

Improving Youth Mentoring Interventions Through Research-based Practice

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Published online: 20 February 2008
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Abstract Youth mentoring programs are in the limelight. Over three million young people have a Big Brother, a Big Sister, or a similar adult volunteer involved in their lives—a sixfold increase from just a decade ago—and generous federal funding continues to fuel new initiatives. This expansion speaks volumes about the faith our society places in one-on-one relationships between vulnerable young people and caring adults. But what do we know about the effectiveness of this intervention strategy? A better understanding of the research evidence for youth mentoring, including findings from reviews, evaluations, and meta-analyses, provides a basis for a more informed, practically applicable approach to strengthening youth mentoring interventions.

Keywords Mentoring · Intervention · Policy

There is no shortage of information on the topic of youth mentoring. In addition to a growing number of academic books and peer-reviewed journals devoted to the topic, the sheer volume of articles and online reports is enough to numb even the most curious of minds. Despite this wealth of information, the base of evaluation findings on which policy and practical decisions rests remains curiously thin. Mentoring strikes deep emotional chords and has attracted

powerful constituents who, at some level, look to evaluations to confirm what they intuitively hold to be true. Likewise, practitioners tend to value pure and simple findings that can be used to for action. Although it can be difficult to satisfy such appetites while remaining true to the evidence, a more nuanced, understanding of what it takes to deliver high quality, effective youth mentoring could, in fact, lead to allocations for program enrichments that would yield a higher return on investments.

So, what *do* we know about the efficacy of youth mentoring? From experience and the research that has already been compiled we know that, when done well, mentoring is an effective intervention strategy for some young people. Evaluations of formal one-to-one mentoring programs have provided evidence of their success in promoting better social, academic, and behavioral outcomes (DeWit et al. 2006; DuBois et al. 2002a, b; Grossman and Tierney 1998; Herrera et al. 2007; Karcher 2005; Keating et al. 2002). Yet such evidence is in relatively short supply. The most scientifically rigorous verdict on effectiveness was reached over 5 years ago, when a meta-analysis of 55 youth mentoring program evaluations was conducted (DuBois et al. 2002a). Findings from this analysis, as well as evaluations that have been conducted subsequently, will be described in later sections. To this end, the evaluation literature can be broadly defined as fitting into somewhat overlapping categories of reviews, program evaluations, and meta-analyses.

Reviews

Several comprehensive reviews of the youth mentoring literature have emerged from the US, Canada, and the UK in recent years (see Table 1). Although such reviews can move readers beyond the more piecemeal approach of

Invited paper presented to Division 27 of the American Psychological Association, San Francisco, August 18, 2007.

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Table 1 Summary of reviews

Review	Affiliation(s)	Number of studies reviewed*	# Peer-reviewed	Examples of overall tone
Hansen (2007)	Big Brothers Big Sisters of America	61	35	“The studies consistently find a broad range of positive outcomes from both community-based and school/site-biased mentoring. Outcome areas include attitudes, academic and socio-emotional behaviours with various youth populations. The literature continues to explore the extent and depth of these outcomes, though it is clear that programs using identifiable positive program practices regularly yield higher outcomes in the youth than programs that are not well-run” (3).
Phillip and Spratt (2007)	The Rowan Group, University of Aberdeen	24	3	“While it is clear that youth mentoring and befriending have minimal impact on offending behaviour and attitudes, research to date has pointed to the very different ways in which mentoring in particular, has been delivered within programmes....Questions of dosage, duration and intensity demand more intensive scrutiny. In particular, more requires to be learned about why matches fail and what the implications are for those young people who do not ‘stay the course’” (41).
Roberts et al. (2004)	Institute of Health Sciences, City	6	3	“On the basis of these findings, we concluded that non-directive mentoring programmes delivered by volunteers cannot be recommended as an effective intervention for young people at risk of or already involved in antisocial behaviour or criminal activities...We are not suggesting that mentoring cannot work. There are many different kinds of mentoring, and some show better evidence of effect than others. Our current state of knowledge on the effectiveness of mentoring is similar to that of a new drug that shows promise but remains in need of further research” (p. 513).
Liabo and Lucas (2006)	Evidence Network, Economic and Social Research Council, London	15	8	“We currently do not know whether mentoring is an overall positive intervention. Mentoring therefore needs to be evaluated in a randomised controlled trial.”
Brady et al. (2005)	Child & Family Research and Policy Unit; Health Service Executive Western Region; Department of Political Science and Sociology, National University of Ireland, Galway	17	8	“A range of research highlights that mentoring can have positive outcomes with young people. The best outcomes from mentoring are achieved when strong relationships develop and where young people experience environmental risk and disadvantage. Positive outcomes are more likely to accrue when ‘best practice’ procedures are in place—including screening of volunteers, supervision, training, ongoing support and group activities. Where such practices are neglected, there is potential for programmes to have negative effects on youth” (p. 29).
Hall (2003)	The SCRE Centre, University of Glasgow	35	20	“The US studies indicate that mentoring can have a significant impact on a number of measures, but that this impact may not be large... The best US evidence is that mentoring may have some impact on problem or high-risk behaviours, academic/educational outcomes, and career/employment outcomes” (p. 15).
Jekielek et al. (2002)	Child Trends	19	6	“A number of well-designed program evaluations indicate that mentoring programs are beneficial to at-risk youth. Given accumulating evidence about the effectiveness of these programs, and widespread interest in initiating these programs, further research would be helpful to those who seek to implement mentoring programs” (p. 35).
Sipe (2002)	Public/Private Ventures	20	4	“First and foremost, the field now has definitive evidence of the positive benefits mentoring can produce for the youth being served by these programs. We have also learned that unrelated youth and adults can come together to form meaningful and satisfactory relationships but not without time and the right attitude” (p. 259).

* Does not include meta-analyses or review papers

individual studies, mentoring programs can vary on a multitude of dimensions (e.g., duration, intensity, integration with other services, target populations, approaches) in ways that complicate global assessments of effectiveness. Similarly, although high quality work is often included, many reviews also contain a discouraging mix of flawed studies. It is not uncommon, for example, to see rigorously, peer-reviewed research placed on relatively equal footing with unpublished in-house reports. Moreover, reviews of overlapping bodies of work sometimes draw dramatically different conclusions (Boaz and Pawson 2005). For example, a recent review (Hansen 2007, p. 4) concluded that, “studies consistently find a broad range of positive outcomes from both community-based and school/site-based mentoring.” A survey of many of the same studies, however, led researchers (Roberts et al. 2004, p. 513) to conclude in the *British Medical Journal (BMJ)* that “mentoring programmes as currently implemented may fail to deliver on their promises.” This difference of opinion stems, in no small part, from how and what evidence is considered. For example, the *BMJ* review and others (e.g., Roberts et al 2004; Hall 2003; Philip and Spratt 2007; Liabo and Lucas 2006), place considerable stock in meta-analyses of program effects. By contrast, Hansen (2007) and others (Jekielek et al. 2002; Sipe 2002) put more weight on the 1995 evaluation of Big Brothers Big Sisters of America, which has been interpreted quite positively. More generally, reviews tend to differentially highlight potential iatrogenic effects and set different inclusion standards (i.e., strict evaluation versus a mix of evaluations, secondary analyses, and more qualitative program descriptions). Likewise, review articles and chapters in special issues of journals and academic handbooks, which summarize the literature as it bears on particular topics (e.g., gender, special needs) are only as strong as the research and evaluations on which they stake their claims (Pawson 2006).

Mentoring Program Evaluations

Evaluations of formal one-to-one mentoring programs have provided evidence of success at reducing rates of problem behaviors, academic difficulties, and psychological disturbances. Yet, these evaluations vary in their ability to rule out confounds and, as in all program evaluations, there exists a constant tension between the real and the ideal. Even when well conducted, findings from the evaluations that have been conducted since DuBois et al.’s (2002a) meta-analysis do not suggest the strong effects that are central to arguments for investment in mentoring initiatives. In some instances, negative or no effects have been found (e.g., Blechman et al. 2000), or effects have eroded

to non-significance within only a few months of program participation (Aseltine et al. 2000; Herrera et al. 2007). In fact, only one mentoring program, *Across Ages*, has achieved the status of “model program” on the Substance Abuse and Mental Health Services Administration (SAMHSA) Registry of Evidence-based Programs and Practices (NREPP), an online registry of independently reviewed and rated interventions.

Big Brothers Big Sisters of America (BBBSA) was listed on this registry as an “effective program,” a designation that stemmed, in part, from the landmark study of their community-based mentoring (CBM) programs (Grossman and Tierney 1998). Several widely cited, statistically significant differences in behavior, academic functioning between the mentored youth and the control group were uncovered after 18 months. Although promising, the standardized effect sizes across all outcomes was relatively small (.06)¹ (Herrera et al. 2007).

This same effect size was detected more recently, in a large randomized evaluation of BBBSA’s newer, school-based mentoring program (SBM) was conducted. In SBM, interactions between youth and mentors typically are confined to the school setting and the 1-year minimum commitment of mentors is shortened to the 9-month school year. Because SBM is linked to the academic calendar, the relationships tend to be less enduring than those forged through CBM. Indeed, the average length of the relationships in the SBM evaluation was just 5.3 months (compared to 11.4 months in the CBM evaluation), and nearly half (48%) of the relationships did not continue into the following school year. Overall, findings were mixed; at the end of the first school year, youth assigned to receive mentoring showed significant improvements in their academic performance, perceived scholastic efficacy, school misconduct, and attendance relative to a control group of non-mentored youth. Nonetheless, when youth were reassessed a few months into the following school year, most differences were no longer statistically significant.

Despite these somewhat discouraging trends, the group differences that have been uncovered in the national evaluations do give grounds for cautious optimism about the potential viability of mentoring interventions. Matches vary considerably in their effectiveness, depending on the characteristics of the individuals involved and the quality of the relationships they form, in ways that affect outcomes. Indeed, secondary analyses of the SBM evaluation data revealed that mentees who experienced longer, higher

¹ Although there are no easy conventions for determining practical importance, Cohen’s (1988) standards for interpreting effect sizes are as follows: an effect size value of .20 is a commonly used benchmark for a “small” effect, .50 for a “medium” effect, and .80 for a “large” effect.

quality relationships received bigger benefits than those in shorter or weaker relationships (Herrera et al. 2007). And, in Year 2, those involved in weaker relationships actually showed declines relative to their non-mentored peers. The same patterns have been found in community-based mentoring. When Grossman and Rhodes (2002) reanalyzed the BBBS community-based mentoring data taking the quality and length of relationships into account, wide variations in program effects emerged. But when all relationships are combined, as was the case in the analyses conducted for national evaluations, positive outcomes are easily masked by the neutral and even negative outcomes associated with less effective mentoring relationships. The challenge is to identify those program inputs and factors that can facilitate the formation of close, enduring, and, ultimately, effective mentor-youth ties.

Meta-analysis

A series of meta-analyses have permitted researchers to empirically summarize the results of mentoring across multiple studies and to statistically determine the strength of program-related effects. Although the ability to code such studies on important dimensions (e.g., relationship quality, intensity, and length, program approach) is constrained by whatever information is provided in the original study (see Cooper and Hedges 1994; Lipsey and Wilson 2001), comparisons across studies have revealed important patterns and gaps in the literature.

In their meta-analysis on youth mentoring to date (see Table 2), DuBois et al. (2002a, b) found favorable effects across relatively diverse types of program samples. Among the small number of studies that included follow-up assessments, the benefits of mentoring appeared to extend a year or more beyond the end of a youth's participation in the program. As DuBois et al. (2002a) note, however, the magnitude of these effects on the average youth participating in a mentoring program was modest. Although there was considerable variation across studies, the effect size was relatively small (.14), particularly in comparison to the effect sizes that have been found in meta-analyses of other prevention programs for children and adolescents. For example, a meta-analysis of 177 prevention studies found effects ranging from .24 to .93, depending on program type and target population (Durlak and Wells 1997). Meta-analyses of youth psychotherapy, encompassing hundreds of studies, have reported even stronger mean effects, ranging from .71 to .88 depending on the age of the children being treated (Weisz et al. 2005). But, importantly, while the overall effect size of mentoring programs was modest, substantial variation in the effectiveness of different programs emerged across these studies. More

structured programs, in which there were clear expectations, a focus on instrumental goals, and ongoing support to volunteers yielded notably strongest effects. Interestingly, a similar pattern emerged in meta-analyses of youth psychotherapy. Weisz et al. (2005, p. 631) note that, in studies of "treatment as usual in settings in which therapists were able to use their clinical judgment to deliver treatment as they saw fit, not constrained by evidence-based interventions or manuals, and in which there was a comparison of their treatment to a control condition" effect sizes were close to zero (see e.g., Weisz et al. 1995).

More recently, Tolan et al. (2005) conducted meta-analysis of 31 youth mentoring programs. Focusing on a more limited array of outcomes, the researchers found effect sizes of .24–.28 for delinquent and aggressive outcomes, respectively, while drug use (.08) and academic outcomes (.16) were somewhat smaller. The authors concluded that additional evaluations that include random assignment and growth measurement over time were needed. Jolliffe and Farington (2007) explored the effects of youth mentoring on recidivism among juvenile offenders. Their analyses, which were based on 18 evaluations, revealed a combined fixed effect of only .08. Again, significant variation emerged across studies; seven studies showed significant positive impacts on re-offending while an equal number showed negative (but not statistically significant) impacts. Programs that combined mentoring with other interventions, required weekly meetings for longer periods of time per meeting, and had more enduring relationships had the most positive effects on re-offending. Looking at a broader range of outcomes, Eby et al. (in press) conducted a meta-analysis of 40 youth mentoring evaluations, comparing them to 53 adult workplace mentoring and 23 college-level academic mentoring evaluations. Again, the effect sizes were generally small, with mentoring more highly related to some outcomes (school attitudes) than others (psychological distress). Interestingly, effect sizes were found to vary across the three types of mentoring, with absolute values ranging from only .03 to .14 in youth mentoring to .11 to .36 and .03 to .19 in academic and workplace mentoring, respectively. This relative ranking is consistent with the previous meta-analysis, and makes sense when one considers the greater challenges facing youth and the fact that academic and workplace mentoring includes a mix of assigned and natural mentors. Nonetheless, the authors conclude that, "we believe the results underscore the need to temper what are sometimes seemingly unrealistic expectations about what mentoring can offer to protégés, institutions, and society at large." Finally, Smith (2002) reports an effect size of around .20 across 43 studies. Similar to Tolan et al. (2005), effect sizes varied depending on the outcome assessed.

Table 2 Mentoring meta-analyses

Author, Year	# Of studies (# of samples)	Average effect size	Effect size-range	Moderators associated with larger effect size	Overall conclusion about effectiveness of mentoring
Eby et al. (in press)	(40)	–	.03–.14 (Absolute value)	Meta-analysis of three major areas of mentoring: (1) youth, (2) academic and (3) workplace. Type of mentoring—smaller effect sizes for youth mentoring, compared to academic and workplace mentoring.	“This pattern seems to suggest that generally speaking academic mentoring has stronger effects than does youth mentoring and that workplace mentoring is somewhere in between... youth who are mentoring commonly face numerous challenges (e.g., academic problems, parental conflict, unhealthy peer relationships) that may be difficult to overcome with mentoring alone” (p. 16).
Jolliffe and Farrington 2007 ¹	16 (18)	0.079	–.244–1.271	Study reported characteristics of mentoring interventions with larger effect sizes (i.e. did not use moderator analyses). Longer duration of each meeting Greater frequency of each meeting—meeting once a week or more (versus less often, or frequency unspecified) Mentoring as part of a multi-modal treatment (versus mentoring as sole intervention) Youth apprehended by police (versus at-risk because of “social situation,” during probation, or on parole) Lower quality of methodology Smaller sample size	“Mentoring is a promising, but not proven intervention. Mentoring programmes where mentoring was combined with other interventions and where mentors and mentees met at least weekly and spent a longer time together per meeting (e.g. five or more hours) were more successful in their impact on re-offending as long as the mentoring continued” (p. 9).
Tolan 2005 ²					
<i>Delinquency</i>	18	0.32	–.18–1.73		“Potentially substantial benefit for delinquency.”
<i>Aggression</i>	5	0.22	–.05–.44		“Promising findings for aggression.”
<i>Drug Use</i>	5	0.08	–.13–.19		“Not likely effect for drug use.”
<i>Academics</i>	14	0.23	–.15–1.45		“Moderate effect for academic achievement.”

Table 2 continued

Author, Year	# Of studies (# of samples)	Average effect size	Effect size-range	Moderators associated with larger effect size	Overall conclusion about effectiveness of mentoring
Smith 2002– <i>Overall</i> ³	43	0.20	-.80–1.65	<p>Review process—peer-reviewed studies (versus non-peer-reviewed); non-peer-reviewed studies (versus dissertations/theses)</p> <p>Non-experimental (versus experimental design)</p> <p>Lower treatment fidelity—“not reported/low” (versus “medium”) fidelity; “medium” (versus “high”) fidelity</p> <p>Source of outcome data—“youth and other” (versus “youth only” and “other only”)</p> <p>Youth age—“high school” and “mixed” (versus “middle school”)</p> <p>Youth gender—primarily female (versus primarily male or mixed) samples</p> <p>Youth ethnicity—primarily African American (versus mixed) samples</p> <p>Risk criteria—“academic problems” (versus “behavioral problems” or “other”)</p> <p>Natural (versus formal) mentoring</p> <p>Frequency of contact—“biweekly” or “more than once a week” (versus “once a week”)</p> <p>Less time per visit—“less than one hour” (versus “1–2 h” or “more than 2 h”)</p> <p>Matching of mentor dyads—“systematic matching” (versus “mentors choosing mentee” and “matching by common interests)</p> <p>Additional treatment (versus mentoring only)</p>	<p>“Despite the relatively small size of mentoring effects, these findings hold potential value when viewed in light of the cost effectiveness of using volunteers as direct service providers. Additionally, when the sheer volume of mentored youth is considered, even a small effect size can produce beneficial outcomes across a large number of children” (p. 57).</p>

Although less thoroughly explored than in the DuBois et al. study, the findings of the more recent meta-analyses suggest that the effects are likely to vary depending on an array of youth, mentor, and program characteristics as well as the quality of the evaluation methodology and outcomes measured. Given this variation, it is unfortunate that only two of the meta-analyses (DuBois et al. 2002a, b; Smith 2002) have conducted formal tests for moderators of program effects. A study that includes a systematic, up-to-date meta-analytic review of the current literature and a thorough test of the moderators would thus represent a significant contribution to the literature. Several well-designed evaluations of multiyear mentoring programs are underway or recently completed which, when combined with the smaller evaluations that have been conducted in recent years, will provide a better sense of the moderating variables and their association with outcomes. The inclusion of these additional studies will help practitioners and policy-makers establish more realistic goals and expectations concerning program scale, intensity, length and outcomes. For now, as unsatisfying as it may sound, the conclusion that “robust research does indicate benefits from mentoring for some young people, for some programmes, in some circumstances, in relation to some outcomes,” is probably the closest to a “bottom line” on youth mentoring that can be reached (Roberts et al. 2004).

Implications for the Practice of Youth Mentoring

The above review offers a somewhat sobering evaluation of the current state of evidence for youth mentoring, while pointing to strategies for improving programs, relationships, and outcomes (Weissberg et al. 1989). To a certain extent, however, the field of youth mentoring has taken on a public life of its own—a life that is, at times, removed from the scientific evidence. Despite expansive goals, there has been no clear road map for how to scale up this intervention approach in ways that provides high-quality mentoring relationships to all participants. Instead a relatively small base of evidence for quality community-based mentoring programs helped to galvanize a wide constituency of support for youth mentoring interventions. This support has stimulated aggressive growth goals, which have necessitated that mentoring be delivered more efficiently and less intensively (Rhodes and DuBois 2006).

Bringing an intervention to scale while retaining fidelity is costly and challenging, but it can be done. To meet this challenge, policy-makers and funders must demand greater adherence to evidence-based practice and rigorous evaluations to test the efficacy of existing programs and guide the development of new initiatives. Of course, as evidenced by this review, research findings tend to be complex and

replete with qualifications and nuances that do not always lend themselves easily to advocacy and practice. Yet, if we are to champion this intervention strategy, we must be prepared to grapple with its complexities—even at the risk of learning that commonly deployed programs and practices do not always improve youth outcomes. To this end, prevention researchers have a central role to play in comparing methods of implementation, analyzing success and failure in different applications of mentoring, and effectively communicating these findings back to the field.

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