Children and Youth Services Review 30 (2008) 1458–1464

Contents lists available at ScienceDirect

Children and Youth Services Review

journal homepage: www.elsevier.com/locate/childyouth

Strengthening the integration of actuarial risk assessment with clinical judgment in an evidence based practice framework

Craig S. Schwalbe *

Columbia University School of Social Work, 1255 Amsterdam Ave., New York, New York 10027, United States

ARTICLE INFO

Article history:
Received 3 September 2007
Received in revised form 11 November 2007
Accepted 14 November 2007
Available online 16 May 2008

Keywords:
Risk assessment
Structured decision making
Evidence based practice
Resilience

ABSTRACT

Traditional discussions of actuarial risk assessment utility in child welfare and juvenile justice emphasizes its comparative predictive validity with clinical methods of prediction. While important, it ignores how actuarial risk assessment instruments actually influences the clinical deliberations of their users. Recent literature extends the discussion of their clinical utility by invoking evidence based practice principles. Implicit in this discussion is a traditional model of structured decision making, common in child welfare and juvenile justice agencies, whereby actuarial risk assessment is supplemented with contextual needs assessment. This article critiques the traditional model of structured decision making and argues that its limitations are inconsistent with the spirit of evidence based practice. Instead, a revised model of structured decision making, grounded in research on risk and resilience, promises a more complete integration with evidence based practice.

1. Introduction

The literature on risk assessment presumes their utility. It is generally understood that actuarial risk assessment is more accurate than unaided clinical judgment for predicting critical target events like child maltreatment or juvenile delinquency (Meehl, 1954, 1986; Dawes, Faust, & Meehl, 1989; Grove & Meehl, 1996). Scholars have amassed substantial empirical evidence in support of this conclusion. Emboldened by this evidence, researchers and program planners have designed, implemented, and occasionally validated risk assessment instruments in child welfare, criminal justice, juvenile justice, and forensic mental health settings to support case planning and case decisions. Yet how human services professionals use actuarial risk assessment instruments is little understood (Schwalbe, 2004). In place of formal conceptual models and theory, experts admonish human services professionals to "consider" risk assessment findings or even to allow risk assessment findings to supplant their intuitive judgment about future risk. In the absence of clarity, it should not be surprising that human services professionals are occasionally loath to use risk assessment instruments as they were intended (Lyle & Graham, 2000; Hilton & Simmons, 2001; Krysik & LeCroy, 2002). Needed is a clear conceptual framework to inform risk assessment utility.

Shlonsky and Wagner (2005) offered such a framework. They argued that evidence based practice principles can integrate actuarial risk assessment and clinical judgment. To be sure, actuarial risk assessment is an "evidence based practice" for tasks involving the projection of future risk. Further, evidence based practice principles provide a framework for integrating subjective impressions with empirical evidence. For this reason, they can clarify the vague and ill-defined relationship between actuarial assessment and clinical judgment.

To facilitate this integration, Shlonsky and Wagner (2005) relied on a structured decision making model that has its roots in the criminal and juvenile justice systems (Baird, 1984). This model hinges on two distinct assessment processes: actuarial risk assessment and structured needs assessment. Each assessment performs separate functions. Risk assessment instruments inform

* Tel.: +1 212 851 2228.
E-mail address: css2109@columbia.edu.

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doi:10.1016/j.childyouth.2007.11.021

intervention urgency and intensity while structured needs assessment contributes to individualized case planning. Shlonsky and Wagner show that, when armed with this information, human service professionals can apply evidence based practice procedures to develop case plans that are individualized to client circumstances, that are supported by scientific evidence, and that are consistent with local conditions.

While the introduction of evidence based practice principles represents a breakthrough, its relationship to the traditional model of structured decision making merits closer examination. The crucial question is whether or not the traditional structured decision making model reflects the empirical spirit of evidence based practice. In the present case, the distinction between risk and need, along with their respective assessments, is problematic. Although the distinction appeals to logic, the theoretical differences between risk and needs have not been fully conceptualized. Indeed, while the concept of risk has been refined over years of theoretical development, the concept of need has suffered from relative conceptual neglect. The aim of this article is to correct this imbalance. It grounds both concepts, and their respective assessments, using insights gleaned from the emerging risk and resilience paradigm. In the end, the article will show that the distinction between risk assessment and needs assessment impedes the integration of structured decision making with evidence based practice principles. However, when actuarial risk assessment and contextual needs assessment are conceptualized as a singular process, it is aligned more closely with evidence based practice principles, providing further support for Shlonsky and Wagner's (2005) breakthrough integration. The article will conclude by suggesting modifications to actuarial risk assessment necessary to enhance this integration.

2. Risk, need, and evidence based practice

Shlonsky and Wagner's (2005) integration is centered around two core processes: Baird's model of structured decision making and Sackett's model of evidence based practice (Baird, 1984; Straus, Richardson, Glasziou, & Haynes, 2005). As indicated previously, Baird's model emphasizes separate assessments of risk and needs. Risk assessment instruments indicate risk of future target events. They do this by classifying clients into groups, usually described as low-, medium-, and high-risk, based on scores generated from a set of individual risk factors accumulated into a single index. The hallmark of actuarial risk assessment instruments is empirical validation. Its utility depends on the ability to predict critical target events. Contextual needs assessment, on the other hand, identifies targets of intervention and contributes to case plan goals. It is less tied to empirical research in that, although it may draw on findings from empirical research, it in and of itself is usually not subjected to empirical validation. Most often, they are developed through expert consensus.

Evidence based practice principles integrate risk and needs assessment findings into case planning. This begins by asking clinically relevant questions that are potentially answerable through a search and critical appraisal of available evidence (Straus et al., 2005). Shlonsky and Wagner (2005) suggest that clinically relevant questions should be grounded in findings from contextual needs assessment. For example, should a need assessment uncover deficient parenting skills accompanied by low motivation to participate in mandated interventions in a high risk family, human services professionals may seek empirically grounded interventions focused around the following, or similar, questions:

1. What interventions improve parenting skills among child welfare involved parents?
2. What interpersonal practice skills increase participation of mandated clients in child welfare interventions?

Precisely worded questions like these are the staging ground for locating answers based on empirical evidence in electronic and library resources. Although investments in technology and electronic data-bases may be required to implement this approach, its payoff is in a greater integration of practice with empirical research findings and in the promise of improved outcomes for individual cases.

Evidence based practice procedures, grounded in structured risk and needs assessment, initiate the process of intervention planning. By linking Sackett's model of evidence based practice (Straus et al., 2005) with Baird's (1984) model of structured decision making, Shlonsky and Wagner (2005) imply that a separate needs assessments is required to fully implement evidence based case planning. In so doing, they, with Baird and others, have highlighted the notion that actuarial risk assessment serves the decision making processes by providing a singular piece of information — risk of critical target events. Moreover, they have circumscribed its potential to guide the construction of clinically relevant questions, a function left to contextual needs assessment. In their words:

> Actuarial risk assessment does not assist in case specific clinical decisions, nor does it engage the family in cooperative case planning, assess their functioning, establish case plan goals, or choose treatment interventions … risk assessment simply informs the worker about the likelihood of future maltreatment at a given point in time … a comprehensive, contextualized family assessment is required to identify and clarify relevant problems at the individual, family, community, and societal level. (p. 421)

In essence, Shlonsky and Wagner's (2005) argument echoes early distinctions between actuarial risk assessment and clinical/impressionistic risk assessment suggested by Meehl (1954). In his seminal work, Meehl reviewed evidence indicating that actuarial predictions are more accurate than those made by clinical methods. In so doing, his discussion brought to light a central distinction between actuarial and clinical processes. He noted that actuarial prediction methods work because they are capable of establishing an optimal combination of factors that discriminate between subjects likely to experience a critical target event versus subjects unlikely to experience the same event. Alternatively, clinical processes involve the creation of causal hypotheses. Whereas actuarial

tables are useful to ascertain risk of future critical events, clinical methods identify the causal processes which, if disrupted through intervention, will prevent deleterious outcomes. Shlonsky and Wagner doubt the contribution of actuarial risk assessment to this process and suggest that contextual needs assessment instruments supports it.

But this contention has not been examined. To be sure, the structure of many contemporary risk assessment instruments might provide evidence in support of Shlonsky and Wagner's (2005) argument. Their brevity may lack face validity with human service professionals charged with case planning. However, it is not at all clear that clinical hypothesis grounded in contextual needs assessment instruments could do better. Recall that, unlike the highly empirical actuarial method, expert and practitioner consensus guides the development of contextual needs assessment instruments. Interventions targeted at "needs" identified through the process of contextual needs assessment may not achieve their intended effect – preventing critical target events – if they are based on misdirected causal hypotheses. Required is an assessment aid that highlights intervention targets that are closely aligned with empirical evidence.

3. Conceptualizing risk and need

Creation of such an instrument is confused by the poorly defined distinction between "risk" and "need." The literature on traditional structured decision making models does not address this distinction. This section addresses the problem through the lenses of the emerging risk and resilience paradigm.

Risk is an empirical probability. "At risk" refers to an enhanced likelihood of experiencing some target event usually involving disrupted health or psychosocial development. Risk factors are bio-psycho-social correlates of the target event. They are statistical markers that indicate degrees of risk. Often, risk factors have general effects; that is, they indicate risk of multiple developmental problems. For instance, poverty is associated with developmental problems ranging from child abuse and neglect to low academic performance (Fraser, 2004). Other risk factors have specific effects. For instance, peer delinquency is a factor commonly associated with repeated juvenile delinquency (Cottle, Lee, & Heilbrun, 2001) but would not be expected to mark risk of future maltreatment.

Risk factors can be classified in various ways. The most simple classification scheme describes two types: static and dynamic risk. Static risk factors are historical in nature and as such tend to remain fixed or indicate greater risk over time. Assaults to fetal development through maternal alcohol or tobacco consumption are one type of static risk factor. Another is history of child maltreatment. In both instances, measured risk cannot be reduced, though prior child maltreatment risk can increase as maltreatment episodes increase over time. In contrast, dynamic factors are more contemporary to the assessment and can change with changing circumstances. In the California Family Risk Assessment reported by Shlonsky and Wagner (2005), the item that measures "primary caretaker provides physical care inconsistent with child's needs" (#N6; p. 414) and the item that rates "primary caretaker characteristics" (#A-7; p. 414) are both examples of dynamic risk factors. Theoretically, either factor could be reduced or eliminated through successful intervention or by resilient adaptation.

Other risk factor classifications have been suggested or are implied in the literature. Hoge (2002), writing for criminal justice and juvenile justice scholars, defined three types: static factors, criminogenic needs, and responsivity factors. Static factors is as defined above and criminogenic needs parallels dynamic factors. Responsivity factors, on the other hand, are correlates of successful intervention like motivation and beliefs about the reasons that justify formal intervention. These would not be expected to activate risk of a critical target event except in the presence of other measured risk in the static and dynamic factors domains. Interactions among different types of risk factors have been observed in Rutter's (2005) research on susceptibility factors and Masten's et al. (1999) research on adaptational systems and resilience. The growth in our understanding of risk factors and their interactions suggests complex relationships that, if well understood, could increase the sensitivity and specificity of social interventions.

Despite increased sophistication, it remains that the predictive validity of risk factors, founded on their statistical association with critical target events, is insufficient to imply causality. The relationship between school behavior problems, a risk factor included on the North Carolina Assessment of Risk (NCAR), and delinquency recidivism provides a compelling example. This factor was among the strongest predictors of recidivism in three samples of delinquent juveniles in North Carolina (Schwalbe, Fraser, Day, & Arnold, 2004; Schwalbe, Fraser, & Day, 2006; Schwalbe, Fraser, Day, & Cooley, in press). Juveniles evidencing increasing behavioral difficulties at school had progressively higher rates of recidivism than juveniles without behavioral difficulties. Does this finding suggest that school behavior problems in some way cause delinquency? Probably not. Instead, it is likely that school behavior problems and chronic delinquency are companion developmental problems that tend to co-vary.

Herein lies the apparent limitation of risk factors and actuarial risk assessment instruments. Many authors suggest that intervention planning requires valid causal theory. Masten and Coatsworth (1998) assert, for example, that "… to effect change, one must in some way manipulate a causal process" (p. 213). This maxim prompts a knotty problem — upon what guidance should human service professionals develop case goals and intervention plans? If actuarial risk assessment cannot provide sufficient grounds for a causal theory, on what grounds should interventions be developed?

Fraser, Kirby, and Smokowski's (2004) conception of "risk chains" may provide one alternative. A risk chain is a pattern of interlocking risk factors that describe a pathway culminating in a critical target event. Similar to a causal model, risk chains represent a hypothesis or theory describing how risk factors operate together to increase the probability of critical target events. In some fields, theoretical research on risk and resilience is sufficiently advanced to support the development of global theories. The Social Development Model, which explains how risk factors organize to make pro-social and anti-social behavior more likely, is one example (Catalano & Hawkins, 1996). In other fields, research on risk and resilience is less formally developed. In these cases, human services professionals might develop individualized risk chains. Regardless, sufficient information about dynamic risk factors, responsivity factors, susceptibility factors, and adaptational factors that impinge upon a case is required.

These non-static risk factors may constitute "need" as it was understood by Shlonsky and Wagner (2005). Traditionally, needs have been conceptualized broadly within the ecological framework (Pardeck, 1988; Germain & Bloom, 1999). Assessment of "needs" is multi-dimensional encompassing client goodness of fit within multiple domains of functioning. While highly influential in the human services, the ecological model gives little direction with respect to which domains should receive priority attention and which can be fruitfully avoided (Fraser, 2004). The risk and resilience paradigm provides an alternative, though complementary, model. Through the benefit of empirical research findings, human services professionals are guided to focus their attention especially on non-static risk factors that demonstrate a statistical association with the target event of interest. Theoretically, with a comprehensive assessment of non-static risk factors, human services professionals could articulate case specific risk chains that explain the anticipated relationship between current risk and resilience conditions with predicted target events. Grounded theories of decision making suggest that human service workers already create such risk chains to inform and support intervention decisions (Klein, 1998; Dawes, 1999; Lipshitz, Klein, Orasanu, & Salas, 2001). The tricky question is: does the contextual needs assessment process recommended by Baird (1984) shore up the risk chain development process to align it more closely with evidence based practice principles? It can if it is firmly rooted in the risk and resilience paradigm. This can only happen if "needs" are synonymous with "non-static" risk factors. In essence, the distinction between "risk" and "needs" lacks conceptual standing. Instead, the key distinction is between the types of risks.

4. Integrating actuarial risk assessment and clinical decision making

One goal of all human services interventions is to promote client functioning so as to reduce the likelihood of key target events. Other goals are possible and likely. For instance, "well being" goals are also included in case plans. Nevertheless, the principle mandate of agencies like child welfare and the juvenile justice system is essentially the same — for protection from, and prevention of, critical target events.

The risk and resilience paradigm offers insights into how these mandates can be met. The most obvious strategy is to reduce risk. Though challenging, this strategy directs interventions at non-static risk factors to return cases to low risk status. For example, participation in promising parent education programs appear to reduce risks associated with problematic parenting skills (Reid, Webster-Stratton, & Baydar, 2004). A second strategy is to neutralize the effect of risk factors so that their relationship to the target event becomes less potent. Increasing the resource base of client systems, as when youth are referred to mentoring programs, is emblematic of interventions of this type. The cornerstone of either type of intervention is an accurate and valid assessment of malleable risk factors that, if altered or neutralized, will reduce the probability of repeated target events. Once identified, evidence based practice procedures can be utilized to develop case plans that are informed by the best available empirical research, are consistent with client circumstances, and individualized around client preferences and goals to the largest extent possible.

Shlonsky and Wagner (2005) argue that an actuarial risk assessment cannot provide this link. That is, that actuarial risk assessment instruments do not identify the full range of risk factors necessary for intervention planning. Indeed, the risk assessment instruments described in their article could not serve this function as they are weighted heavily toward the measurement of static risk factors. They identify few malleable risk factors. However, such an actuarial risk assessment instrument is possible. Actuarial risk assessment instruments can be constructed with a broad array of dynamic risk factors that could ground clinical hypotheses and could identify targets of intervention to reduce risk. Examples of three instruments developed for juvenile court decision making illustrate how this could happen.

4.1. Youth level of service/case management inventory

The YLS/CMI has received more attention in the literature than other risk assessment measures for delinquent juveniles (Hoge, 2001; Catchpole & Gretton, 2003; Schmidt, Hoge, & Gomez, 2005; Schwalbe, 2005). It is expressly designed to provide an empirical assessment of risk and to identify intervention targets (Hoge & Andrews, 2001). Its structure closely follows traditional psychometric measurement scales. It measures static, dynamic, and responsivity factors in seven domains (offense history, family circumstances/parenting, education/employment, peer relations, substance abuse, leisure/recreation, personality/behavior, attitudes/orientations). These are measured using multiple indicators, 42 items in all, each contributing a single point to the total risk score. Along with the estimation of risk, the YLS/CMI includes a structured case planning component to create the explicit link between risk assessment and case planning. Dynamic risk indicated in any domain suggests potential intervention targets and case-plan goals.

4.2. Arizona Risk/Needs Assessment

The Arizona Risk/Needs Assessment system is an example of how the traditional structured decision making model can be enhanced by closer coordination of actuarial risk assessment, a subsequent detailed assessment of dynamic factors, and case planning procedures. Implied by its name, the Arizona Risk/Needs Assessment system combines two parts: a risk scale and a needs scale (Risk/Needs Manual, FY2005). The risk scale was developed actuarially using a large sample of delinquent juveniles in Arizona (LeCroy, Krysik, & Palumbo, 1998; Krysik & LeCroy, 2002). It estimates risk through an additive index of ten factors. Five are explicitly historical (offense history, offense characteristics, ever assaultive, ever truant, runaway attempts), five are dynamic (juvenile relationship with family, drug use during the past year, current school enrollment, behavior problems/mental health issues, peer relationships). The risk scale is similar to many brief actuarial instruments already implemented throughout the US. The Arizona Risk/Needs Assessment system is distinctive, however, owing to the close coordination between the risk scale and the needs scale. Except for offense history and offense characteristics, each item on the risk scale corresponds to a detailed set of

measures on the needs scale. For example, when the risk scale indicates that a juvenile is not currently enrolled in an educational program, the needs scale prompts probation officers to indicate whether the juvenile is participating in a GED related program, seeking/obtained employment, or has withdrawn from school. This ensures that detailed assessments remain targeted at risk factors proven to predict repeat delinquency. The assessment system is integrated in the Juvenile On-Line Tracking system (JOLTS), a state-wide information management system.

4.3. Joint Risk Matrix

The Joint Risk Matrix (JRM) was designed to increase the predictive validity and extend the functionality of the NCAR (Schwalbe et al., 2006). It is composed of two distinct scales: the static risk scale and the dynamic factors scale. Each scale is scored separately. The static risk scale measures three factors: age at first offense, number of prior offenses, and history of running away. The dynamic factors scale measures eleven dynamic risk factors: alcohol/drug abuse, school behavior problems, peer delinquency, current family criminal justice involvement, hyperactivity/impulsivity/inattention, mental health problems, juvenile cooperation, juvenile expression of remorse, and parental cooperation. Total risk scores for each scale are divided into three risk classes (low, medium, high-risk) which are cross-classified into a risk matrix. Fig. 1 shows the risk matrix. It shows that juveniles classified into the high risk category on either the static risk scale or the dynamic factors scale receive a final risk classification of high risk. Similarly, juveniles classified into the low risk category for both instruments receive a final risk classification of low risk. Remaining combinations result in a final risk classification of medium risk. While the explicit link between the JRM and case planning remains in development, the risk matrix (Fig. 1) suggests how this link could happen. Case plan goals could be aimed at reducing measured risk in the dynamic risk scale. With successful intervention, many juveniles with low or medium risk ratings on the static risk scale could be re-classified into lower risk groups.

5. Implications

Despite their differences, the instruments highlighted above share two key traits in common. First, they measure more dynamic risk factors than static risk factors. While the California Family Risk Assessment has a high concentration of static risk factors (75%), only 12% of the YLS/CMI and 21% of the Joint Risk Matrix are static (Hoge & Andrews, 2001; Shlonsky & Wagner, 2005; Schwalbe et al., 2006). And although 50% of the Arizona Risk/Needs Assessment risk scale is static, the need scale is heavily dominated by dynamic factors (Risk/Needs Manual, FY2005). Second, each of the risk factors was shown in their respective validation studies to predict juvenile recidivism (LeCroy et al., 1998; Jung & Rawana, 1999; Hoge & Andrews, 2001; Krysik & LeCroy, 2002; Schwalbe et al., 2006). These shared characteristics suggest at least three benefits for intervention planning.

The first benefit is that they indicate research supported intervention targets. Obviously, only risk factors, both static and dynamic, that predicts the key target event merits inclusion in any risk assessment. Therefore, case plans would be aligned with the risk and resilience perspective to the extent that they are associated with risk assessment findings. Human services professionals responsible for case planning will continue to develop case-level hypotheses and risk chains to justify interventions. The advantage of this approach is that they will be more likely to anchor their hypotheses in risk factors that, if changed through intervention, hold most promise for reducing rates of critical target events. The second benefit is that risk assessment instruments could be used to monitor progress in interventions. This is owing to the higher concentration of dynamic risk factors necessitated by the approach advocated here. Risk assessment instruments loaded with malleable risk factors can show changing risk in a downward direction.

Third, actuarial risk classifications could frame intervention goals. Recall that the first function of actuarial risk assessment instruments is to classify clients into groups according to cumulative risk scores. These groups will vary markedly in the rates at which critical target events occur. An intermediate goal in the intervention process could be to alter a client system's group membership — from high risk to medium risk for example. Theoretically, re-classification into a new risk group should suggest a change in the probability of future critical target events.

For example, suppose that findings of the JRM for a delinquent juvenile revealed high risk status for repeat delinquency owing to elevated scores on parental supervision, peer delinquency, and alcohol/drug abuse. A juvenile probation officer may hypothesize that inadequate parental supervision affords the juvenile more freedom to associate with a delinquent peer group which in turn reinforces substance abuse through a process of "deviancy training" (Dishion, Poulin, & Burraston, 2001). The structure of the JRM suggests that risk reduction in each of these areas, with a special emphasis on parental supervision, would reduce the probability of repeat offending

	Dynamic Risk Level		
Static Risk Level	**Low (0-6)**	**Medium (7-11)**	**High (12+)**
Low (0-2)	*Low*	*Medium*	*High*
Medium (3-4)	*Medium*	*Medium*	*High*
High (5+)	*High*	*High*	*High*

Fig. 1. Joint Risk Matrix (final risk classification).

from a high-risk level to a medium-risk level. The literature supports Multi-Systemic Family therapy for risk reduction efforts of this type and may be recommended for this case (Henggeler, Borduin, Schoenwald, Rowland, & Cunningham, 1998). Periodic re-assessments with the JRM would document changing risk over time and contribute to an evaluation of intervention efficacy.

6. Conclusion

This analysis, prompted by Shlonsky and Wagner's (2005) proposal to join structured decision making with evidence based practice, suggests a revised model of structured decision making rather than its wholesale rejection. To be sure, Baird's (1984) model ushered an era of structured decision making in child welfare and juvenile justice. The benefits of this approach, which includes transparency, equity, and increased standardization, are highly prized in human service systems where the authority to restrict client civil rights and impose institutional placements weighs heavily. The revision proposed in this article calls instead for a new generation of decision aids. In brief, it seeks innovative actuarial risk assessment instruments that perform dual functions: estimation of risk and support of clinical processes involved in case planning. While several instruments capable of performing these functions have been developed for the juvenile justice system, their development in child welfare appears to lag.

Implementation of the proposed revision requires three changes in current practice. First, the goal of risk assessment development should expand beyond predictive validity concerns. These have historically led to the construction of brief risk assessment instruments using multivariate statistical approaches consistent with the classic actuarial method. Instead, risk assessment instruments should strive to include all research supported domains of dynamic risk and protective factors. In settings where institutional support is less dependent upon risk assessment brevity, traditional psychometric procedures could guide instrument development (DeVellis, 2003). These instruments would employ a multi-item measurement strategy for critical risk domains which would increase validity with the added benefit of reducing measurement error — a seemingly intractable problem for risk assessment design. In other settings, brief instruments could be transformed to model characteristics of more comprehensive instruments as was done with the Arizona Risk/Needs Assessment and the Joint Risk Matrix. In each case, risk assessment instruments provide estimation of risk and contribute directly to hypothesis formation and case planning.

Second, as recommended by Shlonsky and Wagner (2005), organizational cultures must support structured decision making and evidence based practice in order to maximize their effectiveness. Shlonsky and Wagner note that support for inquiry and evaluation are necessary pre-conditions for the successful implementation of their joint structured decision making/evidence based practice strategy. Lawler and Bilson (2004) add the need for professional reflection and observe that the explicit support of these practices by professional teams increases their influence on individual practice. Absent the support of agency culture, human service professionals will perceive structured decision making strategies and evidence based practice procedures as an administrative burden rather than as an aid to effective interventions. This is an arena for scholarly inquiry and policy development that is sorely in need of attention.

Third, continued reflection and research is required into the utilization of risk assessment findings by human service professionals. Toward this end, Shlonsky and Wagner's (2005) work is a substantial advance forward. By invoking principles and procedures from the field of evidence based practice, they have identified a practical integration of risk assessment with the cognitive processes that underlie the intervention planning process. It remains to be seen, however, whether or not actuarial risk assessment instruments that follow a structure recommended in this article can influence the hypothesis development process that human services workers undertake when planning interventions. Unknown are the design features of these instruments that influence not only the attitudes of their users toward the instruments but also the deliberations of those users about their clients. In the context of evidence based practice procedures, the empirical question is: to what extent does the implementation of structured decision making tools like comprehensive actuarial risk assessment shape the client oriented clinical questions that are the focus of evidence based practice? It is the answer to this question that will ultimately indicate the utility of risk assessment.

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