

Training and Motivational Factors as Predictors of Job Satisfaction and Anticipated Job Retention among Implementers of a School-Based Prevention Program

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Despite increasing dissemination of prevention programs, little is known about program implementers, including factors that promote satisfying job roles. Using Self-Determination Theory as a conceptual framework, we surveyed 128 implementers of the widely disseminated Primary Mental Health Project. Implementers reported 7.1 years average experience on the job (range 1–25 years), and 55% had two or more years of college. In a multivariate regression model, predictors of higher job satisfaction were: lower education level; positive perceptions of supervision and continuing education opportunities; and satisfaction at work of needs for autonomy and competence. For implementers with ≤ 3 years experience, satisfaction of competence needs predicted job satisfaction; for implementers with >3 years experience, satisfaction of needs for autonomy and for relatedness predicted job satisfaction. Contrary to expectations, job satisfaction was unrelated to anticipated job retention.

Editors' Strategic Implications: *The authors provide a strong and novel test of Self-Determination Theory as it applies to the training and retention of the implementers of prevention programs. Their findings suggest that greater attention should be placed on supervision, motivation, and the psychological needs of implementers in training programs, and to the differential needs of long-term implementers versus beginners.*

KEY WORDS: prevention implementers; job satisfaction; retention; training; survey.

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Over recent decades, practitioners and researchers have developed a diverse array of interventions designed to prevent a broad range of health and mental health disorders. Numerous interventions have been evaluated in rigorous efficacy trials and shown to reduce dysfunction and enhance positive psychosocial and health outcomes for participants (e.g., Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995; Conduct Problems Prevention Research Group, 2002; Dumas, Prinz, Smith, & Laughlin, 2001). As a result of this generative base of prevention research, funders and government agencies can now provide community leaders and program implementers with lists of interventions that meet criteria as 'evidence-based' (e.g., Department of Education, Office of Safe and Drug-free Schools, n.d.; Surgeon General's Report, 2001). A number of developers of prevention programs have teamed with technical assistance organizations to facilitate dissemination of their interventions (e.g., Center for the Study and Prevention of Violence, Blueprints Initiative, n.d.; Center for Substance Abuse Prevention, n.d.; National Registry of Effective Programs, n.d.). Thus, many programs are moving out of controlled, experimental settings and into 'real world' settings.

The demand for community-based personnel to serve as 'implementation agents (IAs)' for prevention programs is bound to increase as efficacious interventions become more widely disseminated. To succeed in realizing the potential salutary benefits of prevention programs, IAs will be needed who are well trained to deliver standardized interventions and who are sufficiently satisfied with their roles that they will remain employed in the field. Moreover, IAs of diverse educational and professional backgrounds will be needed to implement interventions through a variety of delivery mechanisms. Some evidence-based interventions are delivered by teachers (e.g., Promoting Alternative Thinking Strategies (PATHS), Greenberg, Kusche, Cook, & Quamma, 1995). Others are implemented by public health nurses (e.g., Nurse-Family Partnership; Olds, 1997) or mental health professionals (e.g., The Incredible Years; Webster-Stratton, 1992). A number of other evidence-based interventions rely on 'paraprofessional' personnel who are not certified in a specific profession, and typically have fewer years education compared to professionals, but may receive extensive training to deliver a specific intervention model (e.g., Healthy Start Program; Duggan et al., 1999; Project CARES; Cabral et al., 1996).

The development of work conditions and roles that promote job satisfaction for IAs of prevention programs will be necessary to hire and retain a workforce for disseminated interventions. Indeed, low job satisfaction is associated with burnout and job loss among human service workers and helping professionals (Franze, Foster, Abbott-Shim, McCarty, & Lambert, 2002; Koeske, Kirk, Koeske, & Rautkis, 1994; Musick & Stott, 2000). Despite the potential importance of effective work roles and job satisfaction for IAs working in prevention, little is known about how these groups view their career paths, their training and supervision experiences, or which factors contribute to their job satisfaction and

motivation for working and remaining employed in prevention. Greater knowledge about these factors can contribute to more cost-effective implementation of preventive interventions by providing communities with tools for using their human resources more efficiently and effectively.

To address the need for knowledge in these areas, we conducted a survey study with paraprofessional implementers working in a widely disseminated school-based prevention program that serves kindergarten to third grade children with elevated behavioral and social-emotional problems (Primary Mental Health Project; Cowen et al., 1996). The survey assessed attitudes about their training and supervision, and views about their work environment and role satisfaction. The present study reports findings from this survey and results of tests of hypotheses derived from self-determination theory (Deci & Ryan, 1985), which provided a framework for evaluating relationships among satisfaction of motivational needs met in the workplace, overall job satisfaction, and anticipated job retention.

Implementer Competency, Setting, and Program Outcomes

To date, researchers studying factors that promote efficacy of prevention programs have focused primarily on differences in the explicit content of interventions in terms of modifying risk and protective factors. The term causative intervention theory has been used to describe the explicit intervention objectives for modifying risk and protective factors in order to reduce adverse health and mental health outcomes (Chen, 1998; Greenberg, Domitrovich, Graczyk, & Zins, 2001). However, researchers who have studied the effectiveness of evidence-based prevention programs transported to new community settings have found that a number of factors beyond the explicit intervention content contribute in significant ways to levels of success, or failure, of these programs to achieve intended intervention impact (Elias, Zins, Graczyk, & Weissberg, 2003; Elliot, 1998; Kalleswtad & Olweus, 2003; Nation et al., 2003). Such factors related to implementation of an intervention are encompassed in the prescriptive theory of an intervention.

A number of factors that influence an intervention's effectiveness are characteristics of the implementing social system, including the skills and training of the program implementers (IAs). For example, researchers have identified level of community readiness to adopt a program, site infrastructure that supports the implementation (i.e., adequate supervision, space, computer or other supports), and ability to recruit qualified program implementers as among the factors associated with effectiveness of interventions (Backer, 1994; Glasgow, Lichtenstein, & Marcus, 2003; Greenberg et al., 2001). In addition, greater intensity and dosage of the training materials and activities for implementers (Kelly et al., 2000) as well as higher fidelity of implementation of a program

(Kam, Greenberg, & Walls, 2003) are linked to more positive program outcomes. As a case in point, Kam et al. (2003) reported more positive impact on reducing children's problem behaviors associated with the classroom-based PATHS curriculum in school sites with higher administration support for PATHS, which was also associated with a higher degree implementation fidelity by teachers.

The preceding findings suggest that characteristics of the program implementers and of their work settings play important roles in facilitating, or in impeding, the successful implementation of prevention programs—perhaps as important as the explicit intervention content. Further, evidence is accruing that characteristics of the setting, such as organizational structure, cohesion, and shared goals, influence the attitudes and behaviors of the program implementers who deliver a program to its target population (Elias et al., 2000; Kam et al., 2003). In turn, implementers' attitudes and behaviors may influence both their effectiveness in delivering an intervention as well as implementers' own ongoing job satisfaction. Second, a growing body of research findings suggests that the competency of IAs to deliver a standardized intervention has a significant impact on whether an intervention achieves intended outcomes. Thus, effective training programs are instrumental in effective program disseminations (Bellg et al., 2004; Forgatch, Patterson, & DeGarmo, 2005; Kobak, Kipsitz, & Feiger, 2003; Miller & Binder, 2002). In turn, greater implementer competency may enhance IA satisfaction and longevity in their roles.

Self-Determination Theory and IA Job Satisfaction

Motivational theories provide a useful framework for evaluating prevention program implementers' job satisfaction in relation to characteristics of their workplace and training experiences. Indeed, both research and theory on employee job satisfaction in a wide range of fields have increasingly incorporated concepts of intrinsic motivation in addition to extrinsic motivational factors (Gagne, Senecal, & Koestner, 1997; Ryan & Deci, 2000; Vance & Davidhizar, 1997; Vroom & Deci, 1992).

Self-Determination Theory (SDT; Deci & Ryan, 1985) emphasizes three universal psychological needs and asserts that each must be satisfied for people to maintain optimal performance and well-being. According to the theory, the psychological needs for *competence* (succeeding at optimally challenging tasks for desired outcomes), *autonomy* (having choices and being the initiator of one's own actions), and *relatedness* (experiencing mutual respect, caring, and reliance with others) are innate and universal. Accordingly, when fulfilled in the workplace, psychological need satisfaction contributes to greater job satisfaction and performance (Deci & Ryan, 2000). Studies conducted in a range of organizational settings have reported findings consistent with Self-Determination Theory.

For example, factory workers who reported greater satisfaction of their needs for competence, autonomy, and relatedness in the workplace reported more positive job attitudes, higher self-esteem, and greater feelings of well-being than colleagues who experienced less need satisfaction (Illardi, Leone, Kasser, & Ryan, 1993). Other studies have demonstrated that an autonomy-supportive managerial approach is associated with higher levels of employee trust in the company and more job satisfaction (e.g., Deci, Connell, & Ryan, 1989). Finally, multiple studies have used SDT to develop and implement behavioral health interventions. Findings from across a number of such studies indicate that individuals with higher levels of perceived autonomy in their medical care (e.g., treatment for diabetes, interventions for smoking cessation) engage in greater and more sustained positive behavior change (Senecal, Nouwen, & White, 2000, Williams et al., 2002). Moreover, motivational researchers have begun to investigate differences in the salience of specific psychological needs for promoting change in differences phases of interventions. For example, findings from a recent study suggest that satisfaction of the need for competence may be particularly important in the early stages of developing new behaviors and skills (Minicucci, 2003).

For implementers working in community prevention programs, financial incentives for employment are often limited. Due to these limited extrinsic rewards for prevention IAs, satisfaction of intrinsic psychological needs for autonomy, competence, and relatedness may be particularly salient factors in promoting their job satisfaction. Moreover, IAs whose psychological needs at work are met, and who have greater job satisfaction, may also be expected to be more likely to remain in their jobs. To test these hypotheses, we designed our survey for IAs in a prevention program to include assessment of psychological need satisfaction in the work environment.

The principal aims of the present study were as follows: (1) determine the range and typical levels of job satisfaction and anticipated job retention among IAs in a school-based prevention program (PMHP); (2) evaluate the role that age, education, perceptions of training, and psychological needs satisfaction have in relation to job satisfaction and retention; and (3) explore comparisons between ‘beginner’ and ‘experienced’ IAs on these variables. We hypothesized that job satisfaction would predict anticipated job retention, and that positive perceptions of training and ongoing supervision would predict greater job satisfaction. Additionally, we hypothesized that positive psychological needs satisfaction at work (i.e., for competence, autonomy, and relatedness) would predict higher satisfaction and anticipated retention. Finally, we examined whether more years of experience as a prevention implementer would affect the relationship between motivational factors and job satisfaction and retention. Specifically, we expected that greater satisfaction of need for competence would be a more salient predictor of job satisfaction for “beginner” implementers than “experienced” implementers.

METHOD

Participants

Survey respondents were 128 implementation agents for the school-based Primary Mental Health Project (PMHP; Cowen et al., 1996). PMHP is an 'indicated' prevention program (Institute of Medicine, 1994) that provides a school-based intervention for young children (Kindergarten to 3rd grade) who are demonstrating elevated behavioral and/or social-emotional problems. The PMHP program was one of the first school-based programs in the U.S. designed to prevent mental health problems (Cowen et al., 1963) and is considered by experts to be an effective intervention in promoting improved classroom behavioral and social-emotional functioning (e.g., Durlak, 1995; Greenberg et al., 2001). The PMHP program is presently implemented in approximately 1,500 schools in over 15 states in the U.S., including 230 in New York State.

The PMHP program model has four defining components (e.g., Cowen et al., 1996): (1) an individual school-based intervention for young children early in their school career; (2) the use of standardized screening in classrooms to identify children with early adjustment problems from the school population of primary grade children; (3) delivery of the program by trained school-based paraprofessionals to targeted children; and (4) expansion of the role of school Mental Health professionals' (e.g., school psychologists, social workers, counselors) to include supervising paraprofessional IAs located in each school site. PMHP is a non-directive intervention model (Cowen et al., 1963, Cowen et al., 1996) derived from Rogerian play-therapy (Ginnott, 1959; Rogers, 1952) and social-learning frameworks (Bandura, 1986). For the intervention, PMHP paraprofessional IAs meet individually with referred children for 30–40 minutes a week over the course of one school year, using non-directive and supportive play techniques. IAs are trained through a combination of monthly workshops during the first year with the program, on-the-job experience, ongoing supervision by school-based mental health professionals, and opportunities for continuing education as part of the program model. However, individual school sites vary significantly in their provision of ongoing continuing education and level of site-based supervision. One reason for selecting PMHP IAs for the survey study was the success of PMHP in engaging and retaining IAs over time (Cowen et al., 1996).

Procedure

In the fall of 2002 surveys were distributed to 190 PMHP implementers in several regions of New York State. The survey had explicit instructions for respondents not to write their names or any other identifiers, in order to keep survey responses anonymous. In 2002, eight regional centers were in place to

provide training and consultation services to more than 100 schools implementing the PMHP program in NY State. Five of the coordinators of the regional centers agreed to distribute surveys to several schools in their region. The regions included New York City and Rochester (two urban Districts), a large suburban county, and three rural counties. The five training centers were chosen because they represented a cross-section of communities (urban, suburban, rural schools) implementing PMHP in the state.

Preserving respondents' anonymity was a high priority because the survey was distributed by regional centers that provided ongoing training to PMHP school sites and administrated some State-level funding for the program. Thus, to preserve anonymity of individual responses, and to reduce participants' perceptions that the aggregate set of responses from IAs within a school may be identified, the regional training directors did not report which specific schools participated. Accordingly, it was not possible to determine the extent to which the participating sample was representative of all those invited. In addition, because no central database of all PMHP implementers' characteristics was available, the participating sample could not be compared to all PMHP implementers.

Of 190 PMHP implementers invited to participate, 128 (67%) completed and returned the survey. No compensation was provided for participation.

Measures

Descriptive Information

The survey asked respondents to identify their: gender, age, race, highest education level (high school, some college, associate degree, bachelors degree, graduate degree), hourly pay rate, school location type (urban, rural, or suburban), work schedule, years worked as a PMHP implementer, average number of meetings with children in the PMHP program per week, and to check off the two primary reasons for taking, and keeping, their jobs as PMHP implementers from a list of nine alternatives.

Perceptions of Education/Training

The survey had 20 items pertaining to perceived benefit and satisfaction with both initial and ongoing educational experiences. These items were developed by the authors. IAs answered each item using a 7 point Likert-type scale (1 = not at all true, 7 = very true). Five items focused on *training* during the first year of employment, including attitudes regarding quality and quantity of their training (e.g., "The amount of training was sufficient for this job," "The training prepared me well for the job"). Perceptions of *supervision*, which is ongoing for PMHP

IAs and provided by school-based mental health professionals, was assessed by eight items (e.g., “I’ve learned a lot of skills from my supervisor that I use in my job,” “I do not get the individual time and attention I need from my supervisor”). Seven items focused on *continuing education* experiences that are available to IAs several times a year (“The quality of the continuing educational offerings has not been very good,” “They are an important ‘perk’ to the job”). Coefficient alphas for items assessing training, continuing education, and supervision were .83, .74, and .87, respectively, indicating satisfactory internal reliability of those subscales.

Job Satisfaction and Retention

IA job satisfaction was assessed using the 14-item Job Satisfaction Scale for Human Service workers measure (JSS; Koeske et al., 1994). Two additional items reflecting specialization as school-based prevention worker were added by the investigators after consulting with the scale developers. Examples of items are as follows: “clarity of guidelines for doing your job,” “chances for acquiring new skills,” and “your salary and benefits.” Respondents to this measure indicated their satisfaction with a variety of aspects of the job using a 7-point Likert-type scale (1 = very dissatisfied; 7 = very satisfied). The scale can be scored for three subscales (i.e., intrinsic, extrinsic, and salary/benefits) or a total score can be derived by summing the three subscales. Internal reliability coefficients for the total score have been found to range between .83 and .91 across a number of studies (Koeske et al., 1994). Evidence supporting the construct validity of this satisfaction measure has been demonstrated in correlations between lower JSS scores and indices of depression, burnout, and intention to quit one’s job assessed several months later (Koeske et al., 1994). In the present study, coefficient alphas for intrinsic, organizational, and salary/benefits were .78, .80, and .71, respectively. The total score, with an alpha of .87, was used in the present study.

Anticipated job retention was assessed in two ways. One item was open-ended, “I intend to stay in this position for another ___ year(s).” A second, forced-choice item asked respondents to indicate the likelihood that they will be in their position in two years, using a 4-point Likert scale (1 = not at all likely; 4 = certainly I will).

Motivational Factors

Satisfaction of psychological needs at work for competence, autonomy, and relatedness was assessed using the 21-item Psychological Needs Met at Work measure (Deci & Ryan, 1985). Six (6) items assess satisfaction of needs for competence (e.g., “Most days I feel a sense of accomplishment from working”), seven items needs for autonomy (e.g., “There is not much opportunity for me to decide

for myself how to go about my work”), and eight for relatedness (e.g., “People at work care about me”) Respondents use a 7-point, Likert-type scale (1 = not at all true; 7 = very true). This measure has been used extensively in studies of a variety of workplace settings. Findings support the construct validity of the measure and show satisfactory psychometric properties, including subscale internal reliabilities of .73, .79, and .84 for competence, autonomy and relatedness, respectively (Deci et al., 2001; Ilardi et al., 1993; Kasser, Davey, & Ryan, 1992; Ryan, 1982). For the present sample, coefficient alphas for items assessing autonomy, competence, and relatedness were .74, .50, and .79, respectively. The internal consistency coefficient for items comprising the competence subscale was low, but the scale was retained in its original form to facilitate comparison of findings from this study with other studies using this measure.

RESULTS

Characteristics of IA Participants

Demographic characteristics of respondents and responses about job roles are summarized in Table I. Most respondents were female (98%) and white (89%). They ranged in age from 21 to 74 years of age ($M = 48$ years, $SD = 10$ years). The sample reported a wide range of educational background: 19% high school education or less, 26% some college, and 55% a 2-year Associates degree or more education. Likewise, respondents reported substantial diversity in years on the job, salary, and position (full/part-time).

Seventy-eight percent (78%) of respondents reported that their primary reason for *accepting* their position was “to work with children,” and 7% and 5%, respectively, cited the “flexible school schedule” and the “opportunity to work in the mental health field.” Working with children was also the primary reason reported by participants for *remaining* in their jobs (81%). In response to the open-ended item about job retention, the range of years anticipated for remaining on the job was 0–15 years, and the average was 4.55 years ($SD = 3.57$). Thirty-eight percent (38%) of respondents indicated that they intended to leave the job in two years or less. However, 30% of the sample did not respond to this item. On the forced-choice question about job retention, 84% of the sample reported that they would ‘quite likely’ or ‘certainly’ be in their current position in two years, whereas the remaining 16% reported being ‘sure’ or ‘quite likely’ that they would not be in the position in two years time.

Predictors of Job Satisfaction and Job Retention

Preliminary analyses showed that the two principal outcome variables—overall job satisfaction and anticipated job retention—were not correlated.

Table 1. IA Survey Responses: Demographic and Job Role Characteristics

Demographic items	Category	Percent	
Gender	Female	98	
	Male	2	
Ethnicity	Caucasian	89	
	Hispanic	6	
	African American	3	
	Other	2	
Highest education	High school	19	
	Some college	26	
	Associate degree	19	
	Bachelors degree	27	
	Graduate degree	9	
Employment Status	Part time	52	
	Full time	48	
School District	Suburban	48	
	Rural	26	
	Urban	26	
Primary reason for taking job	Work with children	78	
	Flexible work schedule	7	
	Work in mental health	5.5	
	Contribution to community	4	
	Work in school setting	3	
	Benefits	1.5	
	Develop skills	1	
Primary reason for remaining in job	Work with children	81	
	Work in mental health	5	
	Flexible work schedule	4	
	Contribution to community	4	
	work in school setting	2	
	Benefits	2	
	Develop skills	2	
	Mean	SD	Range
Age	48	10	21-74 years
Years in position	7.1	6.0	1-25 years
Salary	\$9.60	2.96	\$5.35-19.23/hr*
Years intend to remain in position	4.55	3.57	0-15 years

Note. $N = 128$.

*Urban significantly > surburban/rural, $p < .05$.

Therefore, separate hierarchical regression analyses (Cohen & Cohen, 1983) were conducted to identify predictors of job satisfaction and of anticipated retention using the following variables entered in three steps: (a) age and education (as a categorical variable) were entered first to control for the potential impact of those demographic variables; (b) perceptions of training, supervision, continuing education were entered next, followed by (c) satisfaction of the three psychological needs on the job. The overall regression model was significant for job satisfaction but not for job retention (measured either as a continuous or categorical variable

Table II. Summary of Regression Analysis: Predictors of Job Satisfaction for Full Sample of Prevention IAs

	Zero-order correlation	ΔR^2	B at entry	β
Step 1—Demographic variables		.074*		
Education	-.21*		-2.19	-.22*
Age	.17		.23	.18
Step 2—Training variables		.24**		
Training	.25*		-1.67	-.01
Supervision	.43**		.43	.35**
Continuing education	.41**		.61	.31**
Step 3—Motivation variables		.19**		
Autonomy	.53**		.62	.28*
Relatedness	.48**		.21	.12
Competence	.53**		.69	.23*
		Total $R^2 = .50$ **		

* $p < .05$; ** $p < .01$.

as described above). Consequently, the regression model for job retention is not summarized. Predictors of higher job satisfaction (see Table II) were: less education; more positive perceptions of supervision and continuing education; and higher satisfaction on the job of needs for competence and autonomy.

Comparison of Beginner and Experienced Implementers

Participants were sub-divided into ‘beginner’ implementers (≤ 3 years experience) and ‘experienced’ implementers (> 3 years experience). Based on our experience as trainers and consultants to numerous PMHP sites, we chose the criterion of more than three years on the job to define an experienced implementer due to our observations that most IAs are implementing with a high degree of autonomy after an initial year of training, two additional years of supervision, and other education. Forty (40%) of participants were ‘beginners’ and 60% ‘experienced.’ Table III summarizes mean values and standard deviations of scores on each survey measure by subgroup and results from one-way ANOVAs (analyses of variance) testing for differences on each variable.

Beginner and experienced implementers reported different responses on five of 10 survey variables. Compared to beginner IAs, experienced IAs reported higher hourly wage (\$10.44/hr versus \$8.30/hr) and more years of education completed. Experienced IAs also reported higher perceived benefit and satisfaction with their initial training and their continuing education opportunities. Among the remaining measures of psychological needs satisfaction, job satisfaction and anticipated job retention, the groups differed on only one: experienced IAs reported higher satisfaction at work of the need for relatedness.

Separate regression analyses were conducted for the groups of beginner and experienced IAs to test for differences between those groups in the role of training

Table III. Means and Standard Deviations on Survey Variables for Beginner and Experienced IAs and Results from ANOVAs

	<i>df</i>	<i>F</i>	Beginner IA		Experienced IA	
			Mean	<i>SD</i>	Mean	<i>SD</i>
Demographic variables						
Salary (hourly wage)	1,110	16.00**	8.30	2.25	10.44	3.08
Education (category)	1,125	5.20*	3.49	1.22	4.00	1.24
Training variables						
Initial training	1,122	4.38*	24.15	8.52	26.73	5.26
Continuing education	1,110	7.25**	39.23	7.02	42.39	5.28
Supervision	1,116	.81	39.52	10.40	41.18	9.47
Motivational variables						
Autonomy	1,121	.40	39.00	6.85	39.67	5.54
Relatedness	1,120	6.17**	47.04	6.51	50.06	6.32
Competence	1,120	2.63	35.46	5.06	36.76	3.82
Job variables						
Job satisfaction	1,107	.02	77.86	11.83	78.22	12.54
Anticipated years in Job	1,82	.08	4.71	3.72	4.49	3.50

Note. Beginner and experienced IAs defined as those with ≤ 3 years ($n = 51$) or > 3 years experience ($n = 76$), respectively. Missing data accounts for differences in n .

* $p < .05$; ** $p < .01$.

and motivational factors in predicting job satisfaction. We chose to conduct two separate regression analyses, rather than to test for interactions between years experience and independent variables in the full-sample regression, for conceptual reasons. Specifically, we considered that beginner and experienced IAs were better conceptualized as distinct groups—consistent with our experience in training implementers—as opposed to conceptualizing experience as a continuous variable. In addition, by yielding separate regression models for each group, we expected that this analytic approach would be more informative about the predictors of job satisfaction for those IA groups compared to tests for interactions in a regression model with the full sample of participants. Each regression included the same predictor variables using the same order as the full-sample regression model.

The regression models were significant for the groups of beginner and experienced implementers and accounted for 52% and 73%, respectively, in variance of job satisfaction (See Table IV). For beginner IAs, the only significant predictor of job satisfaction was satisfaction of need for competence at work. In contrast, for experienced IAs the predictors of job satisfaction were: positive perceptions of continuing education and higher satisfaction of needs for autonomy and for relatedness.

DISCUSSION

Few community-based prevention programs have been as widely implemented for as long a period of time as the PMHP program for young children in

Table IV. Summary of Regression Analyses: Predictors of Job Satisfaction for Beginner and Experienced Prevention IAs

	Beginner IAs ≤3 years experience			Experienced IAs >3 years experience		
	Δ R ²	B at entry	β	Δ R ²	B at entry	β
Step 1—Demographic variables	.08			.10		
Education		−2.30	−.23		−1.71	−.16
Age		.17	.12		.36	.27
Step 2—Training variables	.14			.46**		
Training		.32	.21		2.37	.01
Supervision		.33	.29		.46	.35**
Continuing Education		−4.73	−.03		1.27	.56**
Step 3—Motivation variables	.31**			.17**		
Autonomy		.43	.20		.58	.26*
Relatedness		.25	.15		.53	.25*
Competence		1.08	.47*		.38	.10
	Total R ² = .52**			Total R ² = .73**		

p* < .05; *p* < .01.

elementary schools. Dissemination of PMHP began over 30 years ago in several states, including New York (Cowen et al., 1996; Cowen et al., 1963). Consequently, the present study provided an opportunity to describe implementer agents (IAs) of a relatively mature disseminated prevention program and to assess their attitudes about the job roles, training, and motivational factors associated with job satisfaction. In the sections to follow we summarize the main study findings and discuss several implications for prevention practice and directions for future research.

The participating implementer agents (IAs) who deliver the PMHP intervention to children in schools reported an average of seven years on the job. The IAs included a large number of ‘beginners’ (40% of the sample with three years or less experience) and ‘experienced’ IAs, the latter group with as many as 25 years of experience implementing the PMHP program. Beyond that, two demographic features of participating prevention IAs were notable. First, included among these ‘nonprofessional’ IAs are many well-educated individuals. Indeed, fully 55% have an Associates or four-year college degree, or graduate school training. Although such high rates of education may be surprising for implementer positions that do not require a specific educational degree or background, this finding is, in fact, consistent with another recent study of para-educators (Riggs & Mueller, 2001). In that study between 20–40% of classroom aides held Bachelor’s degrees, and between 14–30% were certified teachers, depending on the sample.

The fact that prevention IA positions can attract individuals with high levels of education would appear to bode well for the prevention field, since a well-educated

workforce may bring greater competencies and skills that enhance service delivery and, ultimately, program outcomes (Forgatch et al., 2005). However, juxtaposed against the potential benefits of an educated workforce was another finding from the present study: higher IA education was associated with lower levels of job satisfaction, albeit to a modest degree. Thus, the implications of attracting a well educated work force to deliver preventive interventions are complex; more educated prevention IAs may enhance the potential for high quality implementation but also undermine the stability of the workforce if opportunities for advancement or growth are not inherent in the job.

The survey also revealed that experienced IAs had more education than beginner IAs. From this present study we cannot ascertain whether the lower education level for beginner IAs is due to greater retention over time of more educated IAs (contrary to lower satisfaction for more educated individuals) or due to differences in recruitment of recent hires. Teasing out that distinction in future studies could yield valuable information about patterns of recruitment for prevention IAs over time and about relationships between satisfaction and actual retention.

Another notable demographic feature was the low proportion of African American prevention IAs (3%) given the fact that 26% of the group of participating IAs worked in two urban school districts that serve predominantly African American children. In light of evidence that traditional clinical service models are often perceived as not providing culturally congruent services for minority groups, due in part to lack of service providers from minority groups (National Advisory Mental Health Council, 2001), the lack of minority-group prevention implementers in the school-based PMHP program should also raise concerns about cultural congruence of prevention services. We cannot from the present study determine if this low rate of African American IAs is due to limited recruitment, low retention of African American IAs, or both factors. Low recruitment of minority IAs and low retention are both important factors for prevention programs, and we recommend that future studies of IAs should clearly distinguish those factors.

Among the factors that may influence recruitment and retention of African American IAs is attitudes about mental health services. The prevention field may benefit from future studies to determine how attitudes about mental health influence participation in prevention programs, both as implementers and as recipients of interventions. For example, to better prepare the prevention field for employing a diverse workforce, more information is needed about how stigma about mental health problems and services, which are high among many minority group communities (U.S. Department of Health and Human Services, 2001), may contribute to barriers for hiring and retaining minority community members as program implementers. Likewise, attitudes among program implementers in communities may also serve as barriers to recruiting and retaining a diverse workforce for prevention programs, and such barriers deserve further investigation. It is important

to note, however, that some community intervention programs have been quite successful in hiring minority group implementers (e.g., Strong African American Families Program, Brody et al., 2004) and those programs provide valuable lessons about practices to achieve greater minority representation in other prevention programs. To promote hiring and retaining African American implementers in the Strong African American Families Program, the program developers had extensive involvement of minority parents and community members in creating culturally sensitive recruitment practices and evaluation procedures (Brody et al., 2004).

Predictors of Job Satisfaction

Prevention implementers' positive perceptions of their training experiences were associated with overall job satisfaction. Indeed, positive perceived value of three domains of training—initial training, ongoing supervision, and continuing education—accounted, in total, for 24% of the variance in overall job satisfaction. Implementers of prevention programs are therefore similar to other workforce groups in reporting that ongoing training and opportunities for continuing professional development are key factors in promoting ongoing job satisfaction (Ellickson & Logsdon, 2002; Kushnir, Cohen, & Kitai, 2000; Traut, Larsen, & Feimer, 2000; Van Der Doef & Maes, 2002).

In addition, we note that implementers' perceptions of their ongoing supervision and continuing education accounted for significant independent portions of variance in overall job satisfaction. This interesting finding suggests that ongoing supervision experiences (weekly in the case of the PMHP program) and less frequent continuing education opportunities may serve distinct, independent purposes in promoting job satisfaction. In the past two decades since PMHP has been widely disseminated, the program founders (Cowen et al., 1996) have emphasized in the guidelines for program dissemination the importance of regular supervision of implementers by the school-based mental health professional as well as ongoing educational opportunities for IAs. Such recommended ongoing education opportunities for IAs include periodic consultations with community mental health professionals and opportunities to attend training programs offered to teachers and other employees in school districts in which PMHP is implemented. In this study, the association between continuing education and overall satisfaction suggests that for prevention programs to maintain an educated and qualified workforce the provision of opportunities to acquire new knowledge and skills may be one key factor.

Congruent with Self-Determination Theory (Deci & Ryan, 1985), the present study also found that prevention implementers' job satisfaction was predicted by greater satisfaction of psychological needs at work. In the regression model for

the full sample of IAs, satisfaction of needs for competence and for autonomy predicted greater overall job satisfaction, above and beyond the contributions of demographic and training variables to satisfaction. This finding underscores the relevance of Musick and Stott's (2000) statement that opportunities for "continuous growth, competence, and pride in one's work" (p. 453) are primary needs for paraprofessionals to maintain job satisfaction and effectiveness, particularly given the modest economic rewards of their positions.

This study's findings also supported our hypothesis that the importance of specific motivational needs for job satisfaction may vary according to 'developmental level' of implementers in their positions, as also suggested by a recent study of motivational factors associated with behavioral change among participants in a health promotion intervention (Minicucci, Schmitt, Dombeck, & Williams, 2003). In the present study, for IAs with three or fewer years experience on the job, greater satisfaction of competence needs predicted overall job satisfaction. In contrast, for IAs with more than three years experience, satisfaction of needs for autonomy and for relatedness were predictors of overall job satisfaction.

These findings have several implications for training and for creating supportive employment conditions for prevention implementers. First, programs that implement well-designed training and ongoing supervision components are likely to promote prevention implementers' job satisfaction, in particular if training incorporates opportunities for continuing education. Second, training programs may benefit from expanded focus on providing opportunities for new implementers to experience competence as they develop new skills. Experiencing competence and efficacy early in their training careers can be challenging for non-professionals who may feel uncertain about their abilities and readiness to work in a new setting such as schools. Ongoing monitoring of implementers' perceptions of competence over the course of a training program may also be useful in ascertaining levels of optimal challenge for imparting new skills while simultaneously promoting the experience of competence. Finally, training models that are autonomy-promoting by providing implementers increased opportunities for decision-making over time may be more successful in meeting needs of experienced implementers. Of the many available descriptions of implementation practices for preventive interventions, we are not aware of any that have included substantial attention to the long-term development of implementers' motivation and growth in their job roles. Greater attention to those concepts in new research and in prevention practice may yield fruitful new information about training and practices for retaining high-quality implementers.

This study also points to several challenges for the prevention field in developing sustainable job roles. Although paraprofessionals are the 'linchpins' required for implementation of a number of preventive interventions (e.g., Duggan et al., 1999; McDonald, Billingham, Conrad, Morgan, & Payton, 1997), findings from this study raise questions about whether paraprofessional implementers have a well-defined identity needed for long-term sustainability of their job roles and for

professional growth. Very few of the implementers surveyed indicated a strong identity with the field of prevention or mental health. The primary reasons cited for accepting and remaining in their current positions implementing a school-based prevention program was the opportunity to work with children. Although a desire to work with children may be an important motivator and source of fulfillment for implementers of school-based interventions, we speculate that paraprofessional implementers who also define themselves as ‘prevention implementers’ may be more likely to internalize training, maintain motivation for ongoing skill development, and remain on the job. In beginning training for new prevention implementers, trainers and supervisors may wish to underscore explicit messages about paraprofessionals’ new identities, as well as emphasizing the importance of new knowledge and skills for delivering an effective intervention. Recruiting and training competent paraprofessional staff is costly, and retention is an important factor in assessing cost-effectiveness of services in communities. Promoting prevention IAs as positions with clear identity and value to the field may help to promote paraprofessionals’ motivation for accepting and remaining with a program.

Limitations and Directions for Future Research

Implementers’ overall job satisfaction and anticipated retention on the job were unrelated in this study, which was contrary to expectations and is difficult to interpret. Although job satisfaction was assessed with a widely-used and validated measure (Koeske et al., 1994), no such validated measure of anticipated job retention was available to us, and the two-items assessing retention developed for this survey may not have adequately captured intent to remain on the job. Furthermore, a significant number of respondents (30%) failed to answer the open-ended question regarding how many years they planned to remain on the job. Reluctance to complete that item may indicate ambivalence, uncertainty about the intent of the question, or concerns about how their responses would be interpreted. Participants in the sample may have been unwilling to consider or to disclose plans for a job change even on an anonymous survey. Moreover, a longitudinal study design may be necessary to accurately assess the relationship between job satisfaction and retention.

In addition to a lack of robust measurement of anticipated job retention and non-response to the questions, other factors extrinsic to the implementers may also have influenced responses about intent to remain on the job. Subsequent to receiving all survey responses, we were informed by one regional center director of the PMHP program that several schools with implementers participating in the survey had publicly announced potential budgetary reductions that could affect the employment of PMHP IAs. Although we cannot determine the impact of that information, it serves as a useful reminder that such extrinsic factors as community

resources may affect program implementers' attitudes, particularly implementers of prevention programs that may not be required as mandated services in schools and communities.

The sampling methods of this study did not enable us to compare responders to the survey from non-responders, which were 33% of those IAs invited. Although a 67% response rate to this study is relatively high, it leaves ample room for differences among participants and non-participants. The latter group may have included IAs who were less satisfied with their roles or more likely to intend to leave their positions. Moreover, due to a lack of centralized information about PMHP implementers, we cannot determine the representativeness of the participating sample to the overall population of PMHP implementers. For these reasons, caution must be used in generalizing the findings from this study to other PMHP implementers or to implementers of other prevention programs.

In addition to the need for more information about predictors of actual job retention for prevention implementers, the present study points to several other areas for future research. One such area is research to better ascertain how characteristics of work settings and the work climate influence prevention implementers' motivation, attitudes, the quality of their service delivery, and the effectiveness of their interventions. Prevention implementers are often perceived as 'guests' within their work settings (e.g., implementers of mental health promotion programs in schools) and wide variations in organizational support for their activities have been reported in prior studies (e.g., Fagan & Mihalic, 2003; Kam, Greenberg, & Walls, 2003; Nichols, 2004). Likewise, identifying effective training practices for prevention implementers has the potential to strengthen the fidelity of implementation of programs and overall effectiveness. The current study is limited by its reliance on self-report data. Observational ratings are currently the most methodologically rigorous instruments available for studying implementers' competence and effectiveness in delivering interventions (Forgatch et al., 2005). Greater use of those tools for studying prevention program implementers should be a high priority for the field, including studies that incorporate measurement of training factors, motivation, and organizational climate.

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