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Effective Group Training Techniques in Job-Search Training

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The aim was to examine the effects of group training techniques in job-search training on later reemployment and mental health. The participants were 278 unemployed workers in Finland in 71 job-search training groups. Five group-level dimensions of training were identified. The results of hierarchical linear modeling demonstrated that preparation for setbacks at the group level significantly predicted decreased psychological distress and decreased symptoms of depression at the half-year follow-up. Trainer skills at the group level significantly predicted decreased symptoms of depression and reemployment to stable jobs. Interaction analyses showed that preparation for setbacks at the group level predicted fewer symptoms of psychological distress and depression, and shared perceptions of skilled trainers at the group level predicted fewer symptoms of depression among those who had been at risk for depression.

Keywords: group training, reemployment, mental health, trainer skills, inoculation

Extensive research has demonstrated that there is a significant decline in mental health as a result of job loss and unemployment (Dooley, Catalano, & Wilson, 1994; Fryer & Payne, 1986; Kessler, House, & Turner, 1987). Unemployment also contributes to many other harmful social and psychological outcomes (Catalano, 1991). At the same time, earlier research has shown that reemployment reduces psychological distress and symptoms of depression and that reemployment in a satisfactory job restores psychosocial functioning to previous levels (Kessler, Turner, & House, 1989; Leana & Feldman, 1995; Vuori & Vesalainen, 1999; Wanberg, 1995). Consequently, most programs for unemployed workers have been designed to promote reentry into the labor force.

A variety of programs aim at promoting the reemployment of unemployed workers. Many of them are job-search programs focusing primarily on intensifying job-search efforts (e.g., Azrin, Flores, & Kaplan, 1975; Eden & Aviram, 1993) or focusing more broadly on enhancing job-search skills, preventing depressive symptoms related to unemployment, and facilitating transition into high-quality reemployment (e.g., Caplan, Vinokur, Price, & van Ryn, 1989). Some job-search programs have their origins in the counseling tradition and emphasize the participant's career goals (e.g., Amundson, Borgen, & Westwood, 1990). Often job-search training is an adaptation of some program or a compiled mixture of many programs or has no specific theoretical foundation. In previous studies, job-search training has generally shown positive effects on reemployment, quality of reemployment, and mental health (Dolton & O'Neill, 2002; Rife & Belcher, 1994; Vinokur, Price, & Schul, 1995; Vuori, Silvonen, Vinokur, & Price, 2002). However, little is known about the role that the applied training techniques play in these effects.

An example of a theory-driven job-search program is the Michigan Prevention Research Center (MPRC) Job Search Program for recently unemployed workers. The MPRC program is designed to influence individual job-search self-efficacy and skills and provide inoculation against setbacks, as its key ingredients (Price & Vinokur, 1995). Two field experimental studies with randomized designs investigating the effects of the MPRC program have found significant increases in reemployment rates and significant decreases in depressive symptoms both in the 6-month and in the 2-year follow-ups (Caplan et al., 1989;

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Vinokur et al., 1995; Vinokur, Schul, Vuori, & Price, 2000; Vinokur, van Ryn, Gramlich, & Price, 1991). In both studies the beneficial effects of the intervention were significantly greater for those with an elevated risk for depression assessed at pretest. A Finnish version of the MPRC program, the Työhön Job Search Program, was also tested in a randomized field study and included long-term unemployed workers (Vuori et al., 2002). The Työhön Job Search Program is almost identical to the 20-hr MPRC program but includes some minor adaptations. The Työhön program showed beneficial effects similar to those of the U.S. MPRC Job Search Program and demonstrated that the intervention program is also beneficial to longer term unemployed workers (Vuori & Silvonen, 2005; Vuori et al., 2002). A study by Vuori and Vinokur (2005) demonstrated this mediating role of job-search self-efficacy and inoculation against setbacks for mental health and reemployment outcomes.

The JOBS manual describes the MPRC Job Search Program in detail (Curran, Wishart, & Gingrich, 1999). The five basic techniques or group training elements in the program are as follows:

1. *Job-search skill training.* The participants are invited to acquire and rehearse job-search skills; this is critical for effective job-seeking performance, as most people have insufficient knowledge and skills in this area (Caplan et al., 1989).

2. *Active teaching and learning methods.* Trainers use active learning methods to engage the participants to learn about job-search techniques. The active learning methods help the participants to take advantage of the knowledge and skills of other participants as part of the learning process. Participant experience is elicited through small-group and large-group discussions, role-playing exercises, and other activities (Caplan, Vinokur, & Price, 1997).

3. *Skilled trainers.* The workshop trainers are well trained to build trust and to facilitate active and supportive group processes that promote the learning of skills and coping with job-search tasks (Caplan et al., 1997).

4. *Supportive learning environment.* During training, the trainers model and reinforce supportive behavior and work to create a positive learning environment through exercises that provide opportunities for the participants to learn from and support each other. A supportive environment is a key ingredient for new learning and for facing the challenges of the job market, as social influences support or undermine key components of job-search motivation (Vinokur & Caplan, 1987). Social support may also have a positive mental health impact on distressed unemployed individuals (Atkinson, Liem, & Liem, 1986).

5. *Preparation for setbacks.* Earlier studies have shown that highly motivated job seekers failing in job searches appear to be at risk for poor mental health compared with those who are not so motivated (Vesalainen & Vuori, 1999; Vinokur & Caplan, 1987). Job-search training aimed at increasing motivation to search for a job could further increase risk among highly motivated job seekers (Caplan et al., 1989). The program addresses this risk by providing the workshop participants with a problem-solving process to help them to be prepared and to cope with the stress related to the experience of unemployment, the job-search process, and the inevitable setbacks that they will encounter. Part of the group problem-solving process involves identification or anticipation of possible barriers to success and advance preparation of solutions to overcome these barriers. Inoculation against setbacks is fundamental to effective coping with an inherently stressful job-search process.

Job-search skill training, active learning methods, skilled trainers, a supportive learning environment, and preparation for setbacks are examples of group elements that may be found in many job-search training groups. However, the presence of these underlying dimensions in training contents may vary greatly, depending on the method, training procedure or trainers used, or group characteristics. Group elements may influence individuals via two separate routes (Choi, Price, & Vinokur, 2003). First, they can influence individuals in a differential and selective way, acting as so-called discretionary stimuli (Hackman, 1992). For example, some individual participants may experience their interaction with the trainers, or the supportiveness of the group, differently than do other group members. Second, group techniques as group characteristics may be shared simultaneously by all group members, acting as so-called ambient stimuli (Hackman, 1992). Objective group character-

istics, such as the group size and duration or gender ratio and mean age of the group participants, may be regarded as extreme examples of stimuli that affect all group members simultaneously. Similarly, shared perceptions of group-level techniques, such as perceptions of active learning methods used in a group, shared perceptions of supportiveness of the learning environment, or shared perceptions of discussions on possible setbacks and ways to overcome them represent intersubjective group elements (Ickes & Gonzalez, 1996). In group-based job-search training, training techniques are also expressed as intersubjective group elements that may have cross-level effects on the participant's later employment or mental health.

The Finnish Context

The unemployment rate in Finland rose drastically at the beginning of the 1990s and remained high during the late 1990s. The government undertook a labor market reform that was carried out beginning in 1998. The new reform emphasized making individual plans for unemployed workers and conducting follow-up interviews with the unemployed job seekers, as well as organizing job-search training courses. The Finnish Ministry of Labor set demanding goals for labor offices in increasing their job-search training, and, consequently, new job-search training activities spread quickly. One of them, the Työhön method, was based on the MPRC Job Search Program, and its use spread widely in Finland during the late 1990s. Altogether, a variety of different job-search training methods were applied with varying degrees of fidelity, and many methods did not have any identifiable background theory.

Purpose of the Present Study

The purpose of this study was to investigate the effects that the applied group-level training techniques of job-search training have on later reemployment, quality of reemployment, and mental health of group participants. Our assumption was that all the applied differing group methods for job-search training could be described by means of a few focal group-training techniques. Our aims were as follows:

1. To empirically identify the group training dimensions underlying the variety of different group-based job-search trainings applied.

2. To investigate which group-level techniques of group-based job-search training are most effective in increasing reemployment and mental health among the unemployed.

3. To study, in addition, whether individual-level risk for depression assessed prior to the training would moderate the effects of group-level techniques of job-search training on reemployment and mental health.

Using countrywide evaluation data for group-based job-search training in Finland, we compared the role of different underlying dimensions of training in their effects on reemployment and mental health. We used the MPRC training elements as the starting point in identifying the group training dimensions underlying various job-search training methods that have been used. We generally hypothesized that the MPRC job-search training elements at the group level would be effective in increasing reemployment and quality of employment, and in decreasing symptoms of distress and symptoms of depression in participants, as training that makes use of these elements has been demonstrated to have these effects at the individual level (Vinokur et al., 1995, 2000; Vuori et al., 2002). There are, however, no empirical results showing, more specifically, the effects of the group-level training elements on reemployment and mental health. On the basis of the theoretical assumptions underlying the MPRC job-search training elements (Caplan et al., 1989), we hypothesized that group techniques characterized by active learning methods, a supportive learning environment, skillful trainers, and the teaching of adequate job-search skills would increase later reemployment and the quality of employment. On the other hand, group techniques characterized by a highly supportive learning environment and preparation of the participants for setbacks in the job-search process would decrease psychological distress and symptoms of depression. As we were interested in cross-level effects of the group-level training techniques on the individual outcomes, we needed to simultaneously control for the effects of individual-level perceptions of the groups and for the cross-level effects of the group characteristics on the individual outcomes (Klein, Dansereau, & Hall, 1994). In light of previous findings on the differential effectiveness of job-search training with those at risk for depression (Price, van Ryn, & Vinokur, 1992; Vinokur et al., 1995; Vuori et al., 2002), we also hypothesized that these group-level training techniques would be most effective for individuals at risk for depression assessed prior to the training.

Method

Participants, Study Design, and Methods of Recruitment

The present study included 278 study participants in 71 job-search groups in 19 employment offices throughout Finland. In order to obtain a representative sample from the employment offices, the study participants were recruited both personally, during their visit to the employment office, and by mail. Those invited to the training had not previously been in job-search training. The 71 job-search groups studied also included participants who were other customers of the employment offices and were not participating in our study. On average, 4 persons in each group participated in this study ($SD = 2.5$). Each group included at least 2 study participants (range = 2–13), but there were at least 5 participants in groups with a mean size of 11 members ($SD = 2.9$). The 71 groups studied were originally part of 149 groups in a countrywide evaluation of group-based job-search training. However, groups with only 1 study participant either at the baseline measurements (58 groups) or at follow-up (17 groups) had to be excluded from the study, because it was not possible to calculate aggregated evaluations regarding group techniques. Three groups were excluded as outliers with respect to group size (63, 66, and 110 participants, respectively).

Job seekers were given the baseline questionnaire at Time 1 (T1) with an information letter about the job-search training courses and the study. The participants filled out the first follow-up questionnaire 2 weeks after the initial group session at Time 2 (T2) and the second follow-up questionnaire 6 months after they entered the study at Time 3 (T3). The response rate for the study participants at T3 was 92%, and there were no statistically significant differences between T3 respondents and dropouts regarding age, gender, marital status, education, unemployment duration, level of financial support, and baseline mental well-being or depressive symptoms.

Demographic Characteristics of the Sample

The sample was 65% female. The respondents varied between 19 and 59 years of age, with a median age of 39 years. With regard to education, 46% had only primary level education, 5% had a university degree, and the rest of the sample had vocational qualifications. At the time of recruitment, the median duration of unemployment of participants was 7 months. Finally, 35% of the respondents had experienced long-term unemployment; they had been continuously unemployed for a year or longer. The comparisons with labor market statistics displayed in Table 1 show that the participants were more often women, were older, and were somewhat less educated and had a longer history of unemployment than the average Finnish unemployed individual who participated in job-search training (Finnish Ministry of Labor, 2000).

Group Characteristics and Group Experiences

Based on the evaluations of the study participants regarding their own job-search group, the mean size of the groups was 11 participants ($Mdn = 11$, $SD = 2.90$, range = 5–19). The groups comprised both study participants and other customers of employment offices participating in the groups, but not in the study. The mean duration of the groups was 30 hr ($Mdn = 25$, $SD = 13.5$), with an average of 5.2 hr per day ($Mdn = 5$, $SD = 1.1$).

Based on the reports of the trainers, several partly inter-

Table 1
Demographic Comparison Between the Research Sample and the Finnish Ministry of Labor National Statistics on Job Search Participants in 1999

Variable	Research sample (%)	Individuals in job-search training (%)	$\chi^2(df)$	p
Gender				
Women	65	57	7.98(1)	<.01
Men	35	43		
Age, years				
15–24	11	17	7.53(2)	<.05
25–50	75	70		
51–64	14	14		
Education				
Primary	46	28	40.09(2)	<.001
Secondary	49	62		
Higher	5	9		
Duration of unemployment				
<12 months	65	79	45.20(2)	<.001
12–23 months	18	14		
24 months or longer	17	7		

Note. For the research sample, $N = 278$; for individuals in job-search training, $N = 47{,}720$.

twined training methods were used. The Työhön (MPRC) method was used in its authentic form in 11% of the groups. Furthermore, in 22 groups (31%), the Työhön method was used, but the trainers added some elements of their own to the program. In 6 groups (8%), the Työhön method was used, but some elements were left out. In addition, in 12 groups (17%), elements from the Työhön method were used selectively. In 12% of the groups, some other training method was reported (Amundson et al., 1990; Engpass Konzentrierte Strategie; local career counseling method). And finally, in 21% of the groups no specific training method was reported. In this study, all of these different kinds of training groups reflected some use of the studied underlying dimensions to one degree or another, whether they reported any connections to the Työhön method or not. The mixed nature of the groups provided variation within the sample and a basis for more general findings.

Altogether 52 trainers trained the 71 groups in this study. Nearly two thirds (64%) of the trainers had a university degree, and the others had vocational qualifications. Over half of the trainers (58%) had attended training meant specifically for job-search trainers, and 53% of them had received more general group trainer training.

Of the study participants, 68% evaluated their experiences of the group as either "good" or "very good," 27% had satisfactory experiences, and only 5% reported "bad" or "very bad" experiences. Women reported more positive group participation experiences than did men, $t(198) = 3.81$, $p < .01$; younger persons were more positive than older persons, $t(276) = 3.17$, $p < .05$; and unemployed persons with higher levels of financial support had more positive responses to group participation than did unemployed individuals with lower levels of financial support, $t(205) = 2.23$, $p < .05$. In addition to individual variation in the evaluations, there was variability between the groups regarding the group experiences; larger groups had more negative experiences than did smaller groups, $t(270) = 4.68$, $p < .05$.

Measures

Demographics were obtained at T1 by asking standard survey questions on age, gender, marital status, and education. Length of unemployment was measured as the number of months unemployed since job loss.

Level of financial support was coded based on the situation of the respondents at T1. In Finland, unemployment benefits are provided in two systems that differ in their level of financial support: the earnings-related unemployment benefit and the much lower flat-rate benefit. If both the husband and the wife are unemployed and receive a flat-rate benefit, they often also receive social assistance. Social assistance is a means-test benefit that keeps families marginally above the poverty line. In the study, the level of financial support was coded as 1 if the participants received social assistance, as 2 if they received only a flat-rate benefit, and as 3 if they received an earnings-related unemployment benefit.

Individual experiences with group participation and group processes were evaluated using a 30-item group technique measure. The measure includes five composite scales, derived from a principal-factor analysis with varimax rotation, giving these five factors with eigenvalues above one. The dimensions of individual experiences with group participation are displayed in Table 2. The first scale is active learning methods, and it measures the frequency with which active learning techniques such as role-playing and group problem solving were used during the training ($\alpha = .84$). The second scale, trainer's skills, measures the frequency of positive feedback and support from the trainers to the group participants ($\alpha = .82$). The third scale, preparation and inoculation against setbacks, measures the frequency with which barriers and setbacks and ways to overcome them in the job-search process were discussed during the training ($\alpha = .84$). The fourth scale, supportive learning environment, measures how often during the training the participants felt that their learning was supported by the trainers by positive reinforcement and encouragement ($\alpha = .89$). The fifth scale, job-search skills training, measures the frequency with which job-search skills were discussed during the training ($\alpha = .86$). The participants reported their ratings on the group technique measure after taking part in the training at T2. The group technique measure was developed at the Finnish Institute of Occupational Health (Malmberg-Heimonen & Vuori, 2000).

The aggregated group technique variables were composed of means of the evaluations of the study participants in each group regarding individual experiences on group participation. The aggregated active learning methods had an intraclass correlation coefficient (ICC) of .63. The other ICCs were .31 for aggregated trainer's skills, .12 for aggregated preparation and inoculation against setbacks, .17 for aggregated supportive learning environment, and .17 for aggregated job-search skills training. All coefficients were statistically significant.

Group-level characteristics were group duration and group size; these were means of values reported by the study participants in each group. Mean age and proportion of men were calculated in each group. The number of study participants is the number of participants in each group.

Psychological distress was measured using the 12-item version of Goldberg's (1972) General Health Questionnaire and included questions such as "Have you recently been able to concentrate on whatever you are doing?" and "Have you recently been able to enjoy your daily activities?" The respondents rated the items on 4-point scales ranging from 1 (*not at all*) to 4 (*more than usual*). The internal consistency (Cronbach's alpha) of the scale was .93 at T1.

The measure of depressive symptoms, the DEPS Scale (Salokangas, Stengård, & Poutanen, 1994), was based on the Hopkins Symptoms Checklist (Derogatis, Lipmann, Rickels, Uhlenhuth, & Covi, 1974). The respondents indicated how often in the last month they had experienced each of the following 10 symptoms: sleeping disorders, feeling blue, feeling that everything requires extra effort, lack of energy, feeling of being alone, feeling of a hopeless future, were not enjoying life, felt worthless, had the feeling that all pleasure had disappeared from life, and felt that apathy did not disappear even with the help of family or friends. The respondents' answers ranged from 0 (*not at all*) to 3 (*very much*). The reliability of the scale (Cronbach's alpha) was .93 at T1. At T1, risk for depression was assessed by constructing a dichotomous variable using this DEPS scale (Salokangas et al., 1994). Those who scored 9 points or more were given the value 1 (at risk), and others were given the value 0.

Reemployment status was based on the answer to the

Table 2
Dimensions of Individual Experiences With Group Participation by Principal-Factor Analysis With Varimax Rotation

Dimension and experience[a]	Factor 1	2	3	4	5
Active learning methods					
You practiced in pairs	.14	.22	**.62**	.23	.07
You worked in small groups	.15	.13	**.81**	.13	.13
The participants took part in role-play	.07	.26	**.63**	.07	.14
The participants discussed their experiences	.24	.14	**.43**	.31	.14
You did exercises with other participants	.18	.10	**.76**	.21	.11
Trainer skills					
The trainers turned questions from the group back to the group to be processed and answered	.08	.21	.26	**.51**	.10
The trainers made encouraging comments about the strengths that came up in discussion	.30	.14	.17	**.63**	.19
The trainers explained why something you or some other participant said was well-founded or suited the situation regarding the objectives of the group	.21	.20	.15	**.65**	.18
The trainers made use of the participants' answers later in the group work	.23	.22	.23	**.66**	.12
The trainers encouraged the silent group members to participate in the given tasks	.21	.06	.04	**.47**	.15
The trainers thanked the speakers in the group	.25	.12	.22	**.43**	.16
Preparation and inoculation against setbacks					
You talked about things which may have prevented you or other participants from presenting your skills and strengths efficiently	.29	.06	.19	.18	**.66**
You talked about things which may prevent you or other participants from finding job openings through personal contacts	.18	.09	.10	.12	**.84**
You talked about things which may prevent you or other participants from coming off a job interview successfully	.11	.15	.16	.18	**.74**
You searched for solutions for your or other participants' job-search problems, for example, that age and education are not suitable	.22	.24	.15	.31	**.52**
You searched for solutions for your or other participants' job-search problems, for example, that there are too few jobs available	.29	.22	.04	.29	**.40**
Supportive learning environment					
The material and discussion matched your situation well	**.59**	.24	.23	.15	.16
You felt that the atmosphere was friendly and stimulating	**.51**	.11	.20	.25	.08
The trainers showed that they value your participation	**.56**	.10	.17	.39	.22
The trainers made you feel happy or satisfied	**.74**	.20	.12	.17	.14
The trainers inspired you	**.79**	.20	.09	.14	.14
Something that the trainers did or said made you believe that they understood your situation	**.68**	.16	.05	.31	.21
The trainers encouraged you to participate in the given tasks	**.54**	.23	.10	.28	.21
Other participants helped you in understanding your problems	**.45**	.26	.33	.16	.18
Job-search skill training					
You practiced how to find job openings through contacts with acquaintances and employers	.19	**.65**	.04	.20	.15
The trainers and other group members helped you to see how to find job openings through contacts with acquaintances and employers	.28	**.70**	.06	.20	.10
The trainers and other group members helped you learn to make a successful job application	.23	**.56**	.17	.07	.05
You practiced with the group how to contact employers for getting a job interview	.05	**.67**	.33	.12	.20
The trainers and other group members helped you learn how to contact employers for getting a job interview	.17	**.70**	.21	.20	.08
The trainers and other group members helped you learn how to come off a job interview successfully	.18	**.56**	.41	.16	.10

Note. Factor loadings of leading items on each dimension are in boldface type.
[a] Participants indicated how often during group sessions the experience occurred.

question "What is your employment status now?" The respondents were classified as reemployed (coded 1) if they described themselves as "being employed without a subsidy from the state" or were "running their own business." The respondents were coded 0 if they were unemployed, in labor market training, in a subsidized job, studying, or on maternity leave. Reemployment in a stable job was coded 1 if they reported a stable job at T3. For all other respondents the variable was coded as 0. In the Finnish labor market, a stable job is generally more desirable and has a clearly higher status than a temporary job. Termination of a stable job is difficult, because the law sharply limits the acceptable reasons for layoffs, and layoff time in stable jobs varies from 1 to 6 months depending on the length of employment.

Analysis

We investigated the cross-level effects of the aggregated group techniques on individual outcomes, and at the same time controlled for the effects of individual-level experiences with group participation, as well as for the cross-level effects of the group characteristics on the outcomes. Consequently, the observations in our data could no longer be regarded as independent, and we thus needed multilevel analysis for modeling the structure of the data. Accordingly, we used multivariate hierarchical linear modeling (HLM) in our statistical analysis (Bryk & Raudenbush, 1992) with HLM 5 software (Version 5.04; Raudenbush, Bryk, Cheong, & Congdon, 2000).

All the outcome variables were analyzed in two steps. First, we calculated the main effect models with all aggregated-level group techniques and characteristics, individual experiences with the group, and individual characteristics. As our sample was relatively small, restricting the number of variables studied (Snijders & Bosker, 2000, pp. 140–154), we also performed the analyses in another, parallel way to avoid overfitting of the model at the group level: Each of the group-level variables was also added one at a time to the main effect models with the individual variables. If the main effects were found to be significant with both procedures, they were considered reliable. We used robust estimates for standard errors.

Second, the interactive effects of the individual-level measure of risk of depression and the aggregated-level group techniques on outcome variables were examined in order to evaluate whether the aggregated-level group techniques would be most effective among unemployed participants at risk for depression prior to the training. During this second step, all five interactions were added simultaneously to the main effect models. In order to verify the reliability of all the interactions found with this procedure, each of the five interactions was also added one at a time to the main effect models. If the interactions were found significant with both procedures, they were considered reliable, that is, statistically stable. As the power of our sample was relatively small for cross-level interactions (Kreft, 1996), it is possible that there are additional interactions among the variables under study that could not be detected using our experimental design.

For the continuous outcome variables (psychological distress, depressive symptoms) we applied a three-level hierarchical model that included (a) the within-individual level, which represents changes within the participants (e.g., from T1 to T3 in outcome measures); (b) the individual level (individual characteristics, individual ratings of the group); and (c) the aggregated group level (group-level means of evaluations on the five group technique scales and the group characteristics).

For the continuous outcome variables, we explained the mean-level parameter of the model (the initial status of the outcome, i.e., the intercept at Level 1 with the following variables: age, gender, marital status, education, duration of unemployment, and financial support). The change parameter (the slope between pre- and postmeasures of the outcome) was explained with the Level 2 variables (individual characteristics; age, gender, marital status, education, duration of unemployment) and with individual experiences with the group (active learning methods, trainer skills, preparation and inoculation, supportive learning environment, and training in job-search skills). The change parameter was also explained with the Level 3 variables, that is, the aggregated group techniques (active learning methods, trainer skills, inoculation, supportive learning environment, and training in job-search skill), and the group characteristics (age and proportion of men). We also tested other group characteristic variables (group duration, group size, and number of participants in the main effect models), but they were omitted as they indicated no effects on outcome variables. These tests also demonstrated that even though we had only a few study participants in some groups, the number of participants did not have any systematic effects on the outcome variables. For the continuous outcome variables, the statistical model was based on the equations given in Table 3. The assumptions for the HLM were met based on residual examination of the continuous outcome variables. There were no statistical reasons for not including the groups with only a few observations (Raudenbush, Brennan, & Barnett, 1995; Snijders & Bosker, 2000, p. 52).

For the dichotomous outcome variables (reemployment, stable job), our model was a two-level hierarchical generalized linear model (Bernoulli model), which included (a) the individual level (individual characteristics, individual experiences of the group) and (b) the group level (group-level means of evaluations on the five aggregated group technique scales and the group characteristics). The outcome was modeled with the Level 1 individual characteristics (age, gender, marital status, education, duration of unemployment, and financial support) and with the Level 1 individual experiences with the group (active learning methods, trainer skills, preparation and inoculation, supportive learning environment, and training in job-search skills). At Level 2, the outcome was modeled with aggregated group techniques (active learning methods, trainer skills, preparation and inoculation, social support, and training in job-search skills) and with group characteristics (age and proportion of men). We also tested other group characteristic variables (group duration, group size, and number of participants in the main effect models), but they were omitted, as they had no effect on the outcome variables. For the dichotomous outcome variables, the statistical model was based on the equations presented in Table 4.

Results

The means, standard deviations, and intercorrelations for the individual-level study variables are pre-

Table 3
Hierarchical Linear Model for the Continuous Response Variable (Y)

Hierarchical level	Equation
Time (Level 1)	$Y = \pi_0 + \pi_1$ Time + e
Individual (Level 2)	$\pi_0 = \beta_{00} + \beta_{01}$ age + β_{02} gender + β_{03} married + β_{04} education + β_{05} duration of unemployment + β_{06} financial support + β_{07} risk of depression + r_0 $\pi_1 = \beta_{10} + \beta_{11}$ age + β_{12} gender + β_{13} married + β_{14} education + β_{15} duration of unemployment + β_{16} risk of depression + β_{17} active learning methods + β_{18} trainer skills + β_{19} preparation and inoculation + β_{110} supportive learning environment + β_{111} training in job-search skills
Group (Level 3)	$\beta_{00} = \gamma_{000} + \mu_{00}$ $\beta_{10} = \gamma_{100} + \gamma_{101}$ aggregated active learning methods + γ_{102} aggregated trainer skills + γ_{103} aggregated preparation and inoculation + γ_{104} aggregated supportive learning environment + γ_{105} aggregated training in job-search skills + γ_{106} mean age + γ_{107} proportion of men + u_{10}

Note. π_is are Level 1 regression coefficients ($i = 0, 1$). e is Level 1 random error. β_{ij}s are Level 2 regression coefficients ($i = 0$: $j = 0, 1, \ldots, 7$; ($i = 1$: $j = 0, 1, \ldots, 11$). r_0 is Level 2 random error. γ_{000} and γ_{10k}s ($k = 0, 1, \ldots, 7$) are Level 3 regression coefficients. u_{00} and u_{10} are Level 3 random errors.

sented in Table 5, and Table 6 shows the respective parameters for aggregated group training technique variables and group characteristics.

Three blocks of predictors, aggregated training techniques and group characteristics as group-level variables, individual perceptions of training techniques, and individual characteristics, were entered simultaneously into each of the four models. In these analyses, the role of individual experiences with the group techniques and group characteristics was controlled in estimating the effect of aggregated group techniques as predictors of outcome variables. The four models predicted the initial status and changes in psychological distress and depressive symptoms during the 6-month follow-up (T1 to T3) as well as both reemployment and reemployment to a stable job at the 6-month follow-up (T3). Table 7 shows the results of the hierarchical linear analyses.

The preparation and inoculation against setbacks as an aggregated group-level indicator of training technique predicted significant decreases in symptoms of distress ($\gamma = -.45$, $p < .01$) and in symptoms of depression ($\gamma = -.32$, $p < .05$) during the half-year follow-up period (see the upper part of Table 7). Trainer's skills reflecting positive feedback and support from the trainers to the group participants as a group-level indicator significantly predicted decreases in symptoms of depression ($\gamma = -.28$, $p < .05$) and stable reemployment ($\gamma = .32$, $p < .01$) one half year after the baseline measurement. Because only 20 participants found stable employment, we conducted some further analyses in

Table 4
Hierarchical Generalized Linear Model (Bernoulli Model) for the Dichotomous Response Variable (Y)

Hierarchical level	Equation
Individual (Level 1)	Y has a Bernoulli distribution with parameter ϕ $\log(\phi/(1 - \phi)) = (\beta_0 + \beta_1$ age + β_2 gender + β_3 married + β_4 education + β_5 duration of unemployment + β_6 financial support + β_7 risk of depression + β_8 active learning methods + β_9 trainer skills + β_{10} preparation and inoculation + β_{11} supportive learning environment + β_{12} training in job-search skills
Group (Level 2)	$\beta_0 = \gamma_{00} + \gamma_{01}$ aggregated active learning methods + γ_{02} aggregated trainer skills + γ_{03} aggregated preparation and inoculation + γ_{04} aggregated supportive learning environment + γ_{05} aggregated training in job-search skills + γ_{06} mean age + γ_{07} proportion of men + u_0

Note. β_is are Level 1 regression coefficients ($i = 0, 1, \ldots, 12$). γ_{0j}s ($j = 0, 1, \ldots, 7$) are Level 2 regression coefficients. u_0 is Level 2 random error.

Table 5
Individual-Level Means, Standard Deviations, and Intercorrelations for Study Variables

Individual-level ($N = 278$) variables	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Active learning methods	20.96	5.94	—															
2. Trainer skills	21.58	6.00	.47*	—														
3. Inoculation against setbacks	16.16	5.25	.41*	.51*	—													
4. Supportive learning environment	30.12	7.53	.49*	.61*	.54**	—												
5. Training in job-search skills	17.03	5.02	.53*	.50*	.41**	.57*	—											
6. Age	38.47	10.12	−.24*	−.02	−.13*	−.07	−.01	—										
7. Male	0.35	0.48	−.08	.08	.06	−.08	−.03	.07	—									
8. Married	0.54	0.50	.08	.00	−.06	−.03	.04	.06	−.14*	—								
9. Education	2.72	1.17	.09	−.14*	−.05	.00	−.17**	−.28*	−.01	.01	—							
10. Duration of unemployment	13.83	16.49	−.10	.07	−.07	.02	.18**	.24*	.19**	−.04	−.22**	—						
11. Financial support	2.35	0.79	.11	.04	.06	.11	.03	.06	−.09	.23**	.06	−.32*	—					
12. Risk for depression	0.37	0.48	−.06	−.01	.00	−.02	.01	.08	.08	−.02	−.07	−.01	−.05	—				
13. T3 psychological distress	24.35	6.81	−.03	−.11	−.06	−.16*	−.08	.09	.00	−.03	−.08	.06	.00	.29**	—			
14. T3 depressive symptoms	6.44	6.63	−.02	−.08	−.07	−.15*	−.03	.13*	.02	−.04	−.08	.06	.03	.44**	.84**	—		
15. Reemployment	0.18	0.38	.01	.06	.06	.04	−.01	−.16*	.17**	.06	.14*	−.13*	.06	−.05	−.20**	−.18**	—	
16. Stable job	0.07	0.26	.00	.04	.09	.03	.06	−.05	.20**	.02	.08	−.02	.08	−.09	−.14*	−.15*	.60**	—

Note. T3 = Time 3.
* $p < .05$. ** $p < .01$.

Table 6
Group-Level Means, Standard Deviations, and Intercorrelations for Study Variables

Group-level ($N = 71$) variables	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Aggregated active learning methods	20.52	4.81	—									
2. Aggregated trainer skills	21.53	4.30	.51**	—								
3. Aggregated preparation and inoculation against setbacks	16.03	3.46	.46**	.64**	—							
4. Aggregated supportive learning environment	30.10	5.00	.56**	.64**	.66**	—						
5. Aggregated training in job-search skills	16.98	3.28	.55**	.63**	.59**	.65**	—					
6. Mean age	38.28	7.12	−.42**	−.26*	−.29*	−.33	−.20	—				
7. Proportion of men	0.33	0.30	−.15	.06	.01	−.08	.01	.21	—			
8. Group hours	29.72	13.48	−.41**	−.01	−.02	−.08	−.05	.10	.06	—		
9. Group size	10.56	2.94	−.28*	−.04	−.01	−.04	−.16	−.01	.14	−.01	—	
10. Number of study participants	3.86	2.49	.17	.02	−.04	.01	.04	.04	.09	−.16	.19	—

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

order to confirm this result. In reduced models with fewer predictors, the effect parameter of the trainer's skills remained high, and the unadjusted effect of only the trainer's skills as a predictor was 0.25 ($p = .02$). Also, when this result was compared with the results of the related reemployment variable, there was a similar but nonsignificant pattern. Moreover, we also found an effect for an aggregated supportive learning environment, but these findings were not reliable, because they were not significant when this group-level variable was added separately to the main effect models.

The moderating effects of baseline risk of depression were estimated simultaneously for all five aggregated group mean level indicators of group training techniques. As shown in the lower portion of Table 7, group-level aggregated perceptions of preparation and inoculation against setbacks had a significant interaction effect with baseline risk of depression on the decrease in psychological distress ($\gamma = -.86$, $p < .05$) and in symptoms of depression ($\gamma = -.80$, $p < .01$) during the 6-month follow-up. The participants who were at greater risk for depression benefited more from the preparation and inoculation against setbacks than did those at lower risk. In addition, group-level measures of trainer's skills reflecting positive feedback and support from the trainers produced a significant interaction effect with baseline risk of depression for decrease in symptoms of depression ($\gamma = -.46$, $p < .05$) at the half-year follow-up. Again, the participants who were at higher risk benefited more from the trainer's skills. Moreover, we also found interaction effects for active learning methods and job-search skill training with baseline risk of depression, but these findings were not reliable, because they were not significant when the interactions were added separately to the main effect models.

Discussion

We identified five underlying dimensions of group training techniques in job-search training derived from the reports of the participants in nationwide job-search training for unemployed job seekers in Finland. The dimensions included (a) active learning methods involving active participation in small groups; (b) trainer's skills managing group processes and incorporating the participants' ideas in discussions; (c) preparation against setbacks, including identifying setbacks and planning strategies to prevent negative outcomes during the job search; (d) creation of a supportive learning environment, in-

cluding encouragement from the trainer and a positive learning atmosphere; and (e) provision of training in job-search skills, including instrumental tactics for a successful job search, such as networking and the use of information interviews.

These five elements of group-based job-search training were aggregated from individual level reports to the group level, and their cross-level impact on mental health and employment outcomes of the group participants was estimated using HLMs. We found that group-level preparation against setbacks reduced increases in psychological distress and in symptoms of depression from the baseline to the follow-up 6 months later. In addition, group-level trainer skills also reduced increases in symptoms of depression and increased reemployment to stable jobs.

The underlying elements of job-search training also interacted with baseline depression for individuals in the training groups, showing beneficial effects of some underlying training dimensions. Most notably, preparation and inoculation against setbacks interacted with baseline risk of depression to reduce the rate of increase in psychological distress and in symptoms of depression for participants at higher risk of depression. Similarly, trainer skills were more beneficial for those at higher risk for depression in reducing increases in symptoms of depression than for those at lower risk for depression.

Our analyses allow us to estimate the effect of group training elements aggregated from the individual level reports to the group level over and above the effects of the participants' individual perceptions. The group training techniques applied in small groups reflected processes engendered in member-to-member interactions rather than through individual learning processes. Group-level processes may reinforce and amplify individual-level perceptions through modeling and social comparison. It is likely that the intersubjective group techniques that we have identified in this study are important not only as group-level characteristics of training but also because they serve different functions as "active ingredients" in training. Thus, for example, active learning methods, the trainer's skills, and the supportive learning environment dimensions are probably most important for establishing a learning environment in small groups, as they maximize motivation and participation and provide a safe context for learning, relatively free of threat and criticism. At the same time, training in job-search skills may have a different function, teaching trainees the instrumental skills required for an effective job search. Finally, the preparation against setbacks dimension may provide a unique dimension of learning anticipatory coping with the stressful nature of the job-search task, where reversal and failure are frequent and must be anticipated and overcome if a persistent and effective job search is to be carried out.

As group-level preparation against setbacks was shown to prevent later deterioration of the participants' mental health, job-search training should apply group elements and discussions preparing the participants to cope with setbacks that they most likely will encounter. These include the experience of unemployment and the stressful job-search process, especially in tight labor market situations. In this respect, it also seems that skilled trainers who are able to use frequent positive feedback in their training and are able to give sustained support to group participants may create palliative group-level perceptions, which prevent later deterioration of the participants' mental health.

Previous research on job searches suggests that the risk for depression is a critical dimension in the success or failure of a job search. For example, Price et al. (1992) found not only that those at elevated risk for depression were more likely, without intervention, to fail in their job search and remain depressed but that job-search training using MPRC group training methods benefited individuals who were at elevated risk for depression. These results were later confirmed in a prospective randomized trial (Vinokur et al., 1995). In neither of these studies, however, were separate group-level training techniques of the job-search training measured to allow estimation of cross-level effects of these elements on the beneficial effects of the program for those at risk for depression. In the present study, with a heterogeneous sample of job-search groups using a diversity of training methods, we found that different underlying elements of job-search training have differential effects on those at risk for depression. In particular, preparation and inoculation against setbacks appears to be a key preventive underlying dimension of training for those at risk for depression, who may often be highly motivated job seekers failing in their job searches (Vesalainen & Vuori, 1999; Vinokur & Caplan, 1987). As job-search training typically aims at further increasing motivation in the job search, it seems particularly important for high-risk participants to share views and experiences with other participants regarding possible barriers to a successful job search and solutions to overcome them. Similarly, shared group perceptions of trainer skills, including encouragement to participate in the group, positive feed-

Table 7
Group-Level and Individual-Level Effects of Job Search Training Techniques on Mental Health and Reemployment

		Mental health						Employment			
		Psychological distress			Depressive symptoms						
Dimension	Variable	Initial status	Change rate	%	Initial status	Change rate	%	Reemployment	%	Stable job	%
					Main effects models						
Aggregated group techniques and characteristics	Aggregated active learning methods		0.21			0.27		0.05		0.14	
	Aggregated trainer skills		−0.24			−0.28*		0.09		0.32**	
	Aggregated preparation against setbacks		−0.45**			−0.32*		0.03		−0.06	
	Aggregated supportive environment		(0.28)[a]			(0.26*)[a]		−0.04		−0.07	
	Aggregated training in job-search skills		−0.24			−0.28		0.02		−0.12	
	Mean age		0.00			0.18**		0.00		0.00	
	Proportion of men		(3.77**)[a]			(2.90*)[a]		0.00		0.00	
Individual experiences with the group	Active learning methods		0.12			0.05		−0.10		−0.14	
	Trainer skills		0.01			0.05		0.02		−0.08	
	Preparation against setbacks		0.19			0.13		−0.01		0.04	
	Supportive learning environment		−0.20*			−0.19**		0.04		0.00	
	Training in job-search skills		−0.06			0.09		−0.02		0.09	
Individual characteristics	Age	0.04	−0.05		−0.01	−0.05		−0.03		−0.02	
	Male	−0.42	−1.25		0.00	−1.32		1.28**		1.73**	
	Married	−0.30	−0.49		−0.94*	0.38		0.75		0.58	
	Education	−0.57*	0.13		−0.19	−0.20		0.22		0.29	
	Unemployment duration	0.01	0.04		0.01	0.01		−0.02		0.01	
	Financial support	0.59			0.52			0.03		0.68	
	Risk of depression	7.74**	−3.31**		9.55**	−3.41**		−0.36		−1.58*	
Variance explained by all variables				10.5[b]			15.1[b]		19.3[c]		28.0[c]
Variance explained by the aggregated group techniques and characteristics				3.2[b]			8.6[b]		2.1[d]		7.6[d]
Variance explained by only the aggregated group techniques				2.1[b]			5.4[b]		2.1[d]		7.6[d]

Table 7 (*continued*)

Dimension	Variable	Mental health						Employment			
		Psychological distress			Depressive symptoms						
		Initial status	Change rate	%	Initial status	Change rate	%	Reemployment	%	Stable job	%
		Models with interactions									
Risk of Depression × Aggregated Active Learning Methods			0.17			(0.37*)[a]		0.00		−0.04	
Risk of Depression × Aggregated Trainer Skills			−0.33			−0.46*		−0.23		−0.38	
Risk of Depression × Aggregated Preparation Against Setbacks			−0.86*			−0.80**		0.10		0.06	
Risk of Depression × Aggregated Supportive Environment			0.33			0.32		0.09		0.25	
Risk of Depression × Aggregated Job-Search Skill Training			−0.24			−0.27		0.05		(0.59*)[a]	
Variance explained by all variables and by all the interactions				13.1[b]			16.8[b]		20.1[e]		31.7[e]
Variance explained by only the interactions				2.8[b]			2.0[b]		0.9[f]		3.7[f]

[a] Coefficients in parentheses were not verified when respective group-level variables or interaction terms were added one at a time to the main effect models. [b] The Level 1 explained proportion of variance was calculated as the proportional reduction of the sum of the variance components (Snijders & Bosker, 2000). [c] Nagelkerke measure of R^2 of the full model calculated with ordinary logistic regression. [d] Difference of the Nagelkerke measures of R^2 when aggregated group techniques variables were added to the model. [e] Nagelkerke measure of R^2 of the full model with interactions. [f] Difference of the Nagelkerke measures of R^2 when interactions were added to the model.
* $p < .05$. ** $p < .01$.

back, and support, seem to be important for the mental health of participants at risk for depression.

The results of the present study should be considered in the light of some empirical limitations. For example, we were able to obtain only a proportion of all the group members in any particular training group in the present sample, which resulted in relatively low statistical power, especially regarding the cross-level interactions. We may consider these results, therefore, to be a lower bound estimate of the impact of the training results aggregated from individual level reports to the group level. In addition, the data on the underlying elements of job-search training, although consistent with the underlying theory of the MPRC training principles (Caplan et al., 1989) and based on the results of factor analysis, are derived from self-report data.

Future research on the group techniques of training could move in several directions. First, the replication and extension of these findings with larger samples would be highly desirable. Beyond that, experimental tests of the degree to which these underlying elements of group training have unique impacts on important individual differences such as risk for depression not only are possible but should be carried out. In the long run, this could allow the design of adaptive treatment (Cronbach & Snow, 1977) for individuals facing the stressful task of job search, and perhaps other stressful coping tasks as well.

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