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Can job seekers achieve more through networking? The role of networking intensity, self-efficacy, and proximal benefits

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Abstract

The authors develop and evaluate an online networking intervention, Building Relationships and Improving Opportunities (BRIO), built in conjunction with the networking literature and social cognitive theory (Bandura, 1986, 1999). A field experiment using 491 unemployed job seekers shows that the intervention increases networking intensity, networking self-efficacy, and proximal networking benefits. Further, the intervention generates higher quality reemployment through its positive effects on networking self-efficacy. Individuals who completed the intervention and were also lower in extraversion showed the most positive improvements in networking self-efficacy and reemployment quality. The study advances the literature by uncovering the mechanisms through which a networking intervention may result in improved reemployment success, and demonstrating the moderating role of individual differences in affecting intervention outcomes. The study helps practice by providing a publicly available, research-based training to improve job search networking.

KEYWORDS

job search, job search training interventions, networking, reemployment, social cognitive theory

1 | INTRODUCTION

Networking is a highly encouraged behavior for individuals looking for work (Pierson, 2009). Job seekers are told "networking is your most important job search strategy" (U.S. Department of Labor ETA, 2019) and that it should be undertaken "consistently and continually" (Ceniza-Levine, 2018). Indeed, many job seekers find employment through social connections. For example, in a classic study, 56% of a sample of 282 professionals in Massachusetts found jobs through

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social contacts (Granovetter, 1995). Research in other countries similarly supports the role of networking in finding work (Franzen & Hangartner, 2006). Yet, many job seekers feel discomfort or do not know the best way to go about contacting friends, family, or acquaintances during their job search (Wanberg, Basbug, van Hooft, & Samtani, 2012).

Given the importance placed on networking during the job search, it is surprising that it is not clear how and to what extent it is possible to help job seekers improve their networking skills. Many interventions have been evaluated for their effectiveness in helping job seekers achieve positive outcomes (Liu, Huang, & Wang, 2014). These job search interventions have taught a broad array of job search skills and/or enhanced motivation for the job search in general. However, individual changes in networking dimensions and outcomes as a consequence of networking were not evaluated in any of the 47 intervention studies identified by Liu et al. (2014).

In order to help individuals with networking, it is important to understand the processes involved in producing positive networking outcomes (i.e., what can job seekers do to achieve good outcomes?). The networking literature lacks clarity about proximal processes and mechanisms (Marsden & Gorman, 2001; Mouw, 2003). Research on networking during job search has focused on job seeker *networking intensity* (time spent in networking activities). However, time spent networking is not a consistent predictor of reemployment success (Forret, 2018). Examinations of additional aspects of networking beyond networking intensity are needed to inform how job seekers can achieve positive outcomes from networking. That is, what is it that is to be improved about networking other than doing it more, and how might these dimensions of networking be facilitated? Additionally, it is important to understand whether certain types of individuals benefit more (or less) from an intervention to help them with networking during job search. That is, what boundary conditions might be involved in improving individual networking?

In this study, we use theoretical insights from the general study of job search (van Hooft, Wanberg, & Van Hoye, 2013) to propose two aspects of networking quality that job seekers may gain from improving beyond networking intensity: *networking self-efficacy* (confidence about engaging in networking activities) and *proximal networking benefits* (immediate value achieved from networking such as referrals, problem reformulation, solutions, and/or validation). We draw on practitioner and academic sources on networking (e.g., Cross & Sproull, 2004; Pierson, 2009) and social cognitive theory (Bandura, 1986, 1999) to create an online intervention we call Building Relationships and Improving Opportunities (BRIO) to help job seekers improve these dimensions of networking. We use an experimental field study with multiple waves of data collection to examine the extent to which improvement in these proximal dimensions results in the attainment of two reemployment success outcomes, reemployment status, and reemployment quality. We further examine *extraversion* (the dispositional tendency to seek out and enjoy social interaction, experience and exhibit positive affect, and engage in assertive behavior and decisive thinking; Ashton, Lee, & Paunonen, 2002; Wilt & Revelle, 2017) as a possible moderator of intervention effectiveness.

Our study provides the first comprehensive evaluation of a research and theory-based networking program using a robust experimental design. We address a tangible, real-world need, faced by thousands of individuals each year; specifically, we provide a program to help individuals learn networking skills. Our findings that BRIO resulted in increased networking intensity, self-efficacy, and benefits, as well as reemployment quality, contribute evidence to the literature that job seekers can improve their networking quality. Research has not previously shown that it is possible to affect such critical outcomes with a brief, online intervention. Because our program is online, it is repeatable, cost-effective, and available to individuals anytime.[1] Our identification of aspects of networking to improve, as well as the documentation of the components of our training, is also useful for agencies wishing to recreate the outcomes of our program in in-person classes and for counselors working one-on-one with job seekers.

Theoretically, we provide important contributions to the job search and general networking literatures. First, we introduce two aspects of networking quality—networking self-efficacy and networking benefits—to the study of networking within job search. By doing so and by examining them as mediators, we produce new insight about intermediate mechanisms that assist the achievement of distal goals (i.e., reemployment and reemployment quality) in the context of job search. Such insight is necessary to develop agency-based theories on job search networking and extend theories on career-related networking in general. Current work emphasizes network positions and contact characteristics, rather than specific benefits targeted and gained and what an individual can do proactively (Bensaou, Galunic,

& Jonczyk-Sédès, 2014, Casciaro et al., 2015). Second, by examining extraversion as a moderator of intervention effectiveness, we address whether the BRIO intervention is differentially useful according to a job seeker's level of extraversion. This is important because "Who is most in need of job search interventions" is an understudied question and one that can help advance theory on assistance for job seekers (Liu et al., 2014, p. 1030).

2 | JOB SEARCH NETWORKING

Job search networking is defined as the proactive process of initiating and using informal relationships to potentially benefit one's job search goals. In the job search literature, networking is considered an informal (vs. formal, such as examining online job postings) job search method and is recommended to job seekers as an important avenue to identify and obtain information about job options (Van Hoye, van Hooft, & Lievens, 2009; Wanberg, Kanfer, & Banas, 2000). Beyond retrospective measures asking job seekers how they found their jobs, researchers have primarily operationalized job search networking with measures that focus on the time and effort individuals put into their networking (Forret, 2018).

2.1 | Networking intensity and job search success

Research linking networking intensity to objective job search outcomes has shown equivocal findings. Although some studies have found that higher levels of networking intensity are associated with more job offers (Obukhova & Lan, 2013; Van Hoye et al., 2009) and shortened unemployment duration (Wanberg et al., 2000), others have reported null or even negative relationships (McArdle, Waters, Briscoe, & Hall, 2007; Saks, 2006). Furthermore, although based on a small number of studies, a meta-analytic synthesis indicated that effort expended in informal job search was not significantly related to number of job offers ($k = 4$) or reemployment ($k = 8$; van Hooft, Wanberg, Kanfer, Kammeyer-Mueller, & Basbug, 2015).

Similarly, studies linking networking intensity to reemployment quality have produced mixed findings (Mouw, 2003; Rubineau & Fernandez, 2015). Most of these studies have included income as an indicator of the quality of the new job. Work by Franzen and Hangartner (2006) suggests that networks may more appropriately facilitate broader aspects of perceived satisfaction with the new job (such as job demands–ability fit and happiness with the job as a career investment) than income. Networks can provide career and organizational information that facilitate broader aspects of reemployment quality, such as helping an individual sort through what they value and providing information about the culture of specific organizations. However, meta-analytic synthesis shows no significant relationship between the extent of effort expended in informal job search across measures of reemployment quality that include both income and broader measures of job quality ($k = 9$; van Hooft et al., 2015).

Because networking intensity alone has not adequately accounted for the positive outcomes of networking during job search, it may be useful to assess additional dimensions of job search networking (Forret, 2018). A possible explanation for the lack of uniform findings regarding individual networking effort and outcomes may be varying networking quality. Recent work has highlighted the importance of the quality of job search activities, in addition to time spent in such activities (Hulshof, Demerouti, & Le Blanc, 2019; van Hooft et al., 2013, 2015). Highlighted as important but understudied in the job search context are two particular aspects of networking quality: networking self-efficacy (de Janasz & Forret, 2008; Kuwabara, Hildebrand, & Zou, 2018) and proximal networking benefits (Cross & Sproull, 2004; Wolff, Moser, & Grau, 2008).

2.2 | Networking self-efficacy and proximal benefits

Networking self-efficacy refers to individuals' self-assessed capability about engaging in networking activities. Many job seekers are not comfortable using networking and have low self-evaluations about their networking savvy (Anand & Conger, 2007; Wanberg et al., 2000, 2012). This discomfort stems at least in part from misconceptions and lack of

knowledge about networking (Anand & Conger, 2007; Cullen-Lester, Woehler, & Willburn, 2016). Individuals often dislike networking because they feel that it involves bothering others, the need to attend awkward networking mixers, having to know a lot of people, or asking someone outright for a job (Lowstuter & Robertson, 1995; Pierson, 2009). Illustrating such misconceptions about networking, a job seeker in a qualitative study noted "They say go out there and network (laugh). Well, you know, when you go out and network you're in a crowded room filled with people who are as unemployed as you are" (Wanberg et al., 2012, p. 898). Low self-efficacy can hinder performance outcomes (Bandura, 1999). When self-efficacy is low, myriad self-reactions related to the focal task occur, including negative thoughts and emotions, as well as reduced attention, motivation, and follow-through (Bandura, 1999). Engagement in activities that individuals are less efficacious in creates stress and can "impair performance by diverting attention from how to best proceed with the undertaking to concerns over failures and mishaps" (Bandura, 1999, p.128). In contrast, individuals with high self-efficacy show greater cognitive flexibility, sustain their motivation in the presence of setbacks, and concentrate on how to perform successfully (Bandura, 1999).

Proximal networking benefits refer to the immediate, in the moment, assistance that networking provides to job seekers. These benefits can be contrasted to more distal benefits from networking, which may occur later and indirectly (Wolff et al., 2008). Because job seekers are susceptible to thinking that networking is about asking for a job, they often underutilize proximal networking benefits (Tullier, 2004). Research suggests that five dimensions describe how social capital can be exchanged through interpersonal interactions, resulting in proximal networking benefits (Cross & Sproull, 2004). These include solutions provided by others ("know-what" and "know-how"), referrals to other sources of information (suggestions of other individuals who can provide information or insight), problem reformulation (helping the person define an issue or think about something in a different way), validation (reassurance for the person that their thoughts about an issue are sound or boosting of confidence), and legitimation (so that the individual can say they spoke to someone about an issue). Networkers can receive more than one of these proximal networking benefits from the same person (Cross & Sproull, 2004; Levin, Walter, & Murnighan, 2011). Strong ties (i.e., close friends, family members, or relatives) tend to facilitate more personal disclosure, problem reformulation, and transmission of useful information (Cross & Sproull, 2004; Kim & Fernandez, 2017; Lin, 2008). Weak ties (more socially distant ties such as acquaintances or friends of friends) provide more solutions, because distal networks provide information that is less redundant with closer circles (Cross & Sproull, 2004; Lin, 2008). It is conceivable that individuals who are more successful at reaping proximal benefits of networking during the job search may be more likely to achieve reemployment success.

3 | THE CURRENT INVESTIGATION

We employ an experimental field study to examine whether an intervention can help job seekers improve their networking intensity, networking self-efficacy, and proximal networking benefits, and whether improvements in these dimensions aid distal reemployment outcomes. We first describe the development of the BRIO intervention, which taught networking skills and motivation within the framework of social cognitive theory. We then delineate specific hypotheses and details about our research design.

3.1 | Development of the BRIO intervention

A substantial literature has developed on the experience of job search (for a recent review, see Wanberg, Ali, & Csillag, 2019). A portion of this literature has focused on interventions to help job seekers. Liu et al. (2014) use a meta-analytic assessment of available job search interventions to demonstrate that it is possible to help job seekers improve their job search capabilities. They note that four major theoretical perspectives have been applied to the development of job search interventions—behavioral learning theory, theory of planned behavior, coping theory, and social cognitive theory. The authors conclude that the most successful interventions impart job search skills while at the same time

boosting self-efficacy, proactivity, goal setting, and social support. These latter components facilitate motivation, and are consistent with the premises of social cognitive theory, including the need to help individuals facilitate their self-regulatory skills.

A key aspect of the social cognitive theory addresses the agentic aspects of individuals and how they can influence their environments (Bandura, 1986, 1999). Individuals can engage their environments to facilitate goal achievement. Individuals can also self-regulate their emotions, motivation, goal setting, and proactive behaviors. Furthermore, people can exert proxy agency, engaging others for support, knowledge, or resources (Bandura, 2012). Social cognitive theory posits that individuals can improve on these capabilities. For example, they can learn to replace faulty thinking and misconceptions with more accurate assessments of an issue or task (Bandura, 1999). They can also improve perceptions of self-efficacy, agency, and reactions to situations (e.g., Eden & Aviram, 1993; Gist & Mitchell, 1992).

Job search, as well as networking, is a self-directed process, involving the need to self-motivate, make decisions about, and engage in activities (Kanfer, Wanberg, & Kantrowitz, 2001; van Hooft et al., 2013; Zikic & Saks, 2009). There is often significant uncertainty and low self-efficacy about the job search process (Eden & Aviram, 1993; Saks, Zikic, & Koen, 2015). Individuals must choose effective ways to cope as they encounter challenges such as financial stress, repeated rejections from jobs they apply for, and pressure from their significant others to find a job (Kinicki & Latack, 1990; Wanberg, 2012).

Because social cognitive theory addresses the motivational aspects inherent to increasing both self-efficacy and behavior, this theory provided a foundation for our training along with providing information about networking (Liu et al., 2014). As a first step in creating the intervention, we made decisions on the informational content of the program. We derived content from a systematic analysis of the networking domain, using both practitioner and academic sources. Subsequently, we asked six subject matter experts on the topic of job search networking (five whose full-time employment involves working with job seekers and one author of a job search self-help book) to review the content and evaluate the comprehensiveness and appropriate emphasis of the program.

As a second stage in the process, and based on the findings of Liu et al. (2014), we developed an intervention script and exercises to boost self-efficacy, promote goal setting, enlist social support, and encourage proactivity. Social cognitive theory suggests that self-efficacy evaluations can be improved through social modeling, mastery experiences, and persuasion aimed to get individuals to believe in themselves (Bandura, 1982, 2012). These factors were promoted via the narratives of three main characters in the program: Jack (a job seeker who is initially uncomfortable with networking), Camille (a job seeker who is confident with networking but realizes she can improve her approach), and Jennifer (a career coach). Jack and Camille improve their networking approach, providing participants exposure to social modeling and vicarious mastery experiences. Jennifer encourages seekers to start the networking process by contacting individuals they know well, promoting mastery experiences. Throughout the program, Jennifer uses persuasion aimed at getting individuals to believe in themselves. For example, she reassures individuals that they can improve their networking and comfort.

We also designed the program to promote goal setting, social support, and proactivity in relation to networking. Goals are more likely to facilitate performance if they are specific (Locke & Latham, 2002). As such, participants are prompted to identify people they will consult about their job search over the next 2 weeks, including date, time, and method of contact. They are also prompted to develop networking objectives, conversation starters, and an elevator pitch (a succinct self-description of one's background, experience, and employment goals). As a means of enlisting social support, individuals are encouraged to get feedback from others on this elevator pitch and other components of their job search. The "Final Tips" part of the program encourages individuals to think in advance about what might get in their way of networking (e.g., "I don't want to bother anyone") and develop strategies to overcome any barriers that might arise (e.g., establishing a routine, engaging in positive self-talk; Melloy, Liu, Grandey, & Shi, 2018).

As a last stage in the process, the script and design of the online program were refined by a firm with an expertise in adult learning principles and online learning. To accommodate short learner attention spans, the program

was formulated into short micro-lessons (i.e., eNuggets; Anderson, 2016) and learners were engaged throughout the training with questions and feedback (Baldwin & Ford, 1988). The program was professionally produced with actors of varied ethnicity and gender. Table 1 shows final details about (a) the skill-based content, (b) how we wove in and incorporated theory-based elements to improve self-efficacy, social support, and proactivity, and (c) how we further incorporated adult and online learning principles.

3.2 | Hypotheses and study design

We propose that the BRIO program will increase participants' networking intensity, self-efficacy, and proximal benefits. Providing information (e.g., facts and knowledge job seekers need)—along with boosting self-regulatory resources—enhances self-beliefs, personal agency, and expected outcomes and stimulates behaviors (Bandura, 1999) including job search behavior (Liu et al., 2014). Because our program is built around the sources of self-efficacy as detailed in social cognitive theory (i.e., social modeling, mastery experiences, persuasion), we propose that the intervention will increase networking self-efficacy. Furthermore, because our program reviews misconceptions about networking with participants, we expect them to learn that there is more to gain by networking than only job leads. By stimulating participants to identify and proactively seek authentic interpersonal connections to facilitate the flow of information and validation through feedback, and securing problem-solving assistance from these connections, we expect the program to increase proximal networking benefits. Last, through encouraging individuals to set goals to reach and leverage their networks (e.g., by identifying goals toward which they have trouble making progress), we expect that the program will produce an increase in networking intensity. We propose:

Hypothesis 1: Participating in the networking intervention will lead to higher levels of (a) networking intensity, (b) networking self-efficacy, and (c) proximal networking benefits.

We further expect that improved networking intensity, self-efficacy, and proximal benefits will positively predict reemployment outcomes (i.e., reemployment status and quality). As reviewed above, the extant literature has been conflicting with respect to the relationships between networking intensity and reemployment outcomes. We propose that within the context of learning how to network and resolving misconceptions of networking that may be leading individuals to engage in this activity inappropriately, networking more (and thus mobilizing one's networks to a greater extent) as a result of participating in the intervention will yield positive reemployment outcomes.

Researchers have not studied networking self-efficacy as it relates to reemployment, but they have related general job search self-efficacy to higher job search quality, increased likelihood of reemployment, and higher reemployment quality (Kanfer et al., 2001; van Hooft et al., 2015). Based on social cognitive theory, we suggest that improved networking self-efficacy is critical to performance outcomes such as reemployment status and quality, above and beyond mere engagement in networking. Networking self-efficacy facilitates more significant investments in preparation as well as higher quality execution of the behavior, whereas self-doubt "hinders adept execution of acquired capabilities" (Bandura, 1982, p. 123). Thus, networking self-efficacy should also help transmit the intervention effect to reemployment success outcomes.

With respect to proximal networking benefits, qualitative research implies that aspects such as providing solutions, referrals to other sources of information, problem reformulation, validation, and legitimation improve people's actionable knowledge and facilitate progress on a given project (Cross & Sproull, 2004). Social cognitive theory describes the role of social persuasion, information, and feedback in helping individuals persist in effort and overcome obstacles (Bandura, 1986). Research also shows that support and assistance from others during job search facilitates reemployment outcomes (van Hooft et al., 2015). Given the substantial needs of individuals to receive insight and information during job search (Wanberg et al., 2012), we expect that effects of the intervention on reemployment outcomes will also be mediated by individuals participating in the intervention reporting higher

TABLE 1 BRIO intervention content and theoretical foundations

Content-based elements of the program	
eNugget (short lesson)	**Title and objectives**
1	**Introduction to Networking** and **What is Networking**? Introduce the value of networking and the need to build confidence, while dispelling misconceptions. Activities: Participants self-evaluate previous networking misconceptions and networking skills. Encouraging feedback is provided based on user response.
2	**Why Should You Network More?** Introduces proximal networking benefits from job search networking including answers and solutions, referrals to other sources of information, problem reformulation, and validation. Promotes a focus on proximal networking benefits and authentic interpersonal connections to answer questions in contrast to asking for a job. Activities: Users study a list of proximal networking benefits and can interactively order the benefits they judge most relevant.
3	**Elevator Pitch** Describes the need for job seekers to have an "elevator pitch." Provides example elevator pitches as guidelines. Activities: Participants observe a video about two central characters developing and delivering elevator pitches. Participants are encouraged to draft elevator pitches and practice them with someone during the next two days.
4	**Getting the Word Out About Your Job Search** Mobilizes job seekers to share their elevator pitch with 100% of their primary contacts, in person, by email, or by phone. Activities: Participants self-assess their confidence and are urged to practice their elevator pitch with all networking partners. Encouraging feedback is provided based on user response.
5	**Asking Questions and Getting Advice** Helps job seekers reflect about how they can use networking to ask questions or get advice on aspects of their job search. Encourages job seekers to identify the benefits they currently need the most (answers and solutions, new leads, problem reformulation, and/or validation). Teaches participants to ponder their job search needs and determine how their contacts could help advance their job search. Activities: Participants list two questions related to their current job search.
6	**Secondary Network Contacts** Helps job seekers consider extending their networks beyond strongly tied primary contacts to weakly tied secondary contacts (Granovetter, 1973). (The program recognizes benefits from both strong and weak ties and does not emphasize one over the other, but does indicate that networkers should not rely exclusively on close contacts.) Activities: To provide vicarious learning, a video enactment shows an example of a networking conversation used with secondary contacts.
7	**Using LinkedIn as a Networking Tool** Emphasizes using LinkedIn to gather information about contacts. Provides supplemental material for individuals who want more information about developing good LinkedIn profiles. Activities: Step-by-step interactive video guides to set up, update, and/or improve a LinkedIn profile, and tips for developing relationships through LinkedIn. Individuals are encouraged to put these guides into action as they engage with this eNugget.
8	**Growing Through the Perspectives of Others** Enhances motivation to learn from others, which is necessary for reaping maximal networking returns. Encourages a learning orientation during job search. Stresses that networking can help job seekers at any point in a job search. Activities: Participants are asked to be as specific as possible in listing two or three goals toward which they are progressing poorly in their job search or that evoke their doubts (e.g., elevator pitches, resumes, cover letters, LinkedIn profiles, or job search strategies). They then list a trustworthy contact for addressing those questions, along with follow-up questions.
9	**Ready, set, goals!** Encourages participants to focus on their most pressing current needs, such as specific answers or input, identifying relevant information sources for problem-solving assistance, general support, or an introduction. Activities: Individuals list specific contacts for consultation over the next 2 weeks, the reason for contacting them, and guiding questions/speaking notes for opening the conversation. Users can auto-place the intention onto their calendars with notes in the calendar item description field.
10	**Final Tips** To facilitate persistence with the goals set previously participants review their plans for the next 2 weeks, think about possible barriers, and consider strategies for overcoming those barriers. The program ends with a 30-s video titled "Just be You," promoting self-confidence and feelings of mastery. Activities: Self-assessment of possible barriers and exploration of strategies for overcoming barriers.

(Continues)

TABLE 1 (Continued)

Theory based elements of the program	
Element	**Description**
Improving networking self-efficacy	Self-efficacy evaluations can be improved through social modeling, mastery experiences, and persuading people to believe in themselves (Bandura, 1982, 2012). We built these factors into the program. BRIO features videos in which three main characters interact in networking scenarios: Jack, a job seeker who is initially uncomfortable with networking; Camille, a job seeker who is confident with networking but realizes she can fine-tune her approach; and Jennifer, a career coach. As the program progresses, Jack and Camille both improve their networking, which exposes participants to social modeling and vicarious mastery experiences. Jennifer encourages job seekers to contact individuals they know well to increase personal mastery experiences. Throughout the program, Jennifer reassures participants that they can improve their networking and be more comfortable in doing so. Her concluding segment "Just be You," is intended to directly persuade participants to believe in themselves (Bandura, 2012).
Goal setting	Because specific goals are more likely to facilitate performance (Locke & Latham, 2002), participants are prompted to identify contacts for their job search over the next 2 weeks, including date, time, and method of contact. They are also prompted to develop networking objectives (e.g., inventorying where they need help, such as with specific answers or input, and planning their networking interactions before, during, and after an interaction) and conversation starters such as congratulations on promotions or queries about recent mergers. The interface automatically links items with participant calendars and notes in the calendar item description field. Participants develop elevator pitches with someone they know.
Enlisting social support	To enlist social support and improve self-presentation, participants are encouraged to get feedback on their elevator pitch and other components of their job search.
Encouraging proactivity	The "Final Tips" part of the program encourages thinking about barriers to networking (e.g., "I don't want to bother anyone") and proactive strategies to overcome barriers, such as establishing routines and engaging positive self-talk (Melloy et al., 2018). Individuals adopt only actions they see as valuable. The intervention stresses that networking is not about simply asking for jobs.
Adult and online learning principles	
Learner engagement and feedback	To accommodate short attention spans, the program uses brief micro-lessons, called "eNuggets" (Anderson, 2016). Additionally, questions and feedback engage learners throughout the training (Baldwin & Ford, 1988). For example, a few select quiz questions were incorporated to assess learner understanding of the content along the way. (After users answer questions, the correct answers appear along with short feedback and brief explanations.)
Learner identification	To optimize audience identification, we chose actors with varied ethnicity, in ages ranging from late 30s to early 50s to reflect the expected sample, and balanced gender among the two actors portraying job seekers.
Program quality	After we designed the concept and completed the script, a firm with expertise in adult learning principles and online learning refined and professionally produced the program. The program used experienced actors.

Notes. Participants were asked to complete the 10 eNuggets presented in the first section of the table in the order presented. To enhance learner control over the material, participants were allowed to complete the lessons in any order they wished and to revisit them as many times as desired. The average participant completed the BRIO program in 76.51 min (SD = 49.64 min).

proximal networking benefits, encompassing more solutions, referrals, problem reformulation, and validation. Taken together, we contend:

***Hypothesis 2*:** The effects of participating in the networking intervention on reemployment status and reemployment quality will be mediated by (a) networking intensity, (b) networking self-efficacy, and (c) proximal networking benefits.

Finally, we examine for whom the intervention will be most beneficial. We propose that individuals lower in extraversion will be most likely to benefit from the intervention. We focus on extraversion because out of the Big Five, this personality trait is the strongest predictor of individuals engaging in networking (Forret, 2018). Higher extraversion is also associated with higher networking comfort, skill in interpersonal interactions, and larger network size (de Janasz & Forret, 2008; Tulin, Lancee, & Volker, 2018; Wanberg et al., 2000; Watson & Clark, 1997). As such, improvement of networking for extraverts may be subject to "ceiling effects," meaning these individuals may have higher levels of study outcomes from the beginning, thus have limited potential to improve (Gist & Mitchell, 1992). Individuals who are extraverted more naturally seek out and enjoy social interaction (Oerlemans & Bakker, 2014). Social cognitive theory suggests when individuals are highly skilled in material before a program begins, they may be less motivated than less-skilled individuals (Bandura, 1982). Thus, our program likely better facilitates the improvement of the self-regulatory resources that are needed to promote networking self-efficacy among individuals lower in extraversion, who have a greater need to upgrade networking skills (Liu et al., 2014). We distinguish between proximal direct and distal indirect effects of the intervention and hypothesize:

***Hypothesis 3*:** Extraversion will moderate the effect of participating in the networking intervention on postintervention (a) networking intensity, (b) networking self-efficacy, and (c) proximal networking benefits, such that the intervention will produce greater (vs. smaller) benefits for job seekers who have lower (vs. higher) levels of extraversion.

***Hypothesis 4*:** Extraversion will moderate the indirect effect of participating in the networking intervention on postintervention (a) reemployment status and (b) reemployment quality, such that the intervention will produce greater (vs. smaller) benefits for job seekers who have lower (vs. higher) levels of extraversion.

To test our hypotheses, we conduct an experimental field study with two control groups. We first use a *posttest only control group* to compare study variables between this control group and the intervention group immediately following the intervention (i.e., networking intensity, self-efficacy, and proximal benefits) and 6 months after the intervention (i.e., reemployment outcomes). When groups are randomly assigned, posttest-only designs reliably assess intervention effects by controlling for the major threats of internal validity including history, maturation, instrumentation, regression, selection, mortality, and their interactions (Campbell & Stanley, 1966).

In addition, we also use a *pretest–posttest control group* in order to assess study variables before and immediately following the intervention. Although rarely incorporated in job search intervention evaluations (Liu et al., 2014), we use this methodological enhancement to verify randomization of study participants to conditions and to examine potential testing effects. The issue of whether or not the posttest only control group is equivalent to the experimental group on key study variables prior to the intervention cannot be determined with a posttest only control group design. Although randomization should effectively equate groups (Campbell & Stanley, 1966), the addition of the pretest–posttest control group is useful to put any questions to rest. Testing effects refer to the extent that participants in the intervention group are influenced by the mere fact of being surveyed. That is, when participants in training programs take pretests regarding their job-seeking behaviors, reflection on the items may cause individuals to "initiate or increase those activities, irrespective of the intervention" (Dimitrov & Rumrill, 2003, p. 160). In our case, the pretest involved an extensive array of questions about networking. By adding a pretest–posttest control group, we could examine the magnitude of the testing effects (Campbell & Stanley, 1966).

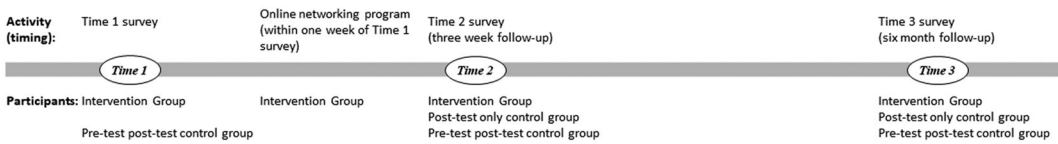

FIGURE 1 Intervention and two control group design
Notes. Timing details (e.g., 3 week follow-up) are in relation to Time 1.

4 | METHOD

4.1 | Participant recruitment and assignment to conditions

Unemployed job seekers attending required orientations in three Minnesota WorkForce Centers between January 12, 2017 and May 19, 2017 were asked to participate in the study (University of Minnesota Institutional Review Board [IRB] #1609E94923, "Skills for Coping with the Stresses of Unemployment and Seeking New Employment Opportunities [Subproject 4]). To be eligible for our study, individuals could not be long-term unemployed (we included individuals unemployed for 6 months or less; Liu et al., 2014), had to be actively looking for full-time work, have at least 2 years of post-high school education, and have access to a computer or tablet. We chose these eligibility criteria in order to provide a program with content suited to a clear audience (e.g., unemployed job seekers rather than employed or student job seekers, and individuals with some post-high school education as opposed to individuals with only a high school or less education). The unemployment rate at the time of the study (January to May 2017, inclusive) for this region was 3.80% (U.S. BLS, 2018).

Of 3,126 individuals attending the orientations, 2,324 (74.3%) were initially eligible and 916 (39.4%) formally enrolled in the study. A repeat assessment of eligibility led to the removal of 176 cases (for example, 31 individuals found employment in the less than 1 week between the orientation and the first survey, and 87 respondents were distributed the wrong survey link).

In alternating weeks, job seekers were assigned to the intervention group or one of two control groups (i.e., "batch randomization"; Shadish, Cook, & Campbell, 2002). Individuals in the *intervention group* were asked to complete the Time 1 (T1) survey, online networking program (intervention), Time 2 survey (T2; 3-week follow-up), and Time 3 survey (T3; 6-month follow-up). Individuals in the *posttest only control group* were asked to complete an enrollment form confirming eligibility (though no survey) at T1, T2, and T3 surveys. Individuals in the *pretest–posttest control group* were asked to complete the T1 survey, T2 survey, and T3 survey. Figure 1 shows an overview of the study design. We timed the T2 survey to occur 2 weeks after the intervention, a conservative choice for observing self-efficacy outcomes, which tend to be stronger immediately after interventions (Blume, Ford, Baldwin, & Huang, 2010). We chose this interval to provide participants sufficient time to engage in networking after the intervention. We sent personalized invitation emails for each activity and up to two reminder emails. Individuals received Amazon e-gift cards for participation.

In the intervention group, 219 individuals responded to the T1 survey and completed the online networking program, 194 (88.6%) responded to the T2 survey, and 180 (82.2%) to the T3 survey. In the posttest only control group, 158 individuals responded to the T2 survey and 118 (74.7%) to the T3 survey. In the pretest–posttest control group, 195 responded to the T1 survey, 163 (83.6%) to the T2 survey, and 143 (73.3%) to the T3 survey. To be included in the final analyses, individuals in the intervention group had to complete the T1 survey, the entire intervention (i.e., shown in Table 1, except for the supplemental/optional material on LinkedIn in eNugget 7), and at least a T2 or T3 survey. At T2, individuals who gained reemployment reported their reemployment information and thereby completed their study participation. Those who were still unemployed at T2 were asked to complete the T3 survey to capture their continued unemployment or reemployment information. Similar rules were used for the two control groups, although they did not have to complete the intervention. Final analyses focused on 491 participants who met the requirements ($N = 196$ in the intervention group; $N = 132$ in the posttest-only control group; and $N = 163$ in the pretest–posttest control group).[2]

Of the 491 participants, 50.7% were women and 87.0% were White. Respondents were 46.92 years old on average (*SD* = 11.20) and had 22.76 years of full-time work experience (*SD* = 10.90). A majority of the sample (60.5% of respondents) had personal annual incomes of $60,000 or more before becoming unemployed. Approximately 25% of the sample reported that their last job had been in a professional specialty occupation; 22% reported executive, administrative, or managerial fields; 14% reported working in sales; and 39% worked in technical, related, administrative support, or other fields. On average, participants had been unemployed for 49.34 days upon enrollment (*SD* = 28.25). A total of 334 individuals (130 in the intervention group, 86 in the posttest only control group, and 118 in the pretest–posttest control group) became reemployed over the duration of the study or had accepted a job offer but had not yet started. The average time it took intervention participants to complete the BRIO program was 76.51 min (*SD* = 49.64 min) with 1.75 logins (*SD* = 1.10).

4.2 | Measures

4.2.1 | Networking intensity, self-efficacy, and proximal benefits

Individuals in the intervention group and the pretest–posttest control group completed measures of networking intensity, self-efficacy, and proximal benefits at T1 and T2. The posttest only control group completed these measures at T2.

Networking intensity was assessed as time spent on "contacting people I know to generate potential job leads" and "talking with people I know about my job search" (Blau, 1994), measured as 1 = *no time at all* to 5 = *a great deal of time* (T1 α = .88; T2 α = .89). As a validity check, we asked participants to provide the first names of individuals they had consulted in their job search (Marsden, 2005). Networking intensity was significantly correlated with the number of names listed (T1: $r = .41$, $p < .01$; T2: $r = .39$, $p < .01$).

Networking self-efficacy was assessed with five items modeled after a closely related task-specific self-efficacy measure, job search self-efficacy (Van Ryn & Vinokur, 1992). Following the stem, "How confident do you feel about engaging in the following types of job search activities?" individuals responded to five items: "using networking in my job search," "informing everyone I know well that I am looking for work," "preparing an 'elevator pitch' outlining the type of job I am looking for and what I have to offer," "using networking to expand my target list of companies," and "using LinkedIn as a tool to assist me in networking" (1 = *not at all confident*, 5 = *highly confident*; T1 α = .84; T2 α = .84).

Participants indicated their *proximal networking benefits* with a five-item scale adapted from Cross, Borgatti, and Parker (2001). Individuals indicated (1 = *not at all*, 5 = *extremely*) the extent to which their networking conversations provided the following benefits: "provided me with answers or solutions"; "helped me meet insiders at target organizations or get in touch with decision makers"; "provided me with relevant information sources, such as other people, companies, or websites"; "gave me useful insight"; and "helped improve my confidence or motivation" (T1 α = .82; T2 α = .83). These items map onto the benefits provided by networking (solutions, referrals to other sources of information, problem reformulation, and validation) as delineated by Cross and Sproull (2004).

4.2.2 | Extraversion

Extraversion was assessed at T1 for the intervention group and the pretest–posttest control group and at T2 for the posttest-only control group. Participants indicated their extraversion according to 10 items from the International Personality Item Pool (Goldberg et al., 2006; 1 = *strongly disagree*, 5 = *strongly agree*; α = .92). Sample items are "feel comfortable around people" and "don't talk a lot" (reverse scored).

4.2.3 | Employment outcomes

Individuals reemployed at T2 or T3 were coded as reemployed (1 = *I have accepted a job*). Individuals still unemployed at T3 were coded as unemployed (0 = *I am currently unemployed, and want to find a job*). Respondents who selected a third option, "I am unemployed and no longer want to find a job," were no longer eligible and thus excluded from analysis. Those reemployed during the course of the study were prompted with additional measures about reemployment

quality at T2 or T3 (i.e., depending on when they became reemployed). Respondents indicated "job improvement" (Burke, 1986) with 11 items, comparing the new job to the old job in an overall sense on several characteristics including working hours, nearness to home, job security, career opportunities, wages, and benefits (−1 = *worse than my old job*, 0 = *same as my old job*, 1 = *better than my old job*; $\alpha = .73$) and "*income*" in the new job (ranging from 1 = *less than $25,000* to 8 = *$200,000 or above*).

4.2.4 | Control variables

Control variables included gender (0 = *man*, 1 = *woman*), previous income (1 = *less than $25,000*, 8 = *$200,000 or above*), race (0 = *non-White*, 1 = *White*), and full-time work experience in years. Gender and race may affect access to and outcomes from social networks (Trimble & Kmec, 2011). With respect to income, research has shown that individuals with lower socioeconomic status tend to use local, strong, or family-related social resources (Lin, 2000). Individuals with more work experience may have more developed networks as well as enhanced probabilities of finding work and finding high-quality work (McDonald, 2011). *Number of days unemployed* at T1 was also controlled for, given that the number of days one has been in the job search may have affected experiences with job search and networking. This variable was computed by subtracting a respondent's last day worked (provided at T1 for the intervention group and pretest–posttest control group and at T2 for the posttest only control group) from the T1 survey date for the intervention group and pretest–posttest control group and the T1 enrollment form date for the posttest only control group. Finally, we controlled for job search workshops, namely, the number of job search workshop(s) (other than our networking intervention) respondents attended over the duration of our study. For example, WorkForce Centers offer free in-person trainings on job search topics such as overall job search strategies, resume preparation, or interviewing effectively. To the extent that individuals attended such workshops, their reemployment outcomes may be affected. We assessed job search workshops at T2 for individuals who were reemployed at T2 and at T3 otherwise so that we could capture attendance at workshops at any time in the study duration.

4.2.5 | Supplemental measures

A few additional measures were used for manipulation and randomization checks. As a manipulation check on our intervention, we gave a short quiz to assess networking knowledge and networking motivation to all groups, with the expectation that the intervention group will score higher on networking knowledge and motivation at the 3-week follow-up in comparison to the two control groups. Five items assessed networking knowledge (e.g., "What percentage of people who you know should be aware that you are looking for a job?"; 1 = *100%* [correct response], 2 = *80%*, and 3 = *at least 50%*; and "When you have the opportunity to network and get the word out, the short and persuasive message you share with others is called: [fill in the blank]"). Each question was scored as correct or incorrect based on online program content (e.g., "elevator pitch," "elevator speech," and "elevator message" were coded as correct for the open-ended question). The total score for this scale indicated the number of items answered correctly. We examined networking motivation with two items: "How much effort do you intend to put into networking activities in the next 2 weeks?" (1 = *no effort*, 5 = *a great deal of effort*) and "I expect to try hard to perform networking activities in the next 2 weeks" (1 = *strongly disagree*, 5 = *strongly agree*, $\alpha = .88$). Finally, we asked individuals if they had a LinkedIn profile, and to check and report how many contacts they had on LinkedIn. We used this supplemental measure as part of our randomization checks to demonstrate that the intervention and two control groups were equivalent at T1.

4.3 | Analytical strategy

To demonstrate construct distinctions, we first conducted confirmatory factor analysis (CFA) with data available from all three groups at T2. Model fit was evaluated using Confirmatory Fit Index (CFI), Root Mean Square Error of

Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). We then performed randomization and manipulation checks. Next, we examined the research hypotheses by conducting path analysis using Mplus 8.3 (Muthén & Muthén, 2017), comparing the intervention group with the posttest only control group. Indirect effects and conditional indirect effects were evaluated using the 95% bias-corrected bootstrap confidence intervals (95% BCB CIs; Shrout & Bolger, 2002). Finally, we conducted supplemental analyses with the pretest–posttest control group to explore testing effects.

5 | RESULTS

Table 2 shows means, standard deviations, and correlations for focal study variables across the intervention and the two control groups. CFA with networking intensity, self-efficacy, and proximal benefits showed that a three-factor structure demonstrated adequate fit (Hu & Bentler, 1999; $\chi^2(51) = 181.51$, $p < .01$; CFI = .95; RMSEA = .07; SRMR = .04). This model fit to the data significantly better than a two-factor model combining the factors with the highest correlation (i.e., networking intensity and networking self-efficacy; $\chi^2(53) = 490.81$, $p < .01$; CFI = .84; RMSEA = .13; SRMR = .07, $\Delta\chi^2$ (2) = 309.30, $p < .01$) and a one-factor model containing all items ($\chi^2(54) = 818.15$, $p < .01$; CFI = .72; RMSEA = .17; SRMR = .09, $\Delta\chi^2$ (3) = 636.64, $p < .01$). These results supported treating networking intensity, self-efficacy, and proximal benefits as separate constructs.

5.1 | Randomization and manipulation checks

Randomized assignment is expected to equate groups on the "expectation of group means" at baseline (Shadish et al., 2002, p. 250). Yet, sampling error dictates that there may nevertheless be differences at baseline even when randomization is effective. As such, we assessed the groups for possible differences. A multivariate analysis of variance (MANOVA) indicated no significant differences among the intervention group, posttest only control, and pretest–posttest control groups on gender, previous income, race, work experience, and days unemployed at T1 ($F(10, 968) = 0.61$, $p > .05$, Wilk's $\lambda = .99$, partial $\eta^2 = .01$).[3] Among individuals who had LinkedIn profiles, a one-way ANOVA showed no significant difference in number of contacts across the three groups ($F(2, 431) = 0.30$, $p > .05$). Further, the intervention group and the pretest–posttest control group, both of which received T1 surveys, did not differ on the initial level of networking intensity, self-efficacy, or proximal benefits ($F(3, 350) = 1.78$, $p > .05$, Wilk's $\lambda = .99$, partial $\eta^2 = .02$). These results support the effectiveness of our randomization process.

As a manipulation check, all three groups completed a networking knowledge quiz and an assessment of networking motivation. The intervention group completed these assessments as part of the intervention, whereas the posttest-only control group and the pretest–posttest control group completed these assessments at T2 (Figure 1). MANOVA results demonstrated that the three groups differed on networking knowledge and networking motivation ($F(4, 808) = 44.03$, $p < .01$, Wilk's $\lambda = .67$, partial $\eta^2 = .18$). Supporting the effectiveness of the manipulation, post hoc analyses using Bonferroni correction indicated that the intervention group had significantly higher mean scores on networking knowledge ($M = 4.83$, $SD = 0.42$) in comparison to the posttest-only control group ($M = 3.49$, $SD = 1.22$; $p < .01$) and the pretest–posttest control group ($M = 3.69$, $SD = 1.00$; $p < .01$). The posttest-only control group and pretest–posttest control group did not differ significantly on networking knowledge ($p > .05$). Similarly, the intervention group had also significantly higher mean scores for posttest networking motivation ($M = 4.25$, $SD = 0.61$) than the posttest-only control group ($M = 3.79$, $SD = 0.85$; $p < .01$) and the pretest–posttest control group ($M = 3.88$, $SD = 0.83$; $p < .01$), whereas the posttest-only control group and pretest–posttest control group did not differ significantly ($p > .05$). Results of the manipulation check showed that the intervention group reported enhanced networking knowledge and motivation, which provides initial evidence of intervention effectiveness.

TABLE 2 Means, standard deviations, and zero-order correlations

	Intervention group		Posttest only control group		Pretest–posttest control group									
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	1	2	3	4	5	6	7	8
1. Gender (0 = man, 1 = woman)	0.51	0.50	0.52	0.50	0.49	0.50								
2. Previous income	4.26	1.66	4.08	1.74	4.13	1.54	–.24**							
3. Race (0 = nonwhite, 1 = white)	0.86	0.35	0.88	0.33	0.87	0.34	–.04	.20**						
4. Work experience	23.76	10.87	21.72	10.92	22.41	10.89	–.04	.34**	.22**					
5. Days unemployed	47.68	26.73	49.13	28.11	51.52	30.11	.02	–.02	–.03	.00				
6. Job search workshops	3.95	6.86	2.98	5.12	2.75	3.45	.01	–.02	–.04	.19**	.03			
7. Intervention group (0 = no, 1 = yes)	1.00	0.00					.01	.05	–.02	.08	–.05	.10*		
8. Pretest–posttest control group (0 = no, 1 = yes)					1.00	0.00	–.02	–.02	.00	–.02	.05	–.07	–.58**	
9. Networking intensity (T1)	3.38	1.07			3.52	1.04	.01	.15**	–.05	–.03	–.04	–.05	–.07	.07
10. Networking self-efficacy (T1)	3.41	0.95			3.60	0.89	–.10	.32**	.02	.00	–.09	–.13*	–.10	.10
11. Proximal networking benefits (T1)	3.60	0.88			3.59	0.83	.05	.10*	–.07	–.06	–.06	–.04	.00	.00
12. Networking intensity (T2)	3.59	1.02	3.27	1.01	3.42	1.06	.04	.19**	–.05	.05	–.01	.07	.11*	–.01
13. Networking self-efficacy (T2)	3.92	0.73	3.52	0.89	3.69	0.84	–.08	.36**	.05	.04	–.04	.06	.18**	–.03
14. Proximal networking benefits (T2)	3.75	0.89	3.41	0.81	3.53	0.87	.00	.19**	–.08	.00	–.05	.06	.15**	–.04
15. Extraversion	3.38	0.88	3.49	0.84	3.47	0.88	.02	.16**	–.05	.00	.03	–.06	–.06	.03
16. Reemployment status (T3) (0 = no, 1 = yes)	0.66	0.47	0.65	0.48	0.72	0.45	.09*	–.01	.05	–.14**	–.14**	–.12*	–.03	.07
17. Job improvement (T3)	0.41	0.32	0.30	0.39	0.35	0.43	.01	–.11*	–.03	–.10	–.04	.02	.11*	–.02
18. Income (T3)	4.06	1.61	3.87	1.79	3.80	1.61	–.31**	.78**	.17**	.22**	–.08	–.11	.07	–.06

(Continues)

TABLE 2 (Continued)

Variable	9	10	11	12	13	14	15	16	17	18
1. Gender (0 = man, 1 = woman)										
2. Previous Income										
3. Race (0 = nonwhite, 1 = white)										
4. Work experience										
5. Days unemployed										
6. Job search workshops										
7. Intervention group (0 = no, 1 = yes)										
8. Pretest–posttest control group (0 = no, 1 = yes)										
9. Networking intensity (T1)	(.88)									
10. Networking self-efficacy (T1)	.57**	(.84)								
11. Proximal networking benefits (T1)	.52**	.48**	(.82)							
12. Networking intensity (T2)	.63**	.44**	.39**	(.89)						
13. Networking self-efficacy (T2)	.43**	.68**	.43**	.55**	(.84)					
14. Proximal networking benefits (T2)	.31**	.34**	.48**	.52**	.50**	(.83)				
15. Extraversion	.25**	.40**	.24**	.27**	.32**	.17**	(.92)			
16. Reemployment status (T3) (0 = no, 1 = yes)	.05	.06	.03	−.01	.02	.06	−.01			
17. Job improvement (T3)	.12	.15*	.19**	.11*	.20**	.17**	.02	–	(.73)	
18. Income (T3)	.22**	.36**	.13*	.24**	.39**	.19**	.15**	–	.08	

Notes. $N = 491$, with specific *N*s varying for reasons such as participants responding to only one of Time 2 (if reemployed) or Time 3 surveys and job improvement and reemployed income only available for individuals who found a job. Correlations between reemployment status and job improvement, and reemployment status and income, are not applicable as reemployment outcomes were only available for individuals reemployed during the course of the study, for whom reemployment status was denoted with a value of 1.
$^{*}p < .05$; $^{**}p < .01$ (two-tailed).

5.2 | Hypothesis testing

Hypothesis 1 suggests that the networking intervention will increase job seekers' networking intensity (H1a), self-efficacy (H1b), and proximal benefits (H1c). As displayed in the first three columns of Table 3, controlling for gender, previous income, race, work experience, days unemployed, and job search workshops, the intervention group had significantly higher levels of networking intensity ($B = .28$, $p < .05$), networking self-efficacy ($B = .37$, $p < .01$), and proximal networking benefits ($B = .33$, $p < .01$) at T2 than the posttest only control group, supporting H1. Overall, our models explained 7% of the variance in networking intensity, 19% of the variance in networking self-efficacy, and 10% of the variance in proximal networking benefits. These correspond to a $d = .32$ for networking intensity, $d = .49$ for networking self-efficacy, and $d = .40$ for proximal networking benefits, comparable to the effect sizes associated with attitudinal/behavioral outcomes (Liu et al., 2014).

Hypothesis 2 suggests that the intervention will improve reemployment status and reemployment quality through networking intensity (H2a), self-efficacy (H2b), and proximal benefits (H2c). The last two columns of Table 3 show that networking self-efficacy significantly predicted job improvement ($B = .08$, $p < .05$) and income ($B = .25$, $p < .05$), but not reemployment status ($B = -.08$, $p > .05$). Given previous income as a control variable, our model essentially examines changes in income from the previous job to the new job. Networking intensity and proximal benefits were not significantly related to reemployment outcomes (Table 3). As such, we examined potential indirect effects of the intervention on job improvement and income via networking self-efficacy. The estimated indirect effects from the intervention to job improvement and income through networking self-efficacy were .03 and .09, respectively. Their 95% BCB CIs obtained from 5,000 bootstrap samples also excluded zero ([.01, .07] and [.02, .21], respectively; Table 4). These findings partially support H2b but not H2a and H2c.[4] Overall, our models explained 10% of the variance in reemployment status, 12% of the variance in job improvement, and 66% of the variance in reemployment income (this value is higher because previous income was a control variable). These percentages correspond to an odds ratio of 1.12 for reemployment status, close to the lower end of the credibility interval reported by Liu et al. (2014); and $d = .31$ for job improvement and $d = .11$ for income, both comparable to similar outcome variables reported by Liu et al. (2014).

Hypothesis 3 concerns whether the intervention effect depends on participants' trait extraversion. As Table 5 shows, extraversion did not moderate the relationship between the intervention and networking intensity at T2 ($B = .01$, $p > .05$), failing to support H3a. However, extraversion significantly moderated the relationship between the intervention and networking self-efficacy at T2 ($B = -.11$, $p < .05$). Analysis of simple slopes (Aiken & West, 1991) suggests that the intervention had a positive and stronger effect for individuals low in extraversion ($B = .31$, $SE = .06$, $p < .01$) and a positive but weaker effect for highly extraverted individuals ($B = .13$, $SE = .06$, $p < .05$), supporting H3b. Figure 2 shows the results. Extraversion did not moderate the relationship between the intervention and proximal networking benefits at T2 ($B = -.03$, $p > .05$), failing to support H3c. Our moderation models explained 11% of the variance in networking intensity, 28% of the variance in networking self-efficacy, and 12% of the variance in proximal networking benefits.[5]

Given findings regarding Hypotheses 2b and 3b, we tested a moderated mediation model with extraversion as a moderator of the relationship between the intervention and networking self-efficacy at T2 and networking self-efficacy at T2 as a mediator of the relationship between the intervention and reemployment outcomes (see Table 6). Hypothesis 4a was not supported, given that networking self-efficacy was not related to reemployment status. Regarding job improvement, the bootstrapped confidence interval of the difference in the conditional indirect effects excluded zero (point estimate = .02, 95% BCB CI = [.002, .04]; Hayes, 2015). Specifically, the indirect effect from the intervention to job improvement via networking self-efficacy at T2 was stronger and significant (.03 with 95% BCB CI = [.01, .05]) when extraversion was low (i.e., −1 *SD*). Although still positive, the indirect effect was weaker (.01 with 95% BCB CI = [.001, .03]) when extraversion was high (i.e., +1 *SD*). Regarding income, results followed a similar pattern in that the bootstrapped confidence interval of the difference in the conditional indirect effects excluded zero (point estimate = .05, 95% BCB CI = [.01, .12]). Specifically, the conditional indirect effect from the intervention to income via networking self-efficacy at T2 was positive and stronger when extraversion was low (i.e., −1 *SD*; .08 with 95% BCB

TABLE 3 Coefficient estimates of the path model

	1. Networking intensity (T2)		2. Networking self-efficacy (T2)		3. Proximal networking benefits (T2)		4. Reemployment status		5. Reemployment quality			
									Job improvement		Income	
Predictor	**Coefficient**	***SE***	**Coefficient**	***SE***	**Coefficient**	***SE***	**Coefficient**	***SE***	**Coefficient**	***SE***	**Coefficient**	***SE***
Intercept	2.72**	.26	2.89**	.20	3.38**	.23	–.97	.85	.16	.18	.11	.42
Gender (0 = man, 1 = woman)	.16	.11	–.05	.09	.12	.10	.22	.27	–.04	.05	–.29	.16
Previous income	.13**	.04	.18**	.03	.12**	.03	.05	.09	–.04*	.02	.68**	.06
Race (0 = nonwhite, 1 = white)	–.07	.19	.07	.14	–.24	.18	.36	.40	.05	.07	.28	.16
Work experience	.00	.01	–.01	.004	–.01**	.01	–.03*	.01	.00	.003	.01	.01
Days unemployed	.00	.002	.00	.002	.00	.002	–.01*	.01	.00	.001	.00	.003
Job search workshops	.01	.01	.01	.01	.01	.01	–.03	.02	.00	.004	–.05**	.01
Networking intensity (T2)							–.20	.18	–.06	.03	.03	.10
Networking self-efficacy (T2)							–.08	.21	.08*	.04	.25*	.11
Proximal networking benefits (T2)							.34	.19	.06	.04	–.02	.11
Intervention group (0 = posttest only control group, 1 = intervention group)	.28*	.11	.37**	.09	.33**	.10	.11	.28	.07	.05	–.01	.15
R^2	.07		.19		.10		.10		.12		.66	

Notes. $N = 328$.
$^{*}p < .05$; $^{**}p < .01$.

TABLE 4 Estimates of indirect effects of the intervention, through networking intensity, self-efficacy, and proximal benefits at T2, to reemployment outcomes

				2. Reemployment quality					
	1. Reemployment status			Job improvement			Income		
Predictor–mediator	Point estimate	*SE*	95% BCB CI	Point estimate	*SE*	95% BCB CI	Point estimate	*SE*	95% BCB CI
Intervention group									
-Networking intensity (T2)	−.06	.06	[−.23, .02]	−.02	.01	[−.05, .000]	.01	.03	[−.04, .09]
-Networking self-efficacy (T2)	−.03	.08	[−.20, .13]	.03	.02	[.01, .07]	.09	.05	[.02, .21]
-Proximal networking benefits (T2)	.11	.07	[.003, .29]	.02	.01	[.001, .06]	−.01	.04	[−.10, .06]
Total indirect effect	.03	.08	[−.13, .19]	.04	.02	[.01, .08]	.10	.05	[.02, .20]

Notes. $N = 328$. 95% BCB CI, 95% bias-corrected bootstrap confidence intervals confidence intervals, obtained from 5,000 bootstrap samples. The posttest only control group is the reference group.

TABLE 5 Results of extraversion as moderator of the intervention effect on proximal outcomes

	1. Networking intensity (T2)		2. Networking self-efficacy (T2)		3. Proximal networking benefits (T2)	
Predictor	*B*	*SE*	*B*	*SE*	*B*	*SE*
Intercept	2.93**	.25	3.10**	.18	3.58**	.21
Gender (0 = man, 1 = woman)	.15	.11	−.06	.08	.08	.10
Previous income	.11**	.04	.17**	.03	.12**	.03
Race (0 = nonwhite, 1 = white)	−.04	.17	.11	.12	−.22	.15
Work experience	.00	.01	−.01*	.004	−.01**	.01
Days unemployed	.00	.002	.00	.001	.00	.002
Job search workshops	.01	.01	.01	.01	.01	.01
Intervention (−1 = posttest only control group, 1 = intervention group)	.16**	.06	.22**	.04	.19**	.05
Extraversion	.25**	.07	.27**	.05	.12*	.06
Intervention × Extraversion	.01	.07	−.11*	.05	−.03	.06
R^2	.11		.28		.12	

Notes. $N = 311$. Because interaction effect is estimated, effect coding (as opposed to dummy coding) of the intervention condition is used.
$^{*}p < .05$; $^{**}p < .01$.

CI = [.02, .16]) and positive but weaker when extraversion was high (i.e., +1 *SD*; .03 with 95% BCB CI = [.004, .09]). Therefore, Hypothesis 4b received full support.

5.3 | Examination of testing effects

Our inclusion of a pretest–posttest control group allowed us to examine the extent to which there were testing effects. Testing effects would be indicated if the pretest–posttest control group demonstrated higher networking intensity, self-efficacy, proximal benefits, or reemployment outcomes (e.g., from being alerted to the topic of networking by

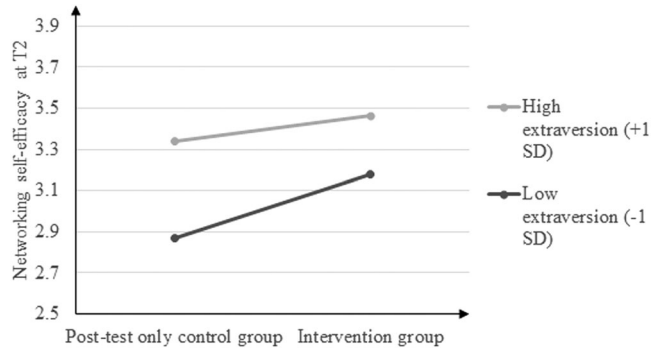

FIGURE 2 Simple slopes of interaction. The interactive effect of the intervention and extraversion on networking self-efficacy

TABLE 6 Estimates of conditional indirect effects of the intervention on reemployment outcomes through networking self-efficacy at T2

				2. Reemployment quality					
	1. Reemployment status			Job improvement			Income		
Variable	Point estimate	*SE*	95% BCB CI	Point estimate	*SE*	95% BCB CI	Point estimate	*SE*	95% BCB CI
Conditional indirect effect when extraversion is:									
High (+1 *SD*)	−.004	.02	[−.05, .05]	.01	.01	[.001, .03]	.03	.02	[.004, .09]
Low (−1 *SD*)	−.01	.05	[−.12, .09]	.03	.01	[.01, .05]	.08	.03	[.02, .16]

Notes. $N = 325$, with specific *ns* varying for reasons such as participants responding to only one of Time 2 or Time 3 surveys and job improvement and reemployed income only available for individuals who found a job. 95% BCB CI, 95% bias-corrected bootstrap confidence intervals, obtained from 5,000 bootstrap samples.

taking the T1 survey) than the posttest only control group. Using data from all three groups, we regressed networking intensity, self-efficacy, and proximal benefits on the control variables (i.e., gender, previous income, race, work experience, days unemployed, and job search workshops) and two dummy variables representing the intervention group and the pretest–posttest control group, with the posttest only control group as the referent group. In the same model, reemployment status, job improvement, and income were regressed on networking intensity, self-efficacy, and proximal benefits, the control variables and two dummy variables representing intervention conditions. The results showed that, after the effects of control variables were accounted for, the pretest–posttest control group did not differ from the posttest only control group in networking intensity ($B = .15$, $p > .05$), networking self-efficacy ($B = .18$, $p > .05$), or proximal networking benefits ($B = .12$, $p > .05$) at T2. These two groups also did not differ in employment status ($B = .41$, $p > .05$), job improvement ($B = .03$, $p > .05$), or income ($B = -.15$, $p > .05$). Therefore, we did not find support for testing effects, indicating that prompting individuals to respond to questions about networking alone was not potent enough to generate significant benefits.

6 | DISCUSSION

We report the results of a robust experiment conducted to test a short, online intervention for job seekers, called BRIO. We compared a control group with individuals randomly assigned to the BRIO intervention and found that the intervention enhanced networking intensity, networking self-efficacy, and proximal networking benefits such as job search

solutions, referrals, problem reformulation, and validation. In addition, the intervention resulted in higher reemployment quality (job improvement and income) via the improvement of networking self-efficacy. Although all participants benefitted by participating in the intervention, participants who had low levels of extraversion benefitted the most, which suggests that networking outcomes can be improved even and especially among introverted job seekers who are generally more uncomfortable about networking (de Janasz & Forret, 2008).

6.1 | Empirical and theoretical contributions

Our study provides important empirical and theoretical contributions to the literature. First, our field experiment is the first to test whether an intervention can guide randomly assigned job seekers to improve their networking and, consequently, reap tangible reemployment advantages. Empirically, this is a valuable extension of the job search intervention literature, which to date has not examined how and to what extent job seekers can improve their networking skills (Liu et al., 2014). We also extend the networking literature given there is a commensurate scarcity of knowledge about how to improve individuals' networking skills in general (Spurk, Kauffeld, Barthauer, & Heinemann, 2015). Consistent with the components of successful interventions identified by Liu et al. (2014), our findings support the value of social cognitive theory as an underlying framework in improving networking outcomes.

Second, we extend theoretical insight and empirical findings about the role of networking intensity, self-efficacy, and proximal benefits involved in producing distal networking outcomes. By doing so, we respond to calls to examine the useful mechanisms or components of networking (Marsden & Gorman, 2001). Research to date has not sufficiently clarified what occurs during networking that produces positive networking outcomes. Our mediators address psychological, agency-based aspects of networking. Research has understudied individual agency in networking, including the examination of motivational variables that can promote understanding of engagement in relational activities, as well as emotional experiences during networking (Bensaou et al., 2014; Casciaro et al., 2015). Through our examination of intermediate processes involved in networking, we introduce the concept of proximal networking benefits to the job search literature. The more general networking literature (i.e., focused on career success) has explicated proximal benefits as an outcome (Cross & Sproull, 2004; Levin et al., 2011; Walter, Levin, & Murnighan, 2015). We translate this variable to the job search literature, informing and studying the proximal benefits individuals can strive to achieve when networking during a job search. Although proximal benefits did not significantly predict higher reemployment success with other variables in the model, it is an important intervention outcome in its own right. For example, proximal benefits in networking provide insight and support, likely making the job search process less stressful. The job search literature has almost exclusively focused on the examination of networking intensity and our study expands this construct space.

Third, our experimental study design addresses a research gap regarding whether individuals in general (including randomly assigned individuals) can benefit from networking (Mouw, 2003; Obukhova & Lan, 2013). Extant research has been primarily descriptive and correlational, leaving the possibility open that the profits of networking are due to unobserved variables and not to networking itself. Because most social scientists have relied on nonexperimental data linking the use of social capital to positive outcomes, it is often inappropriately assumed that using one's social networks will reap positive outcomes for everyone (Mouw, 2006). Studies examining causal inferences with respect to the behavior of networking are only slowly emerging (Godechot, 2016; Spurk et al., 2015; Wolff & Moser, 2009), but have rarely included true experimental designs and have not been initiated in the job search context. Our study showed that randomly assigned individuals can improve their networking and reemployment quality. Our methodology was also rigorous, including the rare inclusion of two control groups. Beyond suggesting that networking impacts reemployment outcomes, our study design allowed us to examine and rule out whether the pretest partly prompted the observed outcomes (Campbell & Stanley, 1966).

Finally, we examined what types of unemployed job seekers benefit the most from networking skills training. While the intervention was beneficial for the sample as a whole, participants who had low levels of extraversion benefitted the most. Examining job seeker extraversion as a potential boundary condition advances our understanding of conditions

under which interventions are most or least helpful (Liu et al., 2014). Given the questions raised about whether the benefits of networking are generally available, this finding provides a nice illustration that the profits of networking are attainable for individuals with a lower tendency to seek out and enjoy social interaction, experience and exhibit positive affect, and engage in assertive behavior and decisive thinking.

6.2 | Practical contributions

The BRIO intervention addresses a practical need of job seekers: an empirically evaluated and effective program to bolster networking intensity, networking self-efficacy, proximal networking benefits, and reemployment quality. This is significant, given that job seekers are bombarded with advice about how to network; however, much of this advice comes in the form of folk wisdom (Anand & Conger, 2007). The BRIO intervention is also useful for practitioners and outplacement program designers. Professionals can suggest job seekers use our program. Moreover, the content delineated in Table 1 can guide the development of in-person workshops or programs for different populations (e.g., student job seekers).

Because our program is online, it is accessible 24/7. Given that networking is inherently a social process, there are advantages to in-person training. Yet, in-person training requires replication and is less convenient for job seekers. Job seekers have to wait to get information until the scheduled training time. They also have to find and commute to the training. Many job seekers reach out to find information about their job searches online, consistent with learners on other topics (Brown & Sitzmann, 2011). A Google search of the key words "how to network in job search" yields 2,360,000,000 results (July 12, 2019), demonstrating substantial interest in learning about networking online. Nevertheless, of the 47 interventions on job search identified by Liu et al. (2014), all were delivered in person. A further benefit of a program focused uniquely on networking is that it allows job seekers who are only interested in brushing up on this aspect of their job search to do so easily.

The BRIO program requires only a small investment of time, typically around an hour and a half or less. In return for this small time investment, the effect sizes we found for BRIO's relationships to reemployment quality outcomes (job improvement and income) compare favorably to other job search interventions that are typically in person and more time intensive (Liu et al., 2014). With respect to reemployment quality, Liu et al. (2014) reported a marginally significant effect of job search interventions on participants' job satisfaction. In the present study, we found that, on average, individuals in the intervention group reported job improvement 0.31 standard deviations higher than individuals in the posttest only control group. For income, Liu et al. (2014) found a significant effect of job search interventions on participants' starting salary. In the present study, we found that, on average, intervention participants' reemployment income was 0.11 standard deviations higher than that of respondents in the posttest only control group.

As a final practical contribution, it is useful to know that individuals who are more introverted can improve their networking intensity, self-efficacy, and proximal benefits. Given the positive association between extraversion and networking, it is often challenging for career counselors to persuade or teach introverts to network more intensely and effectively. Our research suggests that following the principles of social cognitive theory (using techniques such as social modeling, mastery experiences, and verbal persuasion) and incorporating additional motivation-enhancing strategies (e.g., continuously set and monitor goal progress, enlisting support from friends and family, and reappraising the situation to become more proactive) can indeed improve the networking attempts and outcomes of introverted job seekers. Career counselors can now inform individuals low in extraversion that there is evidence available that they can improve and reap more benefits from networking during job search via completing the BRIO intervention.

6.3 | Limitations and future research directions

Our findings have potential limitations regarding generalizability. First, the BRIO intervention may be less effective for individuals who dislike online learning. An intriguing extension would be to compare our online training with in-person training that uses the same content and theoretical emphasis. Second, it is unclear whether our findings will replicate

across different job seeker groups, cultures, and economies. Our program focused on unemployed job seekers with at least some post-high school education. Individuals with higher and lower levels of education will have differing network structures and availability (Cappellari & Tatsiramos, 2015; Elliott, 1999), so different intervention approaches might be needed for individuals who have only high school educations or less.

There is much left to learn about how to help individuals improve their networking and the mechanisms by which networking produces positive outcomes. An area of future exploration may involve helping people develop their networks prior to periods of job search. For example, an intervention could be developed to help individuals groom the relationships they already have prior to periods of job search, as well as to cultivating new (versus building existing) relationships with unique and diverse ties. Attention to both old and new relationships is conducive to receiving optimal proximal networking benefits (Levin et al., 2011; Wolff & Moser, 2009). Stages of relationships determine the benefits they convey (Porter & Woo, 2015). As individuals move from early initiation stages to later stages of relationships, networking partners may share more information (Kim & Fernandez, 2017). Our measures did not assess dimensions of network contacts, such as length and closeness of the relationship, and whether they were primary or secondary contacts. Although somewhat outside the boundaries of this investigation, deeper knowledge of the connections individuals make as they learn how to network would be valuable.

Future research might further define and expand the proximal networking construct space (the operationalization of what it is about networking that matters, what individuals do right or wrong when they network, and the more immediate outcomes of networking). This research might also examine how increasing networking self-efficacy unfolds for job seekers, and how this is dynamically related to later networking intensity and proximal networking benefits. Future examinations can also extend the distal construct space. For example, research might examine how improvements in networking self-efficacy and proximal networking benefits promote positive emotions, mental health, or persistence during job search. The goals that job seekers have are very diverse (Forret, 2018). Networking in the context of a career setback such as involuntary job loss or denied promotion can produce generative distal outcomes that reach beyond those examined in this study, such as solidifying one's career identity and meeting long-term goals (Shepherd & Williams, 2018; Vough & Caza, 2017; Zikic & Klehe, 2006). Future work can examine outcomes from a career perspective, beyond a time horizon of six months.

Finally, research may elucidate areas in which our study was inconclusive. For example, the BRIO intervention was not related to the likelihood of reemployment. For reemployment status, Liu and colleagues found an average effect (odds ratio) of 2.67 (weighted $SD = .72$). In the present study, the effect size was $e^{0.11} = 1.12$, which is close to the lower end of the credibility interval observed by Liu et al. (2014). The unemployment rate at the time of the study for this region was 3.80% (U.S. BLS, 2018). We expect that the strong economy made our findings conservative, meaning that our intervention would likely have more powerful effects for job finding under tougher economic conditions. When the unemployment rate is low, it is difficult for an intervention to affect reemployment speed because it is easier for individuals to find work. When the unemployment rate is high, job seekers experience more rejections and take longer to find work, making it also more likely that they need networking for the more proximal networking benefits it can provide including solutions, referrals to other sources of information, problem reformulation, and validation.

7 | CONCLUSION

We developed a brief online intervention, BRIO, to help job seekers improve their skills and motivation related to networking. In an experimental field study with multiple time waves, intervention participants reported higher networking intensity, self-efficacy, and proximal benefits, as well as superior reemployment quality (transmitted through networking self-efficacy) than individuals in two control groups. Our findings build support for causal conclusions

about the role of networking in reemployment outcomes, shed light on the process through which job seekers' use of social networks can facilitate reemployment success, and offer proof of concept for the free and accessible BRIO program.

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ENDNOTES

[1] We provide the BRIO for public use for free online, available at http://learntonetworkwithbrio.csom.umn.edu. This public version of the program does not include a small number of the interactive components of the evaluated program, such as auto-populating networking plans onto one's calendar. Retaining these functions required paying a subscription rate to the firm that developed the hosting platform. Financial resources to retain these functions were not available. The program is best viewed on a computer, rather than on smaller mobile devices.

[2] Of 491 participants, 465 (94.7%) provided complete data across all measurements. Following the recommendations of Goodman and Blum (1996) and similar to Lin, Ma, and Johnson (2016), results from multiple logistic regression analyses revealed that whether or not participants completed all surveys versus just the T1 (for the intervention and pretest–posttest control groups) or just the T2 (for the posttest only control group) survey was not significantly predicted by any control variables (i.e., gender, race, previous income, full-time work experience, number of days unemployed, and job search workshops) or the experimental conditions. Thus, the data appear to be missing at random and the results are unlikely to be biased by participant attrition.

[3] These results are based on control variables assessed at baseline. MANOVA results also indicated no significant differences among the three groups when job search workshops were included in the analysis.

[4] The three aspects of networking, while distinct constructs as supported by the CFA, are somewhat collinear (r = .50–.55 at T2; Table 2). We therefore ran two additional models with either networking intensity or proximal benefits as single mediator. For networking intensity as single mediator, we observed no significant indirect effects, but found a positive, significant direct effect between the intervention and job improvement (but not income). For proximal networking benefits as single mediator, we found a positive, significant indirect effect through proximal networking benefits to job improvement (but not income). In this model, the intervention had no significant direct effects on reemployment outcomes.

[5] To check if other Big Five personality traits affect our study findings, we conducted a set of post hoc analyses in which we separately explored conscientiousness, neuroticism, openness to experience, and agreeableness as a moderator of the intervention effect on networking intensity, self-efficacy, and proximal benefits. We further separately tested for possible interaction effects of conscientiousness, neuroticism, openness to experience, and agreeableness as moderators of the mediated intervention effect, through networking self-efficacy (the only significant mediator), on reemployment outcomes (see Hypothesis 4). None of these interaction effects were statistically significant.

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REFERENCES

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
Anand, N., & Conger, J. A. (2007). Capabilities of the consummate networker. *Organizational Dynamics*, *36*, 13–27. https://doi.org/10.1016/j.orgdyn.2006.12.001

Anderson, G. (2016). *What is an eNugget?* Retrieved from https://learnwithluma.com/what-is-an-enugget

Ashton, M. C., Lee, K., & Paunonen, S. V. (2002). What is the central feature of extraversion? Social attention versus reward sensitivity. *Journal of Personality and Social Psychology*, *83*, 245–252. https://doi.org/10.1037//0022-3514.83.1.245

Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology*, *41*, 63–105. https://doi.org/10.1111/j.1744-6570.1988.tb00632.x

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*, 122–147. https://doi.org/10.1037/0003-066X.37.2.122

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1999). Social cognitive theory of personality. In D. Cervone & Y. Shoda (Eds.), *The coherence of personality* (pp. 185–241). New York, NY: Guilford Press.

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, *38*, 9–44. https://doi.org/10.1177/0149206311410606

Bensaou, B. M., Galunic, C., & Jonczyk-Sédès, C. (2014). Players and purists: Networking strategies and agency of service professionals. *Organization Science*, *25*, 29–56. https://doi.org/10.1287/orsc.2013.0826

Blau, G. (1994). Testing a two-dimensional measure of job search behavior. *Organizational Behavior and Human Decision Processes*, *59*, 288–312. https://doi.org/10.1006/obhd.1994.1061

Blume, B. D., Ford, J. K., Baldwin, T. T., & Huang, J. L. (2010). Transfer of training: A meta-analytic review. *Journal of Management*, *36*, 1065–1105. https://doi.org/10.1177/0149206309352880

Brown, K. G., & Sitzmann, T. (2011). Training and employee development for improved performance. In S. Zedeck (Ed.), *Handbook of industrial and organizational psychology* (Vol. 2, pp. 469–503). Washington, DC: American Psychological Association. https://doi.org/10.1037/12170-016

Burke, R. J. (1986). Reemployment on a poorer job after a plant closing. *Psychological Reports*, *58*, 559–570. https://doi.org/10.2466/pr0.1986.58.2.559

Campbell, D. T., & Stanley, J. C. (1966). *Experimental and quasi-experimental designs for research*. Boston, MA: Houghton Mifflin.

Cappellari, L., & Tatsiramos, K. (2015). With a little help from my friends? Quality of social networks, job finding and job match quality. *European Economic Review*, *78*, 55–75. https://doi.org/10.1016/j.euroecorev.2015.04.002

Casciaro, T., Barsade, S. G., Edmondson, A. C., Gibson, C. B., Krackhardt, D., & Labianca, G. (2015). The integration of psychological and networking perspectives on organizational scholarship. *Organizational Science*, *26*, 1162–1176. https://doi.org/10.1287/orsc.2015.0988

Ceniza-Levine, C. (2018, September 24). How much networking does it really take to land a job? *Forbes*. Retrieved from https://www.forbes.com/sites/carolinecenizalevine/2018/09/24/how-much-networking-does-it-really-take-to-land-a-job/#43968eb22916

Cross, R., & Sproull, L. (2004). More than an answer: Information relationships for actionable knowledge. *Organization Science*, *15*, 446–462. https://doi.org/10.1287/orsc.1040.0075

Cross, R., Borgatti, S. P., & Parker, A. (2001). Beyond answers: Dimensions of the advice network. *Social Networks*, *23*, 215–235. https://doi.org/10.1016/S0378-8733(01)00041-7

Cullen-Lester, K. L., Woehler, M. L., & Willburn, P. (2016). Network-based leadership development: A guiding framework and resources for management educators. *Journal of Management Education*, *40*, 321–358. https://doi.org/10.1177/1052562915624124

de Janasz, S. C., & Forret, M. L. (2008). Learning the art of networking: A critical skill for enhancing social capital and career success. *Journal of Management Education*, *32*, 629–650. https://doi.org/10.1177/1052562907307637

Dimitrov, D. M., & Rumrill, P. D. (2003). Pretest-posttest designed and measurement of change. *Work*, *20*, 159–165.

Eden, D., & Aviram, A. (1993). Self-efficacy training to speed reemployment: Helping people to help themselves. *Journal of Applied Psychology*, *78*, 352–360. https://doi.org/10.1037/0021-9010.78.3.352

Elliott, J. R. (1999). Social isolation and labor market insulation: Network and neighborhood effects on less-educated urban workers. *Sociological Quarterly*, *40*, 199–216. https://doi.org/10.1111/j.1533-8525.1999.tb00545.x

Forret, M. L. (2018). Networking as a job-search behavior and career management strategy. In U.-C. Klehe & E. A. J. van Hooft (Eds.), *Oxford handbook of job loss and job search* (pp. 275–292). New York, NY: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199764921.013.022

Franzen, A., & Hangartner, D. (2006). Social networks and labour market outcomes: The non-monetary benefits of social capital. *European Sociological Review*, *22*, 353–368. https://doi.org/10.1093/esr/jcl001

Gist, M., & Mitchell, T. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, *17*, 183–211. https://doi.org/10.5465/AMR.1992.4279530

Godechot, O. (2016). The chance of influence: A natural experiment on the role of social capital in faculty recruitment. *Social Networks*, *46*, 60–75. https://doi.org/10.1016/j.socnet.2016.02.002

Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality*, *40*, 84–96. https://doi.org/10.1016/j.jrp.2005.08.007

Goodman, J. S., & Blum, T. C. (1996). Assessing the non-random sampling effects of subject attrition in longitudinal research. *Journal of Management*, *22*, 627–652. https://doi.org/10.1177/014920639602200405

Granovetter, M. (1995). *Getting a job: A study of contacts and careers* (2nd ed.). Chicago, IL: University of Chicago Press.

Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, *78*, 1360–1380. https://doi.org/10.2307/202051

Hayes, A. F. (2015). An index and test of linear moderated mediation. *Multivariate Behavioral Research*, *50*, 1–22. https://doi.org/10.1080/00273171.2014.962683

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*, 1–55. https://doi.org/10.1080/10705519909540118

Hulshof, I. L., Demerouti, E., & Le Blanc, P. M. (2019). Reemployment crafting: Proactively shaping one's job search. *Journal of Applied Psychology*. https://doi.org/10.1037/apl0000419

Kanfer, R., Wanberg, C. R., & Kantrowitz, T. M. (2001). Job search and employment: A personality-motivational analysis and meta-analytic review. *Journal of Applied Psychology*, *86*, 837–855. https://doi.org/10.1037/0021-9010.86.5.837

Kim, M., & Fernandez, R. M. (2017). Strength matters: Tie strength as a causal driver of network's information benefits. *Social Science Research*, *65*, 268–281. https://doi.org/10.1016/j.ssresearch.2016.11.003

Kinicki, A. J., & Latack, J. (1990). Explication of the construct of coping with involuntary job loss. *Journal of Vocational Behavior*, *36*, 339–360. https://doi.org/10.1016/0001-8791(90)90036-2

Kuwabara, K., Hildebrand, C. A., & Zou, X. (2018). Lay theories of networking: How laypeople's beliefs about networks affect their attitudes toward and engagement in instrumental networking. *Academy of Management Review*, *43*, 50–64. https://doi.org/10.5465/amr.2015.0076

Levin, D. Z., Walter, J., & Murnighan, J. K. (2011). Dormant ties: The value of reconnecting. *Organization Science*, *22*, 923–939. https://doi.org/10.1287/orsc.1100.0576

Lin, N. (2000). Inequality in social capital. *Contemporary Sociology*, *29*, 785–795. https://doi.org/10.2307/2654086

Lin, N. (2008). A network theory of social capital. In D. Castiglione, J. W. Van Deth, & G. Wolleb (Eds.), *The handbook of social capital* (pp. 50–69). New York, NY: Oxford University Press.

Lin, S.-H., Ma, J., & Johnson, R. E. (2016). When ethical leader behavior breaks bad: How ethical leader behavior can turn abusive via ego depletion and moral licensing. *Journal of Applied Psychology*, *101*, 815–830. https://doi.org/10.1037/apl0000098

Liu, S., Huang, J. L., & Wang, M. (2014). Effectiveness of job search interventions: A meta-analytic review. *Psychological Bulletin*, *140*, 1009–1041. https://doi.org/10.1037/a0035923

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, *57*, 705–717. https://doi.org/10.1037/0003-066X.57.9.705

Lowstuter, C., & Robertson, D. P. (1995). *Network your way to your next job–fast*. New York, NY: McGraw-Hill.

Marsden, P. V. (2005). Recent developments in network measurement. In P. J. Carrington, J. Scott, & S. Wasserman (Eds.), *Models and methods in social network analysis* (pp. 8–30). New York, NY: Cambridge University Press.

Marsden, P. V., & Gorman, E. H. (2001). Social networks, job changes, and recruitment. In I. Berg & A. L. Kalleberg (Eds.), *Sourcebook of labor markets: Evolving structures and processes* (pp. 467–502). New York, NY: Springer.

McArdle, S., Waters, L., Briscoe, J. P., & Hall, D. T. T. (2007). Employability during unemployment: Adaptability, career identity and human and social capital. *Journal of Vocational Behavior*, *71*, 247–264. https://doi.org/10.1016/j.jvb.2007.06.003

McDonald, S. (2011). What you know or who you know? Occupation-specific work experience and job matching through social networks. *Social Science Research*, *40*, 1664–1675. https://doi.org/10.1016/j.ssresearch.2011.06.003

Melloy, R. C., Liu, S., Grandey, A. A., & Shi, J. (2018). Overcoming emotional and attentional obstacles: A dynamic multi-level model of goal maintenance for job seekers. *Journal of Vocational Behavior*, *108*, 92–107. https://doi.org/10.1016/j.jvb.2018.06.009

Mouw, T. (2003). Social capital and finding a job: Do contacts matter? *American Sociological Review*, *68*, 868–898. https://doi.org/10.2307/1519749

Mouw, T. (2006). Estimating the causal effect of social capital: A review of recent research. *Annual Review of Sociology*, *39*, 79–102. https://doi.org/10.1146/annurev.soc.32.061604.123150

Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide* (8th ed.). Los Angeles, CA: Muthén & Muthén.

Obukhova, E., & Lan, G. (2013). Do job seekers benefit from contacts? A direct test with contemporaneous searches. *Management Science*, *59*, 2204–2216. https://doi.org/10.1287/mnsc.1120.1701

Oerlemans, W. G., & Bakker, A. B. (2014). Why extraverts are happier: A day reconstruction study. *Journal of Research in Personality*, *50*, 11–22.

Pierson, O. (2009). *Highly effective networking*. Franklin Lakes, NJ: Career Press.

Porter, C. M., & Woo, S. E. (2015). Untangling the networking phenomenon: A dynamic psychological perspective on how and why people network. *Journal of Management*, *41*, 1477–1500. https://doi.org/10.1177/0149206315582247

Rubineau, B., & Fernandez, R. M. (2015). How do labor market networks work? In R. A. Scott & S. Kosslyn (Eds.), *Emerging trends in the social and behavioral sciences* (pp. 1–15). Hoboken, NJ: John Wiley and Sons. https://doi.org/10.1002/9781118900772.etrds0168

Saks, A. M. (2006). Multiple predictors and criteria of job search success. *Journal of Vocational Behavior*, *68*, 400–415. https://doi.org/10.1016/j.jvb.2005.10.001

Saks, A. M., Zikic, J., & Koen, J. (2015). Job search self-efficacy: Reconceptualizing the construct and its measurement. *Journal of Vocational Behavior*, *86*, 104–114. https://doi.org/10.1016/j.jvb.2014.11.007

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.

Shepherd, D. A., & Williams, T. A. (2018). Hitting rock bottom after job loss: Bouncing back to create a new positive work identity. *Academy of Management Review*, *43*, 28–49.

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, *7*, 422–445.

Spurk, D., Kauffeld, S., Barthauer, L., & Heinemann, N. S. R. (2015). Fostering networking behavior, career planning and optimism, and subjective career success: An intervention study. *Journal of Vocational Behavior*, *87*, 134–144. https://doi.org/10.1016/j.jvb.2014.12.007

Trimble, L. B., & Kmec, J. A. (2011). The role of social networks in getting a job. *Sociology Compass*, *5*, 165–178. https://doi.org/10.1111/j.1751-9020.2010.00353.x

Tulin, M., Lancee, B., & Volker, B. (2018). Personality and social capital. *Social Psychology Quarterly*, *81*, 295–318. https://doi.org/10.1177/0190272518804533

Tullier, M. (2004). *Networking for job search and career success* (2nd ed.). Indianapolis, IN: JIST Works.

U.S. Bureau of Labor Statistics (BLS) (2018). Local area unemployment statistics (LAUS). Retrieved from https://beta.bls.gov/dataQuery/find?fq=survey:[La]&s=popularity:D

U.S. Department of Labor, Employment, and Training Administration (ETA). (2019). CareerOneStop: Networking is your most important job search strategy. Retrieved from https://www.careeronestop.org/JobSearch/Network/form-a-network.aspx

van Hooft, E. A. J., Wanberg, C., Kanfer, R., Kammeyer-Mueller, J., & Basbug, G. (2015, August). Job search and employment success predictors: A meta-analytic test of motivation and self-regulation. In C. Wanberg & T. Trzebiatowski (Chairs), Individual career development within social and organizational context. Symposium conducted at the 2015 Annual Meeting of the Academy of Management, Vancouver, Canada.

van Hooft, E. A. J., Wanberg, C. R., & Van Hoye, G. (2013). Moving beyond job search quantity: Towards a conceptualization and self-regulatory framework of job search quality. *Organizational Psychology Review*, *3*, 3–40. https://doi.org/10.1177/2041386612456033

Van Hoye, G., van Hooft, E. A. J., & Lievens, F. (2009). Networking as a job search behavior: A social network perspective. *Journal of Occupational and Organizational Psychology*, *82*, 661–682. https://doi.org/10.1348/096317908X360675

Van Ryn, M., & Vinokur, A. D. (1992). How did it work? An examination of the mechanisms through which an intervention for the unemployed promoted job-search behavior. *American Journal of Community Psychology*, *20*, 577–597. https://doi.org/10.1007/BF00941773

Vough, H. C., & Caza, B. B. (2017). Where do I go from here? Sensemaking and the construction of growth-based stories in the wake of denied promotions. *Academy of Management Review*, *42*, 103–128. https://doi.org/10.5465/amr.2013.0177

Walter, J., Levin, D. Z., & Murnighan, J. K. (2015). Reconnection choices: Selecting the most valuable (vs. most preferred) dormant ties. *Organization Science*, *26*, 1447–1465. https://doi.org/10.1287/orsc.2015.0996

Wanberg, C., Basbug, G., van Hooft, E. A. J., & Samtani, A. (2012). Navigating the black hole: Explicating layers of job search context and adaptational responses. *Personnel Psychology*, *65*, 887–926. https://doi.org/10.1111/peps.12005

Wanberg, C. R. (2012). The individual experience of unemployment. *Annual Review of Psychology*, *63*, 369–396. https://doi.org/10.1146/annurev-psych-120710-100500

Wanberg, C. R., Ali, A. A., & Csillag, B. (2019). Job seeking: The process and experience of looking for a job. *Annual Review of Organizational Psychology and Organizational Behavior*. https://doi.org/10.1146/annurev-orgpsych-012119-044939

Wanberg, C. R., Kanfer, R., & Banas, J. T. (2000). Predictors and outcomes of networking intensity among unemployed job seekers. *Journal of Applied Psychology*, *85*, 491–503. https://doi.org/10.1037/0021-9010.85.4.491

Watson, D., & Clark, L. A. (1997). Extraversion and its positive emotional core. In R. Hogan, J. A. Johnson, & S. R. Briggs (Eds.), *Handbook of personality psychology* (pp. 767–793). San Diego, CA: Academic Press. https://doi.org/10.1016/B978-012134645-4/50030-5

Wilt, J., & Revelle, W. (2017). Extravesion. In T. Widiger (Ed.), *The Oxford handbook of the five factor model* (pp. 57–82). New York, NY: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199352487.013.15

Wolff, H.-G., & Moser, K. (2009). Effects of networking on career success: A longitudinal study. *Journal of Applied Psychology*, *94*, 196–206. https://doi.org/10.1037/a0013350

Wolff, H.-G., Moser, K., & Grau, A. (2008). Networking: Theoretical foundations and construct validity. In J. Deller (Ed.), *Readings in applied organizational behavior from the Lüneburg symposium* (pp. 101–118). Mering, Germany: Hampp.

Zikic, J., & Klehe, U.-C. (2006). Job loss as a blessing in disguise: The role of career exploration and career planning in predicting reemployment quality. *Journal of Vocational Behavior*, *69*, 391–409. https://doi.org/10.1016/j.jvb.2006.05.007

Zikic, J., & Saks, A. M. (2009). Job search and social cognitive theory: The role of career-relevant activities. *Journal of Vocational Behavior*, *74*, 117–127 https://doi.org/10.1016/j.jvb.2008.11.001

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