

Defining the Community Context for Parent-Child Relations: The Correlates of Child Maltreatment

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GARBARINO, JAMES, and CROUTER, ANN. *Defining the Community Context for Parent-Child Relations: The Correlates of Child Maltreatment*. CHILD DEVELOPMENT, 1978, 49, 604-616. This report presents the results of studies designed to illustrate the use of child maltreatment report data as social indicators of the quality of life for families. It addresses the feedback function of family-support systems and links maltreatment to the overall balance of stresses and supports in the neighborhood context of families. This study focuses on the reported incidence of child abuse and neglect at 2 levels of neighborhood analysis within a single metropolitan county—20 neighborhood areas and 93 census tracts. Multiple-regression analysis is used to develop predictive equations using socioeconomic, demographic, and some attitudinal data as the independent variables. For the 20 subareas, 81% of the variance and for the 93 census tracts, 52% of the variance is accounted for. Data on the source of reports tend to discount the widely held position that biased reporting accounts for the negative correlation between socioeconomic status and child maltreatment. The results are related to an emerging ecological perspective on human development.

The maltreatment of children involves a wide range of developmental processes and outcomes—physical, cognitive, and affective. Consistent with the individualistic premise of American culture, research on the abuse and neglect of children has generally centered on the dyadic relationship of parent-child, victim-perpetrator, therapist-client (Garbarino 1977a, 1977b; Gelles 1973; Spinetta & Rigler 1972). In contrast to this approach, the present study views the maltreatment of children as largely a problem of support systems and resources. It focuses on the environment of families and on manifestations of family stress. According to this view, the likelihood of child maltreatment varies in direct relation to the availability, adequacy, and use made of a family's supportive resources in the community. Child maltreatment is thus approached from the perspective of an ecological model of human development in which the focus is on behavior within social context and on the mutual accommodation between organism and environ-

ment (Bronfenbrenner 1977). When viewed in this light, the incidence of child maltreatment functions as a social indicator of the quality of life for families.

This paper is based on studies examining the maltreatment of children (abuse and neglect) in a community context. It builds upon the fundamental insight of human ecology (Hawley 1950) that the starting point for serious analysis is mapping. In so doing, it builds upon prior work in the area of the human ecology of child abuse and neglect (Garbarino 1977a) and emphasizes the potential for using child maltreatment reports as useful social indicators. The approach presented in the paper may be thought of as an ecologically oriented epidemiological study of family environments in relation to child maltreatment. Moreover, it can provide a basis for developing a methodology appropriate to the task of studying the overall community context of parent-child relations.

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Because there are many who are skeptical of report data and indeed of the entire reporting process itself, one goal of this research is to legitimize the use of these report data in research where appropriate. To date, report data have been used principally to estimate incidence (e.g., Lebsack, Note 1). Because of wide variations in the consistency of reporting, it is often impossible to compare child maltreatment across states or, sometimes, even within states. As Light (1973) has pointed out, however, it is often possible to use report data to assess relationships within groups.

Report data have been criticized as being systematically biased due to the underrepresentation of affluent families. Critics cite three contributing factors to such a bias: (a) private physicians, the principal health resource of affluent families, account for a very small proportion of the reports (3% in Gil's 1970 report); (b) agencies are less likely to intervene in affluent families than in poor families; and (c) affluent families are generally more able to maintain the privacy and isolation which permit child maltreatment to occur unreported (see Parke & Collmer 1975). Other scholars, skeptical of the processes of reporting, fear that the data are biased because of labeling effects. Their concern is that, on the basis of their status as "outsiders," marginal people in a community are likely to be labeled deviant by the social service personnel working with them (Coser 1965; Horowitz & Liebowitz 1969). In this paper we will elaborate on these points and respond to them based on the patterns that emerge in our analyses of child maltreatment report data.

Preliminary work on the sociology of child abuse and neglect has identified socioeconomic and demographic variables as contributing factors (Friedman 1976; Polansky 1976). Gil (1970), for example, implicated low incomes, the stresses on female-headed households, and high levels of geographic mobility. Light's reanalysis of Gil's data further supports the proposition that socioeconomic factors contribute to abuse. Elmer (1977) found that the long-term consequences of maltreatment resemble the overall impact of poverty. Polansky (1976) and others have linked neglect to inadequate material and social resources, as well. In an earlier study using counties as the units of analysis (Garbarino 1976), the key variables linked to child maltreatment were those re-

flecting demands placed on women by home and work. In their extensive review of the literature, Parke and Collmer (1975) supported the multivariate model outlined by that research, and subsequent studies have built upon it.

The second body of literature relevant to our present concerns deals with family-support systems. Interpersonal supports play an important role in mediating the effects of broad socioeconomic, demographic, and economic forces on the quality of life for children, a central concern for ecological studies (Willems, Note 2). As an outgrowth of this proposition, the concept of support system has been developed and elaborated by several investigators, among them Gerald Caplan (1974; Caplan & Killilea 1976). In his terms, a support system performs several critical social functions relevant to the dynamics of child maltreatment by acting as

... continuing social aggregates that provide individuals with opportunities for feedback about themselves and for validations for their expectations about others, which may offset deficiencies in these communications within the larger community context. . . . People have a variety of specific needs that demand satisfaction through enduring interpersonal relationships, such as for love and affection, for intimacy that provides the freedom to express feelings easily and unself-consciously, for validation of personal identity and worth, for satisfaction of nurturance and dependency, for help with tasks, and for *support in handling emotion and controlling impulses* [emphasis added]. [1974, pp. 4-5]

They tell him [the individual] what is expected of him and guide him in what to do. They watch what he does and they judge his performance. [Ibid., pp. 5-6]

Of particular importance in the present case is this feedback function ("They watch what he does and judge his performance"). The whole process of reporting suspected child maltreatment is itself a feedback mechanism. Moreover, it is a necessary component of a high-quality environment for families, because, without it, disrupted parent-child relations cannot be recognized and helpful intervention initiated.

Recognizing that the feedback function is critical for parents, our conceptual framework includes research on the neighborhood and on social isolation. Studies of the neighborhood as a social unit (e.g., Fellin & Litwak 1968; Kromkowski, Note 3) reveal that the

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neighborhood can have a potent role in supporting families, ameliorating isolation, promoting group values, providing additional resources to families, and even serving as a "lay referral service" linking families and professionals.

Fieldwork by Collins and Pancoast (1976) identified "natural neighbors" who serve as informal providers of support, information, and services. Warren (1977) identified the strengths and weaknesses of the neighbor role in contrasting neighborhood types. Maccoby, Johnson, and Church (1958) explored the role of neighborhood infrastructure in the dynamics of juvenile delinquency. Devereux (1960) demonstrated the impact of neighborhood social climate on participation in community activities. Linking this conceptualization of stresses and support systems to child maltreatment, child abuse has been found to be associated with "more extreme stresses," including "contemporary social-isolation" (Newberger, Reed, Daniel, Hyde, & Kotelchuck 1977) and a buildup of "life crises" (Justice & Duncan 1976). Child maltreatment and childhood accidents decreased when families identified as "high risk" for maltreatment were involved in long-term support systems (Gray, Cutler, Dean, & Kempe 1977).

More generally, a pilot study conducted by Bronfenbrenner indicated that perceived stresses and supports are related to parents' marital relationships, feelings about their children, sense of the future, and the overall level of conflict in the home (Bronfenbrenner, Avgar, & Henderson, Note 4). Research by Lewis, Beavers, Gossett, and Phillips (1976) emphasizes the importance of the multiple strengths that characterize "healthy" families. That is, there is "no single thread" holding strong families together but rather a web of personal and social resources. A key resource in this regard is the family's "affiliative attitude about human encounter" (Lewis et al. 1976, p. 206). One central proposition underlying our research program is that isolation from potent prosocial support systems is a necessary condition for child maltreatment (Carbarino 1977a). A corollary of this hypothesis is the proposition that a strong prosocial neighborhood climate can have a beneficial impact—by increasing social participation—on persons whose individual predilection is to be isolated (see Devereux 1960).

Our research strategy derives as well from a third area of investigation, the field of social indicators. The Organization of Economic Co-operation and Development defined social indicators as measures "to monitor (economic and social) trends and impacts, and to provide a system of 'early warning' of growing imbalances, social disbenefits [*sic*], dissatisfactions, and emerging social needs" (Andrews & Withey 1976, p. 2). Other conceptualizations of social indicators emphasize that they allow the investigator to make time-series comparisons and that they are, in Sawhill's terms, "designed to guide choices at several levels of decision making" (Sawhill [1969] in Andrews & Withey 1976, p. 4). The Social Research Group's report *The Status of Children, 1975* (Snapper, Barriga, Baumgarner, & Wagner 1975) and two studies by the Foundation for Child Development, *State of the Child: New York City* (Lash & Sigal 1976) and "The National Survey of Children" (Zill, Note 5) illustrate, in a preliminary fashion, ways in which social indicators can be utilized to assess the quality of life for children.

In its 1976 report, *Toward a National Policy for Children and Families*, the National Academy of Sciences recognized the importance of socioeconomic, demographic, and economic indicators in influencing the quality of life for children and families when it used such variables to identify children "at risk." Research in child development has begun to study the effects of these broad societal influences—which the emergent ecological perspective on human development would refer to as "macrostructural influences" (Brim 1975; Bronfenbrenner 1977; Garbarino & Bronfenbrenner, Note 6). These macrostructural influences are the forces of history and social structure that shape and provide the context for individual lives (Elder 1977; Mills 1959). Social indicators are thus a quantitative manifestation of social history.

In our analysis, child maltreatment is viewed as part of the larger issue of the "social habitability" of family environments (Willems, Note 2). As such it reflects the interaction of macrostructural forces in society and microstructural factors in families. It thus addresses the need for childhood social indicators (Brim 1975; Zill & Brim, Note 7).

This paper integrates ideas from all three areas—the sociology of child maltreatment,

support systems, and social indicators—into one overarching hypothesis: *child maltreatment is an indicator of the overall quality of life for children and families*. Therefore: (1) the incidence of child maltreatment varies directly as a function of other indicators of the material and psychosocial quality of family and community life, and (2) the reporting process itself reflects the effectiveness of family-support systems in providing feedback to families—and thus protection for children.

Methodology

Background.—The present research strategy evolved from an earlier study of child maltreatment using report rates from 58 counties in New York State as the units of analysis (Garbarino 1976). That study laid the groundwork for an ecological approach to the understanding and prevention of child abuse and neglect. It presented a multivariate approach, using socioeconomic and demographic variables as the independent variables. The findings suggested the hypothesis that the degree to which mothers in a particular county are subjected to socioeconomic stress, without adequate support systems accounts for a substantial proportion of the variance in rates of child maltreatment across New York counties. General economic conditions accounted for less of the variance in the New York counties.

The early New York study stimulated a replication of the analysis, this time for Nebraska's 93 counties (Garbarino & Crouter, in press). It quickly became clear, however, that statewide reporting patterns in Nebraska had not yet reached an adequate, consistent level at which cross-county comparisons could be made. Consultation with state officials and examination of statewide studies of incidence confirmed our suspicions (Banagale & McIntire 1975). Furthermore, it was impossible to distinguish how much of the difference between the New York and Nebraska data was due to the unreliability of reporting in Nebraska and how much was due to the substantive differences between the two very different states. Some tentative conclusions concerning "construct validity" (Bronfenbrenner & Mahoney 1975) were generated by that analysis that provided a basis for subsequent efforts (Garbarino & Crouter, in press). These conclusions suggest that a direct relationship (positive correlation) between the rate of reported child

maltreatment and socioeconomic status is evidence of an inadequate reporting system when viewed across political subunits such as counties. Because reporting was too widely discrepant across counties in Nebraska, and because for many purposes counties represent an unacceptable gross level of aggregation, a second phase of the research was initiated in which subunits of a single county were studied intensively. This paper describes a two-pronged analysis of the ecology of child maltreatment in Douglas County, Nebraska. As such it reflects the results of a conceptual and methodological approach evolved through a series of studies.

Design.—Prior research in Douglas County concluded that reporting within the county had reached a reliable and consistent level (see Banagale & McIntire 1975). To analyze patterns of child maltreatment within the county, it was necessary to choose geographical units of analysis that would be both useful and theoretically sound. We were faced with two conflicting goals. For small areas there was the problem of attenuated relationships resulting from the low base rate of the phenomenon of child abuse and neglect. We therefore sought to reduce error variance by aggregating data. For larger areas we faced the problem of ecological validity. We doubted that the larger units adequately reflect neighborhoods as people "create" them behaviorally and cognitively. We sought to maximize ecological validity and minimize error variance.

We dealt with this issue by analyzing the data in two ways. The county was divided into 20 "subareas" defined by previous research and city planning efforts (Center for Applied Urban Research, Note 8). The 20 subareas we looked at ranged in population from 4,213 to 42,578. These units and the corresponding analysis were designed to meet the goal of reducing error variance and, thus, attenuation. Neighborhood ecological validity was addressed by replicating the subarea analyses for the county's 93 census tracts. The 93 census tracts ranged in population from 135 to 12,190. The subarea level alleviated the problem of low base rate and possibly large error variance, while the tract analysis looked at smaller community units more in keeping with residents' perceptions of neighborhood. Furthermore, because of the wealth of data available in census reports by tract, they are, in the words of

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Bogue and Bogue "an under-exploited demographic resource" (1976, p. 88). By comparing and contrasting the two analyses we hoped to minimize both disadvantages, although we realized that census tracts seldom exactly match neighborhood definitions, and subareas still contain error variance attributable to the low base rate of reported child maltreatment.

Using child maltreatment reports from state and local child protective services collected in 1976, we developed a measure of the rate of child maltreatment per 1,000 families for each subarea and tract. This is based on reports that were accepted for investigation after a preliminary screening designed to eliminate obviously frivolous, malicious, or invalid reports. Our discussions with field-workers led us to believe that the problem of bias was more likely to become an issue when dealing with the process of substantiation where more affluent individuals would be able to thwart the investigative process. For this reason, and because we were able to examine the correlates of case substantiation as a separate empirical issue, we based our primary analysis on the accepted reports.

Because the cases report families involved in child maltreatment and because there is growing consensus that abuse and neglect are best conceived of as family pathologies, the number of families rather than individuals per geographic unit was used as the base for computing the rates. Maltreatment rates in this paper refer to the total number of accepted reported cases per 1,000 families unless specifically noted as a rate of substantiated maltreatment. To give an indication of the absolute number of accepted reports on which these rates were based, the incidence ranged from three to 65 in subareas with small populations (e.g., under 3,000 families) and from 12 to 136 in subareas with populations greater than 3,000 families. Socioeconomic, demographic, housing, and some attitudinal data were available from U.S. Census publications and from a survey conducted by the University of Nebraska at Omaha's Center for Applied Urban Research (CAUR). The survey was organized by subarea and, within subareas, by census tract. In all 1,992 people were included in the sample. The size of the sample in each subarea ranged from 45 to 95 respondents while the sample ranged from three to 76 in each census tract.

In addition, state child protective services provided more detailed information concerning some 1,300 "accepted" child maltreatment reports in the county from 1973 to 1976. Child protective services screened the reports to eliminate obviously spurious cases. This information included variables such as the source of the report and whether or not the case was later judged substantiated. From these data, we developed new variables to include in the analyses. For each subarea and tract, we added (1) the percent of cases reported by "distant" sources (i.e., by institutions such as hospitals, clinics, law enforcement agencies, and schools); (2) percent of cases reported by "close" sources (i.e., noninstitutional sources such as family members, friends, and neighbors); (3) percent of cases that were later judged substantiated; and (4) percent of cases that were not judged substantiated.

The variables included in the analysis were the following. Socioeconomic: (1) percent of families with incomes less than \$8,000 a year; and (2) percent of families with incomes more than \$15,000 a year. We thus sought to identify qualitatively different socioeconomic life-styles rather than treat income as a linear continuous variable. In this way our analysis paralleled other efforts to give social meaning to income differences (Garbarino 1975; National Academy of Sciences 1976; U.S. Bureau of Labor Statistics 1975).

Demographic: (3) percent of families headed by females; (4) percent of married women (with children under 6 years old) in the work force outside the home; and (5) percent of families living in current residence less than 1 year. These indicators reflect the stresses on women both directly (having to be both caregiver and labor force participant), and indirectly (having the disruption of social networks that accompanies moving). They thus provide an index of the proportion of a neighborhood that is "free from drain" (Collins & Pancoast 1976), a key factor in the potency and effectiveness of natural helping networks.

Attitudinal: (6) percent who feel good neighbors are important; (7) percent who feel daycare is important and necessary; (8) percent who rate their neighborhood as very desirable; and (9) percent who rate their neighborhood as not desirable. These variables represent the perceived importance of support systems and the overall perceived quality of neighborhood life.

Housing: (10) stability of neighborhood score (a scale 1 [growing] to 5 [deteriorating] based on CAUR ratings derived from housing, economic, and population trends); (11) percent of single-family housing; and (12) percent of vacant housing. These variables reflect the physical and social quality of surroundings (and thus the objective basis for perceived quality of surroundings). They likewise index the impediments to effective natural helping networks.

Simple bivariate correlations were computed using these and the child maltreatment reports. Further examination of the data included a series of multiple-regression analyses.¹ All of the variables used reflect actual percentage values. In some of the tables to be presented in the discussion of results, it may appear that two or more variables have been combined or averaged in some way. In fact, however, no such averaging was done. The variables were entered separately in the multiple-regression equation. Two sets of analyses were completed, one using subareas as cases and the other using census tracts. The two approaches inform one another and will be presented together.

Results

Tables 1 and 2 present the results of multiple-regression analyses designed to test our hypothesis concerning the relationship between the maltreatment of children and the socioeconomic and demographic context in which families live. Table 1 presents the results of the subarea analysis. Table 2 shows the results of the census-tract analysis.

The results strongly support the proposition that child maltreatment (at least as reported) is related to socioeconomic, demographic, and economic variables. It must be noted that one factor contributing to the high value of R for subareas is the existence of several subareas with extreme values. Economic factors alone account for 62% of the variance for subareas ($R = .79$) and 38% for census tracts ($R = .62$). With the addition of variables reflecting stress on mothers and high geographic mobility, the equation accounts for 81% of the variance for subareas ($R = .90$) and 48% for tracts ($R = .69$). When the socioeconomic variables are combined with perceptions about the neighborhood, they account for 66% ($R = .82$) and 41% ($R = .64$) of the variance for subareas and tracts, respectively.

TABLE 1
CORRELATES OF CHILD MALTREATMENT IN 20 DOUGLAS COUNTY, NEBRASKA, SUBAREAS:
ECONOMIC AND DEMOGRAPHIC FACTORS (per 1,000 Families)

| Correlate | Total Maltreatment | | Abuse | | Neglect | |
|--|-----------------------|-------------|------------|-------------|------------|-------------|
| Economic factors: | | | | | | |
| 1 Percent households with income over \$15,000 per year | $r = -.68$ | $r^2 = .46$ | $r = -.64$ | $r^2 = .41$ | $r = -.63$ | $r^2 = .40$ |
| 1+percent households with income under \$8,000 per year (2) | $R = .79$ | $R^2 = .62$ | $R = .65$ | $R^2 = .43$ | $R = .78$ | $R^2 = .61$ |
| Adding demographic factors: | | | | | | |
| 1+2+percent transient | $R = .87$ | $R^2 = .76$ | $R = .77$ | $R^2 = .59$ | $R = .88$ | $R^2 = .78$ |
| 1+2+percent married women (with children) in labor force, and percent female-headed households | $R = .79$ | $R^2 = .63$ | $R = .73$ | $R^2 = .54$ | $R = .80$ | $R^2 = .64$ |
| 1+2+mobility+maternal role | $R = .90$ | $R^2 = .81$ | $R = .88$ | $R^2 = .77$ | $R = .92$ | $R^2 = .84$ |
| Adding ideological factors: | | | | | | |
| 1+2+day care and neighbors | $R = .86$ | $R^2 = .74$ | $R = .66$ | $R^2 = .43$ | $R = .87$ | $R^2 = .76$ |
| 1+2+evaluation of neighborhood | $R = .83$ | $R^2 = .66$ | $R = .74$ | $R^2 = .55$ | $R = .82$ | $R^2 = .67$ |
| Adding neighborhood development: | | | | | | |
| 1+2+developmental trend (growing-deteriorating) | $R = .83$ | $R^2 = .69$ | $R = .66$ | $R^2 = .44$ | $R = .82$ | $R^2 = .67$ |
| Adding housing: | | | | | | |
| 1+2+housing (% single family and vacant) | $R = .91$ | $R^2 = .83$ | $R = .71$ | $R^2 = .50$ | $R = .92$ | $R^2 = .94$ |

¹ In each regression analysis, the two economic variables were entered first in the equation, followed stepwise by other variables.

TABLE 2

CORRELATES OF CHILD MALTREATMENT FOR 93 CENSUS TRACTS IN DOUGLAS COUNTY, NEBRASKA:
ECONOMIC AND DEMOGRAPHIC FACTORS (per 1,000 Families)

| Correlate | Total Maltreatment | | Abuse | | Neglect | |
|---|--------------------|-------------|------------|-------------|------------|-------------|
| Economic factors: | | | | | | |
| 1 Percent households with income over \$15,000 per year..... | $r = -.46$ | $r^2 = .21$ | $r = -.51$ | $r^2 = .26$ | $r = -.37$ | $r^2 = .14$ |
| 1+percent households with income under \$8,000 per year (2)..... | $R = .62$ | $R^2 = .38$ | $R = .55$ | $R^2 = .30$ | $R = .55$ | $R^2 = .31$ |
| Adding demographic factors: | | | | | | |
| 1+2+percent transient..... | $R = .68$ | $R^2 = .47$ | $R = .63$ | $R^2 = .39$ | $R = .62$ | $R^2 = .39$ |
| 1+2+percent married women (with children) in labor force, and percent female-headed households..... | $R = .62$ | $R^2 = .39$ | $R = .57$ | $R^2 = .32$ | $R = .56$ | $R^2 = .32$ |
| 1+2+mobility+maternal role..... | $R = .69$ | $R^2 = .48$ | $R = .64$ | $R^2 = .40$ | $R = .64$ | $R^2 = .41$ |
| Adding ideological factors: | | | | | | |
| 1+2+day care and neighbors..... | $R = .66$ | $R^2 = .43$ | $R = .60$ | $R^2 = .36$ | $R = .58$ | $R^2 = .33$ |
| 1+2+evaluation of neighborhood..... | $R = .64$ | $R^2 = .41$ | $R = .58$ | $R^2 = .34$ | $R = .57$ | $R^2 = .33$ |
| Adding neighborhood development: | | | | | | |
| 1+2+developmental trend (growing-deteriorating)..... | $R = .64$ | $R^2 = .42$ | $R = .56$ | $R^2 = .31$ | $R = .60$ | $R^2 = .36$ |
| Adding housing: | | | | | | |
| 1+2+housing (% single family) and deteriorating housing)..... | $R = .67$ | $R^2 = .44$ | $R = .57$ | $R^2 = .33$ | $R = .63$ | $R^2 = .39$ |

While these findings are suggestive, we believe they underestimate the importance of neighborhood attitudinal factors for both methodological and substantive reasons. On substantive grounds, it can be argued that the items involved in the CAUR questionnaire are somewhat ambiguous for the present use. Although the relationship is not very strong when compared with other factors, perceptions are potentially important factors to consider in studying the human ecology of child maltreatment. It must be noted that of all the independent variables in the analysis the attitudinal measures are the least reliable, having been based on a survey not designed for the current study (CAUR, Note 8).

The analysis of the source of child maltreatment reports is a necessary supplementary exploration, presented in tables 3 and 4. As seen in these tables, the source of the report varies with other ecological characteristics of the subarea or tract. That in itself is significant. But how and why does the source vary? Areas experiencing economic stress are areas where distant sources—institutions such as hospitals, schools, agencies, and law-enforcement groups—are more likely to report child maltreatment. Conversely, in higher-income areas, reporting is more likely to be carried out by close sources such as family members, neighbors, and friends. The possible explanations for these differences are multiple.

This topic can best be addressed by examining several alternative hypotheses. At the outset, it should be made clear that this issue is not simply some arcane detail of bureaucratic practice. In examining the reporting system we are dealing with an important

TABLE 3

THE CORRELATES OF REPORTING SOURCE FOR 20 DOUGLAS COUNTY SUBAREAS (%)

| | "Close" Sources | "Distant" Sources |
|---|-----------------|-------------------|
| Incomes less than \$8,000 per year..... | $r = -.60^{**}$ | $r = .60^{**}$ |
| Incomes more than \$15,000 per year..... | $r = .55^{**}$ | $r = -.54^{**}$ |
| Female-headed households..... | $r = -.58^{**}$ | $r = .58^{**}$ |
| Married women (with young children) in labor force..... | $r = -.54^{**}$ | $r = .58^{**}$ |
| Living in residence less than 1 year..... | $r = -.27$ | $r = .39^*$ |
| Reported child maltreatment per 1,000 families..... | $r = -.52^{**}$ | $r = .55^{**}$ |
| All cases which were substantiated abuse..... | $r = -.06$ | $r = .01$ |
| All cases which were substantiated neglect..... | $r = -.50^{**}$ | $r = .51^{**}$ |

NOTE.—Some cases are unclassifiable from available records, thus the close and distant percent do not total 100. Separate, though nearly sign-reversed identical correlations are thus presented.

* $p < .05$.

** $p < .01$.

TABLE 4
CORRELATES OF THE SOURCE OF CHILD MALTREATMENT
REPORTS FOR 93 DOUGLAS COUNTY
CENSUS TRACTS (%)

| | "Close" Sources | "Distant" Sources |
|--|--------------------|----------------------|
| Incomes less than \$8,000 | $r = -.27^*$ | $r = .48^{**}$ |
| Incomes more than \$15,000 | $r = .17^*$ | $r = -.34^{***}$ |
| Mean income | $r = .22^*$ | $r = -.26^*$ |
| Female-headed house- holds | $r = -.25^{**}$ | $r = .44^{***}$ |
| Working mothers | $r = -.21^*$ | $r = .32^{***}$ |
| Children in female- headed households | $r = -.25^{**}$ | $r = .43^{***}$ |
| Same residence for 5 years or more | $r = -.01$ | $r = .13$ |
| High school graduates 3- and 4-year-olds in educational programs | $r = .24^*$ | $r = -.40^{***}$ |
| Total rate of maltreat- ment reported | $r = .06$ | $r = -.14$ |
| Rate of abuse reported | $r = -.33^{***}$ | $r = .33^{***}$ |
| Rate of neglect reported | $r = -.25^{**}$ | $r = .23^*$ |
| Stability of neighborhood | $r = -.28^{**}$ | $r = .30^{**}$ |
| All cases which were sub- stantiated abuse | $r = -.28^{**}$ | $r = .50^{***}$ |
| All cases which were sub- stantiated neglect | $r = -.24^{**}$ | $r = .02$ |
| | $r = -.08$ | $r = -.13$ |

* $p < .05$.

** $p < .01$.

*** $p < .001$.

line of defense (sometimes the last line of defense) for protecting the well-being of children. Informed experts agree that early attention to maltreatment (and even the precursors of maltreatment) is essential for protecting children (e.g., Gray et al. 1977). Since reporting initiates some action (both protective and supportive) it is an important component of the community's network of family-support systems. Knowing whether or not it works across neighborhoods is an important substantive issue for any understanding of the ecology of childhood.

If reporting by distant sources is biased along socioeconomic lines then it presumably discriminates against less affluent groups and areas. But what of bias in reporting by close sources? Although Gil (1970) found that there was no class difference in expressed willingness to take some action when they suspected abuse (only 7% of those surveyed indicated that they would not take any action) there is reason to doubt that this means they would report the case. Suspicion and resentment of officials is substantially greater in low-income areas than it is in more affluent ones. More-

over, Gil's own data (1970) did reveal that persons from ethnic minorities and those with less than a high school education said they would speak directly to the parents when they suspected abuse rather than report to a social service agency.

Discussions with workers in law enforcement and child protective services in this study's target county revealed that there is a widespread belief that people in low-income areas are less likely to report ("rat on") their neighbors and family. Moreover, it appears that community standards used in defining inadequate and unacceptable child care are lower in the most socioeconomically distressed areas. Put more directly (and bluntly), in the informed opinion of field-workers, patterns that would be judged abusive or neglectful in more affluent areas are likely to be accepted (with resignation perhaps) in less affluent areas. It would be misleading, in our opinion, to attempt to justify discrepancies as "cultural differences." A recent follow-up study by Elmer (1977) supports this view. She found the long-term consequences of documented abuse nearly synonymous with the developmentally damaging impact of socioeconomically stressful family environments. Moreover, it is not correct to attribute these findings to ethnic or racial differences. The racial composition of an area does not play a statistically significant role in any of the analyses reported. Some official evidence was reviewed to support this contention. We concluded that if there was overreporting by institutional sources in low-income areas there was likely to be underreporting by non-institutional sources. The net effect, we hypothesized, was that the overall validity of the report data was good.

This hypothesis is consistent with the data. Our underlying assumption, based on an extensive literature search, was, as was noted above, that there is a genuine inverse relationship between affluence and child maltreatment. With such a relationship existing in the phenomena, we would expect to find a positive correlation between the proportion of reports coming from distant sources and the socioeconomic level of the neighborhood because of the selective reporting effects noted above.

The results indicate that the source of the report itself is one more piece in the complex pattern of child maltreatment. For both analyses (i.e., subareas and census tracts), there is a strong positive correlation between

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indicators of low income, stress on mothers, and overall child maltreatment with the percentage of cases reported by distant sources. Likewise, a strong positive relationship exists between higher income and the likelihood that maltreatment will be reported by close sources. As proposed in our overarching hypothesis, the source of child maltreatment reports varies as a function of other indicators of the material and psychosocial quality of life for families.

While the foregoing discussion seems plausible (and is persuasive to us), the data presented thus far are consistent with the alternative hypothesis that reporting by distant sources is socioeconomically biased while reporting by close sources is not. A recent in-depth study (Pelton, Note 9) argues that the socioeconomic bias presumed by many to play a large role in the reporting process does not, in fact, operate in areas that have conscientiously cultivated public awareness of child maltreatment. Pelton's study rejects the widely publicized view that maltreatment is "democratic"—that is, equally common among the affluent as among the poor. Data were available to shed some light on this issue.

We reasoned that if only the report data from distant sources were biased then the multivariate correlations presented in tables 1 and 2 would reveal a substantially different pattern when computed separately for maltreatment rates based on distant and close reporting sources. If, on the other hand, the two sources of reporting data are equivalent we would expect to find similar patterns. Since both sources, while somewhat biased (with 30% of the variance in rate of maltreatment accounted for by differences in reporting source, $r = .55$), are reflecting the underlying inverse relationship between affluence and child maltreatment, the multiple-regression models should be similar. Table 5 reports the results of these analyses. The two rates behave in a similar fashion. We take this as evidence that the reporting

system does perform well enough to justify our use of the resulting data for the substantive analyses presented in tables 1 and 2.

These findings have implications for understanding the phenomenon of child maltreatment, for defining the reporting process across differing neighborhoods, and finally, for making more informed policy decisions, as will be elaborated in the discussion section of this paper.

Tables 6 and 7 present the results of an analysis of the correlates of the status of the report (substantiated vs. unsubstantiated abuse; substantiated vs. unsubstantiated neglect) with socioeconomic, demographic, and economic variables. Overall, 55% of the 1,300 maltreatment cases we examined represented substantiated cases. We looked to see whether a pattern emerged in which the economic and demographic characteristics of an area predicted whether a report of abuse or neglect would eventually be substantiated. Note that the results are ambiguous. At the tract level, no substantial relationships exist. At the subarea level, a pattern does emerge. However, because this pattern does not show up at the tract level (due in part to the very small absolute numbers involved), it must be looked at with caution. For subareas, cases of neglect are more likely to be substantiated if they occur in low-income areas than if they occur in high-income areas. This relationship does not obtain for abuse. This is in keeping with the general finding presented in table 1 that socioeconomic factors are more strongly related to neglect than to abuse (at least at the level of subareas). These results indicate that if our principal analyses (tables 1 and 2) were based only on substantiated reports they would show an even stronger relationship between socioeconomic-demographic variables and the incidence of neglect. We doubt this would be particularly useful given the attenuation that a reducing of an already small base rate would

TABLE 5

MULTIPLE REGRESSION ANALYSES DONE SEPARATELY FOR CHILD MALTREATMENT REPORTS FROM INSTITUTIONAL ("DISTANT") AND NONINSTITUTIONAL ("CLOSE") SOURCES (%)

| | Noninstitutional Sources | | Institutional Sources | |
|--|--------------------------|-------------|-----------------------|-------------|
| Economic factors..... | $R = .63$ | $R^2 = .40$ | $R = .64$ | $R^2 = .41$ |
| Social-stress factors (controlling for economic factors and including transience and maternal role)..... | $R = .60$ | $R^2 = .36$ | $R = .58$ | $R^2 = .34$ |

TABLE 6

CORRELATES OF THE STATUS OF CHILD MALTREATMENT REPORTS (SUBSTANTIATED VS. UNSUBSTANTIATED) FOR 20 DOUGLAS COUNTY SUBAREAS (%)

| | Abused Cases Substantiated | Neglect Cases Substantiated |
|--|----------------------------|-----------------------------|
| Incomes less than \$8,000... | $r = -.12$ | $r = -.52^{**}$ |
| Incomes more than \$15,000 | $r = .00$ | $r = -.48^{**}$ |
| Mean income..... | $r = -.16$ | $r = -.57^{**}$ |
| Female-headed households. | $r = -.14$ | $r = .47^{*}$ |
| Working mothers..... | $r = .02$ | $r = .46^{*}$ |
| Same residence 5 years or more..... | $r = -.03$ | $r = .13$ |
| High school graduates..... | $r = -.17$ | $r = -.43^{*}$ |
| Total rate of maltreatment reported..... | $r = -.06$ | $r = .58^{**}$ |
| Rate of abuse reported..... | $r = -.05$ | $r = .48^{**}$ |
| Rate of neglect reported..... | $r = -.06$ | $r = .56^{**}$ |
| Stability of neighborhood.. | $r = -.04$ | $r = .57$ |

* $p < .05$.
** $p < .01$.

produce. Moreover, as was argued earlier, the process of substantiation may well introduce more bias than it removes and thus undermine rather than increase overall validity. Based on our knowledge of the behaviors involved, we also suspect that these results reflect the fact that in more affluent areas reported neglect is more likely to consist of emotional maltreatment that is more difficult to document in a conclusive fashion in the absence of simultaneous physical neglect.

Discussion

In the introduction we presented three areas of research upon which our work draws: (1) sociological work on the relation of socioeconomic and demographic forces with child maltreatment; (2) studies of support systems and related research on neighborhoods, social networks, and isolation; and (3) social indicators of the quality of life for children and families. This discussion will relate our findings to these three lines of research, argue for the utility of report data, and illustrate how this type of research can be used to better understand and serve the cause of parents and children.

We must note at this point that although these results are based on aggregate data they may well reflect the operation of individual level relationships as well. Research using individuals (e.g., Newberger, et al. 1977) has

produced findings consonant with those reported here. While recognizing the temptations of the "ecological fallacy" (i.e., inappropriately drawing conclusions about individuals based on aggregate data), we are encouraged by recent work demonstrating that there are occasions (and this may well be one) when aggregate-individual inferences may legitimately be made (Bogue & Bogue 1976). Although our current interest is in "screening neighborhoods for families," we do look to the present research as a source of hypotheses for family-level study.

Clearly, socioeconomic, demographic, and economic forces are related to the phenomenon of child maltreatment. Being poor is bad for families (National Academy of Sciences 1976). Low income combined with disruptive demographic factors is a potent generator of the stress and life crises that precipitate maltreatment (Justice & Duncan 1976). The interaction of economics and demography provides (or denies) some necessary conditions for social habitability. Rates of maltreatment vary directly as a function of these influences. Tables 1 and 2 illustrate the power of socioeconomic and demographic variables to predict rates of abuse and neglect in different neighborhoods within the target county. The relationship between variables may be attenuated for tracts

TABLE 7

CORRELATES OF THE STATUS OF CHILD MALTREATMENT REPORTS (SUBSTANTIATED VS. UNSUBSTANTIATED) FOR 93 DOUGLAS COUNTY CENSUS TRACTS (%)

| | All Cases Substantiated Abuse | All Cases Substantiated Neglect |
|---|-------------------------------|---------------------------------|
| Incomes less than \$8,000... | $r = .05$ | $r = .19^{*}$ |
| Incomes more than \$15,000 | $r = -.16$ | $r = -.08$ |
| Mean income..... | $r = -.23^{*}$ | $r = -.19^{*}$ |
| Female-headed households. | $r = -.28^{*}$ | $r = -.15$ |
| Working mothers..... | $r = .15$ | $r = .07$ |
| Children in female-headed households..... | $r = -.01$ | $r = .14$ |
| Same residence 5 years or more..... | $r = .19^{*}$ | $r = -.20^{*}$ |
| High school graduates..... | $r = -.21^{*}$ | $r = -.13$ |
| 3- and 4-year-olds in educational programs..... | $r = -.29^{**}$ | $r = -.09$ |
| Total rate of maltreatment reported..... | $r = .03$ | $r = .12$ |
| Rate of abuse reported..... | $r = -.01$ | $r = .05$ |
| Rate of neglect reported... | $r = -.02$ | $r = .09$ |

* $p < .05$.
** $p < .01$.

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and inflated for subareas. This is to be expected because of the low base rate of reported maltreatment combined with the relatively small absolute size of census tracts and number of subareas. Both tract and subarea analysis are essential, however, because while the smaller ecological units are more in keeping with the idea of neighborhood the larger units are more reliable units for survey data.

The findings support earlier research on the sociology of child abuse and neglect (Friedman 1976; Garbarino 1976; Gil 1970; Polansky 1976). The model presented in the regression analysis builds upon and supports the earlier model derived from reports of child abuse and neglect across New York State counties (Garbarino 1976). As Parke and Collmer (1975) emphasized, and as our research illustrates, only a multivariate approach can begin to explore the intricacies of so complex a phenomenon as the maltreatment of children.

As a result of our preliminary analyses, we conclude that utilization of child maltreatment data as social indicators of the quality of life for families and children is a valuable tool with which to formulate questions and thus better focus attention and resources on families in need. The limited conceptual and empirical nature of much child and family advocacy may thus be augmented by a research-based model for experimental ecological intervention for which Bronfenbrenner (1977) and others have argued. The approach presented here has scientific value in its contribution to the human ecology of child maltreatment, support systems, and social indicators. Perhaps most important for the children growing up in our communities, however, are the logical policy implications the research has for the prevention of child maltreatment and the improvement of the overall quality of life for families (Zigler, Note 10). It argues that we can usefully employ an ecological approach to the allocation of scarce resources. We should insist that child maltreatment reports be aggregated to the levels at which service delivery is organized. Resources and intervention projects can be directed to high-risk areas. As this line of work develops, it may provide a basis for assessing the at-risk status of neighborhoods with particularly dangerous socioeconomic and demographic combinations. Such areas are those with a low level of material and social resources—few people who are free from drain (Collins & Pancoast 1976).

The ecologist's use of mapping as an essential tool in social analysis is supported by the results and recommended to students of parent-child relations. By systematically studying the community context of parent-child relations we can build upon the compelling insight that while the child is father to the man the community is parent to the family, and, in so doing, enhance our understanding of the ecology of human development.

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