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An Empirical Application of Interprofessional Consensus

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ABSTRACT

Determining the veracity of increasing incidents of child abuse presents a problem to clinical sociologists as well as other agency professionals, and subsequently to studies which rely on these determinations for sample selection. This paper tests the theory of interprofessional consensus underlying child abuse reports in records from a hospital population. The average agreement (interpersonal consensus) of ten different professional reports is high, estimated by correlation analysis. Factor analysis reveals two separate dimensions underlying professional reports; one factor separates the social agency determinations from the legal agencies. Despite the clustering of agencies into separate dimensions, determinants of substantiation do not differ between the agencies. Criteria of determination common to both include mother and father's characteristics such as mental illness and drug use. Thus, utilization of the theory of interprofessional consensus provides an index which can be used by researchers and clinical sociologists to improve the accurate identification of cases or of a sample for study.

The Problem of Substantiation

Determining decisions in the increasing (Gelles & Straus, 1987) prevalence of intentional parental violence are a major problem for clinical sociologists and other agency professionals (Giovannoni & Becerra, 1979; Lamphear, 1986; Snyder &

Newberger, 1986). In considering allegations of child abuse, how do police, social workers, clinical sociologists, and researchers make determinations? How much agreement (interprofessional consensus) is there among these professionals regarding specific cases? Consider the following fictionalized case of Gideon Yazzie:

> Gideon is a two year old Navajo boy admitted to a hospital emergency room. He had a concussion on the forehead and upper skull, and a large bruise on buttocks and lower thigh. The doctor on duty concluded that both these injuries could not have been the result of a fall from a high chair, as reported by the parents. She therefore reported the incident to Child Protective Services (CPS). Gideon's mother, confronted by a policeman investigating the report, explained that only the day before the fall from the high chair, he had also fallen backwards off the sofa. Gideon is a very active child, and frequently acquires bumps and bruises. The CPS social worker interviewed the Yazzie's neighbors late that week. The neighbors complained that Mr. Garcia, Mrs. Yazzie's boyfriend, is often drunk and beats both Mrs. Yazzie and her son. Mrs. Yazzie denied this allegation under oath in family court, and explained that the neighbors were malicious, and would like to cause trouble for them because they resent the Yazzie's presence in an otherwise all-white apartment complex.

Substantiation of abuse in the lives of children such as Gideon is a perplexing problem for police, social workers, and family court judges. Clinical sociologists and other agency professionals confronted with contradictory information make crucial decisions, which affect termination of parental rights and children's safety. Researchers who rely on these sources to identify study samples must consider the methodological problems of inconsistency resulting from reporting sources that issue from very disparate agencies, and incompatible criteria for making determinations.

Research Implications

Inaccurate identification is the major difficulty which has plagued child abuse research and resulted in studies in which no differences were found to exist between the abused and the "control" group (Elmer, 1967; Lamphear, 1986).

In her review of 17 recent studies, Lamphear (1986) concluded that less than half had adequate operational definitions of what constituted child abuse and what did not. Researchers used one of a variety of legal, social work, medical, and psychological definitions of child abuse, relying on agency, clinical sociologists, and other professionals' substantiations without further analysis or testing as to the

accuracy of the determination. Another source of inconsistent results lies in the comparison of the findings of studies of child abuse with samples from differing types of agencies or official reports (Egeland, 1981). It is difficult to accumulate consistent and nonconflicting findings with research samples that rely on differing agency's definitions of abuse, unless those agencies use the same criteria to identify abuse cases.

These criteria have been used to distinguish between abused and not abused children: the observation of "nonaccidental injury" and the identification of abusive parental behavior. Researchers have identified one of the following; social worker's ratings, doctor's diagnoses, court judgments, official reports to police, and clinical observations of parent-child interaction to indicate inflicted injury or dysfunctional parenting.

Research definitions of child abuse which focused on harm to the child (nonaccidental injury) usually observed physical injuries. The modern study of child abuse began with Kempe, Silverman, Steele, Droegemueller, and Silver's (1962) recognition that some of the children admitted to University of Colorado hospital emergency room had been deliberately harmed by their parents. Defining abuse as "inflicted harm" selects samples that represent relatively extreme cases of physical abuse. Identification relies on medical physician's diagnosis (Gelles, 1975; Gil, 1970). Criteria which rely solely on physician's observations of injury err by omission.

Abused children may have no external evidence of the abuse which would lead the physician to further investigation. If there were an appreciable time lapse, the physical evidence of such harm may have faded over time, also allowing the abuse to remain undetected. Snyder and Newberger (1986) found physicians in their study were more likely to underestimate the abuse: "Surgeons consistently rated categories as less serious." They explain this finding as due to physician's "biomedical" rather than personal orientation, and relative lack of contact with patients and their families. Thus, the physician's reliance on physical evidence in making his decisions would argue that parent's characteristics or other types of information do not enter into the determinations.

Defining maltreatment as dysfunctional parenting behavior mandates the direct observation of parent and child interaction. Snyder & Newberger (1986: 126) consider clinical sociologists' and social workers' observations as essential to the decision-making process in determining substantiation of child abuse cases: "The observations nurses and social workers make are usually critical in decision-making about the filing of child abuse reports. Hence, the burden of recognition

may fall heavily on their shoulders." However, Snyder and Newberger also point out one problem for researchers that rely upon this source alone to differentiate child abuse cases from other children: that social workers as a group tended to rate cases very highly, to overestimate the severity of abuse, and perhaps to overestimate the existence of abuse as well. This suggests that social workers' and clinical sociologists' reports rely heavily on characteristics of the parents.

Child abuse reports are also substantiated by police and family court judges. Official statistics have problems which many observers have noted. Statistics on the discrepancy between victimization rates and rates of crimes reported to the police reveal that reported cases are a small minority of all incidents. Reported cases are likely to be extreme cases, and contain certain reporting biases; for example, we know that lower class individuals, whether or not they are more likely to commit the offense, are much more likely to be reported, and to be convicted (Gelles, 1975; Gil, 1970). This suggests that legal professionals' determinations may rely heavily on class and ethnic criteria.

Interprofessional Consensus

Researchers investigated the decision-making process in suspected cases of child maltreatment. Interprofessional consensus was proposed to exist for such diverse professional groups as social workers, police, clinical sociologists, pediatricians, and lawyers (Giovannoni & Becerra, 1979). In a recent test of the Giovannoni and Becerra hypothesis which included physicians, psychiatrists, and psychologists; Snyder and Newberger (1986: 139) found "professionals do discriminate among types of child maltreatment and are in some consensus regarding the relative seriousness of these categories."

Snyder and Newberger (1986: 137) call for future research to "focus on differences and similarities in behavior among professionals when recognizing and responding to cases of possible child maltreatment." They suggest that future research could "systematically investigate what specific information effects the evaluation of seriousness by different disciplines (e.g., nature of the consequence, parental characteristics, child characteristics, family socioeconomic status, ethnic group)." This paper develops a measure, based on the notion of interprofessional consensus among clinical sociologists and other professionals involved with the case, that investigates these dimensions and decision criteria determining professionals' preliminary identification of abuse cases.

Testing Interprofessional Consensus

Between July, 1978, and August, 1979, 218 children were admitted to a large state-run psychiatric children's hospital located in the southwestern United States.[1] When we omitted outpatient files and those which lacked important information, a sample of 183 cases with complete information revealed medical, legal, and social service reports. Table 1 records the relative numbers of each of 10 different types of reports in the 183 case records with complete information.

Table 1
Professionals' Reports of Child Abuse

Type of Report:	Frequency	%
1. Social worker	88	41
2. Child's self-report	63	29
3. Police report of abandonment	61	28
4. Physician's report of sibling injury or death	50	27
5. Spouse report of partner	54	25
6. Legal custody suit	53	25
7. Physician's report of nonaccidental physical injury	40	20
8. Legal prosecution	31	15
9. Parent's self-report	17	8
10. Court conviction	6	3

There was a record of a child's report to a responsible adult (teacher, social worker, etc.) in 28.7% of 183 cases with complete information. The child may have called the Child Abuse Hotline number directly, or, like Gideon in our example, may have been admitted to a hospital emergency room and seen by a physician. The police often enter the case because they are called by neighbors or teachers when children have been left alone for extended periods of time.

Observable injuries were reported for 20% of the children. National estimates of child abuse found 3.2% with a major injury and 18.5% with minor physical

injury. Physical evidence, used alone as the criteria for identification of abuse, would therefore allow between 78% and 97% of abuse to remain undetected. Of those in our sample who were injured, the pattern is consistent with that found elsewhere (Egeland & Stroufe, 1981; Gelles, 1982; American Humane Association, 1983). Broken bones were the most common injury, found in 10.4%; 4.4% had visible bruising, 3.4% had suffered concussion, 1% had evidence of burns (generally attributed to scalding liquids or cigarettes), and 1% had suffered genital injuries. The death or hospitalization of a sibling, due to child maltreatment, was reported for 27% of the group.

Teachers, physicians, clinical sociologists, as well as social workers are mandated by law to report instances of child abuse. When Child Protective Services receives a report, an investigation is initiated. Parallel to the social service investigation, the police conduct a similar review of the case to support a criminal prosecution. There was a confession by the abuser in only 8% of the cases. These few parents confess in the course of interviews and investigations, usually in order to receive leniency from the court or to obtain immunity from further prosecution. Clinical sociologists and other social workers substantiated abuse for 41% of the 183 children.

Besides the police report of abandonment, three types of legal records existed in the case files: custody proceedings, prosecution for abuse or neglect, and conviction. Legal custody suits were filed by Child Protective Services on behalf of 25% of the children. In 15% of the cases, parents were prosecuted by the local district attorney for child abuse. Convictions for abuse or neglect were fewer than one in five prosecutions, affecting only 3% of the children. Thus, many prosecutions are dropped or settled in other ways before trial.

Associations Among Different Reporting Sources

A pattern of correlation which reflects a high degree of relationship among the reporters is one confirmation of interprofessional consensus. Table Two presents bivariate phi coefficients relating the ten types of reports.

Generally, the phi coefficients indicate a moderate to high degree of association between different reports. This indicates agreement in the different reporters observing the case, and is some support for the existence of consensus among those clinical sociologists and other professionals.

Table 2
Intercorrelations of Professionals' Reports

	1	2	3	4	5	6	7	8	9	10
1. Custody	1.00									
2. Prosecution	.58	1.00								
3. Conviction	.30	.42	1.00							
4. Injury	.36	.30	.04	1.00						
5. Parent's	.15	.17	-.05	.26	1.00					
6. Spouse	.24	.24	.10	.28	.35	1.00				
7. Social worker	.52	.40	.21	.48	.26	.67	1.00			
8. Child's	.42	.39	.20	.36	.27	.52	.67	1.00		
9. Sibling	.55	.55	.28	.30	.19	.46	.69	.56	1.00	
10. Police	.39	.19	.14	.19	.08	.28	.39	.29	.28	

All correlations above .23 significant at p=.001.
All correlations between .17 and .22 significant at p=.01.
Minimum pairwise N=192.

One of the two relatively infrequent reports, conviction (phi=.022), was moderately associated with prosecution (phi=.39), indicating the fairly typical ratio of less than one conviction in five prosecutions. Reports of abandonment were somewhat more likely to be associated with reports of custody proceedings (phi=.44), and prosecution and conviction reports were even more likely to be found for the same case (phi=.55). Reports of siblings who were abused or neglected were also likely to be present with custody proceedings and prosecutions for abuse (phi=.53).

The other relatively rare report, confession by the abuser, was modestly associated with a spouse's report (phi=.32), and with a report by the child (phi=.35). Abuse reports by the child were quite likely to be associated with spouse reports (phi=.58), and with reports filed on a sibling (phi=.58).

Looking further at reports by family members, reports by spouses or confessions by the abusive parents were generally not associated with any of the legal (custody, prosecution, abandonment, or conviction) reports. This indicates the fact that parents or spouses may confess in order to avert further legal proceedings.

The strongest associations were observed between social worker's reports and children's self-reports (phi=.72), and between reports of abuse or neglect to a sibling (phi=.67). A social worker's report of abuse was also moderately likely to be found with a custody proceeding (phi=.47), abandonment (phi=.42), and a record of prosecution (phi=.39). On the other hand, the presence of a doctor's report of injury was generally not associated with reports from the criminal justice system, thus again suggesting that Snyder & Newberger (1986) were correct in their assessment that doctor's determinations are highly independent of other information sources.

The magnitude of the associations found among these data indicates that professionals' reports do contain a high degree of consensus.

Dimensions of Abuse Indicators

Several different algorithms of factor analysis examine the underlying structure of patterns in professional reporting.[2] As suggested by the correlations, is there a distinct structure of consensus for clinical sociologists and other professionals indicating the various types of agencies or the various occupational categories, as Giovannoni and Becerra (1979) suggest? Or perhaps there may be some other structure underlying consensus: "State agency guidelines regarding which cases will be substantiated are as likely to change with budget considerations as with attention to conditions adversely affecting children" (Snyder & Newberger, 1986: 125).

The clustering of items indicating consensus can be interpreted by the relative weighting of items across two resulting scales. Generally, analyses consistently yielded solutions with two interpretable factors (Table 3). Using a maximum likelihood solution, the first unrotated factor had an eigenvalue of 3.62, while the second had a value of .81.

The first factor under the maximum likelihood solution explained 42.7% of the variance in the variables (where total possible variance is 10 for 10 dummy variables). The second factor accounted for 13.6% of the variance.

The varimax rotation solution suggests a separation between the "legal" and the social dimension, as these variables load very differently on the two factors; although the legal dimensions do not load more strongly on one than the other. Remembering that the legal variables have low frequency of response (e.g., conviction contains only 2% of our cases representing approximately 18 families),

Table 3
Dimensions of Professionals' Consensus

Report	Communality	Eigenvalue	Factor One	Factor Two
1. Custody	.47978	4.08777	.58663	.48420
2. Prosecution	.44251	1.36237	.54997	.49498
3. Conviction	.20436	.95742	.31302	.34341
4. Police	.27227	.84034	.44772	.14629
5. Physician	.12258	.74167	.22897	-.06836
6. Parent	.16590	.71140	.30845	-.19287
7. Spouse	.57678	.40371	.73752	-.30823
8. Social worker	.72816	.36673	.90643	-.17274
9. Child	.57528	.33689	.77252	-.00546
10. Sibling	.56029	.19170	.75295	.15360
Eigenvalues:			3.62188	.80912

Chi Square=56.4975
Degrees of Freedom=26
Iterations=6
Significance=.0005

the loadings for these may represent the fact that although these variables have relatively rare occurrence, they indicate extremely high consensus within the legal profession by the consistency with which they cluster together.

Also, the highest communality estimate was for the social worker's report (.79), while a low communality was observed for the physician's reports of injury (.35). These results are consistent with earlier research (Snyder & Newberger, 1986), which shows social workers' ratings of abuse severity to be higher than the ratings of clinical sociologists and other professionals, and that physicians' ratings are apt to be less severe. This finding also suggests that social workers' ratings are highly related to the other reporters', while physicians' reports are relatively independent.

Thus the factor analysis confirms what Snyder & Newberger (1986) as well as Giovannoni and Becerra (1979) affirm about professionals' reports. The two

different types of professionals, those in social work agencies (such as clinical sociologists) and those in legal professions (such as police), have high internal agreement but constitute separate dimensions of consensus.

One possibility is they make similar determinations based on differing criteria. To test differing influences on professional determinations, we need to ask which variables influence a particular reporter. Are legal determinations affected by differing criteria than social agency decisions?

Correlates of Professional Reports

Correlations between the professional reports and certain other characteristics of the case provide initial evidence regarding relationships between various characteristics of the case and each professional's report.[3]

Table 4
Mother's Characteristics as Criteria for Child Abuse Decisions

Report	Mental illness	Alcohol abuse	Drug abuse	Criminal record	Abused as child
1. Custody	.31	.23	.28	.25	.13
2. Prosecution	.28	-.03	.16	.02	.09
3. Conviction	.19	-.06	.24	-.05	.32
4. Injury	.13	-.02	-.05	-.10	.05
5. Parent's	.07	.16	.06	.03	.13
6. Spouse	.30	.14	.15	.05	.32
7. Social worker	.29	.17	.31	.17	.31
8. Child's	.25	.24	.24	.16	.25
9. Sibling	.29	.20	.33	.22	.34
10. Police	.29	.31	.34	.23	.24

All correlations above .24 significant at p=.001.
All correlations between .20 and .23 significant at p=.01.
Minimum pairwise N=173.

If we consider characteristics of the mother (coded as yes or no) as influences on the various reports, we find that custody decisions are most highly influenced by mother's mental illness (.31), but that her drug (.28) and alcohol (.23) use also are highly determinative. Mother's criminal record is predictive of a custody determination (.25), while mother's abuse as a child does not seem to influence the determination to remove custody from her.

Prosecution decisions seem to be greatly affected by the mother's having a history of mental illness. Convictions relied more on drug abuse, although the relation for mental illness was also present.

The existence of a police report is generally highly related to knowledge that mothers are mentally ill, alcohol or drug abusers, have criminal records, or were themselves child abuse victims.

Physicians' determinations of injury were not related to any characteristics of the mother, which is as one would expect, if physicians' determinations are based upon observable injury.

The clinical sociologist's or social worker's report appears to be dependent upon evidence of mother's mental illness and her drug abuse; but additionally the information that mother had been abused herself as a child is more often taken into account.

This evidence confirms that information about characteristics of the mother, when available, influences different reporters to consensus determinations about child abuse cases. Excepting only the physicians, clinical sociologists and other professionals are using the same characteristics of the mother to make determinations about the veracity of abuse in substantiating cases. Do characteristics of the father also influence professionals' reports about child abuse (Table 5)?

In Table 5, briefly, we see that the same patterns hold true for characteristics of fathers as for characteristics of the mother in determining professionals' opinions about the existence of child abuse, with two exceptions.

Police reports appear to take none of father's characteristics into account.

Another difference lies in the determination of custody. Father's characteristics are not related to custody, which likely reflects the tendency of courts and other officials to award custody to mothers. In other words, knowledge of father's mental illness is probably irrelevant to custody hearings, in distinct contrast to the importance of mother's mental health.

Table 5

Father's Characteristics as Criteria for Child Abuse Decisions

Report	Mental illness	Alcohol abuse	Drug abuse	Criminal record	Abused as child
1. Custody	.03	.09	.12	-.01	.05
2. Prosecution	.19	.06	.16	.07	.12
3. Conviction	-.06	.19	.31	.06	.14
4. Injury	.20	.11	-.01	-.03	.11
5. Parent's	.24	.16	.01	-.00	.20
6. Spouse	.28	.32	.19	.06	.18
7. Social worker	.19	.26	.11	.08	.19
8. Child's	.24	.29	.19	.07	.26
9. Sibling	.21	.25	.11	.03	.34
10. Police	.02	.06	.16	-.06	.02

All correlations above .24 significant at p=.001.
All correlations between .19 and .23 significant at p=.01.
Minimum pairwise N=161.

Summary

Substantiating child abuse cases continues to rely on clinical sociologists' and other professionals' opinions. Little is known about interprofessional consensus and how determinations are made. In this paper, we empirically verify the existence of interprofessional consensus in a variety of reporting sources from a sample of hospital medical records. The extent of interprofessional consensus in the reports was estimated at .84 by alpha. The different reporters appear to cluster into two dimensions, representing the legal and the clinical sociology or social work approaches. Clinical sociologists and other agency professionals base their determinations not on characteristics of the child such as race, gender, or class, but rather on characteristics of parents such as mental illness and drug abuse.

Research Implications

We propose that interprofessional consensus should be further tested for use as a measure or scale to detect the accuracy of identification of study samples. Combining all ten different reports into a simple summated index (Table 6), one can interpret the alpha statistic as the degree of overall consensus; or the average amount of overlap in the reports.

Table 6

Measure of the Extent of Interprofessional Consensus
on Child Abuse Cases

Number of Reports	Frequency	%	Increase in alpha
0	99	45.4	.673
1	24	11.0	.734
2	14	6.4	.766
3	18	8.3	.785
4	23	10.6	.797
5	11	5.0	.805
6	18	8.3	.811
7	5	2.3	.815
8	6	2.8	.840

N=218
Mean=2.04
Chronbach's alpha=.84

This index measures the extent to which interpersonal consensus exists for a particular case. We can see that there is no indication of abuse for 99 of 218 cases. Looking at the internal consistency, which we are interpreting as consensus for this data, we see that there is 67% agreement in cases of no abuse (where reports are 0). Interprofessional consensus increases from .73 to .84 with the addition of all the reporters. This index could be useful as a device or measure to verify a sample of abuse cases for accuracy of identification. The theory of interprofessional consensus, as shown in the case records reviewed here, potentially solves the problem of

substantiation by providing a reliable, internally consistent scale as an index of interprofessional consensus.

NOTES

1. A demographic description of the hospital population is available upon request. The average case was a white male, 11 years old. Cases were not statistically different from national or local samples.

2. The results of maximum likelihood, which is the most conservative test of the data, and of alpha extraction (not shown) were similar, that is, both arrived at two interpretable factors, and had similar loadings for variables on the factors.

3. Indicators such as unemployment, receipt of welfare, race, ethnicity, sex, age, and characteristics of the child were found to have no statistically significant magnitude of association with any of the reports. Therefore, the earlier suggestion that legal professionals might be more highly influenced by class, race, and gender variables is not the case in this data. We report below only those characteristics of the case which were found to have a significant correlation with at least one of the reports. The tables are available upon request.

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