September 1992

Primary Prevention of Child Abuse: Is It Really Possible?

Mary K. Rodwell
Virginia Commonwealth University

Donald E. Chambers
University of Kansas

Primary Prevention of Child Abuse: Is It Really Possible?

MARY K. RODWELL

Virginia Commonwealth University
School of Social Work

DONALD E. CHAMBERS

University of Kansas
School of Social Welfare

Despite the growing interest in child abuse and its prevention, to date no systematic research has been conducted to determine the usefulness of instruments used to identify and predict abuse or neglect. The present study is a review and analysis of predictive instruments of abuse or neglect with the goal of identifying the predictive efficiency of the instruments. Analysis reveals a variety of problems with predictive efficiency, particularly as predicting individual risk of abuse or neglect relates to primary prevention. Implications of the findings and suggestions for practice are discussed.

Introduction

One of the ironies of social program history in the United States is that the earliest *Society For the Prevention of Cruelty to Children* (SPCC) did not engage in basic prevention. In fact, the New York SPCC was single minded in its focus on "child rescue": its mission was a form of law enforcement; its devotion was to the already abused child. The strategy was to remove the child from a dangerous environment in order to "prevent" child abuse from *recurring* (Breamer, 1974, p. 117). While that may be a secondary prevention of considerable importance, it is not basic (i.e., primary) prevention in the sense of avoiding the damage of the original assault. The SPCC, in attempting to deliver the child from further harm, was not attentive to what antecedent causes for the harm might be.[1] The concept of antecedents are crucial to primary prevention because unless basic causes can

be unambiguously identified, first order consequences cannot be prevented.

Although the definitive intellectual history of child abuse has yet to be written, it appears to have taken nearly fifty years before primary prevention was actually embedded in child abuse and neglect program designs. This is of more than historical interest because this basic divergence between program designs intent on the protection of children (the child rescuers), those attending to the deficits of parents (the parental reformers) and those which have as their goal the prevention of initial abusing or neglecting events (the primary preventionists) persist to this day.[2]

For example, what is perhaps the best known concept in child abuse, the "Battered-Child Syndrome", is ideologically in the "child rescue" not the primary prevention tradition (Kempe, 1962). It is in the "child rescue" tradition because the syndrome profile is used to identify and treat those children who have already been abused. A modern example of the "parent rehabilitation" tradition in child abuse and neglect programming is Parents United. Its program design is one in which reunification of parents and children post-abuse is the central objective. Examples of the primary prevention tradition are program designs which seek to screen mothers of newborn children for "predictors" of potential child abuse and/or neglect. Healthy Start is an example of such a program.

Since funding for programs concerned with child abuse and neglect is limited, it is vital to assess the evidence for the effectiveness of these three approaches. But in what follows we focus on primary prevention, to the exclusion of secondary and tertiary prevention, because it appears to be the most difficult to evaluate. We review the existing literature, argue that there is no serious evidence supporting the efficacy of the predictors of child abuse that together create the program theories that have been used to shape prevention programs for child abuse, and then discuss the implications of that finding.

Review of the Literature

The crucial issue for primary prevention is the ability to identify predictors of child abuse; if predictors do not exist, no

basis for primary prevention programs exist because one must identify an at risk population in order to properly shape and target a program of primary prevention.

In order to determine what is known about predictors of abuse or neglect, a thorough review of the empirical research and a subsequent analysis of those findings were undertaken. Efforts were made to identify major lines of inquiry that might be considered together in identifying the theoretical and conceptual issues pertaining to child abuse prediction. Unfortunately, these lines of inquiry seem to go no further than 1985, because no published studies of the type necessary for this analysis were found after that time.

Method

The literature review began with a computer search of "Dialog"[3] which netted 24 nonredundant titles. In addition, all *Child Welfare* journals from 1963 to the present and *Child Abuse and Neglect* journals from 1970 forward were reviewed for articles that included prediction or correlation in relation to child abuse and neglect. Eighteen titles were added to the review. Finally, the bibliographies of several well known child welfare books were reviewed in the same manner. This process resulted in 29 additional titles. From the total of 71 titles, we were able to locate all but three dissertations and five articles.[4] Thus, this literature review is based on 63 published works.[5] "Publication bias" is always an issue in this kind of review, since it is well documented that positive findings are much more likely to be published. The authors were prepared to use various procedures (e.g., fail-safe N, etc.) to estimate the likely effect of publication bias had the preponderance of findings been positive.

The second stage in this literature search included a review of each article for relevance. The use of "prediction" in the title meant automatic relevance. If the abstract indicated either predictive or correlational research related to either abuse or neglect, the article was included. No article was included without data-based results. All conceptual or theoretical articles were excluded. Forty-eight articles remained after this second stage screening.

These articles were then reviewed thoroughly using a for-
mal coding sheet (a reading guide to insure the same data
was consistently gathered on all studies). The coding sheet in-
cluded: a.) title, author, professional discipline, date of publi-
cation; b.) criteria by which article was selected; c.) theoretical
base and specific research hypotheses; d.) definitions used for
abuse/neglect; e.) sampling process; f.) research design used to
test hypotheses; g.) measurement procedures and issues; h.) var-
iables contaminating findings, moderating variables and sub-
type issues; i.) predictive efficiency; and j.) overall quality of
the research.

In the third and final stage of the review process, we elimi-
nated all articles not containing data and analysis with potential
for making the predictions of interest. Thus, to be included in
the results reported here, the study had to present, for example,
the results of regression or discriminant function analysis, t-tests
or chi-square measures. Twenty-one studies met these criteria
and were included.

It is notable that only two of these twenty-one studies con-
cerned neglect (Giovannoni & Billingsley, 1979; Polansky & Pol-
lane, 1975). The rest focused on child abuse. Because so few
empirical studies of neglect exist, we chose, reluctantly, to drop
neglect from this review. It is also notable that the selected stud-
ies differed greatly in their choice of variables related to child
abuse. Approximately half of the studies identified totally dif-
ferent variables for investigation and half used some, not all, of
the same variables. No two studies by different authors consid-
ered exactly the same, nor even a high proportion of the same
variables.

Results of the Literature Review

Even with the difficulty in identifying like variables and
with the problem of comparable operationalization of variables,
three categories identify the general conceptual focus of the
studies reviewed here. They are:

(a.) Attitudinal/personality focus on parent or child, includ-
ing such variables as distress, rigidity, aggressive impulses,
child behaviors, self-esteem as antecedents of child abuse.

(b.) Interactional focus on the covariance of personality or attitudinal variables of the parent with child-related variables (as noted above) and environmental variables such as social isolation, economic status, living situation, etc.

(c.) Ecological/environmental focus on socioeconomic or demographic characteristics, for example, income, race, welfare recipiency.

These categories describe the variables the investigators are prone to use in explaining and, thus, predicting child abuse. Table 1 below shows the relationship of each study to these categories. Note that more studies focused on attitude and personality variables, though as we will see later, these particular variables do not represent a higher capacity for efficiently predicting child abuse.

Analysis of Predictive Efficiency

The key question this review seeks to answer is whether there is any evidence for antecedents that can validly and efficiently predict the existence of child abuse. The prediction of future events is a complex business and a number of issues must be taken into account before an efficient predictor can be said to be available.

The analysis of predictive efficiency involves more than constructing correlation coefficients, regression equations or t-tests, although all of those summary statistics are useful. These statistical maneuvers are summarizing techniques for the purpose of contrasting groups. Here we are interested in making predictions about individual instances. When it comes to making predictions about individuals there are four different kinds of estimates that together determine predictive efficiency. They can be illustrated best by a 2x2 table which shows the possible outcomes of predictions with actual future events (see Figure 1).

"Positives" are instances where abuse *was* predicted and *did* actually occur. "Negatives" are instances where abuse *was not* predicted and *did not* occur. Both are instances of accurate prediction and, added together, are called "Total." Note that there are two ways that a prediction can go wrong. one is a "False Negative," instances where abuse was not predicted but

Table 1

Types of Antecedent Variables Used in Predictive Research in Abuse

	Attitude/ Personality	Interactional	Ecological/ Environmental
Study/Year			
(American)			
Anderson, Lauderdale/1982	x		
Cohn/1977	x		
Egelund, et al./1980	x		
Melnick, Hurley/1969	x		
Milner, et al./1984	x		
Paulson, et al./1977	x		
Seaberg/1977	x		
Schneider/1982	x		
Spinetta/1978	x		
Altemeir, et al./1984		x	
Gray, et al./1979		x	
Johnson, L'Esperance/1984		x	
Kotelchuck/1984		x	
Starr/1982		x	
Garbarino/1976			x
Spearly, Lauderdale/1983			x
(British)			
Hanson et al./1977		x	
Lealman et al./1983		x	
Lynch et al./1977		x	

actually did happen. The other is a "False Positive," instances where abuse was predicted but actually *did not* happen.

Traditionally these predictive estimates are calculated as ratios. It is important to note that in evaluating how good predictions are, the base for these ratios should be the relevant total predictions made (i.e. total positive predictions, total negative predictions, and grand total of predictions, etc.). In that way some estimate can be made of the proportion of right to wrong

Figure 1

*Illustration of the types of prediction the predictive efficiency
concept generates.*

	Prediction	
	Abuse Will Occur	Abuse Will Not Occur
Abuse Did Occur	positive	false negative
Actual Events		
Abuse Did Not Occur	false positive	negative
	(total positive predictions made)	(total negative predictions made)

Figure 2

Equations for Determining Predictive Efficiency

Total positives	= positive/total positive predictions made
Total negatives	= negative/total negative predictions made
False positives	= false positive/total positive predictions made
False negatives	= false negatives/total negative predictions made

$$\text{Overall Accuracy (Total)} = \frac{\text{Total positives} + \text{Total negatives}}{\text{Grand total (positive and negative) of predictions made}}$$

predictions. We calculated the various predictive efficiencies as
shown in Figure 2. In addition, the ability of a predictor to effi-
ciently pick out abused children will be expressed by a "Missed
Case" ratio, i.e., the ratio of false negatives to the total number
of abused children actually (or estimated to be) in the popula-
tion or sample.

Information about the relative proportion of right or wrong
predictions is of practical value because, as we shall see in more

detail later on, there are ways in which even a very good predic-
tor can go wrong. For example, it is perfectly possible for a vari-
able to be extremely good at picking out all children who will
be abused in the future; but in doing so will wrongly identify
an equal or even greater number of children as abused-in-the-
future when in fact they will not be abused at all! (See Light,
1973; Light & Pillemer, 1984).

    In addition to correlational statistics or regression analyses
designed to reveal general overall relationships between vari-
ables, our study required the reporting of additional statisti-
cal maneuvers (e.g., factor analysis, discriminant functions, etc.)
that tested the ability of selected variables to make advance pre-
dictions in a different data set. We found 11 of the remaining
19 articles in the original pool contained sufficient information
to estimate predictive efficiencies about abuse. All eleven focus
on either attitudinal/personality or interactional antecedents as
predictors. It is interesting to note that no study using ecologi-
cal/environmental antecedents met this criterion for inclusion.

Findings

    Discussion of the results will be hampered by the uneven-
ness of the quality of the studies on at least six counts. Most
studies used sampling methods that were reflective of conve-
nience rather than controlled comparisons which would allow
generalization to a broader population. All studies, with the ex-
ception of the work by Lealman (1983) and by Altemeir and
associates (1984), were retrospective. Researchers used samples
of families who had already been identified as abusing. In ad-
dition, mothers only were the subjects in most studies, thus
systematically excluding fathers or male caregivers. Only two
studies of those included in our analysis, that by Egelund (1980)
and Kotelchuck (1982), used data from a significant number of
fathers. About a fourth of Egelund's and a third of the sample
of the Kotelchuck study were male. Also, most studies included
were conducted in hospital settings (usually public) to the ex-
clusion of community based, private and nonmedical facilities.
Possibly because of this limitation, the subjects in all studies
reflect a lower socioeconomic strata, even though there are no
empirical data confirming that abuse and neglect are limited in
that way.[6]

Additionally, attempts to establish controlled comparisons or research designs that would rule out contaminating, intervening variables or other alternate explanations of results were only partially successful. Finally, potential treatment effects in some studies undermined the clarity of the results because data were gathered simultaneous with the provision of services to high risk or abusing families. Note that if treatments were effective, and generally they were somewhat effective, the consequence of collecting data while treating effectively is to reduce the number of abusing or neglectful incidents. This will cause a potential underestimate of the strength of an identified predictor variable. For example, if stress is a good predictor of abuse, but families in the study are learning effective stress management techniques, then stress will appear to be less robust as a predictor as the number of abuse or neglect incidents declines. Unfortunately, the studies with the potential for treatment effect do not give us clear measure of the effectiveness of treatment so that we can judge with precision the extent of this underestimation.

Given the methodological weaknesses of these predictive studies, the reader may question the usefulness of a discussion of the predictive ability of the instruments when their validity and reliability are essentially unknown. At this point it would seem that, contrary to current practice wisdom, we do not know how much we know. The results here are offered to underscore just how much we may not know and to give impetus to further refinement of capacities to predict abuse and neglect that seem to have stopped in about 1985.

The largest group of studies to be discussed (8) have been conducted in the United States. Three British studies have also been included. However, because child abuse is such a culturally defined concept, it would be misleading to summarize predictive studies across national boundaries. We would not wish to give readers the impression that the results of British studies could be utilized without replication on U.S. samples. On that account we will summarize U.S. and British studies separately. Table 2, however, arrays results of all the predictive studies simultaneously.

Table 2

Predictive Studies in Child Abuse[1]

Study (Year)	Total (%)	+ (%)	– (%)	False + (%)	False – (%)	Missed Cases (%)	N of Study
(U.S. Studies)							
Altemeir, et al. (1984)	84	5	99	95	1	34	1400
Cohn (1977)	75	66	91	34	9	10	52
Egelund et al. (1980)	78	24	91	76	9	63	267
Johnson L'Esperance (1984)*	74	70	81	30	19	16	39
Kotelchuck (1984)	78	80	77	20	23	25	402
Milner (1984)	54	28	85	72	15	31	190
Paulson (1977)	65	54	73	46	27	39	114
Starr (1982)	70	n.a.	n.a.	33	27	n.a.	174
(British Studies)							
Hanson, et al. (1977)	83	97	64	3	36	21	187
Lealman, et al. (1983)	84	13	99	87	1	15	2802
Lynch, et al. (1977)	80	88	75	12	25	30	100

[1] Some studies cited in this table "validated" findings using samples different from those used to initially identify predictors. Where that was the case, data on predictive efficiency is always taken from the "validation" sub-study.

* Unlike the other studies tabled, this one concerns prediction of *recurrence* of abuse.

U.S. Studies

Keeping the above caveats in mind, the seven U.S. studies show a relatively high overall accuracy rate with respect to predicting both those abused and free from abuse—71% accurate, on average (median total). There was consistency among the studies in this regard as all but one clustered within 10% of this figure. The best overall accuracy achieved in this set of studies was 84%.

Note, however, that the average (mean) false positive rate is very large—50.6%. While overall predictive accuracy is satis-

factory, on average the antecedents used in these studies will falsely identify half of those it accuses of child abuse, misidentifying one child as abused for every child correctly predicted to be abused. Moreover, these studies use predictors which would routinely fail to identify a substantial proportion of abused children: one of every three children who are actually abused, since the average (median) missed case rate is about 35% (with an average deviation of 11%).

While no study reviewed here has what could be considered an acceptable false positive rate, there is substantial variation among these studies with respect to false positives. The lowest false positive rate found was 20% (the Kotelchuck study using interactional variables). This means that even the best study relative to false positives misidentified as abused one of every five children on which it made predictions. There were two studies with false positive rates in the 30% range (both with interactional variables). All others were higher. The highest false positive rate was an extremely large 95% (the Altemeir study also using interactional variables).

With respect to missed case rates, there is not as much variability among the seven studies. The lowest missed case rate was 16% (with interactional variables) while the highest was 63% (using attitude/personality variables). The average deviation among the missed case rates was 10.6%.

An interesting detail in Table 2 is whether recurrence is any easier to predict than the initial occurrence. Contrasting the predictive accuracy of the Johnson/L'Esperance 1984 study of the prediction of recurrence among adjudicated abusers against the average accuracy of the studies predicting abuse in samples with no known history of abuse, we find that predictions of recurrence are only 6% more accurate! Note also that the problem of false positives is still with us in the prediction of recurrence. Even with the advantage of knowing an initial instance of child abuse, the false positive rate in the Johnson/L'Esperance study is 30%.

However, this false positive rate is less than the 53% rate found as an average of all studies and the Johnson/L'Esperance study produces one of the *lowest* missed case rates (16%) of any in the group. While their sample is very small, it does suggest

that recurrences can be predicted without overlooking a signif-
icant proportion of cases.

We could not explain the substantial variation in predictive
efficiency in these U.S. studies by any obvious feature of the
research process, such as sample size or method, research de-
sign, various characteristics of the subjects used, instrumenta-
tion, etc. For example, there are high and low overall accuracy,
false positives and missed case rates among studies with large
samples (N=1400) and studies with small samples (N=39). There
are high and low overall accuracy, false positive and missed case
rates among studies using matched controls, among studies us-
ing some version of random assignment, among studies using
prospective and among studies using retrospective designs.

Nor is it possible to associate good predictive efficiency with
any specific predictive variable or any set of them. It appears
that wherever instruments or predictor variables are used with
more than one sample, overall accuracy rates, false positives
and missed case rates vary substantially. It is also clear that
such variation in results cannot be attributed to the general type
of antecedent variable used, at least with respect to the attitu-
dinal, interactional, and ecological categories discussed earlier.
Predictive efficiencies as a function of antecedent variables are
presented in Table 3 below.

Our summary conclusion is that, based on existing empir-
ical data, there is no reason to believe that child abuse in the
U.S.A. can be efficiently predicted in advance. It cannot be

Table 3

Predictive Efficiencies as a Function of Antecedent Variables in U.S. Studies*

Type of Predictor Variable	Total Rate	False Positive Rate	Missed Case Rate
1. ATTITUDINAL/ PERSONALITY	66%	65%	44%
2. INTERACTIONAL	76%	45%	27%

* Recall that studies using ecological antecedents produce data
that does not allow the analysis of predictive efficiencies, thus those
studies are not included in this table.

predicted without an alarmingly large proportion of mislabeling of non-abusers or of missed cases. Further, the damage done by mislabeling in the indiscriminant and/or mass use of these instruments in primary prevention programs would be likely to fall disproportionately on the poor and on racial minorities.

The British Studies

All the British studies report findings with predictive efficiencies as good as or better than the U.S. studies. Of considerable interest is the 1977 Hanson, McCulloch and Hartley study which appears to have an overall predictive accuracy equal to or marginally better than any U.S. study, while simultaneously generating substantially lower false positive rates. The total rate exceeds all other predictive studies (83%). In addition, it produces the lowest false positive rate of any study we could locate—3%. Overall, these are better results than any found in the U.S. studies because, while the overall accuracy is equal to those found in the U.S. studies, the false positive rate is reduced almost to the vanishing point.

A crucial factor, however, is a high missed case rate. It may be that is order to achieve a satisfactory overall accuracy and a tolerable false positive rate in the prediction of first instances of child abuse, a high missed case rate is inevitable.

These generally improved results bear a closer look for U.S. application, for they appear to illustrate a research strategy that might be well to emulate. The Hanson, McCulloch and Hartley study clearly is directed at the high risk child abuse, overlooking the thornier "at risk" category (p. 48). They chose to target the kind of child abuse that ordinary physicians can agree *on medical grounds* is physical abuse or non-accidental injury. That same kind of clear targeting does not seem characteristic of the U.S. studies. The "at-risk" idea may be the cause of the too-wide, over-inclusive "net" that has been used by U.S. investigators in their search for predictors of child abuse.

Another strategically interesting point, the study distinguishes child abusers from others by a very simple concept: "number of adverse circumstances." Beginning with 67 correlates of abuse, the investigators analyze not for which particular set best accounts for the differences between abusers and nonabusers; but for some raw number of factors which

distinguishes between the two. In this sense the explanatory
and etiological question is side-stepped and the emphasis is
clearly on prediction.

Discussion

This analysis of the research related to the prediction of child
abuse is discouraging. We conclude that efficient prediction for
the purposes of primary prevention is impossible for any prac-
tical professional purpose. What is the reason for this state of
affairs? It is possible that we simply do not know enough to
identify the important variables. It is also possible that the tech-
nical and methodological shortcomings in the research have
obscured important findings. It is certainly true that despite
earnest and skillful attempts, the research reviewed here was of-
ten disabled by errors in instrumentation, research design and
sampling methods. Wherever the explanation lies, it remains
quite clear that we have not come any noticeable distance in our
ability to make practical predictions about child abuse. Clearly,
if prediction is our goal, more and better conceived and imple-
mented predictive studies are needed.

From another perspective, Richard Light (1973), and others
after him, offer a clear clue to the reason why accurate predic-
tion is so difficult here. Without going into the technical details
of his argument, the problem is due to the relatively low in-
cidence of child abuse. Efficient predictions of any very low
incidence phenomenon require extraordinarily accurate instru-
ments. Light shows convincingly that screening instruments for
child abusers must be more than 99% accurate in order to be
acceptable (Light & Nagi, 1977).

According to the results found here, it is quite impossible
to predict the initial episode of child abuse without simultane-
ously overlooking a significant number or "scooping up" many
more children than those who are really vulnerable. No set of
variables, or combination, does a good enough job of early
identification to allow those committed to child protection to
speak thoroughly about the efficacy of primary prevention be-
cause accurate targeting is practically impossible. This review
shows that any primary prevention program based on present
data will be bound to intervene in many more homes than

are necessary. The current potential for stigma resulting from well-intended, but unnecessary early intervention should not be overlooked.

Further, it means that protective services workers as a part of secondary or tertiary prevention could, therefore, frequently and wrongly remove children permanently or at least potentially traumatize families and children who were in no danger. The problem of false positives is not trivial for any level of prediction; even given the *best* predictors available, one of every three to five children will be misidentified as endangered.

These conclusions have important implications for future funding allocations and should be taken seriously. Given present fiscal shortages, funding of primary prevention programs should cease unless or until mass prevention efforts of the non-stigmatizing sort, such as those seen in some Latin American countries, are accepted as the norm. This would require a legislative acceptance of the potential of high frontend costs of broadly-targeted services over long-term cost savings in secondary and tertiary prevention. The alternative is to cease funding of primary prevention programs until research provides efficient antecedents necessary to implement such programs.

Given the underfunded and overburdened nature of the child welfare system, in combination with the limits of current predictive research, the priority should be funding for programs of *secondary prevention* or treatment program designs that can show effectiveness with respect to limiting the damage of the first abuse incident and/or preventing recurrence. From our perspective, family preservation projects fall into this category.

Nothing said above should be taken to indicate that the concept of primary prevention of child abuse is hopeless. In fact, the British studies show a research strategy by which efficient prediction could be accomplished. Research funding is needed to replicate those promising results here in the U.S.A. To follow this research strategy, however, requires us to be much less ambitious about the type of child abuse we will strive to predict and to prevent. It means abandoning the attempt to identify children "at risk" and to clearly target physical abuse of the kind that is medically determinable. While ideologically that may not be the most satisfying way to proceed, were we able to

do primary prevention on the basis of validated predictions of even this limited scope, we would do our clients, their children and our profession a great favor.

References

Altemeir, W., O'Connor, S., Vietz, P., Sandler, H., & Sherrod, K. (1984). Prediction of child abuse. *Child Abuse and Neglect, 8,* 393–400.

Anderson, S., & Lauderdale, M. (1982). Characteristics of abusive parents: A look at self-esteem. *Child Abuse and Neglect, 6,* 285–293.

Bremner, R. (1974). *Children and youth in America* (Vol. II). Cambridge: Harvard University Press.

Cohn, M. (1977). *Assessment of risk in child abusing and neglecting parents.* Unpublished doctoral dissertation, University of California at Los Angeles.

Egelund, B., Breitenbucher, M., & Rosenberg, D. (1980). Prospective study of the significance of life stress in the etiology of child abuse. *Journal of Counseling and Clinical Psychology, 48,* 192–205.

Garbarino, J. (1976). A preliminary study of some ecological correlates of child abuse: The impact of socio-economic stress on mothers. *Child Development, 47,* 178–185.

Giovanonni, J., & Billingsley, A. (1979). Child neglect among the poor: A study of parental adequacy in families of three ethnic groups. *Child Welfare, 49,* 196–204.

Gray, J., Cutler, D., Dean, J., & Kempe, C. (1979). Prediction and prevention of child abuse and neglect. *Journal of Social Issues, 35,* 127–139.

Hanson, R., McCulloch, T., & Hartley, S. (1977). Key characteristics of child abuse. In A. Franklin (Ed.), *Child abuse prediction, prevention and follow up* (pp. 39–53). Edinburgh: Churchill Livingstone.

Johnson, W. & L'Esperance, J. (1984). Predicting the recurrence of Child Abuse. *Social Work Research and Abstracts, 20,* 21–26.

Kempe, C., Silverman, F., Droegmueller, W., & Silver, H. (1962). The battered child syndrome. *Journal of the American Medical Association, 181,* 4–11.

Kotelchuck, M. (1984). Child abuse and neglect: Prediction and misclassification. In R. Starr (Ed.), *Child abuse prediction: Policy implications* (pp. 67–104). Cambridge, MA: Ballinger Publishing Co.

Lealman, G., Hatch, D., Stone, J., Phillips, J., & Ord-Smith, C. (1983, June 25). Prediction and prevention of child abuse An empty hope? *Lancet,* 1423–1424.

Light, R. (1973). Child abuse and neglect in America: A study of alternative policies. *Harvard Educational Review, 43,* 198–240.

Light, R., & Nagi, S. (1977). *Child maltreatment in the United States.* NY: Columbia University Press.

Light, R., & Pillemer, D. (1984). *Summing up the science of reviewing research.* Cambridge, MA: Harvard University Press.

Lynch, M., & Roberts, J. (1977). Early alerting signs. In A. Franklin (Ed.),

Child abuse prediction, prevention and follow-up (pp. 75–99). Lexington, MA: Lexington Books.

Melnick, B., & Hurley, J. (1969). Distinctive personality attributes of child abusing mothers. *Journal of Consulting and Clinical Psychology, 33,* 746–749.

Milner, J., Gold, R., Ayoub, C., & Jacewitz, M. (1984). Predictive validity of the child abuse potential inventory. *Journal of Consulting and Clinical Psychology, 52,* 879–884.

Paulson, M. (1977). Parental attitude research instrument (PARI): Clinical vs. statistical inferences in understanding abusive mothers. *Journal of Clinical Psychology. 33,* 848–854.

Pelton, L. (1978) Child abuse and neglect: The myth of classlessness. *The American Journal of Orthopsychiatry, 48,* 608–617.

Seaberg, J. (1977). Predictors of injury severity in physical child abuse. *Journal of Social Service Research, 1,* 63–76.

Schneider, C. (1982). The Michigan screening profile of parenting. In R. Starr (Ed.), *Child abuse prediction: Policy implications* (pp. 157–174). Cambridge, MA.: Ballinger Publishing Co.

Spearly, J. & Lauderdale, M. (1983). Community characteristics and ethnicity in the prediction of child maltreatment rates. *Child Abuse and Neglect, 7,* 91–105.

Spinetta, J. (1978). Parental personality factors in child abuse. *Journal of Consulting and Clinical Psychology, 46,* 1409–1414.

Starr, R. (1982). A research based approach to the prediction of child abuse. In R. Starr (Ed.), *Child abuse prediction: Policy implications* (pp. 105–134). Cambridge, MA: Bollinger Publications.

Notes

1. Actually, there developed a divergence among SPCCs later in their history, some followed the New York SPCC child rescue viewpoint while others such as the Massachusetts SPCC emphasized rehabilitation of parents in order to return children to their original homes (Bremner,1974). This program strategy was, also, not one which could focus easily on primary prevention.

2. Secondary prevention is prevention of recurrence or spread of the problem (treatment) and tertiary prevention is limiting or reducing the seriousness of the problematic condition (rehabilitation). Secondary prevention or treatment programs which reduce recurrence are extremely important, but have very different costs, benefits and operating characteristics than primary prevention programs.

3. The data bases for "Dialog" were: *Psycinfo, Psycalert, Child Abuse and Neglect* and *Dissertation Abstracts.*

4. Only the most recent of the articles in the line of inquiry pursued by Altemeir (1984), Milner (1985), and Schneider (1982) were included because the latest study represented the most recent and best development of their predictive instruments.

5. The complete listing of all sixty-three articles is too large for inclusion in this article, but is available from the first author upon request.
6. For a thorough review of the argument on this issue see Pelton (1978), who concludes that child abuse and neglect must be class related since every empirical study he can find confirms that statement. Of course, all the studies he reviews involve *official abuse and neglect reports*. Since Pelton himself concedes that poor people are more likely to be reported and prosecuted, his argument that this is not a reporting bias does not convince us.

CONTRIBUTORS

Judith B. Bremner
125 Madison Street N.W.
Washington, D.C. 20011

Yair Caspi
Mordechi Street
Hiudi 23
Jerusalem 93627
Israel

Namkee G. Choi
Assistant Professor
State University of New York
at Buffalo
School of Social Work
285 Alumni Arena
Buffalo, New York 14260

William De Maria
Lecturer
University of Queensland
Department of Social Work
   and Social Policy
Brisbane Qld 4072, Australia

Alice K. Johnson, Ph.D
Assistant Professor
Case Western Reserve University
Mandel School of Applied
   Social Sciences
10900 Euclid Avenue
Cleveland, Ohio 44106-7164

      and

Michael Sherraden, Ph.D
Associate Professor
Washington University
George Warren Brown School
   of Social Work
One Brookings Drive
St. Louis, Missouri 63130

Elizabeth Mulroy, Ph.D
Assistant Professor
Boston University
School of Social Work
264 Bay State Road
Boston, Massachusetts 02215

      and

Terry S. Lane, M.S.S.
Associate Dean for Research,
   Development and Special
   Educational Projects
Boston University
School of Social Work
264 Bay State Road
Boston, Massachusetts 02215

Frank Loewenberg
Bar-Ilan University
School of Social Work
52-100 Ramat-Gan
Israel

Mary K. Rodwell, Ph.D
Assistant Professor
Virginia Commonwealth University
School of Social Work
1001 West Franklin Street
Richmond, VA 23284-2027

      and

Donald E. Chambers
University of Kansas
School of Social Welfare
Twente Hall
Lawrence, Kansas 66045

Karen Stout, Ph.D
Assistant Professor
University of Houston
Graduate School of Social Work
Houston, TX 77204-4492

177