for all children younger than 3 years of age and Sweden for all children older than 12 months of age. These services are organized nationally under education, education/social, and predominantly social services, highlighting the need for intersector cooperation. As Turkey increasingly moves to become an urban rather than rural society and with the associated shift from extended to nuclear families in metropolitan centers, in particular promoting access to home-based services, early child care and preschool education are increasingly critical. The results of previous studies support the view that good-quality day care and preschool education not only lead to better child development (Howes, 1988; Phillips et al., 1987) but ameliorate the negative effects of poverty, especially on very young children (Brooks-Gunn, 1995; Duncan et al., 1994).

In terms of evidence-based practice, innovative initiatives that promote research capacity-building efforts among professional staff in developing countries and creation of networks between investigators in developed and developing countries are likely to lessen the research gap between these countries. An example is the program initiated by the Fogarty International Center and National Institute of Mental Health emphasizing mentored clinical, epidemiological, and preventive research projects in mental health and developmental disabilities in collaboration with investigators at the Children's Hospital Boston, Harvard Medical School, and researchers in Turkey, for both in-country and global cooperation (Munir et al., 2003).

Historically, the strength of the health care system in Turkey, at least since the passage of the basic health law in 1961, has been the development of a national grid of primary health care centers (Coskun, 2004). Despite such a well-developed institutional framework, there are essentially no basic mental health services available at the primary care level in the country. Furthermore, beginning in medical school, general practitioners typically receive widely varying (but generally limited) training in child mental health. On-site training programs are irregular and short term. As also evidenced in the aftermath of two major earthquakes in 1999, an organized effort is urgently needed to address the deficits in early child care and community mental health services in Turkey and this needs to be integrated and sustained within a national mental health policy (Munir et al., 2004).

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TABLE 1
 CBCL/2–3 Scale Scores for Normative Sample According to Demographic Variables

Variables	n (%)	<u>Anx/Dep</u>		<u>Withdrawn</u>		<u>Sleep Problems</u>		<u>Somatic Complaints</u>		<u>Agg. Beh.</u>		<u>Destr. Beh.</u>		<u>Internalizing</u>		<u>Externalizing</u>		<u>Total Problem</u>			
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Gender																					
Male	288 (48.2)	5.8	3.4	4.3	3.5	2.8	2.5	3.2	2.4	9.6	6.2	3.5	3.0	10.2	6.2	13.1	5.5	38.3	20.6		
Female	310 (51.8)	6.5	3.7	4.7	3.8	3.0	2.5	3.6	3.0	9.3	6.2	3.7	3.1	11.2	6.7	12.9	8.5	40.1	22.1		
Age (yr)																					
2	243 (40.6)	6.1	3.6	4.3	3.8	3.0	2.4	3.9	2.9	9.2	6.4	3.8	3.4	10.4	6.6	12.9	9.0	39.5	22.4		
3	355 (59.4)	6.2	3.6	4.6	3.5	2.8	2.6	3.4	2.8	9.6	5.9	3.5	2.9	10.9	6.4	13.1	8.0	39.6	21.5		
Residence																					
Urban	260 (43.5)	6.8	3.5	5.0	3.8	3.5	2.6	4.1	3.1	10.5	6.2	4.2	3.1	11.8	6.6	14.7	8.5	44.5	21.1		
Suburban	129 (21.6)	4.7	3.5	3.2	3.4	2.5	2.3	2.8	2.5	7.8	5.9	3.0	2.8	8.0	6.1	10.8	7.9	32.2	21.1		
Rural	209 (34.9)	6.3	3.6	4.6	3.3	2.4	2.4	3.1	2.7	9.1	6.0	3.3	3.1	10.9	6.2	12.4	8.3	37.9	20.6		
Region																					
West	192 (32.1)	6.6	3.4	4.5	3.8	3.6	2.8	3.9	3.1	10.0	6.0	3.9	3.2	11.1	6.3	14.0	8.3	42.2	21.4		
South	94 (15.7)	6.3	4.1	4.3	3.9	2.5	2.1	3.2	2.6	9.9	6.6	3.5	3.1	11.0	7.0	13.4	9.0	39.3	22.1		
Center	99 (16.6)	6.7	3.4	4.8	3.4	2.9	2.5	3.3	2.4	10.7	6.5	3.7	3.2	11.4	6.2	14.4	9.0	42.9	21.0		
North	58 (9.7)	4.9	3.4	3.8	3.2	2.2	2.3	2.8	2.2	7.7	5.3	3.4	2.7	8.7	6.1	11.1	7.3	32.7	19.4		
East	155 (25.9)	5.7	3.6	4.5	3.5	2.6	2.2	3.5	3.1	8.2	5.8	3.3	3.0	10.2	6.5	11.5	8.0	36.8	21.5		
Total	598	6.2	3.5	4.5	3.7	2.9	2.5	3.4	2.7	9.4	6.2	3.6	3.1	10.7	6.5	13.0	8.5	39.5	21.4		

Note: Only independent variables that were significant at the .05 level associated with scale scores are reported. Anx/Dep = anxious/depressed; Agg. Beh. = aggressive behavior; Destr. Beh. = destructive behavior.