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Employability among refugees and how it is affected by public integration programmes

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ABSTRACT

To secure employment in a new country, refugees often go through a series of steps to enhance their employability. While many governments seek to maximise refugee employment rates, we lack concepts for measuring progress in refugee employability and knowledge about which types of intervention enhance employability. We draw on research on employability and have developed a survey-based concept to measure different dimensions of refugee employability. We analyse how these dimensions predict employment outcomes among newly arrived refugees in Denmark, primarily from Syria. We also investigate the extent to which Danish public integration programmes affect these refugees' progress in employability. The analyses exploit six waves of survey data collected from 2017 through 2019 that measure the refugees' employability on a quarterly basis. Several dimensions in our concept of employability correlate positively with subsequent employment – primarily the refugees' 'conscientiousness and participation', 'health and coping', and 'job focus'. The analyses also show that participation in job-oriented programmes enhances refugees' progress in employability – in particular the dimensions 'conscientiousness and participation' and 'health and coping'.

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Refugees; employment; employability; progress measurement

Introduction

The integration of refugees into their host country's labour market is often a lengthy and sinuous process. Refugees may need to develop language skills, acquire job-relevant qualifications, and build social networks that can help them find jobs (Gubrium and Leirvik 2022; Liversage 2009a). In Denmark and many other countries, refugees receiving unemployment or cash benefits are obliged to participate in active labour markets programmes (ALMPs) and in other integration-oriented interventions seeking to improve their employability, that is, a measure of their personal resources that are likely to improve their chances of securing a job. Such resources include language skills, job motivation, qualifications, social networks and knowledge about the labour market. The causal effects of integration-oriented interventions on refugees'

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labour market participation and employment rates have been estimated by a rapidly growing body of sociological and economic research in the migration field (Butschek and Walter 2014; Thuesen et al. 2020). While providing scientifically valuable and policy-relevant knowledge, these analyses do not explain how such interventions might succeed or fail in terms of the interventions' impact or lack of impact on employability-relevant factors such as job motivation, language skills, health, and professional, personal and social competencies. Lack of knowledge on which interventions are most likely to further refugees' employability may impede the ability of professional caseworkers, NGOs and other relevant stakeholders to initiate relevant interventions and provide adequate support for refugees. To improve our understanding of aspects of the integration process relevant to employment and to help welfare professionals provide more adequate support in this process, we need tools that can measure employability and progress in employability.

Research focussing on a concept of 'employability' has analysed factors that may help jobseekers and employees obtain and maintain employment (Hall 2004; Fugate et al. 2021; Neroorkar 2022). However, to our knowledge, no research has focussed on how to measure employability among immigrants or refugees, and how various types of intervention may enhance their employability. Our paper addresses this knowledge gap by presenting how we have developed and operationalised a survey-based concept of refugee employability. The analyses exploit longitudinal data stemming from the survey-based Refugee and Immigrant Progress in Employability (RIPE) tool that we constructed to measure newly arrived refugees' (mainly Syrian) progress in employability over time while participating in a municipally run integration programme in Denmark. The tool consists of two brief questionnaires that the refugees and their municipal caseworkers had to complete on a quarterly basis when meeting at the municipality's jobcentre. We empirically analyse the extent to which we can distinguish between different employability dimensions, and whether these dimensions correlate with subsequent employment. With inspiration from Arendt, Andersen, and Saaby (2020) who analysed the relationship between ALMPs and employability among vulnerable cash benefits recipients, we chose this strategy of correlating with subsequent employment to validate the dimensions in our concept of refugee employability because employability is a difficult concept to measure when not measured in relation to employment, one of its primary effects. We also analyse the extent to which various public integration programmes correlate with progress in employability among the members of the group of refugees investigated in this study – refugees and adult beneficiaries of family reunification who arrived in Denmark during the period 2015–2016.

Two research questions guide this paper. RQ1: To what extent do the RIPE measures hold predictive validity for future employment? RQ2: To what extent is there a correlation between the refugees' participation in public integration programmes targeting newly arrived refugees and the refugees' progress in employability? The paper proceeds as follows. We briefly review research on immigrant integration into the labour market and on the concept of employability. Second, we introduce the Danish context, the group of refugees in question and the RIPE tool. Third, we provide an overview of our data and the methods. Fourth, we present our results, and fifth discuss our findings and conclude.

Background

Understanding immigrants' progress toward employment

Research on immigrant employment has identified many factors that affect immigrants' labour market outcomes when measured as success in employment and wages. Based on this knowledge of factors that can affect the likelihood of successful labour market outcomes (i.e. 'employability'), we need research studies such as the present one that can develop and validate tools and methods to measure employability.

Factors that can affect immigrants' employability include education level and work experience from the home country and (especially) from the host country (Ballarino and Panichella 2017; Kogan et al. 2011). Proficiency in the host country language also raises the chances of finding employment (Dustmann and Fabbri 2003; Lochmann, Rapoport, and Speciale 2019). Assistance from social networks also often raises immigrants' job chances (Portes and Shafer 2007; Ryan 2011), while good mental and physical health in immigrants is also integral to integration in the labour market. Moreover, motivation, perseverance and willingness to take risks may also promote the likelihood of labour market success (Cohen and Haberfeld 2007). Conversely, lack of relevant qualifications, language skills, and social networks as well as care obligations and poor health may bar some immigrants from finding a job in a short-term perspective, and, for female immigrants, family obligations and child-bearing can affect employment chances negatively (at least in the short run) (Liebig and Tronstad 2018; Liversage 2009b). While these factors are likely to affect the labour market chances of both immigrants and refugees specifically, we should note that refugees are often affected by experiences and issues that negatively affect such chances, i.e. experiences of involuntary uprooting, war and flight that have led to physical injuries, illnesses and/or trauma (Peconga and Høgh Thøgersen 2020). Hence, an awareness of the state of physical and mental health of refugees is particularly important in relation to their integration into a new host country labour market. Australian researchers argue that among refugees a bi-directional relationship exists, implying that good health is likely to raise the chances of finding employment, while good-quality employment is likely to improve (mental) health (Lai, Due, and Ziersch 2022).

In the field of management research, the development and validation of a general concept of employability has long been a research topic (Fugate et al. 2021; Heijde and Van Der Heijden 2006; Neroorkar 2022). Fugate et al. have defined employability as 'a multidimensional aggregate of career identity, personal adaptability, and social and human capital' (2004, 32) that 'enhances an individual's likelihood of gaining employment' (2004, 16). Career identity represents 'a more or less coherent representation of often diverse and diffuse career experiences and aspirations' (2004, 19) including goals, hopes, and fears. Hence, career identity and aspirations relate to both personal identity ('who am I?' and 'what are my potential goals in life?') and labour market identity ('what kind of career would I like to pursue?', and 'what kind of job can I realistically aspire to obtain?'). Personal adaptability is a person's capacity to meet the demands of the situation based on *inter alia* a propensity for learning, openness to change and new experiences, internal locus of control and generalised self-efficacy. Finally, social capital is the goodwill inherent in social networks, while the core elements in human capital are education and experience. Fugate et al. underscore that employability has

no content without its independent, although inter-related, dimensions, that is, employability as an umbrella concept is caused by and has meaning because of its dimensions (2004, 25–26).

The human and social capital components in Fugate et al.'s concept of employability resemble some of the employment-enhancing factors identified by the previously described research on immigrant and refugee employment. Likewise, Fugate et al.'s concept of career identity as a sense of direction resonates with Cohen and Haberfeld's (2007) focus on motivation and perseverance, while Fugate et al.'s notion of the importance of personal adaptability resonates with research that documents the 'trial-and-error' approach many immigrants have to adopt to try to find a (decent) job (Liversage 2009a). Still, even though research on immigrant and refugee employment touches upon topics similar to those central to research on employability, no attempt has yet been made to draw on insights from both of these bodies of research to explore refugees' employability, which is the purpose of this paper.

The Danish context and the RIPE tool

The war in Syria and a relatively large influx of refugees to Europe, including Denmark, during 2014–2016 provided the impetus for the development of the tool that is assessed in this paper, i.e. RIPE. The development of the tool was part of a Danish state-funded initiative, Successful Integration (SI), launched in 2016 to raise the employment rate among newly arrived refugees and beneficiaries of family reunification in selected Danish municipalities. While all 98 Danish municipalities could apply to take part in the SI initiative, 40 municipalities applied, and 17 municipalities were selected on the basis of their lower non-Western immigrant employment rates compared to the national average. The selection of the 17 municipalities was largely based on a benchmarking analysis of all Danish municipalities' performance in terms of labour market integration of newly arrived refugees and beneficiaries of family reunification. The benchmarking analysis (Arendt et al. 2016, 64–68) showed that controlling for a number of background factors (primarily gender, age, type of residency permit and country of origin), the 1st (best) quintile of municipalities performed 8.5% better than expected while the 5th (lowest) quintile performed 6.4% below the expected. Of the 17 municipalities selected for SI, 11 belonged to the 5th, 4 belonged to the 4th and 2 to the 3rd quintile – underlining that most of the municipalities in the SI project were indeed selected among the lowest performing municipalities in terms of labour market integration of newly arrived refugees. Still, the observed average duration until a first job among members of the target group only varied between 92.3 weeks in the 1st quintile of municipalities and 128.2 weeks in the 5th quintile. Hence the performance of the 17 SI municipalities was neither much below what was to be expected nor abysmally lower than performance in the other 'better' quintiles. Therefore, while we should keep in mind that the RIPE tool was developed and implemented in predominantly 'low-performance' municipalities, we find no reason to assume that the caseworkers' service to members of the target group or use of the tool was characterised by bureaucratic carelessness or incompetence that would affect the results presented in this paper.

We developed the RIPE tool by building on the questionnaires used by Arendt, Andersen, and Saaby (2020) for measuring employability among vulnerable cash benefits

recipients. For the RIPE tool, the questionnaires were thoroughly revised and adapted to measure employability among newly arrived refugees and adult beneficiaries of family reunification. The revision of the questionnaires was based on the research on factors influencing immigrants' employment chances described in the previous section, and Fugate et al.'s research on employability (2004; see also Fugate et al. 2021). Moreover, we received input and feedback on different versions of the questionnaires from the municipal caseworkers and managers working in the labour market integration field in the 17 SI municipalities.

The core of the tool consisted of two questionnaires, one for the refugees and one for the caseworkers, each with 11 items intended to measure key dimensions in refugees' employability. The decision to design one questionnaire for the refugees and one for the caseworkers was based on the idea that the refugees might be best at assessing issues such as personal motivation and obstacles to be overcome in everyday life, while the caseworkers might be better at assessing issues pertaining to the national or local context, for example, how a refugee's competencies fit local employers' demand for labour. Moreover, many of the caseworkers were educated social workers and had both extensive experience in assisting newly arrived refugees integrate into Danish society and extensive knowledge of the steps in the process leading toward a first job. The 22 questionnaire items are described in the data and methods section.

For the refugees in the 17 SI municipalities, completing the RIPE questionnaire was a compulsory part of their participation in the integration programme.[1] Participation in the integration programme in Denmark among newly arrived refugees, i.e. persons granted asylum, and family reunification beneficiaries is mandatory if they want to receive cash benefits from the municipality (Act on Integration (AoI), section 16).[2] The programme, which lasts up to five years, is charge free for participants and it comprises language training, civic education, labour market courses, and workplace internships. Refugees have the right to work from being granted asylum. Concerning the RIPE questionnaire, an introduction letter advised the refugees in the SI municipalities to answer the questions based on how they saw their personal situation. The letter also explained that the caseworker would answer another questionnaire with some similar and some diverging questions and that the refugee's answers and caseworker's answers did not have to be identical. Moreover, the letter to the refugees explained that while the caseworkers in the jobcentre would see the refugee's answers, those answers would be anonymous and treated as strictly confidential in the subsequent evaluation of the SI project. The refugee questionnaire and the introduction letter were available in Danish, English, Arabic, Farsi, Somali and Tigrinya.

During an initial meeting between the refugee and the caseworker, the caseworker had to complete a questionnaire on background information about the refugee, primarily arrival date in the municipality, integration programme start date, length of schooling and education, highest educational level attained, and years and types of occupational experience. The refugee had to complete the RIPE questionnaire with the help of their caseworker during a meeting legally required four times a year in the local jobcentre (AoI, section 20), while the caseworker completed the RIPE caseworker questionnaire and registered whether or not the refugee had participated in one or more of twelve predefined activities since their previous mandatory meeting (i.e. one of the 4 annual mandatory meetings at the jobcentre).

Data and methods

Data and measures

The empirical analyses rely on survey data derived from the RIPE tool from the fourth quarter of 2017 through to the second quarter of 2019 in the 17 participating municipalities. The municipalities provided us with civil registration numbers for the refugees who had completed one or more RIPE questionnaires, which allowed us to link the survey data to the individual-level information on the refugees from administrative registers at Statistics Denmark.[3] After data cleaning, we had 480 refugee respondents who had participated in more than one RIPE round, which therefore enables us to analyse RIPE over time. For those 480 respondents with 2–6 rounds of RIPE observations, we had a total of 779 observations measuring progress in employability from one round to the next. Due to only a limited number of missing values on the different RIPE items, we have chosen not to impute missing values. Table A1 in the appendix shows that the number of respondents declines over time; the number of respondents with matching caseworker and refugee data (i.e. a caseworker and a refugee questionnaire completed at the same meeting) declined from 480 in round 2 to 104 in rounds 4-6. Most likely the least employable respondents are those with most observations, given that more employable respondents are likely to obtain a job and leave the integration programme. However, we do not view this potentially skewed composition among our respondents as a major problem since RIPE is primarily intended to measure progress in employability among those who are furthest from obtaining a job.

Below we outline the employability dimensions the two RIPE questionnaires were intended to measure. Tables 1 and 2 contain all 22 items (refugee questions abbreviated

Table 1. Refugee RIPE mean scores (1st round) and mean change (across rounds).

Label	Question	Mean RIPE score (1st round)*	Mean RIPE change*[a]
RfQ1: Collaborative skills	How good are you at completing tasks together with others?	5.81 (1.53)	0.10 (1.63)
RfQ2: Understanding instructions	How good are you at understanding and carrying out an instruction given by a manager?	5.49 (1.62)	0.14 (1.63)
RfQ3: Punctuality – arriving on time	How good are you at meeting on time?	6.39 (1.22)	0.00 (1.24)
RfQ4: Keeping job focus	How easy is it for you to be focused on getting a job?	4.58 (2.06)	0.22 (1.99)
RfQ5: Belief in job within 6 months	Do you see yourself in a job within the next 6 months?	4.10 (2.09)	0.21 (1.96)
RfQ6: Job Importance 6 months	How important is it to you that you find a job within the next 6 months?	5.75 (1.90)	0.05 (1.76)
RfQ7: Job realism	Do you know what kind of work you will be able to get, realistically speaking?	4.51 (2.07)	0.24 (2.05)
RfQ8: Health in relation to job	How good is your health in terms of being able to manage a job?	5.06 (2.06)	0.12 (1.51)
RfQ9: Speaking Danish	How good are you at speaking Danish?	3.40 (1.39)	0.30 (1.11)
RfQ10: Understanding Danish	How good are you at understanding Danish?	4.02 (1.49)	0.33 (1.26)
RfQ11: How to improve job chances	Do you know what to do to improve your chances of getting a job?	4.66 (2.10)	0.22 (2.01)
N (observations)		975	779

Note: *Scale 1–7.
[a]Mean RIPE change from one round to the next for rounds 1–7.

Table 2. Caseworker RIPE mean scores (1st round) and mean change (across rounds).

Label	Question	Mean RIPE score (1st round)*	Mean RIPE change*[a]
CQ1: Collaborative skills	How would you rate the citizens' ability to collaborate with others?	5.38 (1.50)	0.18 (1.34)
CQ2: Everyday problems a barrier	To what extent do problems in the everyday life of the citizen represent obstacles to her/ his ability to focus on getting a job?	4.79 (1.97)	0.18 (1.64)
CQ3: Punctuality – arriving on time	How good is the citizen at meeting on time?	5.47 (1.60)	0.07 (1.423)
CQ4: Relevant qualifications	To what extent does the citizen possess professional qualifications relevant in relation to the local labour market?	3.75 (1.68)	0.34 (1.29)
CQ5: Belief in job within six months	To what extent do you see the citizen in a job within the next 6 months?	3.92 (1.94)	0.30 (1.48)
CQ6: Job realism	To what extent does the citizen hold an idea of which job is realistic for her/ him to get?	4.38 (1.82)	0.33 (1.65)
CQ7: Health in relation to job	How good is the citizen's health in terms of taking care of a job?	5.47 (1.75)	0.10 (1.16)
CQ8: Speaking Danish	How good is the citizen at speaking Danish?	3.31 (1.44)	0.31 (0.94)
CQ9: Understanding Danish	How good is the citizen at understanding Danish?	3.73 (1.45)	0.32 (0.99)
CQ10: Active Job Search	To what extent is the citizen active and committed in their job search?	3.34 (2.02)	0.32 (1.801)
CQ11: Active participation	To what extent does the citizen participate in the activities initiated by the jobcentre?	5.51 (1.58)	0.10 (1.34)
N (observations)		975	779

Note: *Scale 1–7.
[a]Mean RIPE change from one round to the next for rounds 1–7.

RfQ, caseworker questions CQ), all of which were rated on a scale from 1 to 7. The items examined seven (presumed) employability-relevant dimensions measuring (1) social competencies, (2) personal competencies, (3) professional qualifications, (4) self-confidence and goal directedness, (5) health, (6) language (Danish) skills and (7) job-search intensity. *Social competencies* focussed on the refugee's self-rated collaborative skills (RfQ1) and ability to understand work instructions from a manager (RfQ2) and the caseworker's assessment of the refugee's collaborative skills (CQ1). These items drew on research showing that social intelligence competencies, that is, abilities to use emotional intelligence about others in an efficient manner, lead to effective performance at work (Emmerling and Boyatzis 2012), and that collaborative skills matter for employment chances (Rosholm, Sørensen, and Skipper 2019). *Personal competencies* focussed on the refugee's ability to arrive on time for meetings (RfQ3) and to stay focussed on getting a job (RfQ4) as well as on the caseworker's assessment of whether problems in the everyday life of the refugee distracted the refugee from focussing on getting a job (CQ2) and on the extent to which the refugee arrived on time for meetings (CQ3). These items were inspired by Fugate et al.'s (2004) notion of career orientation as a sense of direction, while the focus on ability to arrive on time drew on input from municipal caseworkers who stressed this ability as important to many employers.

Professional qualifications were investigated through a question for the caseworker concerning the extent to which the refugee had qualifications relevant for the local labour market (CQ4). This item drew on research showing the importance of human capital for refugees' employment chances (Ballarino and Panichella 2017; Kogan et al. 2011).

Self-confidence and goal directedness were examined through three refugee items and two caseworker items. The refugee items focussed on self-assessed belief in finding work within six months (RfQ5), self-rated importance of finding a job within six months (RfQ6), and knowledge concerning what might be a realistic job (RfQ7). The caseworker items focussed on the caseworker's belief in the refugee finding work within six months (CQ5) and assessment of the extent to which the refugee had a notion of what might be a realistic job for the refugee (CQ6). These items on self-confidence and goal directedness drew on research on the importance of self-efficacy (Creed, Bloxsome, and Johnston 2001) and motivation and perseverance for refugees' job chances (Cohen and Haberfeld 2007).

Health in relation to taking care of a job was assessed through a single question for the refugees (RfQ8) and the caseworkers (CQ7), and drew on research showing the importance of good health for various employment outcomes (Currie and Madrian 1999). To assess *language skills,* we included items on ability to speak Danish (RfQ9 and CQ8) and to understand Danish (RfQ10 and CQ9). These dimensions drew on research showing the importance of language skills for refugees' labour market outcomes (Dustmann and Fabbri 2003; Thuesen 2017). Finally, we assessed *job-search commitment* by asking the refugee about the extent to which they knew how to improve their chances of getting a job (RfQ11) and by asking the caseworker if the refugee was actively searching for a job (CQ10) and participating in activities initiated by the jobcentre (CQ11). These items were inspired by Fugate et al.'s (2004) concept of personal adaptability as a propensity for learning and by research showing that an active job search increases an unemployed person's employment chances (Amilon 2010).

Besides the RIPE score for each item on the scale from 1 to 7, data included various information about the RIPE respondents. From the Danish DREAM register, we have information on degree of employment on a monthly level. Employment degree is a continuous variable ranging from 0 to 1, where 1 corresponds to fulltime work through the entire month (160.33 working hours). From the survey we have information on the refugee's participation in one or more of the twelve jobcentre activities since their last interview (see the section 'characteristics concerning interventions' below). Moreover, we have information on background characteristics of the RIPE respondents. From the survey, we have information on foreign education, foreign work experience, number of months of residence in Denmark, and country of origin. From the Danish population and family register, we have information on age, gender, marital status, and number of children (0–17 years). Finally, we have information on the date of the RIPE observation and information on which caseworker completed the questionnaire (each caseworker had an identification number).

Analytical strategy

We carry out the analyses in three steps. First, we use common factor analysis with orthogonal rotation to group the 22 RIPE measures into fewer RIPE indices (Fabrigar and Wegener 2012; Watkins 2022). Given the absence of previous research concerning dimensions in a refugee-relevant concept of employability, we use exploratory factor analysis on all 22 refugee and caseworker items except one to investigate the likelihood and composition of such dimensions. However, we exclude item CQ5 – caseworker's belief in the refugee finding work within six months – from our analyses, since previous

research indicates that a caseworker's belief that an unemployed citizen will find a job is likely to be an independent factor promoting such an outcome (Rosholm, Sørensen, and Skipper 2019). This finding mirrors educational research showing that teachers' belief in the potentials of pupils has an autonomous effect on their school outcomes (Sabarwal, Abu-Jawdeh, and Kapoor 2022). Since our focus is the correlations between refugee employability and employment and not the effects of caseworker beliefs on refugees' employment chances, we find the exclusion of CQ5 from the analyses appropriate. Based on the factor analysis, we construct a number of employability indices ('RIPE indices') as sum scales ranging from 1-7, building on the results from this analysis concerning employability dimensions.

Second, we use separate regression models to examine whether these RIPE indices hold predictive validity for future employment (RQ1). Given Fugate et al.'s theory of employability as a 'multidimensional aggregate' (2004, 26), that is, as 'a sum of its parts', we regress employment on each index one at a time to analyse whether each dimension separately correlates with employment. Moreover, we also include all RIPE indices at the same time to analyse which of these indices have the strongest correlation with employment when controlling for other indices.

The timeline concerning the measurement used in the analysis is shown in Figure 1.

As dependent variable, we use average employment degree over a 6-month period after the RIPE measurement (Y_{t+1}). Employment is regressed on the different employability indices measured at time t (EI_t). We control for lagged employability (EI_{t-1}) so that the associations with employment are driven by *recent changes* in employability. We use linear regression models and present results from both ordinary least squares estimations (OLS) and individual fixed effects estimations (FE), where the FE control for individual-specific attributes (observed and unobserved) that do not vary across time, see Equation (1) and (2) respectively.

$$Y_{it+1} = \alpha_1 + \beta_{11}EI_{it} + \beta_{12}EI_{it-1} + \beta_{13}X_{it} + \beta_{14}YEAR_{it} + \beta_{15}S_{it} + e_{1it} \quad (1)$$

$$Y_{it+1} = \alpha_2 + \beta_{21}EI_{it} + \beta_{22}EI_{it-1} + \beta_{23}YEAR_{it} + \beta_{24}S_{it} + \delta_{2i} + \varepsilon_{2it} \quad (2)$$

Since the same persons appear in our data several times, that is, since all persons in our regressions participate in at least two RIPE rounds, we use robust standard errors

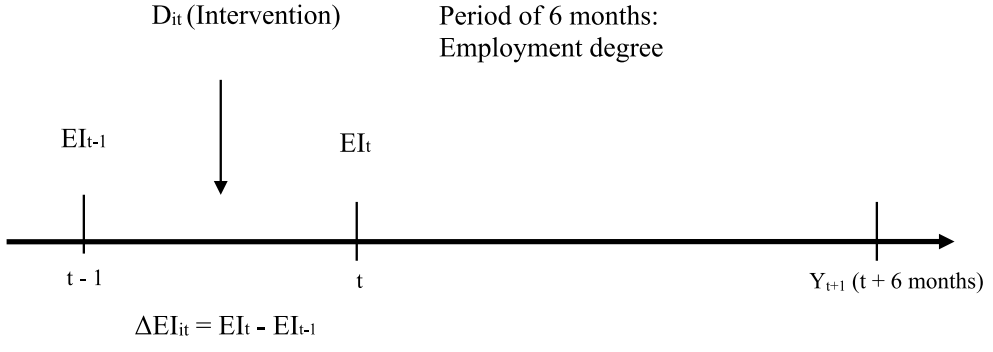


Figure 1. The timing of measurements in the analysis.
Note: EI = Employability Index.

clustered on individuals. Moreover, we also include caseworker fixed effects to control for individual caseworker differences in assessment style (S_{it}) and year fixed effect to control for the year of RIPE measurement ($YEAR_{it}$). In the OLS estimations, we include control variables for individual-level age, gender, marital status, number of children, country of origin, foreign education, foreign work experience, months of residence in Denmark and days between the two RIPE measurements used in calculation of progression (X_{it}). The FE include individual fixed effects (δ_i).

Third, in another set of regression models, we examine if there is a correlation between public Danish integration programmes targeting newly arrived refugees and their progress in employability (RQ2). Here the changes in the RIPE indices (ΔEI_{it}) from one round to the next serve as dependent variables, while, for independent variables, we use survey information on the refugee's participation in one or more of the twelve job-centre activities since their last interview (D_{it}) (see the section 'characteristics concerning interventions' below). We also use linear regression models and present results from both OLS and individual FE, see Equations (3) and (4) respectively, and use robust standard errors clustered on individuals.

$$\Delta EI_{it} = \alpha_3 + \beta_{31} D_{it} + \beta_{32} EI_{it-1} + \beta_{33} X_{it} + \beta_{34} YEAR_{it} + \beta_{35} S_{it} + e_{3it} \quad (3)$$

$$\Delta EI_{it} = \alpha_4 + \beta_{41} D_{it} + \beta_{42} EI_{it-1} + \beta_{43} YEAR_{it} + \beta_{44} S_{it} + \delta_{4i} + \varepsilon_{4it} \quad (4)$$

Results

Firstly, we outline key characteristics concerning the respondents and their participation in different integration and labour market programmes. We then report the findings from a factor analysis concerning employability dimensions and findings from the regressions concerning correlations between employability indices and employment and concerning correlations between the integration programmes and progress in employability.

Characteristics concerning respondents

Table 3 shows background characteristics of the refugee respondents and some figures on their employment and education outcomes. Panel A shows background characteristics of the 480 refugee respondents with at least two RIPE registrations. We record time-varying variables at the time of the second RIPE registration. Note that these statistics are not representative of all the refugees arriving in the 17 municipalities during the period 2014–2016, when most of our respondents arrived. Refugees who quickly found a job are less likely to have two RIPE measurements, which explains the slight overweight of women among the respondents, since male refugees typically find their first job faster than female refugees (Liebig and Tronstad 2018).

On average the respondents are 36 years old, almost 50 percent are married, and almost 60 percent have children (0-17 years old). Most of the respondents, 66 percent, originate from Syria, with Eritrea coming in second at 15 percent. The respondents had spent an average of 29 months in Denmark, implying that most respondents had arrived in Denmark during the interval 2014–2016. Concerning foreign education, most of respondents are not highly educated. Fifty percent have some work experience, and those 50 percent have an average of 10 years of experience. Concerning the

Table 3. Respondent characteristics and employment/education after RIPE.

Panel A. RIPE respondent characteristics	Mean (SD)
Women	0.54
Age	
18–29 years old	0.31
30–40 years old	0.36
41–65 years old	0.29
Age (years)	35.6 (9.6)
Married	0.48
Children	
Children (0–17 years old)	0.59
0–6-year-old children	0.38
7–12-year-old children	0.30
13–17-year-old children	0.23
Country of origin	
Syria	0.66
Eritrea	0.15
Other countries	0.19
Foreign work experience	
Foreign work experience	0.50
No foreign work experience	0.35
No information	0.14
Foreign work experience (years)*	10.2 (8.1)
Foreign education	
Foreign education: Primary or lower secondary education	0.37
Foreign education: Upper secondary or further education	0.23
No foreign education	0.179
No information	0.223
Foreign education (number of years)**	9.7 (3.5)
Duration of residence in Denmark (months)	28.9 (12.8)
Time between 1st and 2nd round RIPE measurements (days)	149.9 (97.1)
N (respondents)	480
Panel B. Employment degree 6 months after RIPE	
Employment degree ***	0.10 (0.21)
N (observations)	779

Notes: Only respondents with at least two matching citizen and caseworker registrations. Age, marital status and number of children vary over time. In this table we measure these variables at the time of the second RIPE registration.
*Individuals with (information on) foreign work experience.
**Individuals with (information on) foreign education.
***Average for the 6 months after the measurement of RIPE.

characteristics of our largest demographic group of RIPE respondents, the Syrians, we can add that 32,787 Syrians lived in Denmark in 2017. This means persons from Syria were the largest group of non-OECD immigrants coming to Denmark during the period 1996–2017 (Statistics Denmark 2017a, 25–26). Among these Syrians, 59% had been granted residence permits as refugees, while the rest had residence based on family reunification with those refugees. Among all Syrians aged 16–64 years living in Denmark in 2017, the employment rate was 31.5 percent (males 45.3; females 12.4); in 2023 this rate had risen to 56.2 percent (males 69.2; females 39.3) (Statistics Denmark 2024). A meta-study from 2020 of 15 studies of 8,176 Syrian refugees resettled in 10 different countries (not including Denmark) found that 43% of those refugees suffered from posttraumatic stress (Peconga and Høgh Thøgersen 2020).

Panel B shows that our respondents on average have an employment degree of 10 percent during each 6-month period following the 779 RIPE measurements. As explained above, employment degree reflects how much of a fulltime working month people work.

Characteristics concerning programmes

Table 4, panel A contains a list of the programmes that the unemployed migrants could participate in at the jobcentre and language schools between two RIPE observations. We developed the list based on Danish legislation in the integration field (especially AoI, sections 21–24) and in consultation with managers and caseworkers from the 17 SI jobcentres.

Danish integration legislation prescribes job-oriented programmes and language training as the primary means to promote labour market-oriented integration of newly arrived refugees and beneficiaries of family reunification who have been granted asylum. The means prescribed by this legislation concur with research that shows that language training (Foged et al. 2022) and wage-subsidised jobs (Butschek and Walter 2014) positively affect unemployed refugees' employment chances, and with research that shows that on-the-job training of unemployed refugees initiated shortly after the refugees' arrival in a municipality also tends to have positive effects on the refugees' employment chances, albeit of a short-term nature (Arendt 2022). Several interventions in Table 4 are general ALMPs, that is, general programmes also used for the native population (see also Butschek and Walter 2014; Thuesen et al. 2020). Moreover, our list includes language training (No 3) since, in Denmark, such training is an integral element of the mandatory integration programme that all newly arrived unemployed refugees must attend (AoI, section 21). The list also includes two programmes sometimes deployed in the jobcentres: training on coping with everyday life challenges (No 10) and elucidation/treatment of/ assistance for coping with health issues (No 11). Other (No 12) can be any other programme not fitting into the first eleven categories.

For analytical purposes, we have constructed three aggregate categories (cat. I-III) (see panel B in Table 4) grouping together programmes according to whether they are of an immediately job-oriented type, focus on upgrading of skills, or have a social and health-oriented focus. Hence, cat. I., job-oriented intervention, includes on-the-job training,

Table 4. Share of refugees who have participated in different types of active labour market programmes and language training (specific and aggregate categories).

A	Specific programmes	Share
1	On-the-job training at a private enterprise	0.44
2	On-the-job training at a public enterprise	0.23
3	Language training	0.80
4	Job search assistance	0.09
5	Subsidised employment	0.05
6	Mentor	0.09
7	Upgrading of occupational skills	0.02
8	Upgrading of basic skills	0.06
9	General course on the Danish labour market	0.08
10	Training on coping with everyday life challenges	0.03
11	Elucidation/ treatment of/ assistance for coping with health issues	0.09
12	Other	0.10
B	Aggregate labour market programme categories*	
I	Job-oriented intervention (type 1,2,4-6)	0.72
II	Upgrading of skills (type 7-9)	0.15
III	Social and health-oriented interventions (type 10,11)	0.11
N (observations)		779

Note: *Please note that '3. language training' is not included in any of the aggregate categories since it is not regarded as a labour market programme in the narrow sense of Danish legislation.

subsidised job, job search assistance, and mentor. A total of 72 percent of respondents had participated in this category of programme. Cat. II includes upgrading of skills and the general course on the Danish labour market. Cat. III covers programmes promoting enhanced coping with everyday life challenges and with health issues. Only 15 and 11 percent had participated in cat. II and III programmes, respectively.

Factor analysis and employability indices

We have conducted an explorative principal factor analysis with an orthogonal rotation based on 21 caseworker and refugee items to investigate the extent to which the items measure the same underlying employability dimensions. The scree plot in the appendix (Figure A1) shows the results from the unrotated factor solution; three factors have eigenvalues above 1 and two just below 1. The scree plot also shows that the eigenvalues flatten from the sixth factor and onwards; hence, using the 'elbow criterion' we might want to retain five factors (Fabrigar and Wegener 2012; Watkins 2022). Parallel analysis (see Table A2) as well as a minimum average partial analysis (see Table A3) support our decision to retain 5 factors (Goretzko, Pham, and Bühner 2021). We rotate our factor solution using orthogonal varimax rotation; in the resulting Table A4 we have marked items with loadings above 0.40 on each of the five factors with grey. We construct five indices corresponding to these five factors based on the two to seven items loading above 0.40 on each of these factors, that is, sum scales ranging from 1-7 that average the score of each index over these items.

Figure 2 illustrates the results from the factor analysis naming the five indices we have constructed based on this analysis and the ranking (through numbering) of the factors according to principal factor solution. Figure 2 illustrates that items stemming from both the caseworker and the refugee questionnaire define indices 1, 3, and 4, while index 2 draws solely on caseworker items and index 5 draws solely on refugee items.

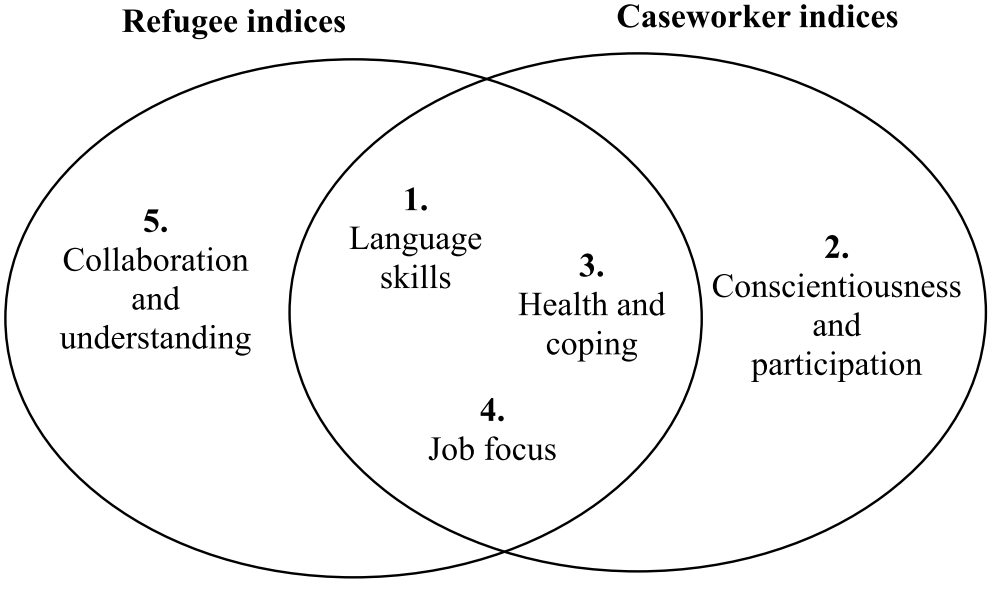


Figure 2. Employability indices based on factor analysis.

We can briefly characterise the five indices as follows. Index 1: Language skills – builds on all four items from the refugee and caseworker questionnaires intended to measure ability to understand and speak Danish. Index 2: Conscientiousness and participation – builds on three items from the caseworker questionnaire concerning the caseworkers' evaluation of the refugees' collaborative skills, active participation in jobcentre activities and ability to arrive on time at the jobcentre or at a workplace. Index 3: Health and coping – builds on both a caseworker and a refugee item concerning health in relation to doing a job, while also including caseworker assessment of whether the refugee has problems in everyday life that are a barrier to finding a job. Index 4: Job focus – builds on five refugee items assessing whether the refugee (a) can maintain focus on obtaining a job, (b) sees themself in a job within six months, (c) regards finding a job within six months important, (d) possesses knowledge concerning a realistic job, (e) knows how to improve their own job chances, as well as two items to measure the caseworker's assessment concerning whether the refugee (f) has a realistic idea of a potential job, and (g) is actively searching for a job. Index 5: Collaboration and understanding – draws on two refugee items concerning the refugee's own assessment concerning possession of collaborative skills and ability to understand instructions in the workplace.

Table 5 shows that the mean index scores from the first round are lowest for the language skills and job focus indices and highest for the conscientiousness and participation and the collaboration and understanding indices. Conversely, progress in the mean scores between rounds is lowest for the conscientiousness and participation and the collaboration and understanding indices and highest for the language skills and the job focus indices.

The predictive validity of the employability indices on employment

Table 6 contains the results of OLS and FE regression analyses where change in employment degree is regressed on the five employability indices one at a time. We focus on the association that is potentially driven by recent changes in employability as we control for lagged employability (i.e. the level of the employability indices at the previous measurement, EI_{t-1}). Figure 3 illustrates the results from the five FE regressions.

Table 5. Mean index scores, 1st round, and mean change between rounds.

	Mean index score measured at the first RIPE round	Mean change in RIPE score between rounds (progression)
RIPE indices		
Language skills	3.61	0.31
	(1.29)	(0.81)
Conscientiousness and participation	5.45	0.11
	(1.39)	(1.09)
Health and coping	5.10	0.14
	(1.69)	(1.07)
Job focus	4.47	0.23
	(1.47)	(1.08)
Collaboration and understanding	5.66	0.12
	(1.37)	(1.32)
N	975	779

Table 6. Employment degree regressed on progress in employability indices. OLS and fixed effects regressions.

	Employment degree, (Average over 6 months)					
	OLS			FE		
	Coeff.	N	R^2	Coeff.	N	R^2
Indices:						
(1) Language skills	0.006	767	0.328	−0.012	767	0.368
(2) Conscientiousness and participation	0.028***	766	0.342	0.015**	766	0.374
(3) Health and coping	0.016**	769	0.351	0.015**	769	0.383
(4) Job focus	0.028***	770	0.372	0.017**	770	0.375
(5) Collaboration and understanding	0.021***	776	0.344	0.002	776	0.361

Notes: Tables A5 and A6 in the appendix contain results from the full models, i.e. the 10 regressions with each index as the independent variable, including standard errors. Please note that the Ns in the regressions are smaller than N = 779 in table 5 because of missing values on some RIPE items.
* $p < 0{,}10$, ** $p < 0{,}05$, *** $p < 0{,}01$

Table 6 shows that in the FE analysis the indices conscientiousness and participation (2), health and coping (3), and job focus (4) all have significant and positive coefficients for subsequent employment degree. Concerning conscientiousness and participation, our results indicate that refugees who focussed on collaboration and engaged in participating in the activities and training organised by the jobcentre (all seen from a caseworker perspective) make progress toward employment. We may interpret this finding in the light of Fugate et al.'s (2004) theory that personal adaptability, that is, a person's capacity to meet the

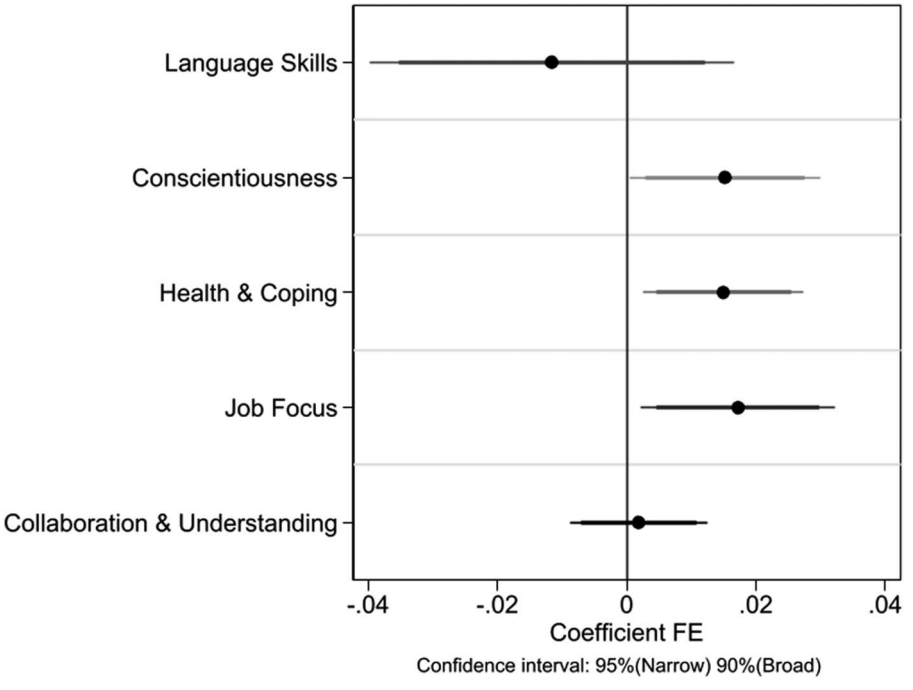


Figure 3. FE coefficients from regressions of employment degree on five employability indices (separately).

Note: Results from FE regression models where each index is entered one at a time.

demands of a situation and a propensity for learning, is an important element in employability. Concerning health and coping, when refugees and caseworkers alike experience that the refugee's health and abilities to handle everyday problems improve, job likelihood also increases. This concurs with previous research on both refugees (Lai, Due, and Ziersch 2022) and on vulnerable cash-benefits recipients, which finds health to be a predictor of subsequent employment (Arendt, Andersen, and Saaby 2020). Finally, when refugee's and caseworkers alike estimate that refugees become more active and realistic in their job search, their subsequent employment degree also increases. Again, this finding makes good sense in the light of Fugate et al.'s (2004) theory that a sense of labour market direction and motivation ('career identity') enhance employability. In the OLS column in Table 6, we see that the refugees' own assessment of their ability to collaborate and understand instructions in the workplace (index 5) matters positively – this also makes sense in the light of Fugate et al.'s theory that personal adaptability is inherent in the notion of employability.

In both OLS and FE regressions, the association between progress in the language skills index (1) and employment degree is insignificant; this could be due to some refugees focussing more on learning Danish and therefore less on finding a job. Other research has shown that in a short-term perspective, language courses have no effect or even have a negative impact on refugee employment, but on the mid-term range, language courses have a positive effect on employment (Kanas and Kosyakova 2023; Rotger 2011).[4]

We have also conducted regression analyses where we enter all five indices as independent variables at the same time (see Table A7). In those analyses, only index 4 (Job focus) retains a significant and positive coefficient in the FE analysis with employment as the dependent variable. We interpret this as an expression that the refugees' and caseworkers' sense of whether the refugees make progress in terms of motivation, belief in finding a job, knowledge about how to improve job chances, and active job search are elements that in combination constitute a strong indicator of employability.

Correlations between interventions and employability

We use the five employability indices as dependent variables in OLS and FE regression analyses where aggregate jobcentre interventions (cat. I, II, III) and language training (intervention no. 3) serve as the independent variables. Table 7 shows the parameter estimates and significance levels pertaining to our independent variables.

Concerning job-oriented interventions (Cat. I), we find a significant positive OLS correlation with all our employability indices, although the FE coefficient is only marginally significant in relation to the conscientiousness and participation (2) and health and coping (3) indices, as illustrated in Figure 4. Hence, participation in job-oriented programmes correlates highly with progress in terms of different aspects of employability according to both the caseworkers and the refugees themselves.

In the FE regression where we include all 12 interventions (and hence split the category 'job-oriented interventions' into its five specific types of interventions) these significant correlations disappear. Subsidised employment is an exception, since it correlates strongly and positively with language skills progress (1) and progress in relation to conscientiousness and participation (2) (see Table A11). On-the-job training at a private enterprise is another exception, since it correlated negatively with language

Table 7. Changes in employability indices (Δ) regressed on interventions. OLS and FE regressions.

	(1)		(2)		(3)		(4)		(5)	
	ΔLanguage Skills		ΔConscientiousness and Participation		ΔHealth and Coping		ΔJob focus		ΔCollaboration and Understanding	
	OLS	FE	OLS	FE	OLS	FE	OLS	FE	OLS	FE
Interventions										
Job oriented	0.170**	−0.015	0.289***	0.240*	0.322***	0.244*	0.463***	0.194	0.341***	0.158
	(0.066)	(0.092)	(0.085)	(0.131)	(0.099)	(0.142)	(0.098)	(0.122)	(0.113)	(0.147)
Upgrading skills	0.081	−0.069	0.105	−0.151	0.234**	−0.067	0.207*	0.046	0.039	−0.139
	(0.086)	(0.149)	(0.103)	(0.189)	(0.118)	(0.157)	(0.116)	(0.156)	(0.137)	(0.226)
Social and health oriented	−0.160	−0.542***	−0.356*	−0.077	−0.672***	−0.714***	−0.216	−0.436*	−0.568**	−0.576*
	(0.155)	(0.156)	(0.208)	(0.316)	(0.178)	(0.242)	(0.205)	(0.232)	(0.221)	(0.303)
Language training	0.097	0.152	−0.061	−0.331	−0.074	−0.284	0.049	−0.052	0.032	0.107
	(0.083)	(0.160)	(0.117)	(0.226)	(0.111)	(0.177)	(0.113)	(0.198)	(0.121)	(0.185)
Constant	1.015***	3.387***	2.404***	6.316***	1.608***	5.930***	1.752***	5.384***	4.176***	7.520***
	(0.313)	(0.337)	(0.489)	(0.545)	(0.418)	(0.450)	(0.463)	(0.326)	(0.467)	(0.456)
N	767	767	766	766	769	769	770	770	776	776
R^2	0.303	0.575	0.344	0.666	0.294	0.649	0.338	0.699	0.459	0.699

Notes: Δ indicates: the change in score from one round of RIPE measurement to the next. Table A.8 and A.9 in the appendix contains results from the full model, including standard errors. Please note that N varies because of missing values on different RIPE items on which the indices are based.
* $p < 0{,}10$, ** $p < 0{,}05$, *** $p < 0{,}01$.

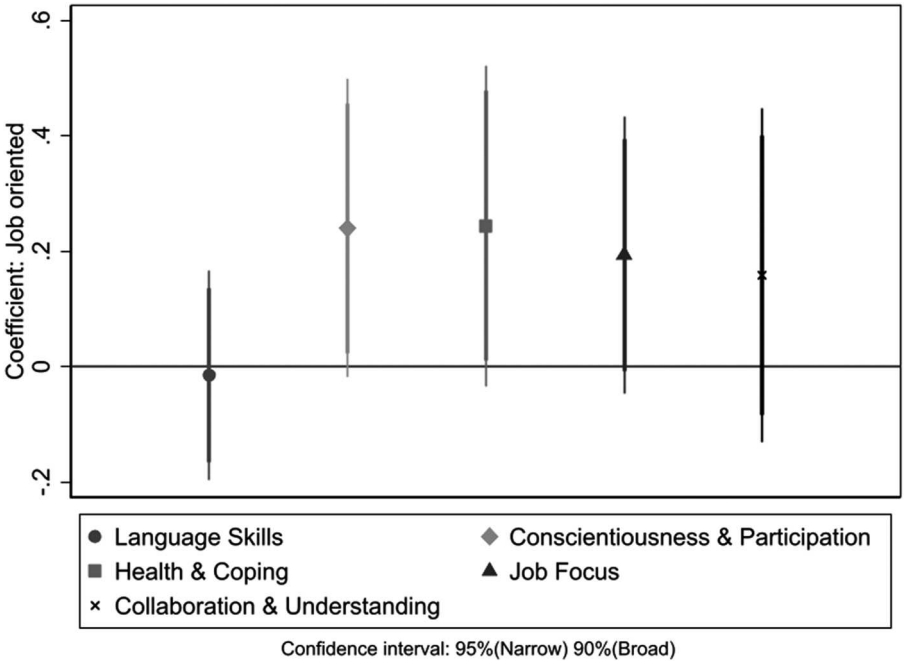


Figure 4. FE coefficients for changes in the five employability indices regressed on the job-oriented interventions category (Cat. I).

Note: Results from FE regression models controlling for initial index level, other interventions and year of measurement.

skills progress. We discuss potential explanations for the contradictory effects of subsidised employment and private job training on language skills progress below.

Concerning upgrading of skills interventions (cat. II), in Table 7 we find almost no significant correlations with our employment indices apart from moderately or weakly significant OLS correlations with the health and coping index (3) and with the job focus index (4). However, looking at individual intervention categories in Table A11, in our FE analyses we find significant and positive correlations between upgrading of occupational skills and job focus (4) and collaboration and understanding (5). Hence, upgrading of occupational skills appears to strengthen a refugees' employability in the eyes of both the caseworkers and the refugees themselves. We also find a positive correlation between upgrading of basic skills and health and coping (3).

Concerning the social and health-oriented interventions (cat. III), Table 7 shows significant and negative correlation in relation to all of our indices, in particular highly significant negative FE and OLS coefficients for the outcome health and coping (3). Moreover, we find a highly significant negative FE coefficient for the outcome language skills (1) and a weakly significant negative FE coefficient for job focus (4) and collaboration and understanding (5). A priori, we would expect a positive correlation between social and health-oriented interventions in the jobcentre and refugee health and health coping. One possible explanation for the negative results might be reverse causality, that is, that poor or deteriorating health incites caseworkers to set a social and health-oriented intervention in motion that fails to lead to any significant positive progress in the refugees' health situation. Finally, concerning language training (3), slightly

surprisingly, we find only insignificant, although still positive, OLS and FE coefficients in relation to the index measuring progress in language skills (1). We discuss the finding concerning social and health-oriented interventions (cat. III) and concerning language training (3) in the discussion below.

Discussion

This paper has analysed the link between the dimensions in a refugee-relevant concept of employability and subsequent employment (RQ1) as well as the link between public integration interventions targeting newly arrived refugees and their progress in employability (RQ2).

The link between employability and employment

Concerning RQ1, the factor analysis identifies *language skills* as a distinguishable employability dimension; all four refugee and caseworker items load highly onto this factor. Research shows that level of host country language skills matters for refugees' labour market integration (Dustmann and Fabbri 2003; Lochmann, Rapoport, and Speciale 2019). However, when we regress employment degree on the language skills index, we find no significant correlation between language skills and short-term employment. Still, other research has shown that interventions seeking to enhance refugees' language skills to promote their employment chances only pay off in the medium or long term (Rotger 2011). The insignificant correlation between language skills improvement and employment might also reflect a lock-in effect (a well-known effect from both ALMPs and language training), that is, that any type of training takes away time from job search (cf. Arendt 2022, 171–172).

Therefore, language skills may still be a relevant dimension in a refugee concept of employability, despite this negative result concerning its correlation with short-term employment. The factor analysis also finds a clear *health and coping* dimension. Subsequent regressions find this dimension to be correlated with employment, which corroborates our expectation that health matters for refugees' ability to fulfil a job. This expectation drew on research on refugees' health and labour market performance (Lai, Due, and Ziersch 2022; Liebig and Tronstad 2018) and on a study that identified a strong correlation between vulnerable cash benefits recipients' health as a dimension in their employability and their employment chances (Arendt, Andersen, and Saaby 2020).

Our factor analysis also identifies a factor that we have termed *conscientiousness and participation* that also correlates with subsequent employment. Three items from the caseworker survey (collaborative skills, ability to arrive on time and active participation) loaded onto this factor. Hence, the index we constructed based on this factor brings together some items that we initially thought of as belonging to separate employability dimensions (social and personal competencies). Still, we may see progress on this index as reflecting what Fugate, Kinicki, and Ashforth (2004) term 'personal adaptability'. A fourth factor termed *job focus* includes seven closely related refugee and caseworker items concerning goal-oriented and active job search, knowledge about the labour market, and employment-related self-confidence. This factor also correlates with subsequent employment and corresponds to our expectations that a concept of

employability should include notions of career identity (Fugate, Kinicki, and Ashforth 2004) and motivation and perseverance (Cohen and Haberfeld 2007). Finally, our analysis identified a fifth factor that we termed *collaboration and understanding* building on two refugee items measuring those concepts as self-assessed abilities. Our analyses found a significant positive OLS correlation between the index based on these two items and, similar to the caseworker index conscientiousness and participation, we see this index as representing a measure of personal adaptability and social competencies in a work context.

The link between interventions and employability

Concerning RQ2, we find in FE analyses a significant and positive correlation between *job-oriented interventions* (cat. I) and progress in relation to two of our indices, namely conscientiousness and participation and health and coping. If we include the OLS analyses, we also find significant and positive correlations between job-oriented interventions and the other three indices. Overall, these results point in the same direction as research indicating that ALMPs, especially wage-subsidised jobs (Butschek and Walter 2014) and on-the-job training (Arendt 2022), matter positively for unemployed refugees' employment chances. Moreover, the positive coefficient on the correlation between job-oriented interventions and conscientiousness and participation might reflect a motivation effect, that is, that unemployed refugees having participated in a job-training internship in a private or public workplace become more motivated for participating in the jobcentre activities in general because such activities make more sense after experiencing work life in a workplace.

We also note that our findings indicate that *upgrading of skills* (cat. II), a much less used type of intervention for this group of unemployed refugees, has only weakly positive (OLS) coefficients for health and coping and job focus. However, looking at the 12 individual interventions, we find positive FE correlations between upgrading of occupational skills and both the job focus and the collaboration and understanding indices. German researchers have found that different types of short-term labour market training targeting refugees have mixed employment results; programmes enhancing occupation-specific knowledge are the most effective in contrast to programmes providing more general skills (Thomsen, Walter, and Aldashev 2013). Thomsen et al.'s findings support our findings that upgrading occupational skills enhances employability in the eyes of both caseworkers and refugees.

Surprisingly, in both the OLS and the FE analyses, we find insignificant but still positive coefficients pertaining to the index *language training* and progress in language skills, while we find a positive OLS coefficient on job-oriented interventions and language skills. 80 percent of our participants receive language training from one RIPE round to the next. One explanation for the positive correlation between job-oriented interventions and language skills might point to the respondents' relatively low level of schooling from their country of origin, implying that learning a new language in a practical context, for example, while doing on-the-job training, rather than in a school context, has a greater pay-off among members of this specific group of refugees. However, a small-scale study has shown that refugees are often isolated without much contact to their Danish colleagues during such internships and lack opportunities to practice their

language skills in this context (Bramm and Kirilova 2018; Lønsmann 2020). It is interesting that we find a weakly significant negative coefficient for (unpaid) job training in a private enterprise and a strongly significant positive coefficient for subsidised employment – both in relation to language skills progress. Potentially, this finding in relation to unpaid job training in a private enterprise might echo Bramm and Kirilova's (2018) findings: that refugees during such internships are often on their own without many opportunities to practice a host country language. However, if they are hired into a job via a subsidised employment scheme, the workplace has decided that it truly wants to make use of their skills, and therefore managers and co-workers have a stronger incentive to speak to them, something that will also develop their language skills. Overall, our results call for more research on how language school vs. workplaces affect the acquisition of a new host country language among different groups of refugees.

Finally, slightly puzzlingly, we find significant positive OLS and FE coefficients on progress in health and coping when regressed on the job-oriented interventions (cat. I), but the reverse when regressed on *social and health-oriented interventions* (cat. III). The positive coefficient on the job-oriented interventions might indicate that doing (practical) work in a workplace context provides a structure and meaning to everyday life that benefits the respondents' sense of health and coping (Lai, Due, and Ziersch 2022; Täubig 2019). Other research on so-called individual placement and support interventions (IPS) targeting persons with psychiatric diagnoses has also indicated that going to work has beneficial mental health effects (Christensen et al. 2019). The negative coefficient on social and health-oriented interventions might indicate that these interventions, targeting merely 11 percent of our respondents (see Table 4), are insufficient in addressing the health problems affecting some refugees, for example PTSD. Potentially, a substantial proportion of our Syrian respondents suffer from such problems (cf. Peconga and Høgh Thøgersen 2020). Such an interpretation would be in line with other research pointing to the difficulties in devising healthcare that adequately addresses newly arrived refugees' healthcare needs (Trueba, Axelrod, and Ayeb-Karlsson 2023; Wylie et al. 2018).

Generalizability

An important, but difficult question relates to the generalizability of our results to other (refugee) groups and other contexts. Two things are worthy of note in this connection. Firstly, our refugee respondents have resided in Denmark for 29 months on average (see Table 3). Secondly, the majority (2/3rds) of the refugee respondents come from Syria; research has shown this refugee group to be likely to suffer from conflict-induced mental health problems (Peconga and Høgh Thøgersen 2020). Given these respondent characteristics, RIPE may primarily be relevant for measuring employability progress among other newly arrived refugee groups. Still, Arendt, Andersen, and Saaby (2020) have shown that a similar tool can be relevant for measuring employability among vulnerable cash benefits recipients. Hence, a tool similar to RIPE could be relevant for measuring employability progress among other groups of unemployed benefits recipient – with varying lengths of residence and of mixed ethnic origin, as long as the respondents understand the included items (RIPE was translated into five languages other than Danish).

When we consider which employability factors distinguish our refugee respondents from native jobseekers and other immigrants (for example economic immigrants), our findings identify two factors that appear specifically important for refugee employability: language skills and health. Native jobseekers typically understand and speak their own language (although their level of schooling may vary widely), and hence language skills are likely less relevant when measuring native jobseekers' employability. While language skills may be relevant for the employability of other immigrants who are not refugees, health is less likely to be relevant when measuring immigrant employability, as immigrants are often found to be in better health than natives, as found in research on the 'healthy immigrant effect' (Kennedy et al. 2015). The other three factors we identified as important for refugee employability (conscientiousness and participation, job focus, and collaboration and understanding) are likely to be relevant dimensions in employability among different (more or less vulnerable) jobseekers and hence not specific to refugees.

Finally, we argue that although the tool has been developed in a Scandinavian welfare state context (i.e. Denmark), the questionnaires might still be relevant in other countries in which public or private employment services must assist (vulnerable) newly arrived refugees in finding a job and need to assess whether progress is made towards reaching this goal. Although the tool was used by 17 Danish municipalities performing somewhat less well than their peers, the tool may still be relevant for other types of organisations (e.g. state-based or private employment services) as long as their task is similar to the one described above, and they have the resources to pursue this goal meaningfully and consistently over time.

Conclusion

This study shows that conscientiousness, health, job focus, and collaborative skills are factors that matter for newly arrived refugees' labour market integration, while language skills appear to be of less importance for short-term employment. Firstly, we find that refugees' conscientious and active participation in the guidance and training organised by public employment services correlates with subsequent employment. Theoretically, this concurs with expectations based on previous research that posit that personal adaptability, that is, a propensity for learning and a capacity to meet the demands of a situation, is an important component in a concept of employability (Fugate, Kinicki, and Ashforth 2004). Secondly, we find that refugees' health also matters positively for employment since progress on our index summarising a score on health and everyday-life coping correlates with increased employment. Health is not an important component in most previous research and theory on employability, but our research on refugees and other research on vulnerable unemployed benefits recipients (Arendt, Andersen, and Saaby 2020) indicates that it should be, at least when trying to conceptualise and measure factors important to employability among such individuals.

Third, we also find that job focus correlates with employment. Compared to health, this finding aligns to a higher extent with previous theory on employability stressing that a sense of direction ('career identity') as well as motivation and perseverance are important factors. Fourth, we find no correlation between improved language skills

and increased short-term employment. Still, we are inclined to interpret this result exactly as a *short-term* result, given research showing that employment effects from increased language skills typically emerge in the medium or long term (cf. Kanas and Kosyakova 2023). Hence, most likely, language skills should still be incorporated as a compontent in a refugee-oriented concept of employability, although this study fails to corroborate this claim empirically. Summing up, we argue that a refugee-focussed concept of employability as a 'multidimensional aggregate' (cf. Fugate, Kinicki, and Ashforth 2004) should include items to assess a refugee's health, job focus, collaborative skills, and probably also language skills.

The policy implications of our study emerge in particular in relation to our findings concerning the use of different types of integration programmes and subsequent employability. Firstly, we find some support for the notion that ALMPs, that is, what we categorise as 'job-oriented interventions' such as on-the-job training, job search assistance and subsidised employment, increase employability. Our findings provide some support for the policies of successive Danish governments that have taken a 'job-first approach' to the integration of newly arrived refugees, if the 'job-first' policy includes a goal of increased refugee employability, rather than simply a goal of fulltime employment of refugees. Still, research shows that the job effects of this job-first policy appear to be temporary and may come at the cost of weakening a focus on the refugees' language and occupational skills that may enhance their longer-term employment chances (Arendt 2022; Foged et al. 2022). Therefore, another implication for policymakers might be indicated by our results concerning a positive correlation between upgrading of occupational skills and the employability indices measuring job focus and collaboration and understanding. Given that stronger occupation-specific skills are (also) likely to increase employment (Thomsen, Walter, and Aldashev 2013), we argue that the potential benefits from such programmes must not be neglected, as they may also increase longer-term sustainable employability.

We refrain from extracting specific policy implications from our findings on correlations between employability and language training (insignificant correlation) and between employability and social and health-oriented interventions (significantly negative correlations). However, based on other research, we are still convinced that language training (Foged et al. 2022) and adequate health screening and treatment (cf. Lai, Due, and Ziersch 2022) are likely to be important for refugees' employability. Research on refugee employability is at an early stage, and our results call for further research. Nonetheless, we recommend that managers and caseworkers in the integration field consider using tools to measure employability progress among unemployed refugees, as such tools might help identify where progress is being made and where more efforts may be required, especially if employment appears to be a distant goal.

Notes

1. Since the refugees in these municipalities were required by Danish legislation to complete the RIPE questionnaire, we did not seek an approval of the project by an ethics committee. Moreover, no such committee was in place at VIVE in 2017 when the SI initiative was initiated. We have subsequently received an ethical approval from VIVE's Research Ethics Committee.

2. All references to AoI refer to LBK no. 1127, 11/10/2017, see www.retsinformation.dk/eli/lta/2017/1127
3. The survey data merged with register data are not publicly available as the use of the latter is restricted to authorized users by Danish law.
4. In additional similar regression analyses (not reported here), we find a positive (OLS) correlation between language skills and participation in education (based on register data information on participation in education on a weekly level). A likely interpretation is that refugees who focus on making progress in relation to learning a new host country language may also focus on other activities likely to strengthen their 'human capital', such as host country education. However, this result is less statistically certain given that we only find a significant coefficient in our OLS analysis. Results available upon request from the authors.

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Data availability statement

The survey data merged with register data are not publicly available as the use of the latter is restricted to authorised users by Danish law.

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