

Job search self-efficacy as mediator between employment status and symptoms of anxiety

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The purpose of this study was to investigate the direct and indirect relationship between unemployment and anxiety symptoms, through job search-self efficacy (JSSE). A total of 30 participants who lost their jobs from the same employing organization were used in this two wave longitudinal study. Participants filled out two questionnaires comprising the Trimodal Anxiety Questionnaire and a Job Search Self-Efficacy subscale at the beginning of the study (T1) and after three months (T2). Results show that participants who were still unemployed three months after being laid off reported higher symptoms of anxiety compared to those who had been reemployed ($\eta^2 = .13$). We also found that participants who were reemployed reported higher levels of JSSE at T2 compared to those who were still unemployed ($\eta^2 = .25$). Moreover, there was a significant negative association between JSSE and anxiety at T1 and at T2. Furthermore, the analysis conducted shows evidence for the mediating role of JSSE in the relationship between employment status and anxiety symptoms. The applied potential of these findings is discussed.

Keywords: unemployment, anxiety, job search self-efficacy, mediation analysis

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Introduction

The economic crisis generated a shift from long-term employment to more insecure work arrangements, bringing the problem of unemployment in the attention of policy-makers, given the increasing rates, especially for the younger workforce (Gorry, 2013). Also, for some occupations and work fields, either sporadic or prolonged periods of unemployment are normal and expected, especially for self-employed professionals or those working in seasonal activities. Unemployment is a major threat to the health of individuals (Paul & Moser, 2009), being associated with increased levels of distress, depression and anxiety (McKee-Ryan, Song, Wanberg, & Kinicki, 2005; Murphy & Athanasou, 1999; Paul & Moser, 2009). Taking into account the important psychological costs that unemployment has on the victims and their families, it is of great importance to identify the underlying mechanisms of the phenomenon, especially for the design of preventive and remedial interventions (Brown, Cober, Kane, Levy, & Shalhoop, 2006).

The concept of job-search self-efficacy is a domain

specific case of the self-efficacy construct. As Bandura (1977) defined it, self-efficacy refers to one's beliefs in his or her ability to perform a specific task or behavior in order to successfully attain a desired goal. Perceived self-efficacy is a malleable quality that is shaped by relevant experience (e.g., past employment success or failure). Moreover, perceived self-efficacy in managing events from one's life also holds a central role in anxiety-related arousal (Bandura, 1997). Using a two-wave longitudinal design with a sample of thirty recently laid-off individuals, we first tested whether the employment status at three months after being laid off shapes the anxiety symptoms and job search self-efficacy. In addition, we tested the indirect effect of the employment status on the anxiety symptoms, with job search self-efficacy as mediating variable.

Unemployment and mental-health

The problem of mental health represents one of the greatest priorities of our era, especially because of its prevalence that challenges the definitions of normality. Losing a job or failing to find one often results in

psychological stress for the individual and family, translated as feelings of inadequacy, uncertainty and poor health. An increasing number of studies indicate the association between losing a job and mental health, unemployment status generating a vicious cycle of distress (Winefield, 1995). For instance, an aggregate time-series survey revealed increases in levels of suicide, mortality, mental health problems and criminality (Brenner, 1973). Bjorklund (1985) showed that the unemployed had significantly poorer mental health than those who had a job. Several models attempted to delineate the relationship between unemployment and health, some explaining the progression through different stages (Admunson & Borgen, 1982; Hill, 1978), while others focusing either on the deprivation of the benefits of employment, such as satisfying affiliation, identity and material needs (Jahoda, 1981; Warr, 1987), or on changes in identities, status and indirectly on behaviors (Ezzy, 1993). It seems that going through recent unemployment is responsible for depression and anxiety symptoms (Montgomery, Cook, Bartley, & Wadsworth, 1999).

As mental and physical health determines productivity and employability, they are important variables to keep in mind, both as antecedents and consequences of layoff. One of the challenges in this area of research rests in separating the mechanisms through which poor psychological adjustment acts both as predictor (emotional and behavioral problems are likely to lead to inadequate employment) on one hand, and as a consequence of unemployment, on the other. Paul and Moser (2009) conducted a meta-analysis of the relationship between unemployment and mental health and found a medium-size effect ($d = .51$). The practical implications of this effect are important, given that it is equivalent to an increase in the rate of clinical disorders from 16% to 34%. In addition to this, the effect is also reflected on a broad range of indicators, including anxiety ($d = .40$). Moreover, the temporal stability was constant over 30 years (the period covered by the studies included in the analysis).

As for causal relationships, the data revealed by Paul and Moser's (2009) meta-analysis on longitudinal studies suggest a deterioration of mental health following a job loss and an improvement in adjustment indicators after finding a job. The presented conclusions suggest the following hypothesis:

Hypothesis 1: Participants who are still unemployed three months after being laid off will report higher values of anxiety compared to those who were reemployed in the same time period.

Unemployment and job search self-efficacy

The literature that emphasizes the primary role that self-efficacy plays in human motivations, behaviors, and achievement is extensive (Bandura, 1997; Luszczynska & Schwarzer, 2005). As key personal resource in career decision making, self-efficacy refers to individuals' beliefs in their capacity to achieve desired results in their endeavors (Bandura, 1997). Because self-efficacy refers to the way in which people think of their own abilities or confidence regarding performing activities, it is usually seen as a variable that dictates the motivation, the calibrated intensity of action and the commitment that are put in carrying on tasks. The concept is treated either generally, as the persons' beliefs in their ability to face challenges and solve problems in all areas of life (Gist & Mitchell, 1992), or applied to certain areas of activity or

specific skills and tasks. A type of domain-specific belief is job-search self-efficacy (JSSE), which addresses the individual's assessment of his ability to engage in all the actions needed in obtaining a desired job, from writing a resume to finding job openings and performing on interviews (Ellis & Taylor, 1983; Kanfer, & Hulin, 1985; Saks, & Ashforth, 2000).

Most of the studies that focused on JSSE and related variables suggest that the construct is positively associated with frequency of job search behaviors and that behaviors predict job outcomes (Eden & Aviram, 1993; Moynihan, Roehling, Cavanaugh, & Boswell, 2003; Saks & Ashforth, 1999, 2000; Schwab, Rynes, & Aldag, 1987). Kanfer and Hulin (1985) show that individuals who found jobs had higher levels of confidence in their job search strategies and efforts compared to those who were still unemployed one month after being laid off. Moreover, many studies revealed positive relationships between JSSE and either reemployment rates (Caplan, Vinokur, Price, & van Ryn, 1989; Ellis & Taylor, 1983; Kanfer & Hulin, 1985) or the number of job offers received (Ellis & Taylor, 1983; Saks & Ashforth, 2000; Stumpf, Austin, & Hartman, 1984).

According to the perceived self-efficacy theory (Bandura, 1986, 1997), there are four major sources of information employed by individuals in shaping their efficacy beliefs: mastery experience, vicarious experience, verbal persuasion, and physiological feedback. The main source for determining the likelihood of future success rates is past experience and this conclusion should apply to the area of job search skills. Self-efficacy is a malleable quality (Berry & West, 1993; Gist & Mitchell, 1992), increasing after success feedback (Shea & Howell, 2000) and declining after failure appraisals (Gernigon & Delloye, 2003). Based on past success or failures, the individual will shape his or her expectations. More specifically, if a person successfully manages to find a job, the level of trust in their own capacity will be heightened and conversely, if he or she has negative experiences in finding a job, the expectancies regarding achieving these goals in the future are deteriorated.

Hypothesis 2: The occupational status three months after layoff will have a negative impact on the JSSE levels of those who didn't find a job and a positive impact on those who were reemployed, amplifying their JSSE levels.

Job search self-efficacy. A potential mediator between employment status and mental health

As self-efficacy has a central role in self-regulation, perceptions of a lack of ability to influence and modify events from one's life can generate feelings of helplessness and even anxiety (Bandura, 1997). More specifically, the appraisal regarding one's capacity to face future events acts as a buffer against the anxiety that goes with the experience of unemployment. The negative relationship between self-efficacy and affective disturbances has already been documented (Cutrona & Troutman, 1986; Maciejewski, Prigerson, & Mazure, 2000; McFarlane et al., 1995), including at younger people (Ehrenberg, Cox, & Koopman, 1991; Muris, 2002). General self-efficacy was conceptualized as a resource that may facilitate coping with stressful situations (Knoll, Rieckmann, & Schwarzer, 2005; Luszczynska, Gutierrez-Dona, & Schwarzer, 2005; Schwarzer, Boehmer, Luszczynska, Mohamed, & Knoll, 2005).

A more recent study (Zenger, Berth, Brähler, & Stöbel-Richter, 2013) indicated that people who reported lower

levels of self-efficacy had more psychological problems seven years after the first evaluation compared to those who reported an average self-efficacy level. The same study also found differences in the general physical health of the participants, with people who had low self-efficacy levels reporting having gastrointestinal or cardiac problems as well as symptoms of burnout more often than those displaying high self-efficacy levels. These physiological indicators can be seen as a somatization of anxiety, several studies showing that there is a relationship between anxiety and cardiovascular disease (Härter, Conway, & Merikangas, 2003; Kawachi, Sparrow, Vokonas, & Weiss, 1994), gastrointestinal disease (Clouse, 1988; Härter, Conway, & Merikangas, 2003) and migraines (Egger, Angold, & Costello, 1998). However, the literature documenting the relationships between JSSE and mental health is rather scarce, being secondarily explored in studies focusing on negative affect and employment (e.g., Crossley & Stanton, 2005). In the light of these findings, we expect the following:

Hypothesis 3: Self-efficacy in job finding will be negatively associated with anxiety symptoms in both moments.

People face increasingly varied and uncertain employment environments (Smithson & Lewis, 2000) that may affect their adjustment in the absence of protective factors. Such a factor is a positive or optimistic attitude towards the behaviors required for active job finding. A low self-efficacy that results from being unemployed will enhance the worries associated with this employment status, while increased levels of confidence will help the individual experience the situation in less threatening ways, thus reducing anxiety symptoms. Taking into account that the negative experience of unemployment or the positive experience of finding a job can have causal effects on self-efficacy (Bandura, 1997) and mental health (Paul & Moser, 2009), and given the causal relationship between self-efficacy and mental health (Bandura, 1997), we expect the following relationship:

Hypothesis 4: Employment status at three months after layoff will have a direct effect on anxiety and also an indirect one, mediated by JSSE.

Method

Participants and procedure

The participants sample consisted of 30 people (17 females) who were recently laid off by their employing organization. Their mean age was 30.2 years ($SD = 8.55$). Twelve of them were re-employed during the 3 month period in which the study took place, while 18 were still unemployed.

The study had a two-wave longitudinal design. A questionnaire including a consent form, a socio-demographic inventory, and a series of psychological measures (among which a job search self-efficacy scale and an anxiety inventory) were administered at the beginning of the study (right after the participants were laid off - T1) and after 3 months (T2).

Measures

Job Search Self-Efficacy (JSSE) was measured with the 14 items for Job Search Efficacy subscale extracted from the *Career Search Efficacy Scale* (Solberg, Good,

Nord et al., 1994). The subscale comprises examples of job-search specific tasks and activities (e.g., Identify an employer with job opportunities you want.), and participants having to rate their confidence in performing each of them on a 10 point scale (1 - Very little; 10 - Very much). The internal consistency index reached $\alpha = .93$ at T1 and $.96$ at T2.

Anxiety was assessed using the *Trimodal Anxiety Questionnaire* (TAQ, Lehrer and Woolfolk, 1982). The scale contains 36 statements that measure the cognitive, somatic, and behavioral aspects of anxiety using a 9-point scale where 0 is "Never" and 8 is "Extremely Often". Eleven items are designed for measuring cognitive anxiety; 16 items reflect somatic anxiety, referring to one's physiologic symptoms such as chest pain or cramps; the last 9 items are designed for behavioral anxiety and capture social avoidance. For each anxiety dimension, a specific score can be computed, but also a global one expressing generalized anxiety. In the present study we used only the global measure. The internal consistency index on the present sample reached $\alpha = .93$ at T1 and $.95$ at T2.

Analytic strategy

In order to verify the first two hypotheses, we applied the Analysis of Covariance (ANCOVA), so as to control for possible differences at T1 (Vickers, 2005). Hypothesis 3 was tested through correlational analysis, and post-hoc comparisons between coefficients were made based on Raghunathan, Rosenthal, and Rubin's (1996) recommendations for correlated but non-overlapping correlations. In order to examine if job search self-efficacy mediates the indirect relationship between employment status (reemployed vs. unemployed) and anxiety (Hypothesis 4), we used Preacher and Hayes's (2008) framework. Thus, the indirect effect was tested based on a bias-corrected bootstrapping procedure with 5000 samples; a statistically significant indirect effect is signalled only when the bootstrap confidence interval (95% CI) does not include the "0" value.

Results

The employment status as revealed at three months from layoff (i.e., reemployed vs. unemployed) is associated with marginally significant changes in participants' anxiety levels ($F(2, 27) = 3.89, p = .059, \eta^2 = .13$). The participants who found a new job had lower levels of anxiety ($M = 2.37, SD = 1.09$) compared to those who were still unemployed ($M = 3.21, SD = 1.23$). Thus, we can assert that Hypothesis 1 has some statistical support. Figure 1 displays the mean anxiety levels for both groups and measurement moments.

We also found that the employment status (at three months after layoff) had an effect on job search self-efficacy (JSSE), $F(2, 27) = 9.23, p = .005, \eta^2 = .25$. More precisely, participants who found a new job in the three months after they were dismissed reported higher levels of JSSE at T2 ($M = 8.48, SD = 0.91$) compared to those who were still unemployed ($M = 7.13, SD = 1.58$). Figure 1 displays the mean JSSE scores for both groups and measurement moments. The revealed data offers support for our second hypothesis.

Table 1 presents the pattern of correlations found between the studied variables. As the data indicate, there was a significant negative association between JSSE and anxiety at T1 (19% of common variance), and also between the same two variables after 3 months, at T2 (53%

of common variance). Furthermore, the relationship between JSSE and anxiety at T2 is amplified, the difference between the two correlation coefficients (at T1 and at T2) being marginally significant ($z = 1.83, p = .067$; two-tailed). The results offer statistical support for our third hypothesis.

The analysis of the indirect effect supports the proposed mediating role of JSSE in the relationship between employment status and anxiety symptoms (Hypothesis 4): $a*b = -0.80, SE = 0.25, 95\% CI [-1.34, -0.33]$. The total effect ($t(28) = -1.92, b = -0.84, p = .065$) is reduced almost to zero when JSSE is entered in the regression analysis (direct effect), $t(27) = -0.114, b = -0.04, ns$. The relationships between the variables and the

corresponding standardized regression estimates for each relation are depicted in Figure 3.

In order to search for further evidence that could support the hypothesized causal direction between the variables, we also conducted a post-hoc crossed-lagged panel correlation analysis. More precisely, we compared the correlation coefficient between JSSE at T1 and anxiety at T2 ($r = -.28, ns.$) with the coefficient between anxiety at T1 and JSSE at T2 ($r = -.18, ns.$). Even though there is a difference between the two estimates in the expected direction, the observed difference is not statistically significant ($z = 0.47, ns.$). Further developments of the present findings will be presented in the Discussion section.

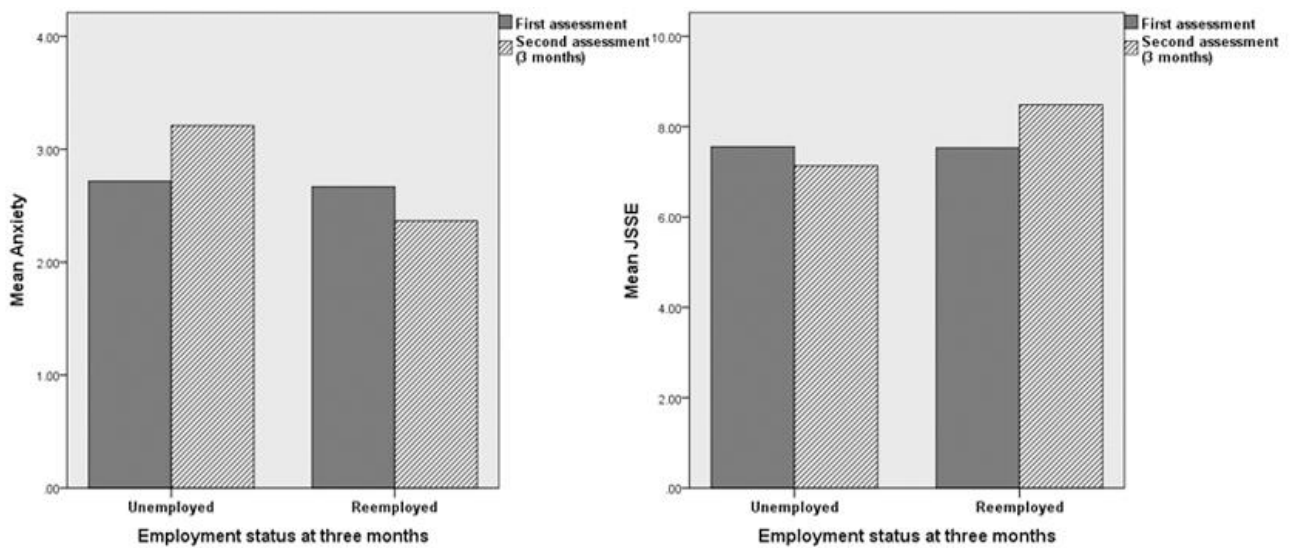


Figure 1. Mean anxiety scores and mean job search self-efficacy scores for the reemployed and unemployed participants at T1 and T2

Table 1. Means, standard deviations and zero-order correlations among study variables, at T1 and T2

Variables	Reemployed (N = 12)		Unemployed (N = 18)		1.	2.	3.
	M	SD	M	SD			
1. JSSE at T1	7.53	1.14	7.55	1.37	1		
2. JSSE at T2	8.48	0.91	7.13	1.58	.43*	1	
3. Anxiety at T1	2.67	1.12	2.72	1.05	-.44*	-.18	1
4. Anxiety at T2	2.37	1.09	3.21	1.23	-.28	-.73**	.35*

JSSE = job search self-efficacy; T1 = measurement moment consecutively after layoff; T2 = second measurement moment (at three months). Higher scores on both measurement instruments are indicative for higher levels of the respective construct. * $p < .05$, ** $p < .01$, two-tailed

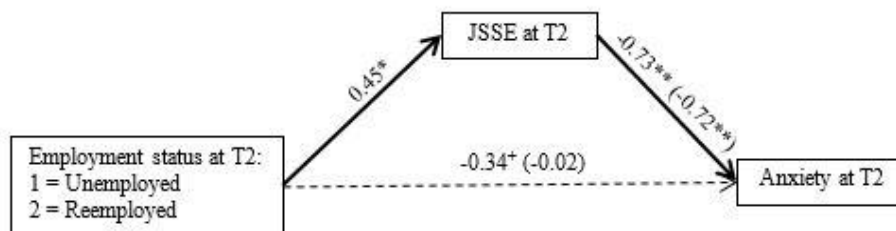


Figure 2. Job search self-efficacy mediates the indirect relationship between employment status and anxiety symptoms. Standardized regression estimates are presented on the relations depicted between the variables. In parenthesis are the multiple regression estimates. + $p < .10$, * $p < .05$, ** $p < .01$

Discussion

The negative effect that unemployment exerts on mental health is well documented (Paul & Moser, 2009). Over time, several theoretical models were developed that explain this relationship (Fryer, 1997; Jahoda, 1981, 1982; Warr, 1987, 2007). These models emphasized the causal link between unemployment and distress, highlighting the psychological needs that we can fill in a satisfactory degree only through employment. Another perspective that explains mental health irregularities is the Social Cognitive Theory of perceived self-efficacy (Bandura, 1977, 1997). One's belief in his capacity to cope with and have control over disturbing thoughts regulates the experienced distress, depression or anxiety arousal in difficult contexts (Bandura, 1994). Unemployment is a difficult and threatening period in one's life because of its potential to magnify symptoms of affective disorders. Perceiving a low sense of efficacy in dealing with unemployment and finding a new job produces anxiety. From this perspective, in the current study we tested the indirect relationship between unemployment (operationalized as employment status at three months after layoff) and anxiety symptoms with the mediating role of job search self-efficacy.

Firstly, starting from Paul and Moser's (2009) meta-analytic results, we predicted that participants who were still unemployed three months after being laid off would report higher symptoms of anxiety compared to those who managed to find a job and who would also manifest lower anxiety levels (direct effect). This hypothesis received partial statistical support, replicating a well-documented pattern through a series of extensive reviews (McKee-Ryan et al., 2005; Murphy & Athanasou, 1999, Paul and Moser, 2009). Thus, the present results are once again highlighting the effect of unemployment on mental health, and more specifically on anxiety symptoms.

We further predicted that the occupational status at three months following layoff will have a negative impact on the JSSE levels of still unemployed participants and will increase reemployed participants' self-efficacy. This hypothesis also received support, the data revealing a significant difference between the two studied groups. More precisely, based on Bandura's (1994, 1997) theory, the positive experience of finding a new job enhanced (also confirmed) one's confidence in his specific self-efficacy, and the setbacks or negative feedback experienced by the still unemployed individuals decreased their self-efficacy beliefs.

Moreover, the correlational analysis revealed significant negative associations between JSSE and anxiety both at T1 and at T2. Also at three months after the first evaluation, the effect size increased from a moderate to a strong association. The negative relationship between self-efficacy and emotional disorders was highlighted in previous other studies (Cutrona & Troutman, 1986; Maciejewski et al., 2000; McFarlane et al., 1995), as well as in studies on younger individuals (Ehrenberg, Cox, & Koopman, 1991; Muris, 2002), but is less explored in the case of unemployed individuals. The only record of this kind that we found was a study conducted by Crossley and Stanton (2005) that found a non-significant relationship between JSSE and anxiety. A possible explanation for the difference between our findings and the aforementioned results could lay in the disparities between the studies' designs. More precisely, even though Crossley and Stanton (2005) also conducted a longitudinal study, they used a sample of students and the first of the two performed

assessments (which included the measures for anxiety and JSSE) was conducted two months before graduation. Thus, both findings could be incorporated and discussed complementary, suggesting that prior to graduation and before starting to actively search for a job, or before being laid off (in the case of experienced individuals), the relationship between JSSE and anxiety symptoms could be inexistent, while during unemployment the two constructs start to relate, a relationship which grows stronger in time. In other words, unemployment could be framed as a threatening situation and a perceived lack of ability to cope with it (i.e., low job search self-efficacy) will lead to anxiety arousal. As long as job search self-efficacy diminishes, due to prolonged unemployment and repeated failures in finding a new job, anxiety symptoms will be more prominent. This statement reflects the predicted indirect effect between employment status and anxiety. The mediating role of JSSE in the relationship between employment status and anxiety received statistical support. These data point out the first evidence of a new possible mechanism (JSSE) between the experience of unemployment and the change in mental health. In an attempt to search for further evidence for the presumed causality, we applied a post-hoc crossed-lagged panel correlation. Even though the association between JSSE measured at T1 and anxiety measured at T2 appeared to be stronger than the association between anxiety at T1 and JSSE at T2, the actual difference was not statistically significant. This result may be due to the low statistical power and thus requires a cautious interpretation.

Even though the results are suggesting causal relations between the variables, the study design impedes stating such conclusions. In order to properly test causal relationships and mechanisms of change, an experimental approach with temporal sequentiality between the variables is needed (for more details see Kazdin, 2007). As such, these findings may be valuable from an applied point of view, suggesting that strengthening one's job search self-efficacy expectations could also consolidate his or her mental health

Limitations

There are also a series of limitations that have to be taken into account. First of all, the study sample consisted only of 30 participants, which leads to a decreased statistical power. At the same time, conducting a similar study on a larger sample is considerably difficult, taking into account that all participants were simultaneously laid off from the same company. Another major limitation is determined by the study's design, which doesn't allow causal conclusions to be formed. Thus, even though the mediation effect is statistically supported by the data this could only lead to causal assumptions and suggestions for further developments.

Conclusion

The theoretical developments from the Social Cognitive Theory of self-efficacy (Bandura, 1977, 1997) offer a comprehensive framework for understanding not only the motivational processes that make one act in a specific manner, but also the self-regulatory mechanisms for affective processes. Few studies explored the relationships between perceived self-efficacy and mental health in the context on unemployment, this relationship being only secondarily explored in studies focusing on negative affect and unemployment (e.g., Crossley &

Stanton, 2005). This study has examined the direct and indirect relationship between unemployment and anxiety symptoms, through job search-self efficacy. The data offer support for the hypothesized indirect effect. The revealed mediation suggests that job search self-efficacy could play an important regulatory role in the relationship between unemployment and experiencing anxiety symptoms. The more confident one is in his ability to overcome employment setbacks and find a new job, the more protected against experiencing anxiety feelings he will be. Even though the study design is not appropriate for asserting causal conclusions the applied potential of our findings is not negligible. Developing intervention programs aimed at amplifying unemployed individuals' job search self-efficacy could also indirectly prevent (or diminish) mental health decline.

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