

Joining Forces

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RESEARCH NEWS YOU CAN USE

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IN THIS ISSUE:

We continue to explore the concept of risk assessment. We are very pleased to have Dr. Joel Milner as our contributing author for this issue. His work is internationally known in the field of family violence.

We describe the goals and objectives of an ongoing U.S. Army/U.S. Air Force FAP collaborative risk assessment initiative. This project will attempt to develop a risk assessment tool that supports treatment interventions.

We review a paper by Heyman and Neidig on differences between the U.S. Army and the civilian sector on rates of spouse abuse.

A survey of Joining Forces readers provided suggestions for future articles and requests for more information about family advocacy programs.

The statistics article comments on the differences between statistical significance and the meaningfulness of research findings.

ISSUES IN RISK ASSESSMENT

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In the April 1999 issue of
Joining Forces, an article entitled

"Risk Assessment and Family Advocacy" provided a thoughtful discussion of important issues related to violence risk assessment. Topics included the definition of risk (i.e., the likelihood that an individual will engage in violence) and the fact that there are positive risk factors (e.g., history of violence) associated with an increased likelihood of harm and negative risk factors (e.g., social support) associated with a decreased likelihood of harm. The article also discussed the fact that most risk assessment techniques have limited or questionable utility because of the lack of data on their ability to accurately predict individual client risk. The present article builds upon the previous article by discussing in greater detail the different types of risk assessment.

Before conducting a risk assessment, the first question that should be addressed is what form of violence is being assessed? Do we need to assess the risk for child physical abuse, child sexual abuse, or spouse physical abuse? In most cases, it is desirable to select risk assessment measures that are tailored to the specific form of violence under investigation because risk factors can vary across the different kinds of violence. For example, negative views of children may be a risk factor for child physical abuse, whereas negative views of

children do not appear to be a risk factor for child sexual abuse.

A second question that should be considered is, "Within the different forms of violence, what type of risk prediction is needed?" When the term "prediction" is used, many professionals think only about future prediction. There are, however, three types of prediction: post hoc, concurrent, and future (e.g., Milner & Campbell, 1994). Post hoc prediction refers to the prediction of a condition (violence) that occurred in the past. Concurrent prediction refers to the prediction of a condition (violence) that may presently exist. Future prediction refers to the prediction of a condition or an event (violence) that may occur sometime in the future. Both concurrent and future risk prediction include assessing

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the risk for the first occurrence of an event (violence) as well as the risk for **recidivism** (a repetition of violence).

Post hoc prediction, which is the prediction of past behavior based on current information, is very difficult. A major problem in post hoc prediction is that information is collected after the occurrence of a behavior

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(violence). Intervening variables, events that occur after the violence and before our assessment, impact interview data and test scores reducing predictive relationships. That is, after-the-fact testing of the violent offender may not represent the conditions that were present at the time of the abuse, making such post hoc prediction difficult. Fortunately, in most risk assessment situations, we are not trying to determine past risk. More often in risk assessment, Army Family Advocacy Program (FAP) staff are engaged in concurrent prediction, which means that we are attempting to estimate the level of current risk for violence. For example, after an incident of abuse has been confirmed, an assessment of risk is usually needed to determine the current level of risk or imminent danger. This type of risk assessment is conducted to determine the likelihood of recidivism as opposed to the level of risk in an individual who has not already displayed abusive behavior.

Previously, it was mentioned that risk factors could vary across the different forms of violence (e.g., child physical and child sexual abuse). In addition, risk factors can vary within a single form of abuse (e.g., child sexual abuse) based on the type of risk prediction that is being attempted. For example, in concurrent prediction of child sexual abuse, risk factors can vary based on whether child sexual abuse risk assessment is attempted before or after abuse has occurred (recidivism prediction). In child sexual abuse recidivism assessment, factors such as the

type of offense, the degree of force used in the offense, the offender's age at the time of the offense, and the presence of grooming behavior are believed to be related to the risk of recidivism. However, if we are attempting to predict risk when no prior incident has been documented, none of the aforementioned variables will be available for use in our risk assessment.

Future prediction, forecasting the occurrence of future events (violence) based on our current knowledge of an individual and a situation, is difficult for several reasons. First, the factors that are useful in concurrent prediction may not have utility in future prediction. For example, in child physical abuse risk assessment, a high level of parental distress is a risk factor for concurrent abuse. The current level of parental distress, however, is not a strong risk factor if we are attempting to predict future child physical abuse because it is highly variable. That is, the parent may be distressed today (suggesting risk), but not tomorrow, or they may not be distressed today (suggesting little risk), but in several months the parent may be experiencing high levels of distress. In each case, the use of current distress data to predict future abuse would be misleading. In contrast, rigid child-related expectations by parents are, relative to distress, better predictors of future risk. This is due, in part, to the fact that rigid child-expectations are trait-like characteristics. This means that they are more stable across time than distress and therefore,

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are better predictors of future behavior.

A second difficulty in making future predictions based on current risk assessment data is the fact that numerous variables, including positive and negative events, can intervene between the assessment and the predicted event. These intervening variables may increase (marital problems) or decrease (social support) the likelihood of the event (violence), thus reducing our ability to make accurate future risk predictions based on current data.

Thus far, we have discussed the fact that there are different types of prediction and that there is a need to determine which factors have the most utility for each type of risk assessment. We also need to be aware of several other characteristics of the factors used in risk assessment. First, we need to realize that risk assessment factors are either static or non-static. A static variable is a factor that can not change or changes very little. For example, in assessing the risk for child physical abuse, many approaches use static variables, such as age, marital status, gender, a childhood history of abuse, and past drug and mental health problems to indicate risk. So, a young and single mother with a childhood history of abuse and past drug and/or alcohol problems is at greater risk for child physical abuse than a parent without these risk factors.

However, while static factors can be predictive of child physical abuse, the fact that they are static means that they are not likely to

change. So, if a risk assessment approach is used that contains static factors, the same risk assessment should not be used in situations where we need to measure changes in the level of risk, such as in making decisions about when to return a child to a parent or in program evaluations. Indeed, in some situations like program evaluations, the risk scores on the static variables can increase between pre- and post-intervention. This occurs because at the time of the initial evaluation a client may be less willing to disclose personal history. At the end of an intervention, especially if rapport has been established, a client may be more willing to discuss his/her history. This candor can result in increases in static variable risk scores from pre- to post-intervention, even if the intervention was, in fact, effective.

Second, and perhaps most important, when considering the characteristics of the factors used in risk assessment, we must be aware that some and perhaps many risk factors are only marker variables and not causal variables. Marker variables are those factors that are correlated with violence, but do not cause the violence; whereas causal variables are the factors that produce the violence. For example, being young and single are risk factors for child physical abuse by a mother, but being young and single do not cause her to abuse her children. In fact, most young single mothers do not abuse their children. Thus, it is more likely that other factors such as a high levels of distress, a lack of maturity, a lack of

parenting knowledge, and a lack of social support, (factors that are associated with being a young single mother) are causal factors of child physical abuse. To the extent that this is true, the young single mother risk factors are marker variables for the related causal variables.

Unfortunately, we frequently do not know which variables are marker variables and which are causal variables among the factors that are used in violence risk assessment. Therefore, we must be careful and not assume that all risk factors are causal factors and, therefore, can be used as guides for our interventions.

Additionally, we need to be aware that risk factors may have more utility in assessing risk in one population than in another. For example, the majority of child physical abuse risk factors have been found in studies conducted using mothers with little or no data on whether the risk factors are appropriate for risk assessment of fathers. Likewise, few data are available on possible ethnic differences in risk factors. Child physical and sexual abuse parental risk factors may also vary based on the developmental level of the child, but this is rarely studied. Finally, there is a paucity of data on the extent to which risk factors developed using civilian samples are appropriate for an army population.

For readers who are interested in additional material on risk assessment, extended discussions of its issues and problems are

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available elsewhere (e.g., Milner & Campbell, 1994).

Literature reviews of the risk factors for child physical abuse (e.g., Milner & Dopke, 1997; Milner & Crouch, 1999), child sexual abuse (e.g., Milner, 1998), and spouse abuse (e.g., Sanders, 1994) are also available. Finally, critical evaluations of approaches to family violence risk assessment, including the use of interviews, observations, general measures, abuse-specific measures, and risk models, are available (e.g., Hansen & Warner, 1992; Milner, Murphy, Valle, & Tolliver, 1998; O'Leary & Murphy, 1992).

References:

Hansen, D. J., & Warner, J. E. (1992). Child physical abuse and neglect. In R. T. Ammerman & M. Hersen, Assessment of family violence: A clinical and legal sourcebook (pp. 123-147). New York: John Wiley & Sons.

Milner, J. S. (1998). Individual and family characteristics associated with intrafamilial child physical and sexual abuse. In P. K. Trickett & C. J. Schellenbach (Eds.), Violence against children in the family and the community (pp. 141-170). Washington, DC: American Psychological Association.

Milner, J. S., & Campbell, J. (1994). Prediction issues for practitioners. In J. Campbell (Ed.), Assessing dangerousness: Violence by sexual offenders, batterers, and child abusers (pp. 20-40). Newbury Park, CA: Sage Publications.

Milner, J. S., & Crouch, J. L. (1999). Child physical abuse: Theory and research. In R. L. Hampton, T. P., Gullotta, G. R. Adams, E. H. Potter, & R. Weissberg (Eds.), Family violence: Prevention and treatment (pp. 33-65). Newbury Park, CA: Sage Publications.

Milner, J. S., & Dopke, C. (1997). Child physical abuse: Review of offender characteristics. In D. A. Wolfe, R. J. McMahon, & R. deV. Peters (Eds.), Child abuse: New directions in prevention and treatment across the life span (pp. 25-52). Thousand Oaks, CA: Sage Publications.

Milner, J. S., Murphy, W. D., Valle, L., & Tolliver, R. M. (1998). Assessment issues in child abuse evaluations. In J. R. Lutzker (Ed.), Handbook of child abuse research and treatment (pp. 75-115). New York: Plenum Press.

O'Leary, K. D., & Murphy, C. (1992). Clinical issues in the assessment of spouse abuse. In R. T. Ammerman & M. Hersen, Assessment of family violence: A clinical and legal sourcebook (pp. 26-46). New York: John Wiley & Sons.

Sanders, D. G. (1994). Prediction of wife assault. In J. Campbell (Ed.), Assessing dangerousness: Violence by sexual offenders, batterers, and child abusers (pp. 68-95). Newbury Park, CA: Sage Publications.

ARMY/AIR FORCE FAP RISK ASSESSMENT COLLABORATION

Representatives of the U.S. Army and U.S. Air Force Family Advocacy Programs met on 6 May 1999 in San Antonio, Texas. The purpose of the meeting was to discuss risk assessment strategies and issues pertaining to both services. The meeting set the stage for the discussion of the need for risk assessment procedures in the two family advocacy programs and the feasibility of developing risk assessment tools. There are two objectives of this collaborative initiative. The first goal is to develop a tool for the assessment of imminent risk; the second is to provide an ongoing assessment that is supportive of treatment interventions. To support the initiative, an extensive review of literature in the area of domestic violence indicators and dynamics is currently being conducted.

At the 6 May meeting, Dr. Joel Milner of the Department of Psychology, Northern Illinois University, presented an overview of family violence risk assessment and focused his remarks on violence predictions, predictions

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of recidivism, violence risk factors, and assessment methods. During group discussion, it was suggested that a simple and easy way to apply the model be developed for the assessment of imminent danger. Additionally, it was pointed out that practitioners should be very clear about the purpose and goals of any proposed risk assessment model. It was concluded that the first step in the development of a risk assessment model is a thorough review and documentation of research-based variables for the model and the consideration of ethical issues. A follow-up meeting of the risk assessment discussion group is scheduled for 4 August 1999 in San Antonio, Texas.

ARMY AND CIVILIAN RATES OF SPOUSAL AGGRESSION

Heyman and Neidig (1999) compared the prevalence of military and civilian rates of spousal aggression from representative samples. The U.S. Army sample included data on 33,762 married, active-duty soldiers randomly selected at 38 U.S. Army installations in the 50 state U.S. Army between 1990-1994. The civilian sample used data obtained from the 1985 National Family Violence Survey (Straus & Gelles, 1986). A total of 3,044 married, employed persons under the age of 65 were compared with the Army sample. The Conflict Tactics Scale was

used to measure spousal aggression. Violence was classified as none, moderate, or severe. The Army sample was standardized to match the age, and race distribution of the 1990 U.S. Census. (Rates of violence were calculated separately for men and women.) Their procedures standardized the data statistically so the Army and civilian data could be compared. It was found that men's reports of moderate husband-to-wife aggression were not significantly different in civilians compared to the Army (both are about 10%). However, severe aggression was significantly higher in the Army (2.5%) than in the civilian sample (0.7%). While the press has speculated that the Army's higher rates are due to the aggressive nature of military training or downsizing, Heyman and Neidig report that such speculations go beyond currently available empirical evidence.

Since the Army is not representative of the general population, Heyman and Neidig reported that a variety of risk factors (e.g., childhood history of abuse, witnessing parental violence, poverty) would have to be assessed and controlled for before drawing conclusions about the relationship between military service and the heightened risk of spousal aggression. Further, it was recommended that researchers interested in supporting theories about the causes of spousal aggression would have to administer measures related to theory rather than compare rates of spousal aggression in different populations. In conclusion, it was pointed out that further research

is needed before definitive conclusions can be made about the relationship between military service and spousal aggression.

References:

- Heyman, R. E., & Neidig, P. (1999). A comparison of spousal aggression prevalence rates in U. S. Army and civilian representative samples. *Journal of Consulting and Clinical Psychology*, *67*(2), 239-242.
- Straus, M. A., & Gelles, R. J. (1986). Societal change in family violence from 1975 to 1985 as revealed by two national surveys. *Journal of Marriage and the Family*, *48*, 465-479.

SURVEY OF JOINING FORCES NEWSLETTER

A survey was conducted to explore readers' perceptions of Joining Forces. The survey was sent to a sample of family advocacy program managers, social workers, new parent program coordinators, and contractors working in the Army Family Advocacy Program (FAP). Thirty responses were received from family advocacy personnel in both CONUS and OCONUS locations. The response rate was 71%.

Overall, respondents had favorable opinions of Joining Forces, found that the newsletter is

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interesting and provides them with new information that can be used in their work. Some of the topics recommended by respondents for future editions of *Joining Forces* were: the operation of programs at different installations, cross-cultural issues and child/spouse abuse, children witnessing violence, novel ideas to assist program managers with preventive education, research on specific military communities, female offenders and male victims, and information on developing tools to measure outcomes. By far, the most prevalent recommendation was for *Joining Forces* to provide more information on what FAP personnel are doing in the field. Therefore, if you would like to share information about your program with your colleagues, please let us know. Our address, E-mail, and telephone numbers are listed in the box on page 2. We will assist you with the editing of the material.

**SIGNIFICANCE VS.
MEANINGFULNESS IN
STATISTICS**

Readers of research studies are often presented with the statement that a finding is statistically significant. What does this mean? Some people think that if a finding is statistically significant it is (1) true and (2) important. Neither of these is necessarily accurate. Statistical significance usually occurs in the context of a hypothesis-testing situation. When you perform a statistical

test, you will find the value of a test statistic (a t-value, for example, or a correlation coefficient) and the associated p-value that tells you the probability that your hypothesis is supported by the data. When an investigator compares two or more groups and reports that a finding is statistically significant, it means that there is a certain probability (usually 95% or greater) that the finding did not occur by chance. (The language of probability is usually more precise than this, but we are simplifying it in this example.) Let's deal with the first of the two possibilities listed above, that a finding is true. As you can see, statistical significance is a statement about probability, not truth. Truth is sought in philosophy, not in statistics. Now for the second issue, that of whether the finding is important.

The sample size as well as other factors affect probability in statistics. The greater the number of subjects, the more likely you are to have significant findings. Thus, the findings may be significant, but not particularly meaningful because only a small difference is required to obtain significance with large samples. As pointed out by Lang, Rothman, and Cann (1998), a p-value does not convey unambiguous information because it is a mixture of confounded information: the size of the effect (related to your hypothesis), the size of the study (your number of subjects), and the precision of your measures. So, in addition to the p-value, you need to understand these other items: precision of the measure, number of subjects, and the effect size. For example, suppose you have a

good paper and pencil test (a precise measure) of some variable (such as depression or aggression scores) and your hypothesis is that there is a difference between men and women. Say that you find a value of 68.03 in a group of 15,000 men and 68.95 in a group of 15,000 women, and you have a p-value of less than 0.0001. Your result is statistically significant, but is it a meaningful difference? It may or may not be important, depending on the question you are asking. But, note that it is only a difference of 0.92. Suppose someone reported in a presentation of this study that there was a significant difference between men and women. At least two of your questions should be, "How much of a difference and what does that difference mean?" Answers to these questions would give you real information that you can use instead of just the knowledge that someone reported a significant difference.

Reference:

Lang, J. M., Rothman, K. J., & Cann, C. I. (1998). That confounded p-value. *Epidemiology, 9*, 7-8.

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