Pathways to Employment: Study Protocol for a Theory-Based Non-Randomized Controlled Trial of Active Labor Market Programs Designed to Move the Long-Term Unemployed Closer to the Labor Market

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ABSTRACT

**Background:** This project’s aims are twofold (1) to uncover and define the underlying theories of change guiding competing active labor market programs (ALMP) in Sweden, and (2) to assess the relative effectiveness of these competing programs in a theory-based non-randomized controlled trial. The purpose is to assess the extent to which competing ALMPs are effective in moving long-term unemployed individuals (i.e. unemployed for 6 months or more) closer to the labor-market.

**Methods/Design:** This project will engage ALMP program administrators and service providers in semi-structured interviews. The transcribed interview material will be used as a basis for program theory reconstruction. All specified program theories will be presented back to program stakeholders for validation. ALMP program effectiveness will be assessed quasi-experimentally with pre- (T1) and posttest (T2) collection of self-reported data. Additionally, official register data from the Longitudinal integrated database for health insurance and labor market studies (LISA) will be collected for all participants. In addition, a matched sample will be collected from LISA to be used as a non-treated control group on final policy outcomes (e.g., employment, salary/wage). This study also assesses program implementation and economic outcomes of the included ALMPs.

**Discussion:** Long-term unemployment has profound impact of the health and wellbeing of individuals, families, and communities. In addition, the effects of long-term unemployment have been found to impact subgroups differently. Today we have scant knowledge on the mechanisms that are influential in moving individuals from long-term unemployment closer to the labor market. This study is designed to answer six research questions using a variety of methods (mixed-methods) and outcome measures (self-report, official register). In addition, this study leverages official register data to construct an untreated control group. This study will assess the extent to which an emerging theory of becoming job ready holds under experimental scrutiny.

**Trial registration:** This trial has been registered with the National Institute of Health, clinicaltrials.gov identifier NCT04247932. Protocol Record 2018-01324. Registered 1-28-2020.

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1. Background

At any point during a given year approximately 1% of the Swedish population is defined as experiencing long-term unemployment (The Public Health Agency of Sweden, 2019). Long-term unemployment is associated with a range of adverse consequences for individuals, families and communities. Beyond its association with income, employment status is an important indicator for many public health outcomes and is a strong indicator for many disparities in health and wellbeing in a population. For example, unemployment increases the risk for premature death and a range of somatic and psychiatric health problems including heart disease, cancer and substance abuse (Janlert, 2015). The health effects of unemployment have also been found to impact groups differently. For example, there is evidence that unemployed immigrants, blue-collar workers, and individuals with low-levels of education experience adverse health effects to a greater extent than other groups of unemployed individuals (Janlert, 2015).

In addition, unemployment has been found to have larger effects on the families of unemployed individuals than on the individuals themselves (Nichols et al., 2013). These effects include negative impacts on infant birthweight (Lindo, 2011) as well as lower school performance (Rege, Telle, & Votrube, 2011), grade retention (Stevens & Schaller, 2011) and high-school completion rates (Wightman, 2012) of children in households where parent(s) are unemployed. In the long run, parental unemployment has been linked to a reduction in later earnings among adults (Oreopoulos, Page, & Stevens, 2008). Importantly, these effects may be mediated through increased family stress and reduced income (McLoyd, Jayaratne, Ceballo, & Borquez, 1994; Nichols, Mitchell, & Lindner, 2013). The extent of these effects have been found to vary depending on whether mothers or fathers experienced extended unemployment (Kalil & DeLeire, 2002).

In addition to individual and family level impacts of unemployment, long-term unemployment has been found to impact communities disproportionately. For example, unemployment may impact social network configuration and social cohesion (Lindsay, 2009; Oxoby, 2009) where, over time, the social networks of unemployed individuals are increasingly made up of other unemployed individuals (Nichols et al., 2013). Thereby changing the social network constellations found at the community level. Economic impacts include for example increased dependence upon public assistance, reduced community investment (e.g., homeownership) and increased crime and health-risk taking behavior (Nichols et al., 2013).

Certain individuals may be more susceptible to being long-term unemployed such as older individuals (aged 55-64) and individuals lacking at least a high-school level education (The Public Health Agency of Sweden, 2019). Importantly, there is increasing evidence that length of time out of the labor market impacts health and wellbeing negatively (Brand, 2015). To help combat the negative effects of unemployment there are a range of active labor market programs (ALMPs) available to individuals experiencing long-term unemployment. Sweden contributes approximately 1.5% of its GDP annually to support ALMPs and is the third largest contributor to these types of programs across Europe (OECD, 2004). The effects, however, of ALMPs provided the long-term unemployed in Sweden are largely unknown. That is, currently there is scant information regarding the extent to which competing ALMPs support the needs of individuals in terms of return to the workforce or impact participants’ general wellbeing. Even less is known about how or if these programs move individuals closer to the labor market. The purpose of this study is to explore and compare the outcomes
of competing ALMPs which intend to support long-term unemployed individuals with the goal of moving them closer to the labor market.

1.1 Active labor market program organization

The organization and provision of ALMPs for the long-term unemployed in Sweden is part of a complex system of services for the unemployed. Even if labor policies and provision of ALMPs has traditionally been the main responsibility of the state, municipalities have increasingly become an important actor in the field of ALMP provision. In Sweden, the municipalities have taken much of the responsibility of delivering market programs for long-term unemployed individuals since the beginning of the 1990’s (Hollertz, 2010). Due to this, individuals may enter the system of labor market programs through either the state-run public employment services or the municipally administered social services. However, the active labor market programs provided directly to individuals are delivered by both public and private (for profit and not-for-profit/non-governmental organizations; NGOs) service providers. Currently, there is a lack of systematic evidence regarding the role of public, private or civic entities in the implementation of employment programs and if this implementation component has significant consequences for program effectiveness (Kluve et al., 2017).

The programs offered through municipal and private service providers can include education, general support to find work (such as coaching), work training and or work placements (Panican & Ulmestig, 2019). Time in unemployment is an important determining factor for which programs participants are offered. Work training and work placements are the main programs offered to individuals who are considered being far from the labor market, that is, those with unemployment periods exceeding 6 months. Unemployment periods of six-months or more is also a standard definition used for defining “long-term” unemployment. Individuals who are categorized as long-term unemployed generally fall into four subgroups: young people with basic education, individuals with disabilities, migrants or elderly workers without higher education (Eriksson, Henskvik, & Skans, 2017).

1.2 Effectiveness of active labor market programs

The effects of ALMPs have been investigated in a number of meta-analyses and systematic reviews with much attention falling on key labor market outcomes such as duration of time in registered unemployment, employment and earnings (e.g., Card, Kluve, & Weber, 2010; Greenberg, Michalopoulos, & Robins, 2003). Taken together, these investigations have found that job search assistance (and similar) programs appear to yield relatively favorable program impacts especially in the short-term while subsidized public sector employment programs, in contrast, have been found to be relatively ineffective (Butschek & Walter, 2014; Card et al., 2010). Training programs have also been associated with positive medium-term impacts (Butschek & Walter, 2014), although in the short-term they often seem ineffective (Card et al., 2010).

In addition to general effectiveness, ALMPs may also target specific populations and the effects of ALMPs may be impacted by specific program elements or target group characteristics. For example, of the types of ALMPs available for youth, entrepreneurship promotion and skills training have been found to have significant effects on employment and earnings (Kluve et al., 2017). ALMPs targeting disadvantaged youth (e.g., low-income youth, youth with low levels of education, youth with strong disadvantage in the labor market) were found to be more effective when compared to programs targeting youth in general (Kluve et al., 2017). However, Card et al. (2010) found that untargeted programs (i.e., ALMPs that include youth rather than target youth) yielded better results than those targeting youth
specifically. In addition, although subsidized public sector employment has been found to be generally ineffective, subsidized private sector employment (work experience and wage subsidy) has been found to be significantly more likely to have a positive effect on immigrants’ labor market outcomes than training (Butschek & Walter, 2014) a program that is found to be generally effective. Another interesting finding from this line of research concerns the timing of interventions. In their investigation of ALMPs for unemployed youth, Kluve et al (2017) found programs to be marginally more effective for women compared to men. However, Card et al’s 2010 investigation of ALMPs found no gender differences. This highlights the importance of considering sub-group impacts in the assessment of ALMPs effectiveness.

1.3 Becoming job ready

Overwhelmingly, the research on ALMPs effectiveness has focused on final policy outcomes (i.e., job placement, retention, and wages; Weigensberg et al., 2012). Theoretically, however, an ALMP will attempt to move an individual from being unemployed closer to the labor market. That is, successful ALMPs may have shorter term goals that are prerequisite and necessary to achieve the longer-term goals of labor market participation. One critique of the body of research that exists on the effectiveness of ALMPs is that they focus almost exclusively on final policy outcomes (Weigensberg et al., 2012). That is, studies fail to describe the underlying theories of change and observed transmission mechanisms behind given interventions and the reporting and tracking of more immediate outcomes (e.g., knowledge, skills, attitudes, and behavior) is lacking (Kluve et al., 2017). This makes it difficult to identify, define and ultimately compare the saliency of the core components (e.g., Durlak & DuPre, 2008) of promising ALMPs.

Emerging research, however, gives promising insight into a theoretical pathway individuals take from being unemployed to being employed (Hong, 2009, 2013). In this model, employment hope (e.g., self-worth, capability, motivation, skills and resources) is theorized to be a pre-labor market developmental marker that has a reciprocal relationship with perceived employment barriers (e.g., health, personal, family). That is, as individuals gain employment hope they are better able to deal with employment related barriers and as one reduces the number of barriers to employment one builds hope. As hope increases and barriers decrease one develops their psychological self-sufficiency. This development of psychological self-sufficiency (e.g., job readiness) helps one achieve realistic economic self-sufficiency (e.g., financial independence) outcomes (Hong, 2013). Although work has been done to develop instruments to test these theoretical constructs, the model has yet to be explored in experimental research. However, it is important to note that meta-analyses of ALMPs have failed to find a connection between the development of “soft skills” (such as those included in employment hope and employment barriers) and outcome of, for example, youth employment programs (Kluve et al., 2017).

1.4 Program theory

In their review of the impact of youth employment interventions which summarized findings from 113 reports of 107 interventions across 31 countries, Kluve et al. (2017) concluded that all too often, research on ALMPs relative effectiveness fail to describe a program’s underlying theory of change and thus omit important transmission mechanisms behind given interventions. Program outcome is only meaningful if programs are designed and implemented well. Lack of attention to a program’s theory of change leads to problems in the interpretation of study results as failures to achieve desired effects may be the result of theory failure or implementation failure, both must be attended to in order to understand how
programs impact participants (Rossi, Lipsey, & Freeman, 2004). This omission is mirrored in other reviews that point out that description of process indicators, or how individuals move from one state to another through a program are lacking (Weigensberg et al., 2012).

A program theory is an explanation of why and how an intervention is intended to impact program participants (Fraser, Richman, Galinsky, & Day, 2009; Funnell & Rogers, 2011; Huebner, 2000; Rogers, Petrosino, Huebner, & Hacsi, 2000). Program theories describe what must be done in order to change mediating processes and how a given intervention will do this (Cook, 2000; Lipsey, 2000; Rogers, 2000). In attempts to assess the relative effects of competing ALMPs, it is necessary to clearly define the program’s underlying theory as programs may fail as a result of flaws in their underlying theories of change or as a result of shortcomings in the implementation of sound theories (Fraser et al., 2009; Rossi et al., 2004). Program theories can generally be divided into two main categories of theory: logic model and theories of change.

Logic Modeling. A logic model is one type of program theory (Fraser et al., 2009). Logic models are visual conceptualizations of core program components with focus on the inputs, objectives, outputs, and outcomes of a given program. Logic models specify how an intervention is expected to work and highlight connections between program inputs and objectives and outputs. Within the context of a logic model, mediating processes are conceptualized as intermediate outcomes and are thus an important step toward achieving more long-term distal outcomes.

Theories of change. Are closely related to logic models in that they are an elaboration of the components found in logic models (Fraser et al., 2009). Theories of change specify the causal chain of events required to bring about the intended program outcomes. Here, attention is given to questions of who (e.g., who is targeted, who provides the intervention), what (e.g., what activities will participants and practitioners engage in), where (e.g., where will specific activities take place) and why (e.g., why will proximal and distal outcomes be achieved).

1.5 Economic evaluation

Meta-analyses and reviews of ALMPs have concluded that few studies provide enough information to assess the relative costs and benefits of competing ALMPs. For example, Card et al. (2010) concluded that program costs were often completely omitted from the program evaluation literature on ALMPs. In addition, the design features of included studies did not lend themselves to direct comparison of the program effect on relevant outcomes such as earnings, employment, or hours of work (ibid.). As such investigators conclude that future primary studies on ALMP effects should undertake cost analyses (Kluve et al., 2017) or specifically evaluate the economic impact of competing labor market programs (Card et al., 2010).

2. Methods/Design

2.1 Aims and research questions

The primary aims of the current study are to (1) explore and describe the underlying theories of change for included ALMPs, and (2) explore the effectiveness of competing ALMPs through a non-randomized controlled experiment. The following questions will be investigated:

1. What are the underlying theories of change guiding implementation of participating ALMPs?
2. Are the programs implemented as intended?
3. What are the outcomes of participating ALMPs on participants?
4. How do implementation components moderate program outcomes?
5. How does the effectiveness of participating ALMPs vary for identified subgroups (e.g., youth, migrants, disabled) of participants?
6. What are the costs and benefits of participating ALMPs?

2.2 Program recruitment

ALMPs in Sweden’s second largest city, Gothenburg, will be targeted for inclusion in the study. At a minimum, three programs from each of two categories of service provider (i.e., civic and non-governmental) will be included for a total of at least six ALMPs.

Inclusion criteria. Inclusion criteria for program participation is as follows:
1. The agency/organization offers an ALMP to individuals who are considered long-term unemployed (outside of labor market for at least six months);
2. The ALMP must have a goal of increasing participants’ access to the labor market through work, work training or studies;
3. The ALMP has participants in at least one of the following target groups: youth (under age 25), individuals with a developmental and/or physical disability, migrants, or older individuals (55+) who lack post-secondary education;
4. The ALMP must be operated by a civic entity (i.e., the municipality), or a private not-for-profit (i.e., NGO) organization;
5. Participants in the program must receive economic support from either the municipality or the state insurance system; and
6. Programs must serve a minimum of 40 participants per year.

Exclusion criteria. Programs are ineligible to participate if any of the following apply:
1. The program is seasonal and not on-going;
2. The program is a time-limited project;
3. The program has been in operation for less than 12 months.

2.3 Program theory reconstruction

This study will engage program stakeholders in semi-structured interviews based on an interview guide developed to investigate the four core components of a program’s logic model: inputs, objectives, outputs, and outcomes. Special attention will be made to uncover the underlying social mechanisms (Hedström & Swedberg, 1998) and core implementation components (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005) thought to impact change at the individual level (Bickman, 1987; Rogers, 2000).

Stakeholder interviews. All interviews will be conducted by two researchers with representation of both program leadership and direct service personnel (2-3 individuals representing each program). Interviews will be held to a maximum of two hours. All interviews will be recorded.

Transcription. All interviews will be transcribed in their entirety.

Analysis. Primary analysis of transcribed interview material will be conducted in two stages. First, transcribed interviews will be assessed and reduced via content analysis (Finfgeld-Connett, 2014). The second stage involves sorting the reduced information into preliminary outcome chains and program theory matrices as described by Funnell and Rogers (2011).

Validation. The resulting outcome chains and program theory matrices will be presented back to program staff for validation and refinement.
2.4 Effectiveness study

The main study will be carried out as a non-randomized controlled experiment (i.e., quasiexperiment) with dependent pretest and posttest samples (Shadish, Cook, & Campbell, 2002). The incremental effects of the included programs within two groups (i.e., civic and NGO) of service provider will be investigated.

Target population. The target population for this study is “long-term unemployed” individuals (i.e., out of the labor market for a period of 6 months or more; Liljeberg, 2016). All individuals entering the participating programs during the recruitment period will be invited to participate in the study.

Assignment. This study will follow natural allocation between groups. The research group will not manipulate the natural allocation of individuals to employment programs as assigned by public actors.

Sample size calculation. An estimated a priori sample size of n = 269 is needed to detect a medium (f = .25) effect at 80% power with up to 5 covariates (G*power, University of Dusseldorf).

Measurement. Measurement will occur at two (i.e., T1, T2) time periods. First, pre-test measurements (T1) will occur directly prior to participants’ engagement in a work training program but following their informed consent. Posttest measurements (T2) will be taken following employment program participation. Determination of the timing of T2 measurement will be based on results of the program theory reconstruction phase of the project. Prior research has found that most ALMPs are short with a duration of 4-6 months (Card et al., 2010) and we anticipate that T2 follow-up will occur six months following pretest. T2 will be standardized across programs.

Primary outcome measure. The primary outcome measured in this study will be change in employment and wage.

Participant measures. Participant measures at pretest include basic demographic data and background variables as well as personal information. In addition, the Learning needs screening tool (adult) (Payne, 1997), developed for use with individuals receiving public assistance benefits, will be used to assess special learning needs of adults participating in participating ALMPs. Participant measures will be translated, as needed, from English to Swedish using a committee approach (Brislin, 1970). The committee includes three researchers fluent in Swedish and English (2x native Swedish, 1x native English). Pre- and posttest measures include:

- Self-sufficiency. Short-employment hope scale (EHS-14) (Hong, Choi, & Polanin, 2014) is a 14-item instrument which assesses four factors of employment self-sufficiency: psychological empowerment, futuristic self-motivation, utilization of resources and skills, and goal orientation.
- Employment obstacles. Perceived Employment Barrier Scale (PEBS) (Hong, Polanin, Key, & Choi, 2014) is a 20-item instrument which assesses five groups of barriers to employment: physical and mental health, labor market exclusion, childcare human capital, and soft skills.
- Resilience. Resilience Scale (Wagnild & Young, 1993) is a self-report instrument with 14 questions. The instrument is designed for general population use and has been used with a variety of populations including adolescents and the elderly.
- General Health Questionnaire (GHQ-12). The General Health Questionnaire is a self-report measure of non-discriminant affective disorders. GHQ has been found to have good reliability and validity in Swedish samples (e.g., Lundin et al., 2017).
**Participant reported measures.** Pre- and posttest participant measures will be participant (self) reported. Participants will be requested to register their responses via a web-based instrument although paper and pen versions of the data collection instrument will be available upon request.

**Register data and non-treated control group.** Statistics Sweden (SCB) is a government agency that is charged with maintaining a number of public registries. This study will leverage data collected and stored in the Longitudinal integrated database for health insurance and labor market studies (LISA). Longitudinal LISA data will be collected for all participants for the period under review. Variables include but are not limited to earnings, hours worked, unemployment duration, quality of employment (contract, fixed), level of employment (hourly, part-time, full-time), type of employment (competitive, integration, supported, sheltered, non-integration), and sector (public, private). In addition, a non-treated matched sample will be collected from LISA to act as a control group in assessment of final labor market outcomes based on program participation.

### 2.5 Implementation measures

Assessment of implementation of the competing ALMPs will be based on participant reported measures.

**Development of implementation measures.** Implementation measures will be developed based on the program theories developed in this study. Ideally, these measures will cover aspects of context, compliance, and competence (Fixsen et al., 2005).

**Collection of implementation data.** Implementation data will be collected via short (max 5 min) telephone interviews with program participants. These interviews will occur at three time periods with equal spacing between intervals (i.e., 2, 4, & 6 months following pretest). Participation/dose will be collected on-site.

**Analysis of implementation data.** Implementation data will be used to (1) assess the extent to which the competing programs were implemented as intended, (2) assess the extent to which identified implementation components are present in the competing programs, and (3) assess the extent to which identified components moderate outcome.

### 2.6 Economic analysis

Data on the implementation and running costs (e.g., time, material, and other inputs) of all conditions will be collected via interviews, data collection instruments, and organizational documents/records. Participant costs will be included (e.g., lost time, travel). Cost analysis will include the resources necessary to provide the interventions along with a comparison of the relative cost-effectiveness of the interventions under comparison. The incremental costs of providing the interventions will be assessed prospectively considering incremental changes in participant outcomes through economic analysis.

### 2.7 Data management and analysis

**Data management.** Data for this project is collected via 3 main sources: electronic, physical, and recorded. Electronic data will be collected via Qualtrics web-based data collection platform. Qualtrics servers are protected by high-end firewall systems which is scanned regularly. In addition, Qualtrics uses Transport Layer Security encryption for all transmitted data. Data is password protected. Physically recorded data (i.e., pen and paper) will be stored in locked fire protected filing cabinets in private, locked offices at the University of Gothenburg. Recorded data will be stored on secured servers at the University of Gothenburg. Data is accessible by research team members only.
Data analysis. Main study outcomes will be assessed with a 2 (intervention group) x n (site) mixed-factorial design. Depending on data characteristics, statistical analyses (e.g. ANOVA, ANCOVA) will be used to test between group differences on pre- to posttest changes on main outcomes. Mediating and moderating processes will be investigated. In addition, implementation and its impact on outcome will be tested for saliency. This study will follow an intent-to-treat analysis strategy. Baseline differences between groups will be assessed for their impact on outcome. Subgroup analyses will be performed. All measures used will be tested for their psychometric properties.

3. Discussion

The proposed study aims to assess the relative effectiveness of competing ALMPs on individuals who are considered long-term unemployed. This assessment includes comparison of the primary outcomes of register-based employment and wages to a matched control group. The assessment of the extent to which participants have moved closer to the labor market will be guided by current developing theory on the relationships between employment hope, employment barriers and psychological as well as economic self-sufficiency. In addition, assessment of implementation will be based on participant organizations’ stated theories of change as well as guiding implementation literature. This study uses mixed methods to answer the research questions posed and provides an opportunity to learn more about how ALMPs are designed and delivered as well as how individuals move from long-term unemployment closer to the labor market and what this shift means for their health and wellbeing. We anticipate that this project will generate a wealth of data, both qualitative and quantitative, that will allow analysis from many perspectives.

List of Abbreviations

ALMP: Active labor market program
ANCOVA: Analysis of covariance
ANOVA: Analysis of variance
EHS-14: Employment hope scale 14
GDP: Gross domestic product
GHQ-12: General health questionnaire 12
LISA: Longitudinal integrated database for health insurance and labor market studies
NGO: Non-governmental organization
OECD: Organization for economic cooperation and development
PEBS: Perceived employment barriers scale
SCB: Statistics Sweden

Declarations

Availability of data and material: This study will adhere to the ethical guidelines as set forth by the Swedish Ethical Review Authority and reasonable requests for the datasets used and/or analyzed during this study will be considered based on current guidelines regarding data security including GDPR.

Ethics approval and consent to participate: This study was granted ethics approval on 01-15-2020 by the Swedish Ethical Review Authority. Dnr. 2019-05222. Written consent will be obtained from all participants prior to inclusion in this study.

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Authors’ contributions: All authors are equal members of the research team for which the grant was provided and have equally contributed to the design and execution of the proposed study. MS is project leader for this project and has primary responsibility for project administration. KH has primary responsibility for the qualitative aspects of this study. TO has primary responsibility for the quantitative aspects of this study. TO is the primary author of this manuscript. All authors have commented on and approved the final version of this manuscript.

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