Barriers and facilitators to increasing work participation among people with moderate to severe mental illness

Tonje Fyhn

Thesis for the degree of Philosophiae Doctor (PhD)
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and if anyone thinks that he knows anything

he knows nothing yet

as he ought to know

1 Corinthians 8:2

Scientific environment

This PhD was carried out in the scientific environment of NORCE Health (previously Uni Research Health) in the research group Work life and Inclusion (WIN), and in association with the research group Society and Workplace Diversity (SAW) at the Faculty of Psychology, University of Bergen. A two-week stay at VU University Medical Center in Amsterdam laid the foundation for one of papers in the thesis.

The PhD work was conducted while participating in the doctoral program of the Graduate School of Human Interaction and Growth (GHIG), at the University of Bergen, Faculty of Psychology, Department of Psychosocial Science. The doctoral program focuses on topics related to social and psychological change within health promotion and preventive initiatives.

Main supervisor was professor Silje Endresen Reme (PhD; University of Oslo), co-supervisor was professor Gro Mjeldheim Sandal (PhD; University of Bergen), and external supervisor was Cécile Boot (PhD; VU University Medical Center, Amsterdam).

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Abstract

This thesis seeks to identify facilitators and barriers to obtaining employment for people in treatment for moderate to severe mental illness. Many people with mental illness wish to pursue life goals such as ordinary employment, and several studies have demonstrated the positive association between employment and physical and mental health. Even so, obtaining ordinary employment can be a challenge, which is demonstrated by high unemployment rates among people with moderate to severe mental illness. The current thesis bases most of its work on an effect evaluation of the vocational rehabilitation program Individual Placement and Support (IPS). IPS provides long-term, individualized follow-up through an IPS specialist, with the goal of obtaining competitive employment.

Alhthough numerous international studies have proven IPS to be more effective than traditional forms of vocational rehabilitation, the trial described in this thesis was the first to investigate the effect of IPS in a Norwegian context. This context is characterized by a generous welfare system, which has many advantages, but may also create incentives to remain outside the workforce. It was therefore not given that IPS would be more effective than ordinary vocational services in this context. The effect evaluation did, however, prove it to be effective also in Norway. The work presented in the current thesis seeks to understand *how* the intervention works, and which factors influence employment for its target group.

Paper 1 *investigates the IPS implementation through a process evaluation*, utilizing data from IPS service providers, fidelity reports, and participants. The study uses mixed methods, with an emphasis on the quantitative material. Results from paper 1 show that IPS was implemented successfully across the six pilot centers, as demonstrated by satisfactory fidelity scores during the project period. Fidelity scores did indicate implementation challenges related to employment contact, providing community-based services, and integration with health services, which was further elaborated on in interviews with IPS specialists. Participants were overall very satisfied with the intervention, and emphasized the important role of the IPS

specialist. Moreover, participants found freedom of disclosure to be important for participation. Less than half of the participants regarded their illness as a barrier to participation in the intervention.

Paper 2 investigates *baseline-measured predictors for employment after 18 months*, and whether group allocation (IPS vs TAU) moderates this effect. The study population consists of 327 participants from the IPS trial, and log binary regression analyses were conducted to investigate the research questions. Results indicate that while involuntary hospitalization is a strong negative predictor for employment at 18 months' follow-up, directive emotional support and non-directive instrumental support positively predict employment. Self-reported measures of anxiety and depression, directive instrumental and non-directive emotional support, age, and education did not predict employment at 18 months in this study, supporting an inclusive approach to providing vocational rehabilitation to the target group.

Paper 3 investigates *the perspective of Norwegian workplaces and their assessment of fictive job candidates* who either had a mental illness, a physical disability, or a cultural minority background. Results show that supervisors and employees in Norwegian workplaces were generally reluctant towards vignette characters with a mental illness in terms of hireability. However, respondents who reported to have previous work experience with a colleague resembling the vignette character in question, generally assessed this character more positively than those who did not have this experience. Main concerns regarding the characters with a mental illness were social interaction and increased workload for colleagues. The paper concludes that job candidates with some kind of health issue are still likely to be underestimated in the labor market.

In conclusion, the findings of the PhD thesis highlight specific barriers and facilitators operating on different levels, to work participation for people with moderate to severe mental illness. It provides avenues for further research on these factors, and provides insights which may enhance vocational services for people in treatment for moderate to severe mental illness. Finally, findings on the workplace

perspective should be addressed in the practical job development efforts conducted by IPS specialists, as well as in the governmental efforts to create a more inclusive work life.

List of publications

Fyhn, T., Ludvigsen, K., Reme, S.E. *et al.* A structured mixed method process evaluation of a randomized controlled trial of Individual Placement and Support (IPS). *Implement Sci Commun* **1,** 95 (2020). https://doi.org/10.1186/s43058-020-00083-9

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Fyhn, T., Sveinsdottir, V., Reme, S. E., & Sandal, G.M. (2020). Employers' and Employees' Evaluations of Job Seekers with a Mental Illness, Disability, or of a Cultural Minority. Resubmitted to *WORK: A Journal of Prevention, Assessment & rehabilitation.*

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List of abbreviations

SE	Supported Employment
IPS	Individual Placement and Support
TAU	Treatment as usual
RCT	Randomized controlled trial
NAV	Norwegian Labor and Welfare Administration
NAV IWSC	NAV Inclusive Work Life Support Center
OECD	Organization for Economic Co-operation and Development
SDT	Self-determination theory
HADS	Hospital Anxiety and Depression Scale
NDSS	Non-directive and Directive Social Support

Overview of thesis papers

Title	**A structured mixed method process evaluation of a randomized controlled trial of Individual Placement and Support (IPS)**	**Predictors of employment in people with moderate to severe mental illness participating in a randomized controlled trial of Individual Placement and Support (IPS)**	**A mixed methods study of employers' and employees' evaluations of job seekers with a mental illness, disability, or of a cultural minority**
Research question	What are barriers and facilitators to implementing and participating in IPS in a Norwegian context?	What predicts employment in people with moderate to severe mental illness participating in a vocational rehabilitation program?	How do supervisors and employees assess fictive job candidates with a mental illness, a physical disability, or cultural minority background?
Methods	Mixed methods (QUAN→qual)	Quantitative	Mixed methods (QUAN+qual)
Population	People in treatment for moderate to severe mental illness participating in the IPS trial (n=96) and IPS service providers (n=26).	People in treatment for moderate to severe mental illness (n=327), participating in the IPS trial.	Supervisors (n=305) and employees (n=925) in various workplaces

Data	Survey and interview data, fidelity evaluations	M.I.N.I. interviews, survey and register data	Survey data
Analyses	Descriptive quantitative analyses and qualitative thematic analysis	Log binary regression analyses	Risk ratio, chi square tests of independence, descriptive quantitative analyses, and qualitative thematic analysis
Results	All pilot centers reached satisfactory fidelity during the study period. Early implementation challenges included integration of vocational and treatment services, employer contact, and providing community-based services. Participants were overall satisfied with the intervention and did not see their illness as a barrier to participation. The IPS specialist seemed to play a particularly important role.	Involuntary hospitalization was a negative predictor of employment, while non-directive instrumental support and directive emotional support seemed to positively predict employment status at follow-up. No moderation effect was found between group allocation and predictors.	Job candidates with a cultural minority background or an audio impairment were more likely than the reference character to be positively assessed. Job seekers with a mental illness were less likely to be assessed positively, and the vignette character with a visual impairment was least likely to be assessed positively. Job seekers with a physical disability seemed to be subject to more individualized assessments. The rationale behind the assessments centered on accommodation needs, and concerns about interpersonal interaction.

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1. Introduction and theoretical framework

The research conducted in this PhD thesis identifies barriers and facilitators in the efforts to increase work participation for people with moderate to severe mental illness, and shows how different factors operate at different levels, from the individual to the contextual level.

The vocational rehabilitation program Individual Placement and Support (IPS) has proven effective in a Norwegian context, enabling work participation for a larger share of people in treatment for moderate to severe mental illness, as compared to treatment as usual (TAU) for this target group (Reme et al., 2018). One strength of the intervention is that it operates on multiple levels, from the individual to the community level (Becker & Drake, 2003).

Accordingly, the research conducted in this PhD work has a multi-level approach to answering the research question: *What are the barriers and facilitators to increasing work participation among people with moderate to severe mental illness?* The introduction and background section of the thesis is structured according to the five levels of McLeroy's socio-ecological model for health promotion interventions: The intrapersonal, interpersonal, community, institutional, and public policy level.

Two theories or frameworks seem particularly relevant to draw upon when positioning the PhD work in existing research fields: Self-determination theory (SDT) and the recovery paradigm in mental health care services. SDT is a metatheory in the sense that it incorporates several theories into one theory with substantial explanatory power of the phenomenon in question (Ryan & Deci, 2017). In comparison, the recovery paradigm is a bottom-up knowledge field largely emerging from first-person accounts of recovery from mental illness (Slade, 2010). Common for the chosen frameworks is that they explain mechanisms of change on different levels, with a main focus on the individual. As the introduction section is structured according to the five levels described in McLeroy's model, self-determination theory will be discussed at the intrapersonal level, while the recovery paradigm will be discussed at

the institutional level. But first, a presentation will be given of the empirical basis that legitimates the efforts to increase work participation for people with mental illness.

1.1 Mental illness and the value of work

There are several reasons why efforts to increase work participation should be prioritized and evaluated for effectiveness. From a macro perspective, utilizing a larger share of the work-capable population is important due to the impending demographic changes facing Norway and many other countries: In 1950 in Europe, there were eight people in work capable age range per older person aged 65 years or older; in 2050 this ratio is expected to be three to one (UnitedNations, 2019). Moreover, in Norway, approximately 15% of the population between 15 and 66 years of age are receiving welfare benefits without being in employment (StatisticsNorway, 2014). These trends accelerate the need to reform the welfare system into a more sustainable model (OECD, 2013), and to enable work participation for a larger share of the population. This thesis is concerned with the latter.

The micro perspective also provides a solid rationale for increasing work participation for this group. Surveys have shown that approximately half of respondents who had a mental illness had a desire to obtain employment, despite their symptoms (McQuilken et al., 2003; Ramsay et al., 2011; Secker & Seebohm, 2001). Work is an important arena for social integration, skills acquirement, and identity, and these needs are as important for people with a mental illness (Boardman, Grove, Perkins, & Shepherd, 2003; Marrone & Golowka, 1999). Although work participation is generally beneficial to mental health, mental illness diagnoses accounted for 36% of the permanent disability allowances granted in Norway across all age groups in 2016, and 62% for the age group 18-39 years (NAV, 2020).

In the health care system as well as in the welfare system, the approach to employment for people with mental illness has traditionally been to ”protect” the patients from ordinary work life, or to prepare them in employment-like settings, demonstrated in practices such as sheltered employment, work practice, or advising

to complete treatment and being "well" before pursuing employment (Nøkleby, Blaasvær, & Berg, 2017; Spjelkavik, 2012; Sveinsdottir, Bull, et al., 2020). However, research provides substantial evidence of a positive health effect of employment (Rueda et al., 2012; van der Noordt et al., 2014). Bond and colleagues (2001) found that adults with severe mental illness who attained a competitive job showed less symptoms and increased self-esteem over time as compared to groups with little or no work, or people who worked in sheltered employment. Similarly, other studies have found reemployment to predict reduction in depression symptoms (Ginexi, Howe, & Caplan, 2000), and improvements in general and mental health (Carlier et al., 2013; Schuring, Mackenbach, Voorham, & Burdorf, 2011). This shows the importance of assisting people with mental illness who are motivated to find ordinary employment, to obtain this goal.

1.2 Two approaches to work rehabilitation

Traditionally, there are two major approaches to work rehabilitation for people with mental illness: Train-place and place-train (Drake, 1998). The two approaches are guided by different assumptions about the ability of the patient to cope with real-world challenges. Train-place pursues employment goals in a step-wise manner, in order to prepare the individual in work-like settings before entering the ordinary labor market, for example through sheltered employment and work practice (Suijkerbuijk et al., 2017). This approach is assumed to protect the individual from setbacks in the form of symptom relapse or hospitalizations if employment attempts fail. On the other hand, the place-train approach is decidedly more progressive, skipping preparatory and assessment steps, and providing on-the-job training in ordinary employment (Mueser, Bond, Drake, & Becker, 1997). The rationale of this approach is that real-world skills require real-world challenges, also when these challenges include relapse of symptoms or failing at a job (Corrigan, 2001). This approach does not seem to lead to more hospitalizations, contrary to the assumption of the train-place approach (Mueser, Bond, et al., 1997). More importantly, the place-train approach has been found considerably more effective in increasing employment rates

(Suijkerbuijk et al., 2017) The work rehabilitation program Individual Placement and Support (IPS) is the best documented place-train program available (Modini et al., 2016).

1.2.1 Individual Placement and Support (IPS)

IPS is a manualized work rehabilitation program based on the place-train approach, within the Supported Employment (SE) paradigm. Its positive effect on employment outcomes has been documented through 27 randomized controlled trials, showing superior results on employment outcomes when compared to treatment as usual across a range of different cultural contexts (Brinchmann et al., 2020). Recent meta-regressions have shown that participants receiving IPS were twice as likely to obtain competitive employment than participants receiving TAU or traditional forms of vocational rehabilitation (Brinchmann et al., 2020; Modini et al., 2016). Although its empirical evidence base is strong, the theoretical foundation is rather weak. The development of its components is a result of recovery ideology and emerging trends in the vocational rehabilitation field in the late 80's (Drake, 1998). Although not theoretically derived, it aligns well with theories and frameworks within intervention development, psychology, and psychiatric treatment, such as the self-determination theory and the recovery paradigm.

IPS services are provided by governmental or private agencies who have specialized in the method. In Norway, IPS centers are financed by the Directorate of Labor and Welfare, and the Health Directorate. IPS services are structured around eight principles (Bond, Peterson, Becker, & Drake, 2012): 1) Zero exclusion, meaning no one is excluded on the basis of their illness, housing situation, etc. 2) The goal is competitive employment, as opposed to work practice or subsidized employment 3) Rapid job search, with the aim of having the first meeting with an employer within 30 days of entering the program 4) Systematic job development, meaning that IPS specialists systematically network with employers in the community and are well-acquainted with their needs 5) Integrated services, which means the IPS specialist is

an integrated part of the treatment teams in the health services 6) Benefits planning, through providing accurate information and assistance regarding benefit entitlements 7) Time-unlimited supports, operationalized as monthly face-to-face contact for as long as needed, and 8) Worker preferences, meaning the job search is based on the participants' own competence and wishes.

IPS differs from traditional work rehabilitation efforts mainly through its place-train approach, i.e. seeking ordinary employment while providing on-the-job support for both the participant and the employer. A validated fidelity scale, the 25-item IPS Fidelity scale, is used to measure adherence to the IPS principles in program delivery (Bond, Peterson, et al., 2012). A score of 74 or more (where 125 is the highest score) is required for the program to be recognized as IPS. Studies have demonstrated the predictive validity of the scale, showing that high program fidelity predicts positive employment outcomes for participants (Bond, Peterson, et al., 2012; Kim, Bond, Becker, Swanson, & Langfitt-Reese, 2015).

Numerous international studies have demonstrated the effect of IPS over traditional vocational programs, but until 2013 it had not been properly implemented and evaluated in the Norwegian – or Scandinavian – context. The Scandinavian countries have similar macro level characteristics such as comprehensive welfare systems, active labor market legislation, and a compressed wage structure (Barth, Moene, & Willumsen, 2014; Einhorn & Logue, 2010). Similar IPS trials have been carried out in Denmark (Christensen et al., 2019) and in Sweden (Bejerholm, Areberg, Hofgren, Sandlund, & Rinaldi, 2015), both of which demonstrated a favorable effect of IPS on work participation as compared to control conditions.

The core principles of IPS, such as basing the job search on individual preferences, integrating vocational and health services, providing long-term support, as well as networking with employers, result in a program that interact with actors and institutions at different levels. This practice corresponds well with the conceptualization of multilevel models within the field of public health promotion (Richard, Gauvin, & Raine, 2011). In the following, McLeroy's socio-ecological

model of developing health promotion programs will be used as a framework for discussing IPS and relevant theories, in order to show how IPS can be understood as a socio-ecological approach (McLeroy, Bibeau, Steckler, & Glanz, 1988). Variables under study in the PhD thesis will briefly be referenced at the appropriate levels of the model.

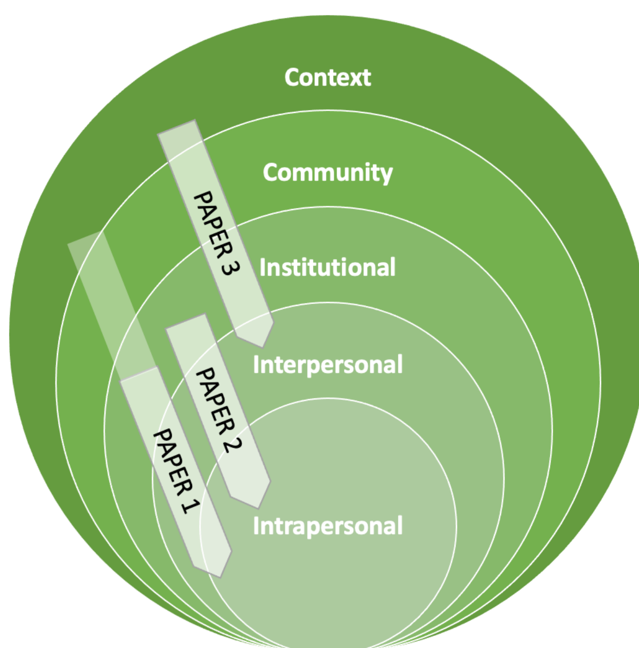
1.3 Theoretical framework – a socio-ecological approach

Socio-ecological models originally emerged as a result of cross-disciplinary approaches to advance public health (Richard et al., 2011). The emergence of these models marked a shift away from an individualized focus on health and behavior, as they took into account contextual determinants of these domains and contributed to structuring research endeavors accordingly (Richard et al., 2011).

One such model has been proposed by McLeroy (1988), based on Bronfenbrenner's model of the different systems influencing individual behavior (1977). McLeroy's model was created to guide the development of public health interventions, and is therefore considered more applicable for the current discussion than Bronfenbrenner's original model (1977). According to McLeroy's model, individual behavior is determined by factors on five levels: Intrapersonal factors, interpersonal factors, institutional factors, community factors, and public policy (McLeroy et al., 1988). The model is a simplification of a complex system of factors functioning at different levels, reinforcing and interacting with each other (Richard et al., 2011). When developing interventions for a certain target group, these levels should be individually analyzed to enhance the likelihood of obtaining the desired outcomes (McLeroy et al., 1988). Although IPS was not developed based on this model, several of the program components correspond well with the levels described. Figure 1 shows how the socio-ecological model can frame the research questions addressed in the thesis, by placing each paper at its appropriate levels. The transparent extension

of the paper 1 arrow marks levels that are discussed, but not empirically investigated, in the study.

Figure 1. McLeroy and colleagues' socio-ecological model for developing public health interventions. PhD papers are placed at the corresponding level(s) of their topic.



Paper 1: Process evaluation of the IPS intervention.

Paper 2: Predictors of employment.

Paper 3: Employers' and employees' assessments of fictive job seekers.

1.3.1 Intrapersonal factors

According to McLeroy's model (1988), intrapersonal factors include any individual characteristic within a person, from developmental history to personality, health, skills, attitudes and other attributes. Mental health services have traditionally focused on the expression of symptoms and symptom relief, leaving the corresponding disabilities of the symptoms (lack of employment, housing etc.) largely undealt with (Corrigan, 2001). For some time, psychiatric treatment lagged behind when it came to incorporating shared-decision making processes, maintaining an asymmetric information and power balance between therapist and patient (Hamann, Leucht, & Kissling, 2003).

The emergence of recovery ideology, patient-centered care, and shared decision-making has contributed to changing treatment approaches (Storm & Edwards, 2013). IPS was developed in the context of these patient-centered trends, and thus takes a broader approach to pursuing vocational goals, as symptoms and treatment history in themselves are not regarded as factors preventing employment. Motivation and personal choice are important elements in the IPS program, expressed in the "no exclusion" principle. No pre-screening is conducted of participants, which means no participant is rejected on the grounds of illness factors, drug abuse, or housing situation. As long as the participant has a desire to obtain ordinary employment, s/he is eligible for the program (Bond, Drake, & Becker, 2012).

Intrapersonal factors: Self-determination theory

The motivational theory Self-determination theory (SDT) can help furthering the understanding of intrapersonal factors at play for individuals receiving IPS (Ryan & Deci, 2000). SDT is a well-documented theory which may provide an explanatory model for the demonstrated effectiveness of the intervention across different cultures, as the theory aligns well with the IPS principles. Self-determination theory aims to describe the underlying processes of the universal human propensity towards engagement and self-development, or, conversely, towards passivity and

disconnectedness (Ryan & Deci, 2000). Research conducted within this theoretical framework has identified three universal basic psychological needs, which serve as nutrients to human motivation and behavioral self-regulation: Competence, autonomy and relatedness. Competence is the need to extend oneself and influence one's environment; autonomy is the need for self-regulation and volition; and relatedness is the need to belong and feel significant to others (Deci & Ryan, 2017). Fulfilment of the needs for competence, autonomy, and relatedness have been shown to explain variations in subjective well-being on a day-to-day basis (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000), and to correlate positively with mental health and positive health behaviors (Ng et al., 2012). The associations between needs satisfaction and positive life outcomes is consistent across widely different settings – from schools to space mission simulations to nursing homes (Goemaere, Van Caelenberg, Beyers, Binsted, & Vansteenkiste, 2019; Kloos, Trompetter, Bohlmeijer, & Westerhof, 2019; Tian, Tian, & Huebner, 2016). Context may shape how the needs are expressed and their fulfilment pursued, but the needs themselves are considered to be universal (Ryan & Deci, 2000).

Intrapersonal factors under study in the PhD thesis

Intrapersonal factors are addressed in the process evaluation study (paper 1) and the predictor study (paper 2). The process evaluation study collects quantitative data on participants' diagnoses, demographic information, functioning and quality of life, as well as qualitative data on experiences with participating in the intervention. The predictor study investigates individual characteristics, such as symptom severity, duration of illness, involuntary hospitalization, and demographic variables, as predictors for obtaining employment at the time of follow-up.

1.3.2 Interpersonal factors

Interpersonal factors are described in the socio-ecological model as proximate social systems such as family and friendship networks (McLeroy et al., 1988). Social support from an “inner circle” is of major importance for most people, and maybe even more so for individuals struggling with health issues. However, people with severe mental illness often have trouble maintaining and developing new relationships, and often have smaller social networks that are limited to family, health professionals, or others with mental illnesses (Angell, 2003). When developing an intervention for this group, it is important to take into account that many do not have the advantage of a large social network. The forming of relationships may be somewhat more challenging, and may require more time to develop. Consistency of support and a long-term perspective are therefore important considerations to make.

Many job vacancies never reach a public platform, which means online searches for vacancies give a limited representation of the available employment options. Social integration has been shown to be associated with obtaining employment (Gayen, McQuaid, & Raeside, 2010; Kasinitz & Rosenberg, 2014; Ziersch & Arthurson, 2005), which shows the importance of having a network when looking for a suitable job. IPS does not directly utilize or expand participants’ network, but the relationship between the participant and the IPS specialist is a central component of IPS. The task of the IPS specialist is to provide support to the client in all phases of the job search – from identifying clients’ wishes and motivations, to writing and sending applications, to attending interviews, and after employment has been obtained, to provide time-unlimited follow-along support to help the client function at work (Mueser, Becker, & Kim, 2001). A critical part of an IPS specialist’s job is to conduct job development and network with local employers (Becker & Drake, 2003). In this way, the IPS specialist indirectly expands the participants’ network.

Interpersonal factors under study in the PhD thesis

Interpersonal factors are investigated in the process evaluation study (paper 1) and in the predictor study (paper 2). The process evaluation study investigates the role of the IPS specialist for intervention group participants. This was investigated through interviews and questionnaires with participants and service providers, and through fidelity evaluations of the IPS centers. The study investigating predictors of employment (paper 2) include four scales of social support provided by one specific, self-selected reference person in the participant's life. The four scales measure non-directive emotional support, directive emotional support, non-directive instrumental support, and directive instrumental support, and whether level and type of support is associated with employment outcomes at 18 months after inclusion in the study.

1.3.3 Institutional factors

McLeroy (1988) defines institutional factors as *"Social institutions with organizational characteristics, and formal (and informal) rules and regulations for operation."* (McLeroy, 1988, p.355). For IPS, two institutions are crucial stakeholders in its implementation in Norway: The mental health services (secondary care), and the Labor and Welfare Administration (NAV), who both operate locally. An OECD report on mental illness in Norway points out that unemployment rates among people with severe mental illness are nine times that of the general population (OECD, 2013). Two of the recommendations in the report are early interventions for people in danger of exclusion from the labor market, and increased integration of health services and vocational services. The design of the IPS program can contribute to fulfil both of these recommendations.

A central thesis in socio-ecological theorizing is that the influences between the different levels are interactive, meaning that not only does institutions and public policy influence individuals and their social groups, but individuals and social groups also influence the macro levels (Richard et al., 2011). Therefore, an intervention operating at different levels of influence is likely to lead to changes beyond a

specified level (McLeroy et al., 1988). For IPS, the integration of the IPS specialist into treatment teams, as required by the method, will inevitably lead to organizational changes for the involved institutions. Organizational changes are considered an important condition for facilitating lasting change at the individual level (McLeroy et al., 1988). Such changes may include change of work teams and work processes, new lines of communication, training for new competencies, and being evaluated by new performance indicators (Schneider & Akhtar, 2012). In addition to changes in work tasks and roles, professional philosophies and practices in each of the institutions may differ, which may generate frustration and hamper implementation efforts (Corrigan, 2001; Slade, 2010). The mentioned place-train versus train-place approaches are examples of colliding philosophies, which both seek the welfare of the patient/client, but through different pathways. The recovery paradigm, as will be shown in the following, has the potential to unify the efforts of the involved institutions.

The recovery paradigm

Vocational rehabilitation programs offered by NAV have traditionally been guided by the assumptions of the train-place approach, assigning people to programs in sheltered settings or work training, in order to prepare them for ordinary employment (Sveinsdottir, Bull, et al., 2020). Similarly, many health care providers have traditionally believed that life goals outside the treatment realm should be pursued when one is considered well enough (Corrigan, 2001). These assumptions of the limitations of mental illness are contrasted by the philosophy of recovery.

The recovery paradigm emerged in the 1990's, following the de-institutionalization of mental health care and the increased focus on community-based services and consumer contribution (Anthony, 1993). The recovery concept was refined through qualitative literature describing personal narratives of individuals who experienced recovery from mental illness, as well as large quantitative studies showing that many do recover from mental illness (Anonymous, 1989; Davidson & Roe, 2007; Harding, Brooks, Ashikaga, Strauss, & Breier, 1987; Salzer, Brusilovskiy, & Townley, 2018).

The recovery paradigm has introduced several important shifts from the traditional view on mental illness and treatment. First, it represents a shift in emphasis from clinical recovery to personal recovery. Whereas clinical recovery refers to becoming well and no longer fulfilling diagnostic criteria for a disorder, personal recovery refers to leading an autonomous, meaningful life even with persisting symptoms (Davidson, O'Connell, Tondora, Lawless, & Evans, 2005; Leamy, Bird, Le Boutillier, Williams, & Slade, 2011). A commonly used definition of recovery is that it is *"a deeply personal, unique process of changing one´s attitudes, values, feelings, goals, skills, and/or roles",* that enables a satisfying and contributing life despite illness symptoms. (Anthony, 1993, p.15). Personal recovery moves beyond the pathological perspective, and is understood as a continuous and recurring process where the individual pursues personal goals and achievements, such as employment, education, housing, and social relationships (Coursey, Alford, & Safarjan, 1997; Drake & Whitley, 2014; Le Boutillier et al., 2011). Empowerment, hope for the future, equal opportunity, and personal development are key dimensions in recovery (Anthony, 1993; Schrank & Slade, 2007).

Second, the recovery paradigm represents a shift in traditional treatment roles: The professional helpers´ main role within this paradigm is to facilitate recovery, and the individual is central in setting the course for this process. This is achieved through client-centered treatment fostering autonomy, providing social support, and facilitating for meaningful everyday activities, such as employment or education (Davidson et al., 2005; Drake & Whitley, 2014; Mead, Hilton, & Curtis, 2001).

Third, the recovery paradigm challenges the research methods informing evidence-based practices in mental health treatment. The recovery paradigm originally emerged from qualitative, personal accounts, and emphasizes that recovery is a unique, personal process. Recovery is by nature subject to the individual's meaning-making (Leamy et al., 2011; Leonhardt et al., 2017). On the other hand, the scientific paradigm dominating evidence-based practice in mental health services is based on rigid quantitative designs, guided by questions defined by researchers or policy makers, and analyses of aggregated data (Leamy et al., 2011). Although both of these

paradigms seek to improve health services for people with mental illness, they challenge each other's basic assumptions on what constitutes valid knowledge that is suitable to facilitate this goal.

IPS and recovery

In an analysis of the qualitative literature on recovery, Drake and Whitley (2014) found employment to be a key arena for experiencing recovery. This supports a basic notion in IPS, namely that anyone can work, if they are provided sufficient support, and the job matches their preferences and competencies. Instead of following a step-by-step approach, where decisions are made mainly by healthcare or welfare service professionals, IPS emphasizes a client-centered approach, which encourages the pursuit of employment as part of the treatment (Bond, Becker, et al., 2001). Recovery philosophy is incorporated in the core principles of IPS, and is especially evident in the principles of no exclusion, attention to client preferences, eligibility based on client's choice, integration with mental health services, and time-unlimited and individualized support. Both scholars and patients have called for more recovery-oriented practices in the health care system (Agrest et al., 2018; Leonhardt et al., 2017; Ostrow & Adams, 2012; Slade, 2010). IPS is a manualized, well-documented intervention which may contribute to this, in health care services as well as in welfare services (Gammelgaard et al., 2017). Castillo and colleagues (2018) argue that although recovery unfolds at the individual level, a socio-ecological approach to recovery is needed to better facilitate this process on several levels. Specifically, this means that services, communities, and public policy must be shaped by the recovery mindset, through prioritizing evidence-based, recovery-oriented practices in mental health care, to challenge communities to foster social inclusion, and to develop public policies that reduce discrimination and foster equal opportunity (Castillo et al., 2018).

Institutional factors under study in the PhD thesis

The process evaluation study (paper 1) investigates barriers and facilitators to implementation of and participation in IPS. Implementation issues are investigated at the institutional level through interviews and fidelity data from the IPS centers, which describe adherence to the IPS model. An indirect measure of institutional factors investigated in the predictor study (paper 2) is involuntary hospitalization, which is an institutional practice with individual ramifications.

1.3.4 Community factors

The definition of the community level in McLeroy's model is not as clear as the other levels, as it is constituted by three distinct understandings: Communities as face-to-face primary groups of the individual; communities as relationships between organizations located within a specific area; and communities as units governed by one or more power structures (such as local government and organizations) (McLeroy et al., 1988). When discussing the implementation of IPS, employers in local businesses are relevant community actors to consider.

Employers are important gatekeepers to the workforce. Most research on work participation among people with mental illness or with a disability has focused on supply-side factors, i.e. the job seekers' characteristics, challenges and support needs, and focused less on demand-side factors, i.e. employer needs and the organizational, legislative, and economic conditions employers operate under (Chan, Strauser, Gervey, & Lee, 2010). Organizational values relating to diversity and social responsibility have gained increased attention in the corporate world (Farcane & Bureana, 2015), which might increase employment opportunities for people with a mental illness. At the same time, research conducted among employers demonstrate that people with a mental illness still face discrimination in the labor market (Batastini, Bolanos, Morgan, & Mitchell, 2017; Biggs, Hovey, Tyson, & MacDonald, 2010; Laberon, Scordato, & Corbiere, 2017; Nota, Santilli, Ginevra, & Soresi, 2014).

A qualitative doctoral thesis with 137 informants who were employers, support service personnel, or clients, found informants to reason differently when considering someone with a mental health condition as compared to someone with a physical condition: A person with a physical condition elicited less insecurity about stability and accommodation (Hampson, 2014). Persons with mental health conditions were ta greater degree considered less reliable, and requiring more awareness and understanding both from management and from co-workers (ibid). Main barriers for recruiting someone with a mental illness or disability, as expressed by employers, relate to costs of accommodation, lack of knowledge about accommodation and technical aids (Kaye, Jans, & Jones, 2011), work performance and productivity concerns, qualification issues (Fraser et al., 2010; Heera & Devi, 2016), and nature of the work (Houtenville & Kalargyrou, 2015; Lengnick-Hall, Gaunt, & Kulkarni, 2008).

Community factors under study in the PhD thesis

The study on demand-side factors of employment (paper 3) is based on data collected among supervisors and employees in different workplaces in Norway. The study sought to map respondents' willingness to hire different job-seekers with either a mental illness, a physical disability, or representing a cultural minority. Barriers to recruitment and the role of respondents' previous experience are also investigated in the study.

1.3.5 Public policy factors

The public policy level in McLeroy's model refers to the laws and policies governing the other levels of the model, from the individual level to the community level. When discussing IPS, the most relevant laws and policies to consider are mainly those governing welfare benefits and entitlements, health service provision, and policies relevant for employers, such as means and measures incorporated in the Inclusive

Work life Agreement[1]. International observers have characterized Norway as a "country of extremes" when compared to other OECD countries, due to the high living standard and large public spending on health and education, while at the same time ranking as one of the top countries when it comes to disability expenditures on incapacity and sickness absence (OECD, 2013, 2020). The Norwegian welfare system is quite extensive compared to most other countries. Norway is among the top ranking nations among 18 OECD countries on the disability policy indices 'Compensation' (coverage, easy access, permanence, and generosity), and 'Integration' (incentives to join work force, accessibility of vocational services) (Böheim & Leoni, 2018). A meta-analysis actually found a *weaker* effect of IPS on employment in contexts were integration efforts were strong (Metcalfe, Drake, & Bond, 2017). Integration efforts in the form of vocational rehabilitation services have traditionally taken a train-place approach, which might have accustomed employers to wage subsidies and unpaid work practice instead of providing ordinary employment for those outside the work force. The negative association between integration efforts and IPS effects found in the mentioned study was attributed to the weak evidence base of existing efforts (Metcalfe et al., 2017).

Public policy factors under study in the current PhD thesis

There are no direct measures of public policy factors in the thesis, however, the characteristics of the Norwegian context have influenced the interpretation of the research conducted, and will be described where relevant in the Discussion section to provide a context for the findings.

The aim of the PhD work was to identify barriers and facilitators to work participation for people in treatment for moderate to severe mental illness. Barriers and facilitators that affect individual outcomes exist on various levels, and the three

[1] The Inclusive Work Life Agreement is an intentional agreement between the Norwegian Government, labor unions, and employer organizations, aiming to reduce sick leave and withdrawal from working life.

papers address issues on the individual to the community levels. In the following, the design and methods used in the PhD work are presented.

2. Design and Methods

The data used in the three studies were generated by two separate research projects: “The effect evaluation of IPS in Norway” (paper 1 and 2), and “Workforce Diversity” (paper 3). The study designs and ethical considerations for the two projects are described in the following. The data collection and analyses are then detailed for each paper individually.

2.1 Study design and ethical considerations, IPS trial

In 2012, the Norwegian Labor and Welfare Administration (NAV), together with the Norwegian Directorate of Health, established six pilot centers in six counties to provide Individual Placement and Support to people with moderate to severe mental illness, and commissioned a scientific evaluation of its effect and implementation. The implementation and evaluation of IPS were the first of their kind in Norway. The evaluation was carried out as a randomized controlled trial (RCT) and consisted of three components. The main task was the effect evaluation, which was followed by a process evaluation to enhance the external validity of the intervention and its effects, as well as a cost/benefit analysis, which provided an economic assessment of the effect. Results from the effect evaluation are described in a published paper by researchers at NORCE (previously Uni Research Health), who conducted the effect evaluation (Reme et al., 2018).

2.1.1 Recruitment and randomization

Eligible participants were patients in treatment for moderate to severe mental illness who were unemployed, and wished to obtain employment. At the time of inclusion, participants could be either unemployed, on sick leave or other social benefits (Sveinsdottir et al., 2014). Participants were primarily recruited from the District Psychiatric Centers (DPS; secondary care) in the six counties, but could also be recruited from primary care. All participants were, or became, connected to a

treatment team which included an IPS specialist, who was trained in the IPS method. The recruitment period lasted for one year and was concluded in the end of October 2013, when 410 participants had joined the study. Sample size calculations (5% significance level and power of 80%) had indicated a need for 400-500 participants. Upon inspection of the outcome data after 18 months, it appeared that 81 participants had been registered with employment at the time of inclusion, and were therefore excluded from the study. Nine participants had obtained employment through wage subsidies and were not treated as employed in the analyses. In the final study population, 56% of the participants had been allocated to the intervention group, while 44% had been allocated to the control group. Allocation to trial arms were based on a computer-generated randomization list using blocks of eight, and were stratified on geographical location. To ensure that the full capacity of the pilot centers was reached, the randomization ratio was 2:1 in favor of intervention allocation for the first five months of inclusion, explaining the skewed distribution of participants to the groups.

2.1.2 Trial arms

Participants allocated to the intervention group received Individual Placement and Support (IPS) at their local IPS center, with the aim of obtaining competitive employment. Participants allocated to the control group were referred to their caseworker at the local NAV office. Caseworkers were instructed to offer them a vocational rehabilitation program, mainly Work with assistance (AB) and/or Traineeship in a sheltered business (APS). To avoid waiting time, control participants were to be prioritized for such programs. The AB program includes follow-up from a personal facilitator to find suitable work, and assistance in negotiating employment conditions. In APS, participants perform tasks in a sheltered environment, in order to test their work capabilities. Tasks are modified to fit the individual, and an advisor provides follow-up as necessary. Participants in the control group could also be offered additional interventions based on individual needs, as they normally would in TAU.

2.1.3 Ethical considerations

An application for approval was sent to the Regional Ethics Committee (REK). However, the committee did not consider the study to fall under the Health Research Act. The Norwegian Social Sciences Data Services (NSD) assessed and approved the study (project no. 34989).

Thorough ethical considerations should be made when designing a study which targets a vulnerable population, and employing a rigid evaluation design highlights some dilemmas in particular. Firstly, it can be regarded unethical to randomize participants to a control condition versus an intervention condition because control participants are possibly being hindered from receiving an effective intervention. This is an important objection to consider for an intervention like IPS, which has proven effective in previous studies. However, there are certain characteristics specific to the Norwegian context which may reduce the intervention's effectiveness, such as a generous welfare system, stringent employee protection legislation, and an emphasis on formal qualifications. It was therefore considered necessary to conduct a rigid evaluation of the intervention in this specific context, although it has proved effective elsewhere. Furthermore, it can be argued that participants' condition may worsen as a result of being randomized to a control condition, known as the nocebo effect. Assigning participants to a no-intervention group was not considered ethically nor legally acceptable, and control participants were therefore prioritized for a spot in a work rehabilitation program at their local NAV office. Although not equivalent to "treatment as usual", these programs were likely alternatives for the target group regardless of their participation in the trial. Moreover, all participants in the trial received treatment in the mental health care services while receiving IPS or TAU. Participants who were assigned to TAU were allowed to enter the IPS program after 12 months. The IPS centers reported that 15 persons entered IPS shortly after the 12-month time limit.

From a mental health treatment perspective, it can be argued that the intervention might worsen participants' condition by placing them directly in ordinary

employment. This is a common objection to the IPS method, however, it has not been supported by empirical evidence (Bond, Resnick, et al., 2001; Frederick & VanderWeele, 2019; Mueser, Becker, et al., 1997). A few studies have in fact found a positive effect of IPS or SE on health outcomes, including the IPS trial in the current thesis (Drake et al., 2013; Reme et al., 2018; Zhang et al., 2017).

Standards of research ethics require that a trial like this is pre-registered in an open registry of clinical trials, detailing study design, data material, funding sources, main and secondary outcomes, and hypotheses. This is to ensure transparency in the research process and reduce under-reporting of insignificant trial results. The trial was pre-published at clinicaltrials.gov (registration number NCT01964092). The protocol detailing trial design, data collection and ethical considerations was published as an article during the study period (Sveinsdottir et al., 2014).

Written consent was collected from each participant at the time of inclusion, covering all parts of the data collection in the study. The consent was signed after an introductory conversation where the participant was informed in writing and verbal communication of all aspects of the study and the data collection, their right to withdraw at any time, and to have their data deleted upon request. Most introductory conversations were conducted by therapists, which poses a risk of coercion. This risk was countered by communicating explicitly to the patient that neither participation nor refusal to participate would affect their treatment or have other consequences. All sensitive data were stored according to the regulations of handling sensitive data. Electronic lists connecting participant ID number with identifiable information was stored in a safe, separate from participant data.

2.2 Study design and ethical considerations, Workforce diversity

The research project “Workforce diversity” aimed at mapping employers’ recruitment practices and attitudes towards hiring job seekers from underrepresented groups, namely job seekers with a mental illness, a physical disability, or of a cultural minority. This was achieved through conducting interviews with employers, and distributing a survey among employers and employees. Paper 3 is based on the survey data.

2.2.1 Recruitment

Respondents were recruited from lists provided by NAV Inclusive Workplace Support Centers in nine counties, and 14 industries were represented in the sample. Managers were contacted individually with information about the project, its purpose, and what it meant to participate. Those workplaces agreeing to participate provided email lists of employees and managers, indicating which employees had manager responsibilities. Some workplaces required a written agreement confirming that email lists would be deleted shortly after the conclusion of the data collection, which was provided.

2.2.2 Ethical considerations

The two studies generating data for the thesis required quite different ethical considerations. While the IPS trial collected sensitive data on health, functioning, benefit recipiency and employment from a vulnerable group, the study on workplace diversity collected cross-sectional, anonymous survey data and interview data from employers and employees in different workplaces.

The project was submitted to the Norwegian Social Sciences Data Services (NSD) for assessment, and was approved (project no. 53262). It was specified by NSD that the survey part of the project did not require approval as it did not collect directly or indirectly identifiable data. The approval regarded the collection and handling of interview data, which was not used in this PhD work.

2.3 Data collection and analysis

Papers 1 and 2 used data from multiple sources and time points in the IPS evaluation, as illustrated in Figure 2.

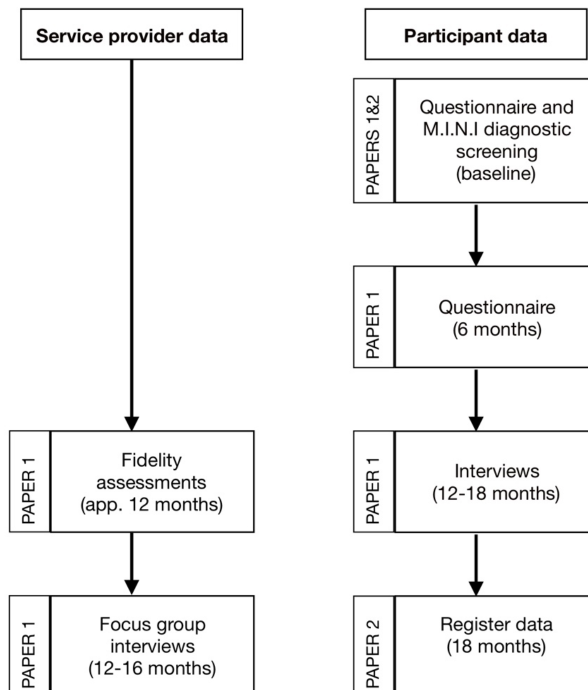


Figure 2. Data collection flow, papers 1 and 2 (IPS trial).

2.3.1 Data collection and analysis, paper 1

Paper 1 analyzed participant data from the M.I.N.I diagnostic screening (baseline), 6-month follow-up questionnaire and interviews, and service provider data from fidelity reports and focus group interviews.

The Mini International Neuropsychiatric Interview (M.I.N.I) was conducted at baseline for participants who had not already participated in such an interview in the last three months as part of their treatment. M.I.N.I. is a brief and structured screening interview with demonstrated validity to diagnose psychiatric conditions (Sheehan et al., 1998). The original intention was to collect M.I.N.I data on all participants, either through baseline interviews or existing screenings. However, this was not feasible due to practical issues, and M.I.N.I was therefore obtained for 248 of the participants (76%). No indications of systematic patterns in the missing interviews were found.

The 6-month follow-up questionnaire was distributed electronically or in paper to intervention participants, and collected data on satisfaction and usefulness through single items: ‘In general, how satisfied are you with the IPS intervention?’ (1=Dissatisfied, 5=Very satisfied); ‘How satisfied are you with your IPS specialist?’ (1=Very dissatisfied, 5=Very satisfied); and ‘How useful has it been to participate in IPS?’ (1=Not useful at all, 5=Very useful). Participants were also presented with lists of six possible barriers and six possible facilitators to participation in the intervention (yes/no). Examples of barriers are ‘Progress was made too quickly’ and ‘My illness was a barrier’. Examples of facilitators are ‘It was helpful to know that the IPS specialist was available’ and ‘Being able to choose whether to disclose or not was helpful’. An open-ended response option was included at the end of each list.

Semi-structured interviews were conducted with 12 intervention participants 12-18 months after inclusion into the study. Interviews lasted for approximately 20 minutes and were conducted over the phone. Interviews were recorded on tape and transcribed.

Fidelity evaluations were conducted by trained evaluators at 2-3 time points during the study period at each center. In principle, fidelity evaluations are to be conducted every 6 months until high fidelity is reached (Becker, Swanson, Reese, Bond, & McLeman, 2015), but this frequency was not achieved in the current study. The reports used in the process evaluation study were conducted approximately one year into the study period, which was the second evaluation for all centers.

Semi-structured interviews were conducted through focus groups with all six IPS teams (n=26), one interview in each center. Interviews lasted approximately 1,5 hours and were conducted 12-18 months into the study period. Interviews were conducted on-site by a member of the research team.

Descriptive analyses were conducted using SPSS 25 and Excel (2017) in order to summarize the data on fidelity and participant surveys. Findings that stood out, in terms of particularly low/high fidelity or survey scores were used as a lens to distil the qualitative data. Interview data were hence analyzed using a deductive approach. A coding list was constructed according to topics in the interview guide, specifications in the governmental grant initiating the study, and findings from the quantitative data. Thematic coding was then conducted (Boyatzis, 1998; Joffe & Yardley, 2004). Categories were re-assessed and adjusted to fit the data progressively through the analytic process. Palinkas' taxonomy (2011) of the structural design of mixed methods research is useful to clarify how the different types of data were collected and emphasized in the analytic process. According to this taxonomy, the *structure* of the methods used in paper 1 is QUAN→qual, meaning that data collection was conducted sequentially, beginning with quantitative data collection. The function of this design was *complementarity*, in the sense that the two data sources together answered a series of related questions to explain a process. The analytic process *connected* the data sources, as one source built upon the other.

2.3.2 Data collection and analysis, paper 2

Paper 2, which investigated baseline predictors of employment status, collected registry data on employment from the State Register of Employers and Employees (SREE). Employment status was indicated by 0=no employment, 1=employment, at baseline and 18 months after inclusion.

Predictor variables were measured in the baseline questionnaire completed by all participants at the time of inclusion:

Age and *level of education* were measured through single items in the questionnaire.

Social support was measured using Fisher and colleagues' (2004) Non-directive and Directive Social Support Scale (NDSS), which measures social support along two dimensions: Non-directive versus directive, and emotional versus instrumental. The scale consists of 16 items measuring four types of support: *Non-directive instrumental support, directive instrumental support, non-directive emotional support, and directive emotional support.* The respondents are instructed to consider a person in their life from whom they receive support, and answer the statements according to how typical the described behavior is for this person. Respondents either tick one of the pre-defined categories (one's doctor, family member, or friend), or specify the relationship in a free-text field. The statements describe different types of support provided by the reference person, and response categories range from 1=Not typical at all to 5=Very typical. Examples of statements are [the reference person] "…pushes you get going with things" and "…is available to talk anytime."

Anxiety and depression symptoms were measured through The Hospital Anxiety and Depression scale, which consists of 7 items measuring anxiety symptoms and 7 items measuring depression symptoms (Leiknes, Dalsbo, & Siqveland, 2016; Zigmond & Snaith, 1983). Response categories differ in phrasing according to the question, but range from 0 (equivalent to 'never') to 3 (equivalent to 'most of the time').

Involuntary hospitalization was measured through the single item 'Have you ever been hospitalized involuntarily?' (yes/no).

Main effects and effect modification were assessed through individual analyses of each predictor using log binary regression (SPSS 25), with bootstrapped CIs. Listwise deletion was used. Dichotomous variables were coded 0/1, were 0 indicated absence of the measured characteristic, and 1 indicated presence of the characteristic. Continuous predictors were centered. Sample size was considered large enough for the predictor analyses (5% significance level, 80% power), but moderation analyses were underpowered.

2.3.3 Data collection and analyses, paper 3

Electronic surveys were distributed to employees and supervisors using Qualtrics©. The vignettes presented to respondents were identical for both groups. However, managers were randomized to answer one of two blocks of vignettes, to shorten the time spent filling out the questionnaire. The vignettes presented 10 job seekers with either a mental illness, a physical disability, or with a cultural minority background. Additionally, a reference character was included, who was described as a single mother with no serious health issues. After each vignette, respondents were asked how well the job seekers would fit into their own work place, what the main reason was for assessing the job seeker negatively or neutrally, and whether the respondent had previous working experience with someone similar to the vignette character in question. 925 employees and 305 managers responded to the questionnaires. Vignette descriptions, questions, and randomization blocks (supervisor survey) are available in appendix C.

SPSS 25 and Excel (2017) were used to analyze the data. Assessments of the vignette characters were recoded into dichotomous variables, where scores of 1-3 were coded as “Neutral/negative”, and scores of 4-5 were coded as “Positive”. Based on this, RR of being assessed positively was calculated for each vignette character, using the single mother vignette as a reference. Descriptive analyses were conducted on the categorical variables inquiring about the reasons for neutral or negative assessments. Qualitative thematic analysis was conducted to code free-text responses of the reasoning behind the assessments. Chi-square tests of independence were conducted

on each vignette character to examine the association between managers' and employees' responses, and associations between positive assessments and having previous experience with someone similar to the vignette character in question.

According to Palinkas' taxonomy, the structure of the mixed methods design used in paper 3 is QUAN+qual, meaning that the primary method was quantitative (QUAN), and that the two types of data were collected simultaneously (indicated by the "+" sign) (Palinkas et al., 2011). The function of this design was *expansion*, in the sense that qualitative data were used to explain quantitative findings. The analytic process *connected* the data sources, as one source built upon the other.

3. Results

3.1 Paper 1: A structured mixed methods process evaluation of a randomized controlled trial of Individual Placement and Support (IPS)

The aim of paper 1 was to describe barriers and facilitators to implementation and participation in IPS, as indicated by fidelity reports and interviews with services providers, and survey data and interviews with participants.

The process evaluation identified issues that were particularly challenging in the implementation process, as indicated by low fidelity scores on certain items one year into the study period. These included providing community-based services, quality of employer contact, and the integration of vocational and treatment services. For participants, the IPS specialist seemed to play an important role, through supporting and empowering them in the job search process. Moreover, freedom of disclosure was an important facilitator as reported by participants. Less than half of the participants considered their illness to be a barrier for participation in IPS, and participants found the intervention useful. One in six participants reported that it was a barrier that IPS was not what they thought it would be. The findings support an inclusive approach to providing vocational rehabilitation efforts to this patient group. Findings relating to implementation add to the knowledge base of IPS implementation, and identifies issues that may need special attention in the initial implementation phase in order to enhance the effectiveness of IPS efforts.

3.2 Paper 2: Predictors of employment in people with moderate to severe mental illness participating in a randomized controlled trial of Individual Placement and Support (IPS)

The aim of paper 2 was to identify individual predictors of employment 18 months after inclusion into the IPS trial, and to investigate possible moderation effects of group allocation (IPS vs. TAU). Results indicate that directive emotional support and non-directive instrumental support positively predicted employment at 18 months, while having been involuntarily hospitalized was a strong negative predictor. The findings suggest that certain characteristics of the support provided may enhance employment outcomes for this population. Moreover, involuntary hospitalization seems to have a negative effect on employment outcomes regardless of frequency or time passed since the event.

3.3 Paper 3: Employers' and employees' evaluations of job seekers with a mental illness, disability, or of a cultural minority

The aim of paper 3 was to investigate the employer perspective on hiring job seekers who either had a mental illness, a physical disability or represented a cultural minority.

Compared to the reference vignette character, the two job seekers representing a cultural minority, as well as the job seeker with an audio impairment, were significantly more likely to be assessed positively. The vignette characters with a mental illness were significantly less likely to be assessed positively. The vignette characters with a visual impairment or using a wheelchair, were least likely to be assessed positively. Vignette characters with a physical disability thus seemed to be subject to more individualized assessments than the characters describing mental illness. Respondents' previous working experience with someone similar to the

vignette character in question was positively associated with favorable assessments of this character. Managers and employees without managing responsibilities were generally concurrent in their assessments of the job seekers.

4. Discussion

4.1 Main findings

The aim of this PhD thesis was to identify barriers and facilitators to increasing work participation for people in treatment for moderate to severe mental illness. The three papers highlight issues on several socio-ecological levels that have implications for users and patients, practitioners, researchers, and policy makers.

Papers 1 and 2 conducted secondary analyses on data collected in an RCT comparing employment outcomes for Individual Placement and Support (IPS) with treatment as usual (TAU) for patients with moderate to severe mental illness. IPS is a vocational rehabilitation program providing long-term and individualized support, with the aim of obtaining employment in the competitive labor market. The RCT found IPS to be more effective than TAU in providing competitive employment.

Paper 1 described the process evaluation of the implementation of IPS in six pilot centers. The purpose of the process evaluation was to strengthen the external validity of the RCT findings, and explain why similar results can be or cannot be expected to be achieved if the intervention is implemented elsewhere. Paper 1 contributes to this aim by providing data on implementation quality and first-hand accounts from service providers and participants. The paper investigated barriers and facilitators to implementation of and participation in IPS, on the individual to the institutional level, and concluded that the implementation of IPS in a Norwegian context was successful in terms of achieving adequate fidelity scores, although single fidelity items indicated certain challenges in the implementation efforts at the institutional level. As for the participants, the majority did not see their illness as a barrier for participation, and they found the intervention useful. The relationship with the IPS specialist was particularly important for the participants.

In paper 2, secondary analyses were conducted on the outcome evaluation data, investigating predictors of employment at 18 months' follow-up. The study

investigated whether self-reported demographic variables, social support, and health-related variables predicted employment status at the time of follow-up. The study found involuntary hospitalization to negatively predict employment status 18 months after inclusion, while non-directive instrumental and directive emotional support showed a weak, but significant association with employment.

Paper 3 investigated the workplace perspective on work rehabilitation, thus expanding the empirical evidence on demand-side factors hindering or facilitating employment outcomes. The study concluded that supervisors and employees were generally reluctant to include job seekers with a mental illness, and some types of physical disabilities. Concerns related to job seekers with a mental illness were mainly related to interpersonal interaction and productivity. However, previous experience with an employee similar to the character described was associated with a more favorable assessment of the character.

In the introductory section, McLeroy's socio-ecological model of public health interventions was used as a framework to decompose IPS into different levels, from the intrapersonal to the contextual. The model is useful for defining analytical levels in evaluating interventions, but it does not provide a theoretical frame for interpreting the findings of such evaluations. Self-determination theory and the recovery paradigm, on the other hand, provide useful frameworks for this purpose. In the following, results will be discussed in light of these.

4.2 Facilitators of work participation

4.2.1 The role and nature of social support

The important role of social support for the target group in facilitating participation in IPS, as well as employment, is one of the main contributions of the thesis. Paper 1 found the support of the IPS specialist to be an important facilitator for participation in the intervention through their availability and regular follow-up. Studies that have attempted to identify the critical skills of an IPS specialist emphasize the importance of providing direct support through letting the client lead the process, encouraging and focusing on possibilities, being flexible and available, and providing emotional and practical support (Glover & Frounfelker, 2013; Johnson et al., 2009).

A randomized controlled trial comparing non-vocational outcomes in IPS participants with TAU participants at 18 months' follow-up found significant differences between the groups on feelings of empowerment in favor of the IPS group (Areberg & Bejerholm, 2013). Empowerment has been identified as an important component of recovery, and also fosters autonomy, which is one of the basic psychological needs in Self-determination theory (Carey, 2005; Onken, Dumont, Ridgway, & Ralph, 2004; Ryan & Deci, 2017). Based on the literature and findings in the current thesis it can be theorized that the IPS specialist provides an autonomy-supporting environment, which has been demonstrated to predict beneficial life outcomes such as self-governance, fulfilment of basic psychological needs, and positive health behaviors (Ng et al., 2012). For participants in the current study receiving IPS, such an autonomy-supporting environment might have contributed to the higher employment rates seen in the intervention group. Future research should investigate the mechanisms of change at the individual level of IPS participants, and particularly the intervention's potential to reduce self-stigma. Several studies indicate that self-stigma is a barrier to pursuing employment for people with a mental illness, and as such should be targeted in work rehabilitation interventions (Brouwers, 2020)

An interesting finding regarding the role of social support is found in paper 2, where directive emotional support reported at baseline was found to predict employment 18

months later. The nature of directive support does not align well with the notion of self-governance and client choice, which are central in SDT and recovery. It can, however, be explained by similar findings on social support measured in populations who are in a vulnerable or acute situation (Gabriele, Carpenter, Tate, & Fisher, 2011). Nevertheless, it points to a delicate balance between guidance and empowerment for people in need of care, which is left unaddressed in both SDT and recovery. Also, non-directive instrumental support predicted employment, which is in line with previous studies where non-directive support is found to facilitate various positive life outcomes (Fisher et al., 2004; Fisher, LaGreca, Greco, Arfken, & Schneiderman, 1997; Stewart, Gabriele, & Fisher, 2012).

Support for the findings in paper 2 is also found in a recent review investigating the influence of significant others on the work participation of individuals with chronic illness (Snippen, de Vries, van der Burg-Vermeulen, Hagedoorn, & Brouwer, 2019). The review found empowering, encouraging, and practical assistance to be associated with work participation and return to work, while behaviors such as pressuring or protecting the individual acted as barriers to employment outcomes.

4.2.2 The role of experience

Paper 3 found that previous experience with someone with the same disability or characteristic as the vignette character in question was associated with more favorable assessments of this character. Free-text responses showed, however, that there is still stigma associated with some of the diagnoses, in particular the character displaying schizophrenic symptoms. The findings support the importance of seeking competitive employment for this group, not only because it benefits the individual, but also because it may change negative perceptions of people with mental illness and their work capacity.

4.3 Barriers to work participation

4.3.1 IPS implementation issues

Indirect barriers to employment were found in the process evaluation study (paper 1), investigating barriers to the implementation of IPS. The main barriers found on the institutional levels were integration of vocational and treatment efforts, insufficient quality of employer contact, and providing community-based services. These findings, which reflect similar findings in previous IPS studies, indicate that it takes time to implement recovery-oriented practices (Bonfils, 2020; Moen, Walseth, & Larsen, 2020). Providing high-quality IPS, which is associated with higher employment rates, requires organizational changes on several levels of the involved institutions. The time and effort required to make these changes should therefore not be underestimated when implementing the intervention. On the positive side, a report investigating the employment focus in psychiatric district centers in Norway (secondary care) through interviews and surveys, found indications of increasingly recovery-oriented practices in mental health care (Proba, 2016). This is promising for the collaboration of vocational and treatment services, and for implementing IPS in new municipalities in Norway.

4.3.2 Involuntary hospitalization

The clearest barrier to employment at the individual level was having been involuntarily hospitalized (paper 2). Respondents were not asked about time passed since the hospitalization, nor the frequency of such admissions, indicating a sustained negative effect on employment outcomes. Health service providers and patients who are critical of involuntary treatment state that involuntary hospitalization is unnecessarily coercive, that the criteria permitting involuntary hospitalization are too broad, and that greater efforts should be made with voluntary measures (Høyer, 1988; Katsakou et al., 2012; Sheehan, Nieweglowski, & Corrigan, 2017). Those regarding it as a necessary evil will maintain that the benefits of treatment exceeds the personal cost of deprivation of liberty for the patient (Høyer, 1988). Some studies have found

involuntary hospitalization to be associated with reduced frequency and duration of hospitalizations, increased adherence to treatment, and reduced likelihood of being victimized to or exerting violence (Swanson, Swartz, Elbogen, Wagner, & Burns, 2003; Swanson et al., 2000). An experimental study found that prolonged hospitalization was positively associated with quality of life at 12 months' follow-up, but this relationship was moderated by perceived coercion (Swanson et al., 2003). First-person accounts in the literature describe how involuntary hospitalization seems to thwart one's basic need for autonomy (Murphy et al., 2017; Nyttingnes, Ruud, & Rugkasa, 2016). This once again points to the difficult balance between exerting expert knowledge to reduce the burden of illness, with respecting personal autonomy and self-governance, even at the cost of symptom relief. Health care and social services should be attentive to the potential scarring effect that this experience may have on the pursuit of employment and perhaps other life goals.

4.3.3 Perceptions of mental illness in the labor market

Findings in paper 3 indicate that job candidates with a mental illness are still met with skepticism in many workplaces. The open-ended responses showed that many respondents had a limited understanding of how a person may function with a mental illness, and this is likely to pose a barrier to employment for this target group. These findings reflect the existing literature on employer perceptions of job candidates with a mental illness or a disability (Erickson, von Schrader, Bruyere, & VanLooy, 2014; Kaye et al., 2011). A cross-cultural study among people with major depression disorders showed that 63% of respondents had anticipated or experienced discrimination, and almost as many had stopped themselves from applying for a job due to anticipated discrimination (Brouwers et al., 2016). These above-mentioned findings collectively indicate that quite some effort remains to change perceptions among employers of the hireability of people with mental illness.

IPS specialists spend a significant amount of time on job development and networking with local employers, in order to increase the chance of a good job match between the employer and the job seeker (Becker & Drake, 2003). Successful job

development has been associated with more positive employment outcomes for participants (Leff et al., 2005). In several studies that did not study IPS specifically, employers expressed lack of knowledge about mental illness, and the need for external support and expertise in order to provide a suitable job match and support for employees with a mental illness (Biggs et al., 2010; Burke et al., 2013; Kaye et al., 2011; McDonnall, 2017).

The methodology of IPS and the expressed needs of employers are well compatible, and it is likely that the IPS method will reduce barriers on the demand-side by providing suitable job candidates through job-matching, and by increasing knowledge about simple accommodations, recovery, the nature of a mental illness, and how to function with mental illness. If an increasing number of employers have positive experiences with such candidates, it is likely to foster more positive attitudes towards employing someone with a mental illness (Chi & Qu, 2005; Copeland, Chan, Bezyak, & Fraser, 2010). A recent position paper on mental illness and stigma calls for the destigmatizing intervention studies (Brouwers, 2020). Whether IPS can have a destigmatizing effect among employers has not been investigated, but this is an interesting empirical question that could connect the fields of vocational rehabilitation, stigma, and management studies.

A public policy factor to keep in mind when considering the findings in paper 3, is that Norway has a relatively high score on the OECD’s index of Employment Protection Legislation, meaning that there are several regulations imposed on employers in the firing process of an individual (OECD, 2015). Because of these regulations, the costs associated with poor hiring decisions may make employers hesitant when considering applicants with some form of potential limitation, as Norwegian studies have indicated (Falkum & Solberg, 2015; Tøssebro, Wik, & Molden, 2017). One meta-analysis did find indications of a moderating effect of employment protection legislation on the effectiveness of IPS, in the sense that stringent regulations reduced the effectiveness of IPS (Metcalfe et al., 2017).

4.4 Findings that support a recovery-oriented approach

A final note should be made on findings that support a recovery-oriented approach to mental illness. Paper 1 showed that most IPS participants did not see their illness as a barrier to participation in a vocational rehabilitation program. Moreover, participants rated their health-related quality of life to an average of 58 out of 100. Both findings emphasize the importance of subjective health measures for this target group. The analyses in paper 2 did not find an association between symptoms of anxiety and depression and employment outcomes, further supporting the non-exclusion principle in IPS and an inclusive approach to this target group when it comes to work rehabilitation services. Slade (2010) argues that the divide between the fields of positive psychology, which focus on growth and opportunities in healthy people's lives, and traditional psychology, which focus on pathology and treatment of mentally ill people, is counterproductive. He argues that mentally ill persons will benefit as much from knowledge on increasing well-being and reaching goals as people without mental illness. This divide is echoed in the place-train vs. train-place approaches, where the former focuses on opportunities and growth, while the latter focus on becoming well in order to be able to pursue goals. The above-mentioned findings are in line with a recovery-oriented approach to the health care and vocational services provided to people with moderate to severe mental illness.

5. In hindsight

Hindsight provides insights that seem obvious in the present, but were not so in the past – for various reasons. Each study has strengths and limitations that can be traced back to a range of decisions made at different time points of the study. While fundamental decisions about design frame the methodological scope of the study, many smaller decisions are made underway that have to be balanced with time and budget restrictions, ethical considerations, and practical compromises. From a broader perspective, context, culture and scientific tradition shape researchers' perception of a problem, as well as the perception of which methodological tools are able to solve the problem (Bird, 2014). It can be stated that the rationale for the IPS trial in a Norwegian context, as well as the Workforce diversity study, rest on specific cultural notions about inclusion and equality, the value of work for all, and that high employment rates are inseparably tied to maintaining the welfare state. For me as a researcher, this context frames my understanding of what type of research questions are relevant to ask when developing a paper, how results are interpreted, and which types of results should be emphasized. As for scientific tradition, researchers within psychology, like myself, are positioned in a positivist tradition, utilizing measurable concepts and operationalized variables to generate what we see as valid and generalizable knowledge (Koch, 1992). It has been an eye-opener for me to learn more about the strengths of mixed methods, and how it facilitates a pragmatic methodological approach to answering research questions – although I am only beginning to become familiar with this approach.

In the following, I will discuss methodological considerations related to study population and recruitment, and selection of methods.

5.1 Considerations of study population and recruitment

Selection bias influences most studies in the social sciences that recruit a portion of a larger population. For papers 1 and 2 (the IPS study), selection bias was reduced through its pragmatic design: Inclusion criteria were broad (being in treatment for a mental illness, and wanting to obtain ordinary employment), participants were recruited from the same type of institutions, and no pre-screening beyond the inclusion criteria were conducted. These factors increase the generalizability of the findings to the broader population of patients in treatment for mental illness who are motivated to find work. The main strength of the IPS trial is its randomized controlled design conducted in a real-life setting, which means findings are likely to be valid and replicable in further implementations elsewhere, in contrast to the controlled conditions characterizing laboratory experiments.

Selection bias is a greater threat to the validity of the workplace study (paper 3). Workplaces were recruited from lists provided by NAV Inclusive Workplace Support Centers (IWSC), which means they are in some degree oriented towards the government-initiated effort called the Inclusive Work life (IW) agreement. Further, respondents were selected through supervisors' approval or refusal to provide email lists of their employees, as well as employees' own decision to respond to the survey or not. Thus, generalizability of the findings in paper 3 should be made with care, but shows how willingness to include different types of job seekers vary also in a population who is oriented towards an inclusive work life. Nevertheless, in hindsight, we should have spent more time exploring alternative recruitment approaches.

5.2 Considerations of selection of methods

Studies 1 and 2, which were part of the IPS trial, used more sophisticated data collection methods than the final study, which was cross-sectional. Study 1 used mixed methods to identify barriers and facilitators to implementation of and participation in IPS. The chosen approach for study 1 was to use the quantitative findings as a starting point to explore and interpret the qualitative material. This deductive approach enabled a distillation of large amounts of data, but it is likely that an inductive approach would have led to an emphasis on other results, which should be kept in mind. The approach was, however, considered appropriate given the aim of the study, which was to identify specific barriers and facilitators to implementation. The 6-month follow-up questionnaires from participants had a response rate of 44% in the control group, and 50% in the intervention group, which is low. In hindsight, considering the study population, we should have reduced the length of the participant survey.

Study 2 used log binary regression analysis to identify baseline predictors of being employed at 18 months among participants in the IPS trial. The analysis is based on assumptions of small multicollinearity and outliers, and requires a certain sample size. Although these assumptions were met, a larger sample size might have produced greater effect sizes and might have been able to detect a moderation effect of group allocation on significant predictors. The dependent variable was employment/no employment, as indicated by registry data. Registry data is an objective source with no loss to follow-up, which strengthens the validity of the findings. However, registry data is still dependent on accurate registration on the part of employers, which is likely to vary. The findings in study 2 are considered sufficiently valid and generalizable to the broader population of patients with mental illness who are motivated to work, but should be replicated and strengthened in future studies, as they are novel in the literature.

Study 3 used mixed methods, emphasizing the quantitative material. The analyses were rather simple, but suitable to fulfil the study aim. In hindsight, we could have

inquired about specific recruitment practices in the last 5 years, which would have indicated actual behavior and not just intentions or attitudes. Moreover, including industry-specific questions relating to barriers or facilitators for inclusion would have enabled more fine-grained analyses. Finally, cross-sectional studies based on a single perspective have limited value in broadening the understanding of complex issues. With more time and resources, a triangulation of perspectives, e.g. of supervisors, employees, job candidates, and vocational rehabilitation actors would have enabled a deeper understanding of the issue.

6. Conclusions and implications

The findings in this thesis legitimize that IPS should be provided to people with moderate to severe mental illness who are motivated to find employment, as it is able to address barriers to employment on different levels, and facilitate competitive employment for participants. The thesis takes a multi-level approach to increase our understanding of barriers and facilitators to obtaining employment for the target group, and show how factors on the individual to the community and public policy level help or hinder this process. The factors under study in this thesis were IPS participant experiences, individual traits and characteristics predicting employment, implementation issues of the intervention, and willingness to recruit job candidates with a mental illness at different workplaces.

In the years passed since the evaluation of IPS, the intervention has been expanded and is being tested for new target groups, including young people on disability benefits; young people outside employment, education and training (Sveinsdottir et al., 2019); people in treatment for chronic pain (Linnemørken et al., 2018); and refugees (Sveinsdottir, Fyhn, Frangakis, & Opsahl, 2020). This can be taken to indicate that both health and welfare services are adopting a more progressive, place-train approach to work rehabilitation than before. Findings in the current thesis emphasize the importance of all actors pulling in the same direction, from the individual, to significant others providing the right type of social support, to institutions providing high-quality, evidence-based vocational services, to potentially harming treatment practices, to local employers in the community, and to legislation and policies governing institutions and individuals. Recovery-oriented health-care and welfare services focusing on achieving personal goals, improving role functioning and enhancing basic psychological needs, can pay a pivotal role in an individual's pursuit of a meaningful, self-governed life.

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Implementation Science Communications

RESEARCH **Open Access**

A structured mixed method process evaluation of a randomized controlled trial of Individual Placement and Support (IPS)

Tonje Fyhn[1*], Kari Ludvigsen[2], Silje E. Reme[3] and Frederieke Schaafsma[4]

Abstract

Background: Individual Placement and Support (IPS) is an evidence-based work rehabilitation program helping people with moderate to severe mental illness to obtain ordinary employment. Although IPS has proven superior to other work rehabilitation programs, in many studies, the majority of the participants remain unemployed. Structured process evaluations of IPS that use mixed methods are scarce, although they could identify implementation aspects that may enhance its effect. The aim of the current study is to assess reach, fidelity, and identify barriers and facilitators to implement IPS.

Methods: The process evaluation was conducted alongside a randomized controlled trial including six IPS centers, comparing IPS with treatment as usual in a population of patients in treatment for moderate to severe mental illness. Mixed methods were used in the process evaluation, including focus group interviews with service providers, individual interviews and survey data from participants, and fidelity reviews using the validated IPS Fidelity Scale.

Results: The intervention reached the intended target group. All centers reached fair to good fidelity according to the IPS Fidelity Scale within the project period (range 97–109, SD 8.1) (see Table 5). Certain fidelity items indicated implementation issues related to employer contact, community-based services, and integration with health services. Survey data showed that less than half of the participants regarded their illness as a barrier for participating in IPS and that freedom of disclosure was important. Participant interviews gave further insight into the role of the IPS specialist, emphasizing their availability and consistent job focus.

Conclusions: Indications of implementation challenges across centers during the first year suggest special attention should be given to these aspects in an early phase to ensure higher fidelity from the start and thus enhance the effectiveness of IPS. The IPS specialist played an important role for participants and was described as positive, pushing in a positive way, and encouraging. More knowledge on the characteristics of successful IPS specialists could further enhance the effectiveness of the intervention.

Trial registration: The study was registered on clinicaltrials.gov prior to the inclusion period (reg.no: NCT01964092, registered 17/07/2013).

Keywords: IPS, Process evaluation, Recovery, Psychiatric disorders, Mental health services

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Contributions to the literature

- The study describes a structured process evaluation of IPS using concepts from the implementation literature, which is lacking in previous IPS studies.
- The study uses mixed methods to gain a thorough understanding of barriers and facilitators to implementation and participation.
- The study supports the recovery notion that people with severe mental illness who are motivated to find employment should be offered help to achieve this.
- The study suggests a need for weighting IPS fidelity items according to their association with employment outcomes.

Background

Mental disorders represent a significant barrier to employment [1]. The WHO's "Mental Health Action Plan 2013-2020" advices the use of so-called multisectoral approaches to treatment, characterized by coordinated services to ensure not only basic health treatment, but also access to employment [2]. One such multisectoral approach is the vocational service Individual Placement and Support (IPS). IPS is an evidence-based approach helping individuals with severe mental illness to obtain ordinary employment [3]. It is based on a recovery approach to mental illness, emphasizing consumer-orientation, social support, and integration of services [4]. It is based on eight principles: Seeking competitive employment, rapid job search, systematic job development, integrated services, benefits planning, no exclusion, time-unlimited support, and participant preferences [5]. Participants are assigned an IPS specialist who provides face-to-face counseling, who is trained in the method, and who helps them get in touch with a potential employer within 30 days. The job search is guided by the participant's preferences. The IPS specialist provides time-unlimited supports and follows up missed appointments with participants. The supports continue as needed after obtaining employment. The IPS specialist is integrated in participants' health treatment team, in order to ensure coordinated services that facilitate work participation. The IPS specialist should spend 65% or more of their time outside the office, to ensure active follow-up of participants and face-to-face networking with employers in the community.

The IPS principles are operationalized in an implementation manual [6], which describes in detail the resources and preparations needed at different levels of the involved institutions to successfully implement the intervention. The principles are quantified in the validated IPS Fidelity Scale, which measures adherence to the method across different cultural contexts [7]. IPS programs obtaining high scores on this scale, as measured by evaluators, obtain higher shares of employment in ordinary jobs [8–10]. Through several experimental studies, the IPS method has proved more effective than traditional employment services, providing a robust empirical base for implementation across a wide variety of cultural contexts [11].

Although IPS has consistently proved effective, the majority of participants do not obtain employment [12–17]. Perhaps more thorough process evaluations or implementation studies could shed light on specific barriers and facilitators to be targeted in order to enhance employment outcomes. Process evaluations aim to improve the external validity of the outcome evaluation [18] and should describe what components of a given intervention are effective, for whom, and under what conditions [19, 20]. However, structured process evaluations of IPS are scarce. A recent review on implementation studies of supported employment revealed that the investigation of implementation issues take widely different approaches, from reflections based on anecdotes to semi-structured interviews and surveys [21]. The lack of common approaches makes it difficult to get an overview of implementation challenges that are generic across contexts, or specific to certain contexts. Such knowledge could enhance future IPS implementation efforts, particularly for piloting IPS for new target groups, such as patients with chronic pain, marginalized young people, and refugees [22, 23]. The process evaluation in the current study focused on assessing reach, fidelity of intervention delivery, and exploring barriers and facilitators to implementation and participation. These implementation measures were selected in accordance with the specifications in the governmental commission that initiated the study, and with recommendations found in Linnan and Steckler's framework for conceptualizing process evaluations of public health interventions and research [19]. These authors define reach as the extent to which the intended target group actually participates in the intervention, and fidelity is defined as the extent to which the intervention was carried out as planned. Barriers and facilitators are defined in the current study as factors that obstruct or enable implementation of evidence-based practices [24].

The process evaluation was conducted alongside the randomized controlled trial of IPS in Norway [15, 25], and its function was to complement the results from the RCT, as well as enhance the effect of future IPS implementation efforts [15]. The aim of the current study is to answer the following research questions:

- Was the target group reached?
- What are barriers and facilitators to implementation as indicated by fidelity reviews and focus group interviews with service providers?

– What are barriers and facilitators to participation as indicated by follow-up surveys and individual interviews with participants?

Methods

The process evaluation used mixed methods in the effort to identify barriers and facilitators to implement IPS, and the interplay between intervention components [26, 27]. Its methodological structure is QUAN + qual, meaning that quantitative and qualitative data was collected simultaneously, but the starting point for the analyses was the quantitative data [28].

About the IPS trial

The IPS trial included an outcome evaluation, a process evaluation, and a cost/benefit analysis [25]. Participants were randomized to an intervention group receiving IPS in addition to treatment as usual (TAU), or to a control group receiving only TAU. Randomization was stratified by each pilot center. Results from the outcome evaluation showed that IPS was more effective than TAU, and the intervention group also showed improvements on the secondary outcomes of self-reported health and depressive symptoms, quality of life, and subjective health complaints [15]. The cost-benefit analysis showed that the intervention was not financially sustainable in the short term, but is likely to achieve this within a few years if the employment rate is sustained (ibid).

Process measures

The process evaluation was designed as a summative, and not a formative, evaluation, meaning that its purpose was to generate knowledge about the implementation process of a standardized intervention [26]. An overview of the process measures is provided in Table 1.

Reach describes whether the study population corresponded to the pre-defined target population for the intervention. *Barriers and facilitators* aim to identify problems as well as helpful factors in the implementation of and participation in the intervention, as reported by IPS specialists and intervention participants. *Fidelity* measures adherence to the IPS method from service providers, by using the IPS Fidelity Scale [9].

Table 1 Data sources of the selected process measures at participant and service provider level

Process measure	Data source
Participant level	
Reach/population characteristics	Baseline survey and Mini-National Neuropsychiatric Interviews (M.I.N.I)
Barriers and facilitators	6-month follow-up survey, individual interviews
Service provider level	
Barriers and facilitators	Focus group interviews with IPS specialists, and fidelity reviews from each center
Fidelity	IPS Fidelity Scale (IPS-25)

Study population

Data was collected from two populations: participants in the intervention group of the RCT and service providers.

Intervention participants

A total of 227 participants were randomized to the intervention group at inclusion, and 96 of these returned the 6-month follow-up questionnaire. Inclusion criteria for participants in the RCT were being in treatment for moderate to severe mental illness, having a desire to work, and understanding Norwegian well enough to respond to questionnaires. There were no significant differences between the intervention and control groups at baseline [15].

Service providers

Data from service providers was collected through fidelity reviews from each center and focus group interviews with the IPS specialist team at each center. Two focus groups consisted of three informants, and four groups consisted of five informants.

Data collection

Reach

Reach was measured through quantitative baseline survey data as well as results from the Mini-International Neuropsychiatric Interview (M.I.N.I), a short, structured diagnostic interview [29] which was conducted at inclusion.

Barriers and facilitators to participate in IPS

Data was collected through individual interviews with intervention participants, as well as items in the 6-month follow-up questionnaire. Informants were recruited based on their written consent in the 6-month follow-up questionnaire and were randomly selected from a computer-generated list of participants who reported to be "less satisfied" to "very satisfied" as indicated in the questionnaire. Twelve participants agreed to be interviewed. The interviews followed a semi-structured interview guide and lasted up to 20 min. Interviews were conducted by author KL and a research assistant. All participants who were interviewed signed an informed and written consent for this particular substudy. Items included in the 6-month follow-up survey were constructed for the current study and were not validated. Items included a list of statements concerning six proposed barriers and six proposed facilitators of participation (yes/no), which articulated aspects of IPS that

differed from ordinary work rehabilitation programs, or other aspects of the intervention that could possibly obstruct or enable participation for this target group. An open-ended response category was added under each list. Satisfaction with the IPS specialist was measured through the item “How satisfied are you with your IPS specialist?.” Perceived usefulness was measured through the question “How useful has it been for you to participate in IPS?” Response categories for each question ranged from 1 = very dissatisfied/not useful at all to 5 = very satisfied/useful.

Barriers and facilitators to implement IPS
Data was collected through focus group interviews with IPS teams, and fidelity reviews. IPS specialists and team leaders were asked to participate in interviews as a team, which were conducted by author KL at all six IPS centers. The interviews followed a semi-structured interview guide and lasted for approximately 1.5 h. The interview guide was developed by drawing on experiences from a previous project with high resemblance to the current and by assessing specifications in the governmental commission. Interviews were recorded on tape and transcribed before analyses. All informants were informed of the purpose of the interviews, that participation was voluntary, and of their right to withdraw at any time.

The fidelity reviews were carried out at each center approximately 1 year into the study period by a trained evaluator team who followed instructions in the IPS Fidelity Review Manual [6]. Low overall fidelity scores indicate implementation challenges, and low scores on single items indicate what those challenges are. The scrutiny of the IPS Fidelity scale enables a more fine-grained examination of possible implementation issues than general scales of program adherence. Fidelity measurements are therefore included as indicators of barriers and facilitators to implementation, complemented by focus group interview data.

Data analysis
To investigate reach, descriptive analyses were conducted on baseline data and M.I.NI. results, using SPSS 25 and Excel (2017).

Quantitative and qualitative data on barriers and facilitators were collated through the following steps, performed separately for each participant group: (1) quantitative data was analyzed, (2) qualitative data was analyzed, and (3) survey items or fidelity items that were particularly low or high were used as an indicator to select themes from the interviews that could further describe these issues. Lists of themes derived from the interviews are included in the supplementary material.

Barriers and facilitators to participate in IPS
Descriptive analyses were conducted on survey data using SPSS 25. To identify barriers and facilitators, results were interpreted by looking for frequently occurring responses in the lists of barriers and facilitators, or unevenly distributed responses to the satisfaction/usefulness items.

Qualitative data was analyzed through a deductive approach, using thematic analysis as described by Boyatzis [30] and Joffe and Yardley [31]. A coding scheme was constructed based on topics in the interview guide and expanded or revised according to recurring topics in the data. The interviews were studied repeatedly and categorized according to this scheme. The analysis focused on manifest content rather than latent phenomena [31], to facilitate bridging of the qualitative and the quantitative data [30]. The unit of analysis was sentences or shorter paragraphs where several sentences described the same topic. Author KL conducted the first round of analyses, and TF supplied and adjusted themes in the second round of analyses. The two authors agreed on the final themes to be included in the study.

Quantitative and qualitative results were collated through the steps described above, using quantitative findings as a lens to select themes from the qualitative results. Some interview themes contained descriptions that were specific to the Norwegian context; others lacked substance and coherence. These were not included in the subsequent analysis, but were described in the final report to the study commissioner [32].

Barriers and facilitators to implementation
The same analytic approach was used for the focus group interviews.

Fidelity reviews were summarized in an Excel table where mean, minimum, and maximum scores and disparities between high-performing and less-performing centers were calculated. Items with particularly low or high scores across centers 1 year into the study period were assumed to indicate implementation barriers or facilitators.

Results
Reach
The target group for the trial, as defined in the governmental commission of the study, were people in treatment for moderate to severe mental illness in secondary care. The diagnostic screening of participants at inclusion showed that 51% of the participants suffered from severe mental illness (psychosis or bipolar disorder) and 49% fulfilled criteria for moderate mental illness (primarily affective disorders). This indicates that the study population corresponds to the pre-defined target group.

An overview of study population characteristics is provided in Table 2.

The study population was relatively young (x = 35, SD 10.7) and education level was low. Nearly half of the participants had experienced violence, and one third had been involuntarily committed to a psychiatric hospital. Mean of previous years worked in main occupation was 7 (SD 7). The mean rating of health-related quality of life, measured by the EQ-5D visual analogue scale, was 58 (SD 18.3).

Table 2 Characteristics of the intervention group at baseline

Variable	%	*n*	Mean	SD
Age		185	35	10.7
Gender (female)	51	185		
Higher education	24	182		
Reading/writing disabilities	15	182		
Years of employment experience		154	7.4	7
Health-related quality of life (EQ-VAS; 0-100)		172	58	18.3
Functioning (WHODAS; 0-48)		179	22	14
Previously experienced violence	48	180		
Previously involuntarily committed	31	173		
Years with mental health complaints		141	10.8	9.2
Psychiatric diagnoses (M.I.N.I. Interviews)				
Recurrent depression	49	140		
Psychosis	41	142		
Anxiety	60	141		
Substance addiction	15	165		
Severe mental illness	51.4	146		
Moderate mental illness	48.6	146		

Barriers and facilitators to participate in IPS

Table 3 shows results from the barriers and facilitators to participation lists. Open-ended response categories were provided, but they did not generate additional barriers or facilitators.

Two of the most frequently cited facilitators among participants regarded the IPS specialist's role: 94% of respondents agreed with the statement "Knowing that the IPS specialist was available for me was helpful," while 81% agreed with the statement "The regular follow-up from the IPS specialist was helpful."

Responding to a separate item regarding the IPS specialist, 78% reported to be satisfied, while 13% reported to be dissatisfied. Nine percent reported to be neither dissatisfied nor satisfied (n = 78; x = 4 SD 1.11).

All over, participants were very happy with the role of the IPS specialist. Participant interviews gave further insight into the IPS specialist's role, emphasizing their availability, support, and consistent job focus. When talking about availability, informants emphasized that the IPS specialist was quick to respond and to express their availability:

> She is really good, really efficient. Supportive, calls and asks me to call back, to call on her spare time. If it's a good time it's a good time, if it's not a good time she calls me back up again. It's been really nice. (Informant 2)

> I think he's been really available, because even if he doesn't answer my call immediately, he calls me back up, he is always there for me if anything comes up. So yes…I feel I have received very, very good follow-up from him. So I am very happy. (Informant 8)

Some participants said that the IPS specialist "pushed" them to keep going with the job search, and some had been confronted with their lack of motivation. This resulted in taking a more active role in the job search:

> It wasn't a threat, but they said we can't help you if you're not interested. They deserved an honest answer to that. It was the best question I could have received, instead of them saying 'We're not wasting time on this...' I woke up. (Informant 10)

> It has been positive for me to start working, yes. But I do feel there is a small pressure and that I have to push myself to say yes to working. I am supposed to start working and not sit at home. And I did get a job, so maybe it's good that they push a little. (Informant 2)

One participant described how being listened to in the process was important:

> If he has come with a job suggestion and I have said that this is not for me, because I will not function well there, he has just put it away immediately, he is very accommodating like that. (Informant 4)

There were a few exceptions to the positive descriptions of the IPS specialist's role. Two of the informants who were less satisfied with the intervention described the interaction with the IPS specialist as challenging.

Another facilitator for participation indicated by survey data was the freedom to disclose or not: 93% of respondents agreed that "Being able to choose whether or not to be open about my illness" was helpful. The interviews indicated that for some participants, choosing to disclose expanded the possibilities for practical help in the job search:

Table 3 Percentage and number of respondents agreeing to the statements about facilitators and barriers

Facilitators for participation	Yes	*n*	Barriers for participation	Yes	*n*
It was helpful that progress was quicker than other vocational services	65%	77	Progress was made too quickly	13%	76
Knowing the IPS specialist was available was helpful	92%	77	It was too time-consuming	9%	77
The action steps along the way were specific, and this was helpful	79%	76	I had challenges with my IPS specialist	8%	76
Freedom of disclosure was helpful	92%	76	My illness was a barrier	43%	77
The support plan I made with the IPS specialist when I got a job was helpful	52%	64	IPS was not what I expected	17%	77
The regular follow-up from the IPS specialist in the job search was helpful	79%	72	Getting to the different places (to meet employers or IPS specialist)	9%	76

> Yes, it's very nice because the IPS specialist can call around for me, I have anxiety about talking on the phone sometimes. And she is with me in the conversations with employers so that I understand what is being said, and she can also inquire about salary. (Informant 2)

One participant reflected on the positive aspects of disclosing to potential employers:

> It might be that some employers think that they want to support it because it is kind of a good cause to help people get a job that maybe have a history of illness or have had problems, and because of that they can get a job. (Informant 7)

Most of the proposed barriers were not supported by participants. However, the most agreed-upon statement was "My illness was a barrier" (46%, n = 95). Considering the target group of the intervention, this number is not particularly high. Informants described illness factors mostly in the context of having the IPS follow-up tailored to their health condition. One in six participants agreed to the statement "IPS was not what I expected" (17%, n = 77). Examples of this were found in the interviews. While some participants were positively surprised by the intervention, others described being disappointed due to high expectations.

> I was promised employment within 6 weeks, and now I have waited for 13-14 months (...). I had expectations about follow-up from IPS specialist and close cooperation between my doctor, the District Psychiatric Center, and a permanent position with full salary. And none of it has happened. (Informant 6)

One informant stated that the follow-up was simply different from what he had expected regarding his own involvement:

> Uuuhm, but the only expectation I did have that turned out not to be correct was that I kind of thought they had some sort of obligation to help me find a job so I didn't have to do such an effort myself. But that was totally wrong. (...) It's not like I can nag them and say 'Hey, find me a job', it's more like they come alongside and back me up on the things I manage to do. (Informant 5)

Two items measuring satisfaction and perceived usefulness were included as indicators of barriers and facilitators to participation, as low scores on these measures could indicate poor quality in intervention delivery, and/or low engagement with the intervention among participants (Table 4). However, participants were overall satisfied with the intervention (n = 95; x = 3.95 SD 0.97) and also found it useful (n = 96; x = 3.96 SD 1.06).

Participant interviews provided further insight about this. Informants said that IPS had made them aware of their own competence and preferences. Most informants reported that IPS had increased the frequency of sending applications and that they had learned more about going to job interviews. They emphasized that the focus on employment had been central in the follow-up:

Table 4 Participants' satisfaction and perceived usefulness of the intervention

	%	*n*
General satisfaction (*n* = 78)		
Dissatisfied	1	1
Not very satisfied	9	7
A little satisfied	18	14
Pretty satisfied	37	29
Very satisfied	35	27
Usefulness (*n* = 78)		
Not useful at all	4	3
Not very useful	4	3
A little useful	24	19
Pretty useful	30	23
Very useful	39	30

> I haven't got a job offer, but now I apply for jobs in a different way. I have been on many interviews, so that has improved as a result of this follow-up (…). I learned how to write an application, about motivation, qualities…. (Informant 11)

> The first thing we did was to go over what kind of jobs I wanted, then we got my CV sorted out, how to write an application, and have everything ready for sending the application. (…) And then we went out into the job market. We went step by step, one thing after another, in the right order. (Informant 10)

Barriers and facilitators to implement IPS

Barriers and facilitators to implementation were examined using the IPS Fidelity Scale and focus group interviews with IPS teams. Results are presented in Table 5. All six centers had reached fair or good fidelity at this point, with scores ranging between 97 (see Table 5) and 109 (median 99.5), with 125 as the highest attainable score, and 74 as the cut-off score for being IPS. Single items were rated on a range from 1 to 5, where item scores 1–3 indicate no or poor implementation.

Items with low scores across centers were "Community-based services" (x = 1) and "Job development—frequency" (x = 2). To receive a top score on "Community-based services," the IPS specialists must spend 65% or more of their time outside the office, following up participants in their local area. This should be seen in relation to the item "Job development—frequency," indicating frequency of contact with employers in order to develop a broad employer network. The IPS specialists reported in the interviews that it had taken quite some time to develop and understand their role and that prioritizing tasks was demanding, as expressed in the following remarks:

Table 5 Center scores on each item, mean scores of centers, mean of lowest and highest performing centers, and total fidelity score for each center

IPS Fidelity Scale (IPS-25)	Mean all centers	Less performing centers				High-performing centers			
		Center 1	Center 2	Center 4	Mean	Center 3	Center 5	Center 6	Mean
Case load size	5.0	5	5	5	5.0	5	5	5	5.0
Exclusively vocational services	4.5	5	5	2	4.0	5	5	5	5.0
Vocational generalists	4.6	4	5	5	4.7	5	4	5	4.5
Integration of IPS with treatment team	3.6	5	2	2	3.0	4	5	4	4.2
IPS team contact with treatment team	2.5	2	3	3	2.7	3	1	3	2.3
State vocational rehabilitation agency is actively involved	4.3	3	5	5	4.3	5	4	4	4.3
IPS team forms a vocational unit	4.8	5	5	4	4.7	5	5	5	4.8
Supervisory role of IPS team leader	3.6	4	3	3	3.3	5	3	4	3.8
Zero exclusion of clients	3.3	3	4	3	3.3	3	3	4	3.3
Agency focus on work	2.6	2	3	3	2.7	3	2	3	2.5
Agency leadership support	3.5	5	4	3	4.0	3	2	4	3.0
Benefits counseling	4.8	4	5	5	4.7	5	5	5	5.0
Disclosure of disability to employers	4.8	5	5	5	5.0	5	4	5	4.5
Individualized assessment	4.7	5	5	5	5.0	4	4	5	4.3
Rapid search	3.7	3	5	3	3.7	3	3	5	3.7
Individualized job search	4.8	5	5	5	5.0	5	4	5	4.7
Job development, frequency	1.8	1	2	1	1.3	3	1	3	2.2
Job development, quality	3.7	2	1	4	2.3	5	5	5	5.0
Occupational diversity	4.6	5	5	5	5.0	4	4	5	4.2
Employer diversity	4.9	5	5	5	5.0	5	5	5	4.8
Competitive jobs	3.6	4	5	1	3.3	5	3	4	3.8
Individualized supports	4.5	4	5	5	4.7	3	5	5	4.3
Time-unlimited supports	4.1	5	5	4	4.7	4	3	4	3.5
Community-based services	1.2	1	1	1	1.0	1	1	2	1.3
Assertive outreach to clients	3.9	5	5	2	4.0	4	3	5	3.8
Total fidelity score		97	103	89		102	89	109	

> What we always have to challenge ourselves on is the use of time, considering time spent on internal meetings, participant meetings and employer contact. To obtain the optimal allocation of resources is pretty challenging.

> Being an IPS specialist is a pretty complex and difficult role, where you are a seller on the one hand, selling the best manpower there is, next you're a facilitator, an IPS specialist, and you can sometimes have a therapeutic approach at times when the therapist is not there. So, it is a very difficult role, and it takes time to be secure in it.

Looking at the two items measuring "Integration with health services," which is an important IPS principle, the mean score of the two items across centers is 3. According to the quality thresholds defined by the program developers, this is barely above the "Fair fidelity" threshold [9]. These items measure whether the IPS specialists are integrated in participant's health treatment team, attend weekly meetings, and ensure focus on employment in coordinating services for the participant.

On the positive side, all six centers received top scores on the items "Caseload size" and "Employer diversity," and nearly top score on "Disclosure of disability to employers." "Caseload size" means that the caseload for each IPS specialist does not exceed 20 participants, in order to ensure close follow-up in all phases of the job search. "Employer diversity" refers to the diversity of workplaces where participants get jobs. It is used as an indicator of whether IPS specialists are following participants' own preferences, and not only working within the limits of their existing employer network. Disclosure measures whether IPS specialists provide information to participants about pros and cons of disclosing about their illness to an employer.

The effect evaluation showed that three of the six pilot centers performed particularly well on employment outcomes [32], though there were no obvious reasons for this. The top three centers did, however, differ from the rest on two particular fidelity items. They averaged 1.3 points above the average of the less performing centers on the item "Integration of IPS with treatment team," which is considered a crucial intervention component [3]. The challenges related to this topic were addressed frequently in the interviews and are illustrated by the following remark:

> I think that it is the greatest success and the greatest challenge, that integration process (…), how we feel that they [treatment team] talk and feel concerning work.

However, the most striking difference was found between scores on "Job development—quality" (indicating quality of employer contact), where the top performing centers averaged 2.7 points above the average of the less performing centers. The issue of employer contact was addressed in the interviews, as exemplified in the following remarks:

> …the job development part, that's something that for most of us, and definitely for me, has been new and different, going out and being assertive both on the phone and in person (…) After a while I realized it's been written in the manual the whole time, that we really need to have our main focus on job development. We've made some changes now this fall where we have set targets and try to reserve days and times to do that.

Discussion

The results indicate that the target population for the intervention was reached and indicate certain barriers and facilitators to participate and to implement IPS.

Reach

Participants' characteristics correspond to the specification of the pre-defined target group. However, the original IPS target group is people with severe mental illness. No differences in employment outcomes between people with moderate vs severe mental illness were found in the outcome study [15]. This may indicate that IPS is effective also for an extended target group. Some interesting points can be drawn from the characteristics of the study population. First, although all participants are in treatment for moderate to severe mental illness, mean level of health-related quality of life is on the upper half of the scale. This shows the importance of subjective measures of health and well-being for this target group. It is also worth noticing that education level is relatively low, and the frequency of adverse events in the past (violence, having been involuntarily committed) is high in the population. In spite of these characteristics, the intervention proved effective on employment outcomes, and participants found it useful even though the majority did not obtain employment.

Barriers and facilitators to participate in IPS

The role of the IPS specialist was perhaps the clearest facilitating factor emerging from both survey and interview data. Participants emphasized the availability of the IPS specialist, their attentiveness to participant preferences, and pushing participants to take steps out of the comfort zone. The consistent employment focus in the follow-up was important for participants' motivation and learning. This is in line with a study identifying emotional support, practical assistance, and a client-centered approach as effective ingredients from the participant

perspective [33]. An ethnographic study of IPS specialist skills identified efficiency, good collaboration with partners, and developing egalitarian relationships with participants as skills differentiating successful specialists from less successful ones [34]. The findings in the current study aligns well with these results, but particularly highlights the consumer-oriented, empowering approach of the IPS specialists.

Another important facilitator, found in participant data as well as in fidelity reports, was the freedom of disclosure. The participants seemed to value the support and information regarding this topic. A previous study has found this item to correlate positively with employment outcomes [35].

The facilitating factors discussed above align well with the values of recovery ideology, which has inspired the development of IPS [4]. Central ideals, such as empowerment and functioning in valued roles are reflected in participants' reports, as well as being evident in the principles guiding the intervention.

This may partly explain why so many participants were very satisfied with the intervention and found it useful, despite the fact that at 18 months the majority (63%) had not obtained employment [15]. However, the outcome evaluation showed that intervention participants reported lower levels of self-reported psychological distress and somatic symptoms, and increased levels of functioning, quality of life, and well-being (ibid). Moreover, satisfaction and usefulness may reflect changes in participants' orientation towards ordinary employment, and that they have gained useful knowledge and self-esteem in the job search process, as indicated by a recent meta-ethnographic review [36].

Few participants agreed to the barriers presented. Less than half of the respondents agreed that their illness was a barrier, which may be explained by the individual tailoring of the intervention, as expressed in participant interviews.

Barriers and facilitators to implement IPS

The barriers to implementation as indicated by fidelity reviews and interview data represent untraditional approaches to providing vocational services and are all related to the role of the IPS specialist. *Providing community-based services* has been reported as a challenge in other IPS studies [37–39], as well as a facilitator for employment outcomes [40], and thus seems to be an important, but challenging component that may take some time to develop.

Succeeding with *job development* was also indicated by fidelity data as a challenging, but important component. Job development is a far more assertive approach than traditional employment services [41], which is characterized by using subsidized employment, sheltered employment, and work practice. The quality of job development efforts may indicate a make-or-break point for success [42, 43].

As for *integration with health services*, this is a core principle in IPS and indicated in the literature as crucial for successful implementation [3]. Barriers to integration seem to be rooted in structural barriers, cultural differences in institutions, and attitudes [36, 41, 44, 45].

Two facilitators are reflected in both populations in the current study, which also diverge from traditional follow-up. First, *disclosure* is often not a topic in traditional services, as the service provider usually makes the initial employer contact, directly or indirectly revealing participants' health issues. Second, *the IPS specialist* has the capacity to provide individualized follow-up due to a smaller caseload than in traditional services. Furthermore, s/he acts as a mediating link between the job seeker and the employer, through job matching and by increasing access to a variety of jobs. These facilitators enable individualized tailoring of the follow-up, which is likely to enhance participants' motivation and sense of autonomy, and thus may create sustainable workforce participation through a good job match.

Strengths and limitations

Strengths of the study are its structured and mixed methods approach, with defined measures. This has enabled a thorough and multi-faceted evaluation of the intervention and enabled an integration of quantitative and qualitative findings. Compared to most other IPS evaluations, it provides richer data material from which to draw conclusions and identify areas for future research.

One limitation pertains to the validity of the fidelity reviews. It is recommended that reviewers are independent [46], which they were not in this study. However, this does not seem to be uncommon [13, 47–49]. Moreover, some IPS specialists questioned the training of the evaluators in the initial phase. Another limitation lies in the participant interviews, as far more satisfied participants than dissatisfied ones agreed to be contacted, leading to selection bias. Finally, the steps taken to collate the quantitative and qualitative results served the purpose of distilling large amounts of data; however, performing these steps with an inductive approach would likely have emphasized other parts of the data, which readers should keep in mind.

Conclusions

Various facilitators and barriers to participate in and implement IPS were identified in the current study. For participants, the IPS specialist seemed to play a crucial role, as did the freedom to disclose or not. Barriers to participation were difficult to detect. One's illness was not seen as a barrier for most participants, which strengthens the legitimacy of offering IPS to this

population. Barriers to implement IPS included providing community-based services, employer contact, and integrating services, while facilitators to implementation included the fulfillment of the IPS specialist role, freedom of disclosure, and caseload size. Job development also seemed to be an important, but challenging component to implement. The novelty of the mentioned components in IPS may explain why they are challenging to implement, while clearly meeting a need among participants. As evidence on the effect of IPS increases, measures should be undertaken to enable a weighting of the different fidelity items [50], identifying crucial components of the intervention. This can facilitate more effective implementation of the intervention across contexts and possibly enhance its effect on employment outcomes.

Supplementary information

Supplementary information accompanies this paper at https://doi.org/10.1186/s43058-020-00083-9.

Additional file 1. Qualitative themes.

Abbreviations

IPS: Individual Placement and Support; TAU: Treatment as usual; WHO: World Health Organization

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Authors' contributions

All authors edited all manuscript drafts. TF drafted and conducted the quantitative data collection, drafted the manuscript, and contributed in the interview analyses. KL conducted and analyzed the interviews. SE was the PI and played a crucial role in the design of the study and data collection. FS contributed with expertise on supported employment and process evaluations. All authors read and approved the final manuscript.

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Availability of data and materials

The datasets generated in the study are not publicly available due to restrictions imposed on data sharing by the Norwegian Social Science Data Services.

Ethics approval and consent to participate

The study complied with the Helsinki Declaration. The process evaluation was part of an outcome evaluation, described in a published protocol [25], which was approved by the Norwegian Social Science Data Services (project no. 34989, approved on 4 October 2013). Written informed consent was obtained from all patients included in the study. Service providers received written information, and verbal consent was given (verbal consent was sufficient at the time as no personal or identifying information was collected).

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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Predictors of employment in people with moderate to severe mental illness participating in a randomized controlled trial of Individual Placement and Support (IPS)

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Abstract

Background: Many people with moderate to severe mental illness have a desire to obtain ordinary employment. To aid further development of health and social services for this group, the aim of this study was to examine candidate modifiable and prognostic markers of employment, and moderating effects of group allocation in a clinical trial.

Method: The sample consists of 327 patients in treatment for mental illness, randomized to Individual Placement and Support (IPS) or treatment as usual (TAU) as part of a clinical trial. Psychosocial and demographic baseline characteristics were included as predictors in log binary regression analyses with employment 18 months after inclusion as the outcome, and group allocation as the moderator (IPS or TAU).

Results: Directive emotional support and non-directive instrumental support seemed to positively predict employment, but effects were small. Involuntary hospitalization seemed to be a strong negative predictor of employment. Group allocation did not moderate any main effects.

Conclusion: Interpretation of the findings suggest that attention should be given to certain aspects of health and social services provided to this target group, and in particular the effect of receiving appropriate types of social support. The findings are novel because social support and involuntary hospitalization do not seem to have been included in previous predictor studies. The results from this study identify new topics for research on employment outcomes for this population.

Keywords

IPS, randomized controlled trial, mental illness, employment, predictors, involuntary hospitalization

Background

Clinical practice in mental health care has gradually broadened its approach from strictly targeting symptoms, clinical status and expression, to enhancing recovery through participation and integration in society (Saxena et al., 2013; Slade, 2010). Employment is a major arena for the recovery process and for participation in society for adults, and there is substantial evidence that employment can improve functioning, finances and mental and general health (Bond et al., 2001; Drake & Whitley, 2014; Kukla et al., 2012; Rueda et al., 2012). Poor job quality, on the other hand, may deteriorate health (Welsh et al., 2016), even to the same level as being unemployed (Broom et al., 2006; Butterworth et al., 2011).

Individual Placement and Support

The vocational rehabilitation service Individual Placement and Support (IPS) is a manual-based method within the Supported Employment (SE) paradigm, seeking to assist people with severe mental illness to obtain ordinary employment (Drake & Becker, 1996). IPS is based on eight principles: obtaining competitive employment, rapid job search, systematic job development, integrated services, benefits planning, zero exclusion, time-unlimited support and worker preferences (Becker & Drake, 2003). The method has proven consistently more effective than other vocational rehabilitation efforts and treatment as usual (TAU) for obtaining employment, across many different contexts (Frederick & VanderWeele, 2019). Although more

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effective than other vocational rehabilitation efforts, in many studies, the majority of participants receiving IPS remains unemployed at the time of follow-up (Heslin et al., 2011; Oshima et al., 2014; Reme et al., 2019; Suijkerbuijk et al., 2017; Viering et al., 2015). Knowledge about predictors across the individual, organizational and contextual domains might enhance the effect of IPS. This study aims to identify individual characteristics that may affect employment outcomes for patients with mental illness receiving IPS or usual care.

Predictors of employment in previous studies

Research on predictors of employment for people with mental illness has mainly focused on demographic traits, illness variables and previous work experience. For demographic predictors, younger age (Campbell, 2007; Corbière et al., 2017; Wewiorski & Fabian, 2004) and higher education (Campbell, 2007; Cook et al., 2001; Nordt et al., 2007; Tse et al., 2014) are generally found to positively predict employment, although some studies have failed to establish these relationships (Catty et al., 2008; Corbière et al., 2011; Sanchez, 2018). Studies investigating illness variables (mainly symptom severity, diagnoses and hospitalizations) vary in their conclusions; however, symptom severity generally tends to be a negative predictor of employment (Biegel et al., 2010; Tse et al., 2014), while the effect of diagnoses vary from positive in a few studies (Cook et al., 2001; Nordt et al., 2007), to negative (Biegel et al., 2010), to no association in other studies (Campbell et al., 2010; Catty et al., 2008; Michon et al., 2005). Having been admitted to a psychiatric hospital seems to be the most consistent negative predictor of employment among commonly measured illness-related variables (Cook et al., 2001; Nordt et al., 2007; Tse et al., 2014). The effect of involuntarily hospitalization on employment outcomes does not seem to have been investigated in previous studies.

Social support is another variable not commonly included in studies investigating predictors of employment, although it has shown consistent positive associations with life outcomes such as positive health behavior, motivation and achievement (Cirik, 2015; Verheijden et al., 2005) and negative associations with morbidity and mortality (Cohen et al., 2000). Social support can refer to an individual's social integration as well as the type or function of the support provided (Wills & Shinar, 2000). Fisher and colleagues (2004) distinguish between four types of social support measured along the dimensions directive/non-directive and emotional/instrumental which are included in this study. Satisfaction with the support usually depends on whether the type of support matches the recipient's situation (Horowitz et al., 2001).

It is reasonable to assume that employment predictors will differ between a group of people with mental illness participating in an SE program and a general group of people with mental illness, given that the criteria for participation in IPS are based on participants' expressed desire to obtain employment (Drake, 1998). Studies comparing predictors of employment between SE and general populations have identified more or less the same predictors; however, the associations seem to be weaker in the SE population (Campbell, 2007; McGurk & Mueser, 2004). One study analyzed data from four randomized controlled trials (RCTs) of IPS and found different predictors in the control group and the IPS group (Campbell et al., 2010). It is possible that part of the effectiveness of IPS occurs by enhancing the effect of positive predictors on employment outcomes and/or by mitigating the effects of negative predictors (Campbell et al., 2010; McGurk & Mueser, 2004). As the intervention is not based on psychological or intervention theories, not much is known about the underlying mechanisms facilitating its effects. Based on this, testing for effect modification of group allocation is a secondary aim in this study.

Variables under study

The predictors in the study include age, level of education, four types of social support, symptom severity of depression and anxiety, and having been involuntarily committed to a psychiatric hospital. Involuntary hospitalization and social support do not seem to have been investigated for this purpose in previous studies, while the other variables have produced somewhat conflicting results. Investigating predictors of employment in this study population may increase the knowledge base of what traits or characteristics might need particular attention during follow-up. Moreover, moderating effects of group allocation (IPS vs. TAU) may also indicate whether IPS enhances the positive effect or ameliorates the negative effect of certain predictors. The aim of the study is therefore twofold: to investigate the effect of potential predictors on employment outcomes, as well as investigate whether group allocation moderates these effects. This may increase our understanding of modifiable predictors for employment in this population and give indications of how IPS works to help participants obtain employment.

Materials and methods

The data material used in the study is from an RCT comparing TAU to IPS for individuals in treatment for moderate to severe mental illness (Reme et al., 2019). IPS was implemented in six centers across Norway. Inclusion started on 1 October 2013 and ended 31 October 2014. The study protocol (Sveinsdottir et al., 2014) and the outcome evaluation (Reme et al., 2019) are available elsewhere. The data used in this study include Mini-International Neuropsychiatric Interview (M.I.N.I.) psychiatric interviews conducted at inclusion, data from baseline questionnaires and register data on employment status 18 months after inclusion.

Ethics and consent

The study was submitted to the Norwegian Regional Ethical Committee (REC; 28 May 2013; project no. 2013/960); however, since the main outcome of the study (employment) was not a health measure, it was not considered to fall under the Health Research Act (Ministry of Health and Care Services, 2008). The project was referred to the Norwegian Social Science Data Services, where permission was granted (4 October 2013; project no. 34989). Informed consent was signed by each participant in the study. The study complied with the Helsinki Declaration.

Population

Inclusion criteria were that participants (a) were in treatment in psychiatric health care, (b) were not in employment but had a desire to obtain this and (c) had sufficient language skills to understand and respond to the questionnaires. The study population consists of 327 participants who at the time of inclusion were undergoing treatment for moderate to severe mental illness (184 randomized to the treatment group, 143 randomized to the control group). Originally, 408 participants were included in the trial (227 randomized to the treatment group, 181 randomized to the control group) (Reme et al., 2019). However, registry data and supplemental information obtained at a later point showed that 81 participants were either registered as employed at baseline or had obtained employment at 18 months through the use of wage subsidies. As the former violated the inclusion criteria of no employment, and the latter violated the IPS principle of ordinary employment, participants registered with employment at baseline were excluded from the study, while participants who obtained employment through wage subsidies were not treated as employed in the analyses ($n=9$).

Mean age in the study population was 35 ($SD=$ 10.72) years, and 50% were female. The M.I.N.I., a brief and structured screening interview (Sheehan et al., 1998), was conducted on 248 (76%) of the participants at inclusion to screen for psychiatric diagnoses. The intention was to conduct M.I.N.I. interviews with each participant through local staff, but this was not feasible due to various practical issues. There were no indications of systematic patterns in missing interviews. A total of 52% of participants were classified as having moderate mental illness (mainly anxiety), while 48% were classified as having severe mental illness (mainly psychotic disorders and severe depression).

Treatment and control groups

The treatment group received IPS in addition to mental health treatment, and the control group received high-quality care as usual, in addition to mental health treatment. This implied being prioritized for a spot in a work-focused rehabilitation program offered by their local welfare office, such as ‘work with assistance’ or traineeship in an ordinary or sheltered business. All IPS centers participating in the study obtained fair or good fidelity during the study period according to the IPS Fidelity Scale (Fyhn et al., 2020; Kim et al., 2015).

Recruitment and randomization

Participants were patients in secondary care, recruited from district psychiatric hospitals and local welfare administration offices. Potential participants were given thorough information about the study aim, what randomization means and why it is necessary to achieve the study aim, implications of participation and data protection. Eligible participants who wished to participate signed a consent form and filled out the baseline questionnaire. Participants were randomly allocated to the intervention or control group by a data-generated randomization list. The first 5 months the randomization ratio was 2:1 in favor of the intervention group to ensure that full capacity was reached at the IPS centers. When the inclusion period was over, 56% had been randomized to the intervention group, and 44% to the control group. Follow-up of the intervention group commenced subsequently. Control participants were referred to their caseworker at their local welfare office.

Predictor variables

Predictor variables measured at baseline included age, education, social support, symptoms of anxiety and depression and whether one had experienced involuntary hospitalization.

Sociodemographic variables. The variables age and education level were measured through single items in the baseline questionnaire. Education was dummy-coded such that 0 = highest completed education was lower secondary (10 years) and 1 = highest completed education was high school or higher education.

Social support. Social support was measured by Fisher’s ‘Non-directive and directive support survey’ (Fisher et al., 2004). The 16-item version was used, which consists of the subscales non-directive instrumental support, directive instrumental support, directive emotional support and non-directive emotional support. Directive support is offered when the support provider assumes responsibility for tasks or choices on the behalf of the recipient (Stewart et al., 2012). Conversely, for non-directive support, the support provider seeks to cooperate with the recipient. Instrumental support offers practical assistance, while emotional support is directed at thoughts and feelings.

The respondent chooses one person in their life whom they complete the survey with reference to (e.g., doctor, family member, friend). Items are rated in reference to

Table 1. Baseline scores on variables under study.

Variable	*N*	%	*M*	*SD*
Age (*continuous*)	327		35.0	10.72
Lower secondary (10 years) as highest education level (*categorical*)	310	33		
Social support non-directive emotional, SSNE (*continuous*, 0–20)	300		16.0	3.56
Social support directive emotional, SSDE (*continuous*, 0–20)	300		12.2	3.72
Social support non-directive instrumental, SSNI (*continuous*, 0–20)	300		13.7	4.04
Social support directive instrumental, SSDI (*continuous*, 0–20)	300		12.3	4.19
Hospital Depression and Anxiety Scale (*continuous*, 0–42)	321		15.6	7.66
Involuntary hospitalization (*categorical*)	312	30		

No differences were found between the intervention and control groups at baseline.

how typical the described behavior is for the reference person, on a scale from 1 = *not at all typical* to 5 = *very typical*. Example items are [the reference person] ‘Is available to talk anytime’ (non-directive emotional), ‘Pushes you to get going on things’ (directive emotional), ‘Takes charge of your problems’ (directive instrumental) and ‘Cooperates with you to get things done’ (non-directive instrumental).

Illness-related variables. Anxiety and depression symptoms were measured through the Hospital Anxiety and Depression Scale (HADS), which consists of seven items measuring depression symptoms and seven items measuring anxiety symptoms (Bjelland et al., 2002; Zigmond & Snaith, 1983). The responses are coded 0 to 3 according to the direction of the item. Examples of statements are ‘I feel tense or “wound up”’ (anxiety) and ‘I still enjoy the things I used to enjoy’ (depression). The sum score variable for HADS was used in the analysis.

Involuntary hospitalization (yes/no) was measured by the item ‘Have you ever been hospitalized involuntarily?’

Scores on predictor variables measured at baseline are presented in Table 1. For social support, approximately 40% of respondents referred to a health or social worker, while the rest were evenly distributed on the categories ‘partner’, ‘close family member’ or ‘other’.

Outcome variable

The outcome variable was employment status at 18 months, as measured by the Norwegian Work and Welfare Administration’s (NAV) State Register of Employers and Employees (SREE). The variable was coded 1 for registered employment, and 0 for no registration of employment. The register is based on employers’ monthly registration of start and finish dates for their employees and includes all forms of employment assumed to exceed 1,000 NOK per year (app. 100 EUR). Jobs yielding smaller earnings than this are not registered as employment. The register provides an objective data source for the main outcome with no loss to follow-up, as compared to self-report. An 18-month time frame was chosen because the median length of follow-up for the IPS participants was 15 months, and because 18 months was assumed to be a more reliable indicator of sustainable workforce attachment than a shorter observation period.

Statistical analyses

Main effects and effect modification were assessed in individual log binary regression analyses using SPSS 25. Continuous variables were centered and analyses were bootstrapped. Listwise deletion was used. Multi-collinearity was assessed prior to the analyses. Dichotomous variables were coded such that absence of a characteristic was coded 0 (reference category), and presence of a characteristic was coded 1.

Results

Directive emotional and non-directive instrumental support seemed to positively predict employment, while involuntary hospitalization seemed to negatively predict employment. Results from the regression analyses are presented in Table 2.

The results indicate that for every unit increase on the social support scales, the odds of being employed at 18 months slightly increased; however, the effect sizes are very small, and interpretation should be made with caution. As for involuntary hospitalization, the results indicate that participants who had experienced this had 77% less likelihood of being employed at 18 months compared to those who had not been involuntarily hospitalized. None of the interaction terms included in the models were significant.

Discussion

The aim of the study was to identify predictors of employment in a study population of patients with moderate to severe mental illness, who had an expressed desire to obtain ordinary employment. Furthermore, the aim was to identify whether group allocation modified these effects.

Table 2. Results from binomial regression analyses.

Predictor variable	*B*	*SE*	χ^2	RR	*p*	95% CI
Age (*continuous; n* = 327)	−0.03	0.02	2.6(1)	0.97	0.107	[0.94, 1.00]
Highest completed education (*categorical, n* = 310)[a]						
Upper secondary (13 years of school) or higher education	0.59	0.47	1.57(1)	1.18	0.210	[0.72, 4.49]
Social support non-directive emotional, SSNE (*continuous, n* = 300)	0.12	0.07	3.04(1)	1.13	0.081	[0.99, 1.30]
Social support directive emotional, SSDE (*continuous, n* = 300)	0.15	0.05	8.16(1)	1.16	**0.004****	[1.05, 1.29]
Social support non-directive instrumental, SSNI (*continuous, n* = 300)	0.10	0.05	3.87(1)	1.11	**0.049***	[1.00, 1.23]
Social support directive instrumental, SSDI (*continuous, n* = 300)	0.08	0.05	3.24(1)	1.09	0.072	[0.99, 1.19]
Hospital Anxiety and Depression Scale, HADS (*continuous, n* = 321)	0.31	0.02	1.71(1)	1.03	0.191	[0.99, 1.08]
Involuntary hospitalization (*categorical, n* = 312)	−1.48	0.72	4.3(1)	0.23[b]	**0.038***	[0.06, 0.92]

Regression coefficient, standard error, Wald chi-square (*df*), risk ratio (RR), *p* value and 95% confidence interval for each predictor.
$^*p < 0.05$ $^{**}p < 0.01$
SE: standard error; CI: confidence interval.
[a]Reference category: Lower secondary. [b]Inverted value.

The results indicate that directive emotional support and non-directive instrumental support positively predicted employment at 18 months follow-up, while having been involuntarily hospitalized was a negative predictor of employment. No moderating effects of group allocation could be detected.

Although the effects of social support on employment are small, it is worth noting that the two types of support standing out in the results are diametrically opposite. The findings suggest that directive emotional support, which is relational in nature, and non-directive instrumental support, which is practical in nature, may both benefit this target group in their search for employment. Previous studies of these different types of support suggest that non-directive support in particular has positive associations with various health-related behaviors, individual outcomes and workplace outcomes (Fisher et al., 1997, 2004; Stewart et al., 2012). Although directive support has shown detrimental effects on health and well-being, there are studies indicating that directive support can be beneficial for recipients in a vulnerable or acute situation (Fisher et al., 1997; Gabriele et al., 2011). The findings in this study seem to support this notion, as participants in the study were all in treatment for moderate to severe mental illness, and struggling with their workforce attachment. Studies in similar populations have found job search activities to be associated with obtaining employment (Corbière et al., 2011, 2017), and non-directive instrumental support may play a part in facilitating such activities, for example, through providing practical guidance on writing a CV, search strategies, the job interview and so on. It is noteworthy that the social support variables measure support provided by one specific person (such as a general practitioner or a family member), and is not a measure of general perceived support from one's social network, or degree of social integration. This suggests that one trustworthy person in a patient's life can have an impact on this outcome. Social support does not seem to have been previously studied as a predictor for obtaining employment, and the differentiation between different types of support should be included in future studies to increase our understanding of its function for this target group on several life outcomes. This can in turn support the development of purposeful social and health practices for this group, including understanding the role of significant others in a patient's life.

Involuntary hospitalization seems to be a strong negative predictor of employment. Although it does not seem to have been included in previous studies, it does seem like hospitalizations with no specifications of voluntariness is a consistent negative predictor of employment (Cook et al., 2001; Nordt et al., 2007; Russinova et al., 2018). In this study, a multiple regression model examining possible confounding with anxiety and depression was tested, but was not significant, indicating that its association with employment is unique. There are no data on frequency or time passed since the involuntary hospitalization, meaning that its association with employment holds regardless of these variations. Studies exploring first-person accounts of involuntary hospitalizations find that patients express feelings of disempowerment, loss of autonomy, self-stigma and lack of involvement during commitment and treatment (Katsakou et al., 2012; Murphy et al., 2017; Nyttingnes et al., 2016; Rusch et al., 2014). The long-term effects of these experiences are unknown, but considering the current findings, it may be hypothesized that the experience increases self-stigma that negatively affect the search for employment, for example, through helplessness and low self-efficacy (Corrigan et al., 2009). Providers of vocational services might be able to identify and ameliorate the individual effects caused by involuntary hospitalization, for example, through a client-centered approach and active participation.

The other results of the study are less novel, yet important as they replicate findings in previous studies, and also support a broad approach to including this target group in

work rehabilitation efforts by not excluding participants based on diagnoses. Symptoms of depression and anxiety, age and level of education did not predict employment in this study. Previous studies have generally found negative associations between illness symptoms and employment outcomes (Biegel et al., 2010; McGurk & Mueser, 2004; Tse et al., 2014), but findings in this study do not confirm this association. This could be due to power issues or it could simply be that these symptoms as measured through HADS do not have a negative effect on employment for this population. The lack of association between symptoms and employment in this study corresponds well with a recovery perspective, where illness in itself is not a barrier for seeking employment, as it does not necessarily hamper work functioning nor motivation to work (Anthony, 1993). The finding is also in line with the rationale behind the non-exclusion principle in IPS, stating that severity of illness or diagnosis is not a reason for exclusion from the program (Becker & Drake, 2003).

Strengths and limitations

One strength of the study is that its outcome measure is based on register data rather than self-report, ensuring an objective data source with no loss to follow-up. The randomized controlled design enabled an examination of the moderating effect of group allocation on the association between predictors and employment outcomes. The study population is sufficiently large to generalize the main effects of the regression analyses to other populations of people with moderate to severe mental illness who are motivated to find ordinary employment. However, it was not large enough to provide sufficient power to the moderation analyses. Studies with larger subgroups might be able to detect differences in main effects between IPS and control groups should they exist and increase our knowledge about how IPS is effective in facilitating ordinary employment for people with moderate to severe mental illness. Another limitation is that the associations of the predictors with employment are bound up with the time frame of the investigation, which is 18 months from baseline. The results might differ for longer or shorter observation periods, which may be investigated in the planned follow-up studies of the same population. Although there is a risk of selection bias, the external validity of the trial was strengthened by the fact that it was a pragmatic trial studying an intervention under real-life conditions.

Conclusion

The aim of the study was to investigate predictors of employment in a population diagnosed with and in treatment for moderate to severe mental illness and to investigate whether group allocation moderated these relationships. The results showed that directive emotional support and non-directive instrumental support seemed to positively predict employment status at 18 months, while involuntary hospitalization negatively predicted employment. None of these variables seem to have been studied as predictors of employment in this target group before. Age, education, symptom severity and non-directive emotional and directive instrumental support did not seem to be associated with employment outcomes. Group allocation did not moderate any main effects in this study. Future studies aiming to improve our understanding of effective health and social services for this target group should further explore the role of social support and involuntary hospitalization, to extend the findings in this study. As effect sizes for social support were small, these findings should be interpreted with caution, and future research should attempt to replicate and expand them.

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IV

Appendices

1. Letter of exemption from Regional Committee for Medical and Health Research Ethics, Western Norway (Norwegian)
2. Approval from Norwegian Social Science Data Services (Norwegian)
3. Information and consent form to participate in the IPS trial (Norwegian)
4. 6-month follow-up questionnaire IPS trial, intervention participants (English)
5. Interview guide IPS participants (English)
6. Interview guide IPS teams (English)
7. Qualitative themes from interviews (English)
8. Template for Intervention Description and Replication (TIDieR) Checklist (English)
9. Baseline questionnaire IPS trial (English)
10. Vignette character descriptions and randomized vignette blocks (English)

REK
REGIONALE KOMITEER FOR MEDISINSK OG HELSEFAGLIG FORSKNINGSETIKK

Region:	Saksbehandler:	Telefon:	Vår dato:	Vår referanse:
REK nord			01.07.2013	2013/960/REK nord
			Deres dato:	Deres referanse:
			28.05.2013	

Vår referanse må oppgis ved alle henvendelser

Silje Endresen Reme

2013/960 Effektevaluering av Individuell Jobbstøtte (IPS)

Vi viser til søknad om forhåndsgodkjenning av ovennevnte forskningsprosjekt. Søknaden ble behandlet av Regional komité for medisinsk og helsefaglig forskningsetikk (REK nord) i møtet 20.06.2013. Vurderingen er gjort med hjemmel i helseforskningsloven § 10, jf. forskningsetikklovens § 4.

Forskningsansvarlig: Uni Research AS
Prosjektleder: Silje Endresen Reme

Prosjektleders prosjektomtale:
Om lag 1/3 av norsk uførepensjon gis på grunnlag av psykiske lidelser og atferdsforstyrrelser, og arbeidsrettede tiltak for denne gruppen har i hovedsak omfattet arbeid med bistand eller arbeidspraksis i skjermet virksomhet. Studien er en evaluering av Individuell jobbstøtte (IPS), et innovativt tiltak med fokus på rask retur til ordinært lønnet arbeid for personer med moderate til alvorlige psykiske lidelser. Metodikken er godt dokumentert fra internasjonale studier, men har ikke vært utprøvd i Norge i rendyrket form for denne gruppen. Evalueringen er utformet som en randomisert kontrollert studie i 6 norske fylker. Den innebærer en effektevaluering, prosessevaluering og en kost/nytte-analyse, der IPS sammenliknes med ordinære arbeidsrettede tiltak på en rekke utfallsmål relatert til arbeidsdeltakelse, psykisk helse og livskvalitet. Prosjektet vil gi evidensbasert kunnskap om rehabilitering av en viktig pasientgruppe som står i fare for å bli ekskludert fra det norske arbeidsmarkedet.

Vurdering

Framleggingsplikt
De prosjektene som skal framlegges for REK er prosjekt som dreier seg om "medisinsk og helsefaglig forskning på mennesker, humant biologisk materiale eller helseopplysninger", jf. helseforskningsloven (h) § 2. "Medisinsk og helsefaglig forskning" er i h § 4 a) definert som "virksomhet som utføres med vitenskapelig metodikk for å skaffe til veie ny kunnskap om helse og sykdom". Det er altså formålet med studien som avgjør om et prosjekt skal anses som framleggelsespliktig for REK eller ikke.

Prosjektet er en evaluering av individuell jobbstøtte (IPS) med fokus på rask retur til ordinært lønnet arbeid og går ut på å evaluere effekten av individuell jobbstøtte for personer med moderate til alvorlige psykiske lidelser med hensyn til om de forblir i ordinært lønnet arbeid eller ikke. Prosjektet vil ikke fremskaffe ny kunnskap om sykdom eller helse som sådan og skal således ikke vurderes etter helseforskningsloven.

Vedtak
Etter søknaden fremstår prosjektet ikke som et medisinsk og helsefaglig forskningsprosjekt som faller innenfor helseforskningsloven. Prosjektet er ikke fremleggingspliktig, jf. helseforskningslovens § 10, jf.

Besøksadresse:
MH-bygget Universitetet i Tromsø 9037 Tromsø

Telefon: 77646140
E-post: rek-nord@asp.uit.no
Web: http://helseforskning.etikkom.no/

All post og e-post som inngår i saksbehandlingen, bes adressert til REK nord og ikke til enkelte personer

Kindly address all mail and e-mails to the Regional Ethics Committee, REK nord, not to individual staff

forskningsetikkloven § 4, 2. ledd.

Klageadgang
Du kan klage på komiteens vedtak, jf. forvaltningslovens § 28 flg. Klagen sendes til REK nord. Klagefristen er tre uker fra du mottar dette brevet. Dersom vedtaket opprettholdes av REK nord, sendes klagen videre til Den nasjonale forskningsetiske komité for medisin og helsefag for endelig vurdering.

Med vennlig hilsen

May Britt Rossvoll
sekretariatsleder

Kopi til: helse@uni.no; post@uni.no

Norsk samfunnsvitenskapelig datatjeneste AS
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Vår dato: 04.10.2013	Vår ref: 34989 / 2 / MSS	Deres dato:	Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 30.07.2013. All nødvendig informasjon om prosjektet forelå i sin helhet 17.09.2013. Meldingen gjelder prosjektet:

34989	*Effektevaluering av Individuell Jobbstøtte (IPS)*
Behandlingsansvarlig	*Uni Research AS, ved institusjonens øverste leder*
Daglig ansvarlig	*Silje Endresen Reme*

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, http://www.nsd.uib.no/personvern/meldeplikt/skjema.html. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, http://pvo.nsd.no/prosjekt.

Personvernombudet vil ved prosjektets avslutning, 31.12.2025, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Vigdis Namtvedt Kvalheim

Marie Strand Schildmann

Kontaktperson: Marie Strand Schildmann tlf: 55 58 31 52
Vedlegg: Prosjektvurdering

Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.

Personvernombudet for forskning

Prosjektvurdering - Kommentar

Prosjektnr: 34989

Studien er en evaluering av Individuell jobbstøtte (IPS), et innovativt tiltak med fokus på rask retur til ordinært lønnet arbeid for personer med moderate til alvorlige psykiske lidelser. Prosjektet gjennomføres som et samarbeid mellom Uni Research AS og Helsedirektoratet, på oppdrag fra Arbeids- og velferdsdirektoratet. Uni Research AS er behandlingsansvarlig.

I forbindelse med prosjektet gjennomføres det en prosessevaluering. Det foretas 5 ulike former for intervju av jobbspesialister, ledere, samarbeidspartnere og mottakere av IPS-tilbudet. I forbindelse med intervju av jobbspesialister, samarbeidspartnere og ledere, innhentes utelukkende opplysninger knyttet til tilbud og prosess. Det innhentes ikke opplysninger om brukere/klienter/pasienter. I tilleg gjennomføres en spørreskjemaundersøkelse blant personer som er under behandling for moderate til alvorlige psykiske lidelser, alene eller i kombinasjon med avhengighetsproblematikk, enten i spesialist- eller primærhelsetjenesten, og som ønsker å fungere i ordinært lønnet arbeid. Hoveddelen av deltakerne til spørreundersøkelsen vil bli rekruttert fra ulike behandlingsteam tilknyttet Distriktspsykiatrisk senter (DPS). Noen deltakere vil rekrutteres fra NAV eller andre kommunale tjenester, men de vil likevel være eller bli tilknyttet et behandlingsteam ved deltakelse.

De som velger å delta i spørreundersøkelsen trekkes tilfeldig ut til en av to grupper: Gruppe 1 får tilbud om bistand til å komme i jobb ved det lokale NAV-kontoret i tillegg til oppfølgingen de har fra sin behandler. Gruppe 2 får tilbud om individuell jobbstøtte som innebærer oppfølging fra en jobbspesialist i tillegg til oppfølgingen de har fra sin behandler. Som deltaker i prosjektet blir de bedt om å besvare spørreundersøkelsen ved innrullering, samt etter 6 og 12 mnd.

I tillegg gjennomføres det 12-15 telefonintervju med brukere for å få utfyllende kunnskap om erfaringene med tiltaket.

Personvernombudet finner informasjonsskrivene tilfredsstillende i henhold til personopplysningsloven, men ber om at det utarbeides egne informasjonsskriv til samarbeidspartnere og nøkkelinformanter. Ombudet ber om at informasjonsskrivene sendes oss innen det opprettes kontakt med utvalget.

Det vil i prosjektet bli registrert sensitive personopplysninger om helseforhold, jf. personopplysningsloven § 2 nr. 8 c).

Qualtrics er databehandler for prosjektet. Personvernombudet forutsetter at det foreligger en databehandleravtale mellom Qualtrics og Uni Research AS for den behandling av data som finner sted, jf. personopplysningsloven § 15. For råd om hva databehandleravtalen bør inneholde, se Datatilsynets veileder på denne siden: http://datatilsynet.no/verktoy-skjema/Skjema-maler/Databehandleravtale---mal/

Opplysningene fra spørreskjemaundersøkelsene skal kobles mot opplysninger om yrkesaktivitet, tiltak, trygder og stønader fra NAV sine registre, bruk av spesialisthelsetjenester fra Norsk Pasientregister, samt

arbeidsinntekt, økonomisk sosialhjelp og utdanning fra Statistisk sentralbyrå. Utvalget får tilfredsstillende informasjon om dette og samtykker til registerkoblingene ved å delta i undersøkelsen.

Registerkoblingene er ikke vurdert av Personvernombudet i denne omgang, da vi avventer tilbakemelding fra Rådet for bioteknologi og helserett (Helsedirektoratet) vedrørende tolkningen av NPR-forskriften og muligheten for å unnta fra konsesjonsplikt etter personopplysningsforskriften § 7-27 når det gjelder kobling og utlevering av NPR-data til forskningsformål. Det er i denne forbindelse tatt kontakt med Datatilsynet, og forsker er gitt anledning til å dele opp prosjektet slik at intervjuundersøkelse og spørreskjemaundersøkelse kan igangsettes. Så snart det foreligger en avklaring av konsesjonsspørsmålet vil koblingen til registeropplysningene kunne gis et behandlingsgrunnlag. Ombudet presiserer at registerstudien ikke må igangsettes før behandlingsgrunnlag foreligger.

Med tanke på at ombudets tilrådning av spørreundersøkelsen og intervjuundersøkelsen sendes i kopi til Datatilsynet, følger en kortfattet beskrivelse av hvordan koblingen av opplysninger fra de ulike undersøkelsene vil gjennomføres: For de personene som deltar i tiltaket vil opplysningene fra Norsk pasientregister, SSB og Nav bli koblet sammen ved hjelp av fødselsnummer. Koblingen vil bli utført av SSB på grunnlag av en tilsendt liste over deltakernes fødselsnummer og løpenummer i spørreundersøkelsen. SSB erstatter fødselsnummeret med et løpenummer og oppbevarer koblingsnøkkelen, før de koplede data blir returnert til Uni Research. Deretter kan data fra spørreundersøkelsen koples på ved hjelp av løpenummeret i spørreundersøkelsen. Koblingsnøkkelen som knytter ID-nummer med personopplysninger vil bli oppbevart hos forskningsgruppen ved Uni Research i låsbart og brannsikkert skap med tallkode. Innsamling av data i papirformat oversendes til Uni Helse hvor de legges inn digitalt og oppbevares i låst arkivskap. Det er kun autorisert personell knyttet til prosjektet som har adgang til denne informasjonen, og alle personer som er knyttet til prosjektet har taushetsplikt. Avidentifiserte registerdata, mottatt fra SSB etter kobling, vil bli behandlet og lagret på PC i avlåst kontor.

Innen prosjektslutt ved utgangen av 2025 vil datamaterialet bli anonymisert ved at verken direkte eller indirekte personidentifiserbare opplysninger fremgår, og navneliste og koblingsnøkler med individuelle nummerkoder vil bli slettet. Anonymiseringen innebærer videre at spørreskjema makuleres. Adresser og logger slettes hos Qualtrics.

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES

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Silje Endresen Reme
Uni Helse Uni Research
Krinkelkroken 1
5014 BERGEN

Vår dato: 15.10.2014 Vår ref: 34989/4/MSS/LR Deres dato: Deres ref:

TILBAKEMELDING PÅ MELDEPLIKTIG PROSJEKT

Vi viser til meldeskjema mottatt den 30.07.2013 for prosjektet:

34989 *Effektevaluering av Individuell Jobbstøtte (IPS)*

Prosjektet er en evaluering av Individuell jobbstøtte (IPS), et innovativt tiltak med fokus på rask retur til ordinært lønnet arbeid for personer med moderate til alvorlige psykiske lidelser. Prosjektet gjennomføres som et samarbeid mellom Uni Research AS og Helsedirektoratet, på oppdrag fra Arbeids- og velferdsdirektoratet. Uni Research AS er behandlingsansvarlig.

Prosjektet består av to deler: Datamaterialet innhentes i første omgang gjennom spørreskjema, personlig intervju og gruppeintervju. Spørreskjemaundersøkelsen kobles så mot opplysninger om yrkesaktivitet, tiltak, trygder og stønader fra NAV sine registre, bruk av spesialisthelsetjenester fra Norsk Pasientregister, samt arbeidsinntekt, økonomisk sosialhjelp og utdanning fra Statistisk sentralbyrå.

Første del av prosjektet har tidligere mottatt vår vurdering. Registerkoblingene ble ikke vurdert i den forbindelse, da vi avventet tilbakemelding fra Rådet for bioteknologi og helserett, (Helsedirektoratet) vedrørende tolkningen av NPR-forskriften og muligheten for å unnta fra konsesjonsplikt etter personopplysningsforskriften § 7-27 når det gjaldt kobling og utlevering av NPR-data til forskningsformål. Det ble i denne forbindelse tatt kontakt med Datatilsynet, og forsker fikk anledning til å dele opp prosjektet slik at intervjuundersøkelse og spørreskjemaundersøkelse kunne igangsettes.

Koblingen av opplysninger fra spørreskjemaundersøkelsen mot de nevnte registrene er basert på samtykke fra den enkelte. Utvalget fikk tilfredsstillende informasjon om dette ved førstegangskontakt og samtykket til registerkoblingene ved å delta i undersøkelsen. Vi viser her til revidert informasjonsskriv mottatt den 17.09.2013.

Vi har foreløpig mottatt følgende koblingsbeskrivelse fra forsker:

1. Uni Helse sender kopi av sin koblingsnøkkel for spørreskjemadata (fødselsnr/løpenummer_1) til Nav. NPR sender sine data til Nav.

2. Nav kobler, ved hjelp av fødselsnummer, disse datasettene: NPR, Nav-data og koblingsnøkkel Uni Helse. Resultatet vil bli et datasett med 600-800 personer over en spesifisert periode.

3. Nav sender dette datasettet til SSB for kobling mot SSB-data ved hjelp av fødselsnummer.

4. Etter kobling avidentifiserer SSB data (erstatter fødselsnummer med løpenummer_2 og oppbevarer koblingsnøkkelen) før retur til Nav.

5. Nav videresender det koblede datasettet til Uni Helse.

Helsedirektoratet har i brev til Norsk samfunnsvitenskapelig datatjeneste (NSD), datert 14.05.2014, på vårt spørsmål om forståelsen av personopplysningsforskriften § 7-27, funnet at merknadene til NPR-forskriften for at det forenklede systemet som personopplysningsforskriften § 7-27 regulerer, også skal gjelde for data fra NPR, såfremt ikke NPR-data skal benyttes som utgangspunkt for å opprette førstegangskontakt.

Det foreliggende prosjektet oppfyller betingelsene i § 7-27, både når det gjelder omfang og varighet. Utvalget består av om lag 800 individer. Hoveddelen av deltakerne i forsøket vil bli rekruttert fra ulike behandlingsteam tilknyttet Distriktspsykiatrisk senter (DPS). Noen deltakere vil rekrutteres fra NAV eller andre kommunale tjenester, men de vil likevel være eller bli tilknyttet et behandlingsteam ved deltakelse. Studien avsluttes/datamaterialet anonymiseres innen utgangen av 2025.

Vi finner at registerdelen i prosjektet *Effektevaluering av Individuell Jobbstøtte (IPS)* kan tilrådes av oss uten ytterligere godkjenning fra Datatilsynet.

Vi legger til grunn for vår tilråding av prosjektet, at forsker etterlever de vilkår Norsk Pasientregister måtte sette for kobling og/eller utlevering, og at personvernombudet for forskning mottar kopi av de tilbakemeldingene forsker får fra NPR.

Ta gjerne kontakt dersom noe er uklart.

Vennlig hilsen

Katrine Utaaker Segadal

Marie Strand Schildmann

Vedlegg: Brev fra Helsedirektoratet

Kopi: Datatilsynet v/Camilla Nervik (camilla.nervik@datatilsynet.no)

Uni Helse

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web uni.no/helse **epost** helse@uni.no
organisasjonsnummer 985 827 117 mva

Forespørsel om deltakelse i forskningsprosjektet "Effektevaluering av Individuell jobbstøtte"

Bakgrunn og hensikt

Dette er et spørsmål til deg om å delta i en forskningsstudie der hensikten er å få bedre kunnskap om hva som kan hjelpe mennesker med moderate til alvorlige psykiske lidelser med hensyn til arbeidsdeltakelse, livskvalitet og psykisk helse. Prosjektet drives av Uni Helse, på oppdrag fra Arbeids- og velferdsdirektoratet i samarbeid med Helsedirektoratet. Ansvarlig for prosjektet er prosjektleder og psykolog dr. Silje E. Reme.

Hva innebærer studien?

Dersom du velger å delta i forskningsprosjektet, vil du bli invitert til en kartleggingssamtale som tar rundt 30 minutter. Der vil du i tillegg bli bedt om å svare på en spørreskjemapakke om bl.a. psykisk helse, helseplager, og funksjonsevne. Dersom du har behov vil du få nødvendig hjelp og assistanse til dette. Deretter vil du bli tilfeldig trukket til en av to grupper: Gruppe I får tilbud om bistand til å komme i jobb ved det lokale NAV kontoret i tillegg til oppfølgingen de har fra sin behandler, mens gruppe II vil få tilbud om Individuell jobbstøtte som innebærer oppfølging av en jobbspesialist i tillegg til oppfølgingen de har fra sin behandler. Fordelingen er helt tilfeldig og det er ingen, hverken du selv eller noen du møter i prosjektet, som kan påvirke eller som på forhånd vet utfallet av trekningen.

Mulige fordeler og ulemper

Deltakelse i prosjektet omfatter ingen risiko for din helse. Du kan når som helst trekke deg fra prosjektet, og henvende deg til NAV og andre behandlere uavhengig av din deltakelse. Etter at prosjektet er avsluttet, kan du også henvende deg til tiltaket Individuell jobbstøtte.

Hva skjer med informasjonen om deg?

Informasjonen som registreres om deg vil kun brukes slik som beskrevet i dette brevet. Alle opplysningene vil bli behandlet uten navn og fødselsnummer eller andre direkte gjenkjennende opplysninger. Som deltaker i prosjektet vil du få tildelt en individuell nummerkode. Denne koden vil knytte deg til dine opplysninger gjennom en navneliste. Listen som knytter navn til nummerkode oppbevares i låsbart og brannsikkert skap. Det er kun autorisert personell knyttet til prosjektet som har adgang til navnelisten og som kan finne tilbake til deg. Alle personer som er knyttet til prosjektet (for eksempel jobbspesialist, saksbehandler og andre ansatte ved NAV, behandlere, forskere, teknisk personale og kontorpersonale) har taushetsplikt.

Informasjonen du har gitt oss vil bli sammenstilt med informasjon fra offentlige registre, og vi ber deg derfor om tillatelse til å hente og sammenkoble informasjon om yrkesaktivitet, tiltak, trygder og stønader du mottar fra NAV, bruk av spesialisthelsetjenester fra Norsk pasientregister, arbeidsinntekt, økonomisk sosialhjelp og utdanning fra Statistisk Sentralbyrå.

Formålet med disse opplysningene er å undersøke om tilbudet du får har effekt på arbeidslivsdeltakelse og helse.

Innen utgangen av 2025 vil datamaterialet bli anonymisert ved at verken direkte eller indirekte personidentifiserbare opplysninger fremgår, og navneliste og koblingsnøkler med individuelle nummerkoder vil bli slettet. Anonymiseringen innebærer videre at spørreskjema makuleres. Det vil ikke være mulig å identifisere deg i resultatene av studien når disse publiseres.

Frivillig deltakelse
Det er frivillig å delta i studien. Du kan når som helst og uten å oppgi noen grunn trekke ditt samtykke til å delta i studien. Dette vil ikke få konsekvenser for den vanlige oppfølgingen eller behandlingen du får av NAV eller din fastlege. Dersom du trekker deg fra prosjektet, har du rett til å få helseopplysninger som er samlet inn fra deg, og at disse slettes fra prosjektet. Krav om dette må fremsettes før data er analysert. Dersom du ønsker å delta, undertegner du samtykkeerklæringen på siste side. Om du nå sier ja til å delta, kan du senere trekke tilbake ditt samtykke uten at det påvirker din øvrige oppfølging eller behandling. Dersom du senere ønsker å trekke deg eller har spørsmål til studien, kan du kontakte prosjektleder Silje E. Reme på e-post: silje.reme@uni.no eller ringe prosjekttelefonen: 55 58 39 91.

Ytterligere informasjon om studien finnes i kapittel A

Ytterligere informasjon om personvern, økonomi og forsikring finnes i kapittel B

Samtykkeerklæring følger etter kapittel B.

Kapittel A- utdypende forklaring av hva studien innebærer:

For å delta i studien må du som deltaker ha et ønske om å jobbe i ordinært lønnet arbeid, og ha tilstrekkelige norskkunnskaper til å kunne besvare spørreskjema på norsk. Deltakere rekrutteres til studien etter vurderingssamtale og orientering om forskningsprosjektet ved det aktuelle senteret. Deretter vil deltakere bli tilfeldig trukket til en av to grupper: den ene gruppen vil få tilbud om oppfølging med ordinært arbeidsrettet tiltak ved det lokale NAV kontoret, og den andre gruppen vil få tilbud om oppfølging med tiltaket Individuell jobbstøtte. Fordelingen er fullstendig tilfeldig.

Gruppe I – Tilbud om oppfølging med ordinært arbeidsrettet tiltak
NAV har ulike arbeidsrettede tiltak for å bistå personer med nedsatt arbeidsevne med å komme i ordinært lønnet arbeid, deriblant Arbeid med bistand (AB) som innebærer personlig tilrettelegging og oppfølging for å finne en jobb du mestrer og trives i, og Arbeidspraksis i skjermet virksomhet (APS) der du vil få anledning til å prøve ut arbeidsevnen din i en arbeidsmarkedsbedrift for å styrke mulighetene dine til å skaffe ordinært lønnet arbeid. Du vil få mulighet til prøve ut flere ulike arbeidsformer som er tilpasset til kompetansen din og utfordringene dine, med oppfølging etter behov fra en veileder. Dersom du trekkes til denne gruppen, vil det bli sendt et brev til det lokale NAV kontor for videre oppfølging og vurdering av hvilke tiltak som passer for deg.

Gruppe II - Tilbud om oppfølging med tiltaket Individuell jobbstøtte (IPS)
Individuell jobbstøtte (IPS) er et oppfølgingstiltak som har vist seg å være en effektiv metode for å bistå mennesker med alvorlige psykiske lidelser til å få ordinært, lønnet arbeid. Tiltaket har vært utprøvd og studert i USA og Europa, men er relativt nytt i Norge. Det er et individuelt tilpasset og arbeidsrettet tiltak, som legger vekt på å igangsette jobbsøk basert på dine interesser og ferdigheter. Søket vil starte så snart som mulig og senest innen 1 måned. IPS inngår som en integrert del av din behandling, og du vil bli knyttet til et behandlingsteam med en jobbspesialist som har som funksjon å etablere relasjon med arbeidsgiver og hjelpe deg i å framskaffe og beholde en ordinær, lønnet jobb.

Som deltaker i prosjektet vil du bli bedt om å fylle ut spørreskjema ved innrullering, samt 6 og 12 måneder etterpå. Vi vil også gjennomføre telefonintervju med 12-15 brukere, for å få utfyllende kunnskap om erfaringene med tiltaket. Det er frivillig å delta i dette. Det er hverken fordeler eller ulemper ved å delta i prosjektet, og det innebærer ingen kostnad for deg som person å delta.

Kapittel B - Personvern, økonomi og forsikring:

Personvern
Opplysninger som registreres om deg er basert på de spørreskjema du selv velger å fylle ut. Slik vil du selv kunne velge hvilken informasjon om deg som blir tilgjengelig for forskerne i prosjektet. Spørreskjemapakkene er satt sammen av utprøvde og standardiserte skjema. Videre vil prosjektet innhente opplysninger om yrkesaktivitet, tiltak, trygder og stønader fra NAV sine registre, bruk av spesialisthelsetjenester fra Norsk pasientregister, samt arbeidsinntekt, økonomisk sosialhjelp og utdanning fra Statistisk Sentralbyrå. For å kunne være sikker på at den informasjonen du registrerer blir koblet til riktig informasjon om deg ved den senere datainnsamlingen og ved koblinger som vil bli foretatt mellom de ulike registrene, vil

ditt personnummer (11 siffer) benyttes. Det er kun dette personnummeret vil benyttes til. Personnummeret vil slettes når datasamlingen er sluttført og dataene skal analyseres. Ved kvalitative intervjuer vil vi bare kjenne ditt fornavn og telefonnummer, og dette vil slettes umiddelbart etter at intervjuet er fullført. Kobling av informasjon tilbake til deg blir altså ikke mulig for prosjektets medarbeidere.

Uni Helse ved prosjektleder Silje Endresen Reme er databehandlingsansvarlig.

Rett til innsyn og sletting av opplysninger om deg og sletting av prøver
Hvis du takker ja til å delta i studien, har du rett til å få innsyn i hvilke opplysninger som er registrert om deg. Du har videre rett til å få korrigert eventuelle feil i de opplysningene vi har registrert. Dersom du trekker deg fra studien, kan du kreve å få slettet innsamlede prøver og opplysninger, med mindre opplysningene allerede er inngått i analyser eller brukt i vitenskapelige publikasjoner.

Økonomi og NAVs rolle
Individuell jobbstøtte (IPS) er ett tiltak i en lang rekke tiltak i regi av NAV. Dette prosjektet har som hovedfokus å undersøke om, og i så fall hvilken, effekt tiltaket har for målgruppen. Det er i NAVs interesse, både som sponsor for prosjektet og som ansvarlig for IPS, å undersøke effekten av tiltaket. Studien er finansiert gjennom forskningsmidler fra Arbeids- og velferdsdirektoratet og Helsedirektoratet, og drives av forskere ved Uni Helse på oppdrag fra Arbeids- og velferdsetaten i samarbeid med Helsedirektoratet. Uni Helse er en uavhengig og selvstendig aktør i forhold til NAV.

Forsikring
Individuell jobbstøtte er ett av flere arbeidsrettede tiltak i regi av NAV. Personer som ikke blir henvist til dette tiltaket vil få en oppfølging med ordinært arbeidsrettet tiltak (primært arbeid med bistand og/eller arbeidspraksis i skjermet virksomhet), som til enhver tid følger det gjeldende regelverk og oppfyller det man har krav på av oppfølging fra NAV. Vi regner ikke at dette prosjektet innebærer noen risiko for de personene som deltar.

Informasjon om utfallet av studien
Du har til enhver tid rett til å trekke deg fra deltakelse i studien. Videre kan du til enhver tid be om informasjon om utfallet av studien. Informasjon om utfall av studien vil ikke kunne identifisere enkeltpersoner, men vil kun vise hovedtendenser basert på generelle kjennetegn, slik som kjønn, alder og informasjon basert på de innsamlede data.

uni Helse

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telefon +47 55 58 86 70 telefaks +47 55 58 98 78
web uni.no/helse epost helse@uni.no
organisasjonsnummer 985 827 117 mva

Samtykke til deltakelse i studien:

Jeg er villig til å delta i studien "Effektevaluering av Individuell jobbstøtte"

(Signert av prosjektdeltaker, dato)

Jeg bekrefter å ha gitt informasjon om studien "Effektevaluering av Individuell jobbstøtte"

(Signert, rolle i studien, dato)

Dersom deltaker ønsker å beholde informasjonsskrivet kan denne siden adskilles fra de foregående sidene.

6-month follow-up questionnaire to participants in IPS group
(paper 1)

Through the IPS program you have had meetings with the IPS specialist, developed a job profile, and taken specific steps towards the type of job you are looking for. If you have found a job, you and the IPS specialist have made a support plan.

Overall, how satisfied are you with the IPS program?

☐ Dissatisfied

☐ Not very satisfied

☐ A little satisfied

☐ Fairly satisfied

☐ Very satisfied

How satisfied are you with your IPS specialist?

☐ Very dissatisfied

☐ Fairly satisfied

☐ Neither satisfied nor dissatisfied

☐ Fairly satisfied

☐ Very satisfied

How useful has it been for you to participate in the IPS program?

☐ Not useful at all

☐ Not very useful

☐ A little useful

☐ Fairly useful

☐ Very useful

In your opinion, have the items on the below list been helpful to participation in the IPS program? (meeting the IPS specialist, taking different action steps, going on job interviews, making a support plan)

Facilitators for participation	**Yes**	**No**
It was helpful that progress was quicker than in other vocational services	☐	☐
Knowing the IPS specialist was available was helpful	☐	☐
The action steps along the way were specific, and this was helpful	☐	☐
Freedom of disclosure was helpful	☐	☐
The support plan I made with the IPS specialist when I got a job was helpful	☐	☐
The regular follow-up from the IPS specialist in the job search was helpful	☐	☐

Other facilitators:

………

In your opinion, have the items on the below list been a barrier to participation in the IPS program? (meeting the IPS specialist, taking different action steps, going on job interviews, making a support plan)

Barriers for participation	**Yes**	**No**
Progress was made too quickly	☐	☐
It was too time-consuming	☐	☐
I had challenges with my IPS specialist	☐	☐
My illness was a barrier	☐	☐
IPS was not what I expected	☐	☐
Getting to the different places (to meet employers or IPS specialist)	☐	☐

Other barriers:

………

Interview guide IPS participants
(paper 1)

1. **Background information**
    a. Age, gender
    b. Education and work experience
    c. Current employment status

2. **Services and welfare benefits**
    a. Are you currently receiving benefits from NAV? If so, what kind of benefits?
    b. Are you currently receiving vocational rehabilitation services? If so, what kind of services?
    c. What types of health benefits are you currently receiving?

3. **Interaction with IPS services**
    a. For how long have you been in contact with the IPS specialist?
    b. How frequently have you had contact with the IPS specialist?
    c. How did you first hear about the IPS trial?
    d. What was the main reason for participating in the trial?
    e. If you no longer are in contact with IPS services, what is the reason for this?

4. **Experiences with the services**
    a. How did you experience the work-focused follow-up?
    b. To what degree do you think the IPS specialist was available for you?
    c. How were you met by the IPS specialist?
    d. Did you feel that the IPS specialist was concerned with your resources/strengths in the job search process?
    e. Has the IPS specialist been concerned with communicating what it takes to obtain employment?
    f. How has your health condition affected the job search process?
    g. In your opinion, how does this program differ from other NAV programs you have experience with?

5. **Expectations**
    a. What kind of expectations did you have to the follow-up?
    b. Has the follow-up met with your expectations? Why/why not?

6. **Consequences (what has the follow-up led to)**
    a. Have you had a job offer?

b. Are you in employment now as a consequence of the follow-up? Competitive employment?
c. To what degree do you feel that your opportunities and resources has been utilized in the job search process?
d. If you are not yet in employment: Has the program increased your confidence that you will obtain employment someday?

7. **Consideration of the services provided**
   a. In your opinion, how can the follow-up be improved?
   b. What are the benefits/what should be continued?
   c. Do you have suggestions for how the services can be organized better?

Interview guide IPS teams
(paper 1)

1. **Background information**
   a. Job position
   b. Educational background
   c. Work experience

2. **Motivation**
   a. Why did you apply for this job?
   b. What prior knowledge did you have of the IPS method?
   c. What are the different types of competencies represented in this team?

3. **Organization of roles and tasks**
   a. How is the work organized?
   b. What are each person's role and tasks?
   c. Who are the most important collaborators?
   d. What are the regular meeting points between colleagues?
   e. How is coordination of services secured?

4. **Possibilities and challenges in organizing the work**
   a. What has been the most important challenges relating to work tasks?
   b. What has worked well when it comes to assigning responsibilities and performing work tasks?

5. **Collaborating relationship/coordination of services**
   a. Who are the most important collaborating partners?

b. How is this collaboration organized?
c. How are tasks and responsibilities assigned?
d. What are the most important meeting points?
e. Do you feel that collaborators are familiar with IPS?
f. How do you experience the collaborators' attitudes towards the program?
g. Are there specific challenges with some of the collaborating partners?

6. **Relations to participants**
   a. What is your experience with recruitment to the program?
   b. Are there any particular challenges with particular user groups?
   c. How do you elicit feedback from the users of the service?
   d. What characterizes the feedback from the users?

7. **Considerations and potential for improvements**
   a. What is the most important experience in providing IPS?
   b. What is the main challenges with the program?
   c. What can be improved?

Qualitative themes from focus groups and individual interviews
(paper 1)

Themes derived from focus group interviews with IPS specialists and individual participant interviews (asterisks mark themes discussed in the article).

Focus group interviews IPS specialists	**Individual participant interviews**
IPS Specialist role development*	Motivation for and expectations towards the intervention*
Paid employment in ordinary work life*	Intervention's clear focus on work*
Written information about job services and work opportunities	Interaction with IPS specialist*
Focus on adults with severe mental illness	Engagement with intervention*
Sharing experiences between pilot centers	Perceived usefulness*
Extent of employer contact*	The job search process*
Intergrating job services and health treatment*	Individual adjustments made according to participants' health condition*
No exclusion of participants	Suggestions for improvement
Steep learning curve for pilots in initial phase	
Challenges with directorate governance	
Local variations in ownership of pilot center (Labour and Welfare Administration or Health directorate)	
Variations in quality of IPS specialist training	

TIDieR
Template for Intervention Description and Replication

The TIDieR (Template for Intervention Description and Replication) Checklist*:

Information to include when describing an intervention and the location of the information

Item number	Item	Where located **	
		Primary paper (page or appendix number)	Other † (details)
	BRIEF NAME		
1.	Provide the name or a phrase that describes the intervention.	4	
	WHY		
2.	Describe any rationale, theory, or goal of the elements essential to the intervention.	4	
	WHAT		
3.	Materials: Describe any physical or informational materials used in the intervention, including those provided to participants or used in intervention delivery or in training of intervention providers. Provide information on where the materials can be accessed (e.g. online appendix, URL).	4	
4.	Procedures: Describe each of the procedures, activities, and/or processes used in the intervention, including any enabling or support activities.	4	
	WHO PROVIDED		
5.	For each category of intervention provider (e.g. psychologist, nursing assistant), describe their expertise, background and any specific training given.	4	
	HOW		
6.	Describe the modes of delivery (e.g. face-to-face or by some other mechanism, such as internet or telephone) of the intervention and whether it was provided individually or in a group.	4	
	WHERE		
7.	Describe the type(s) of location(s) where the intervention occurred, including any necessary infrastructure or relevant features.	4	

	WHEN and HOW MUCH		
8.	Describe the number of times the intervention was delivered and over what period of time including the number of sessions, their schedule, and their duration, intensity or dose.	______4______	_____________
	TAILORING		
9.	If the intervention was planned to be personalised, titrated or adapted, then describe what, why, when, and how.	_____n/a____	_____________
	MODIFICATIONS		
10.‡	If the intervention was modified during the course of the study, describe the changes (what, why, when, and how).	_____n/a____	_____________
	HOW WELL		
11.	Planned: If intervention adherence or fidelity was assessed, describe how and by whom, and if any strategies were used to maintain or improve fidelity, describe them.	____4-5+10_	_____________
12.‡	Actual: If intervention adherence or fidelity was assessed, describe the extent to which the intervention was delivered as planned.	_18-20+23-24_	_____________

** **Authors** - use N/A if an item is not applicable for the intervention being described. **Reviewers** – use '?' if information about the element is not reported/not sufficiently reported.

† If the information is not provided in the primary paper, give details of where this information is available. This may include locations such as a published protocol or other published papers (provide citation details) or a website (provide the URL).

‡ If completing the TIDieR checklist for a protocol, these items are not relevant to the protocol and cannot be described until the study is complete.

* We strongly recommend using this checklist in conjunction with the TIDieR guide (see *BMJ* 2014;348:g1687) which contains an explanation and elaboration for each item.

* The focus of TIDieR is on reporting details of the intervention elements (and where relevant, comparison elements) of a study. Other elements and methodological features of studies are covered by other reporting statements and checklists and have not been duplicated as part of the TIDieR checklist. When a **randomised trial** is being reported, the TIDieR checklist should be used in conjunction with the CONSORT statement (see www.consort-statement.org) as an extension of **Item 5 of the CONSORT 2010 Statement.** When a **clinical trial protocol** is being reported, the TIDieR checklist should be used in conjunction with the SPIRIT statement as an extension of **Item 11 of the SPIRIT 2013 Statement** (see www.spirit-statement.org). For alternate study designs, TIDieR can be used in conjunction with the appropriate checklist for that study design (see www.equator-network.org).

Baseline questionnaire IPS trial
(paper 2)

Year of birth: 19______

What type of education have you completed? *(Please mark the highest educational level you have obtained)*

☐ Primary school (primary and lower secondary school)
☐ Secondary school
☐ University/college 1-4 years
☐ University/college more than 4 years
☐ Other

Have you ever been hospitalized involuntarily?

☐ Yes ☐ No

Non-directive and Directive Support Survey (NDSS)
We are interested in the kinds of encouragement, assistance or cooperation you receive from the person you consider most important to you when you need support to cope with your mental health problems (for example your physician or treatment provider, a good friend or your spouse/partner).

Each question in this survey describes a way that people might be supportive. Please indicate how typical each statement is of the support **you** receive. Please answer so that we can tell which ones are really typical and which are not so typical of the support you receive. **For each of the statements below, circle the number that best indicates how typical the statement is of the kind of support you receive from your chosen support provider.**

The support provider I have chosen is:

- My doctor
- My spouse/partner
- Other: _________

		Not at all typical				Very typic al
1	Show interest in how you are doing	1	2	3	4	5
2	Solve problems for you	1	2	3	4	5
3	Ask if you need help	1	2	3	4	5
4	Take charge of your problems	1	2	3	4	5
5	Make it easy for you to talk about anything you think is important	1	2	3	4	5
6	Tell you to feel proud of yourself	1	2	3	4	5
7	Cooperate with you to get things done	1	2	3	4	5
8	Push you to get going on things	1	2	3	4	5
9	Ask how you are doing	1	2	3	4	5
10	Give you clear advice on how to handle problems	1	2	3	4	5
11	Provide information so you understand why you are doing things	1	2	3	4	5
12	Tell you what to do	1	2	3	4	5
13	Are available to talk anytime.	1	2	3	4	5
14	Point out harmful or foolish ways you view things	1	2	3	4	5
15	Offer a range of suggestions	1	2	3	4	5
16	Don't let you dwell on upsetting thoughts	1	2	3	4	5

The Hospital Anxiety and Depression Scale (HADS)

1	I feel tense or 'wound up':	
	Most of the time	☐
	A lot of the time	☐
	From time to time, occasionally	☐
	Not at all	☐

2	I feel as if I am slowed down:	
	Nearly all the time	☐
	Very often	☐
	Sometimes	☐
	Not at all	☐

3	I still enjoy the things I used to enjoy:	
	Definitely as much	☐
	Not quite so much	☐
	Only a little	☐
	Hardly at all	☐

4	I get a sort of frightened feeling like 'butterflies' in the stomach:	
	Not at all	☐
	Occasionally	☐
	Quite	☐
	Very often	☐

5	I get a sort of frightened feeling as if something awful is about to happen:	
	Very definitely and quite badly	☐
	Yes, but not too badly	☐
	A little, but it doesn't worry me	☐
	Not at all	☐

6	I have lost interest in my appearance:	
	Definitely	☐
	I don't take as much care as I should	☐
	I may not take quite as much care	☐
	I take just as much care as ever	☐

7	I can laugh and see the funny side of things:	
	As much as I always could	☐
	Not quite so much now	☐
	Definitely not so much now	☐
	Not at all	☐

8	I feel restless as I have to be on the move:	
	Very much indeed	☐
	Quite a lot	☐
	Not very much	☐
	Not at all	☐

9	Worrying thoughts go through my mind:

10	I look forward with enjoyment to things:

	Very often	☐
	A great deal of the time	☐
	From time to time, but not too often	☐
	Only occasionally	☐
11	I feel cheerful:	
	Not at all	☐
	Not often	☐
	Sometimes	☐
	Most of the time	☐
13	I can sit at ease and feel relaxed:	
	Definitely	☐
	Usually	☐
	Not often	☐
	Not at all	☐

	As much as I ever did	☐
	Rather less than I used to	☐
	Definitely less than I used to	☐
	Hardly at all	☐
12	I get sudden feelings of panic:	
	Very often indeed	☐
	Quite often	☐
	Not very often	☐
	Not at all	☐
14	I can enjoy a good book or radio or TV program	
	Often	☐
	Sometimes	☐
	Not often	☐
	Very seldom	☐

Vignette character descriptions and randomized blocks
(paper 3)

We will now describe a few different people. We want to know how well you think that each person fits into your work group. There are no right or wrong answers, we are interested in your personal opinions. Please answer as honestly as possible, and remember that your answers are anonymous.

Jennifer (depression)
Jennifer is a 35-year-old woman who is in normal good health and has got the qualifications needed for the job. Recently, Jennifer has been feeling down, anxious and has had problems sleeping. She is not participating in any regular leisure activities or hobbies, and spends most of her time by herself. Jennifer often feels that she lacks energy, and she does not put much effort into her appearance. She tends to be pessimistic about the future. Apart from these things, Jennifer is in normal good health and has the qualifications needed for the job.

Ashley (ADHD)
Ashley is a very active woman in the beginning of her thirties, who has the qualifications needed for the job. She tends to talk a lot, talks fast, and she seems positive and highly engaged. Despite this, Ashley has a tendency to jump from task to task without finishing what she started. She gets impatient easily, and at times it might seem like she does not pay attention. She can have trouble concentrating for longer periods of time. Growing up, Ashley had trouble behaving the way her parents and school expected her to, and had a tendency to break norms and rules, but she has better control of these issues today.

Omar (integrated minority)
Omar is a Muslim man in his mid-thirties, who has the qualifications required for the job. He is born in [current country], by Pakistani parents, and is bi-lingual. He is in normal good health and has previous work experience.

Jessica (uses wheelchair)
Jessica is a woman in her forties, who has the qualifications needed for the job. She is born with a muscle disease that causes her to use a wheelchair. The wheelchair is easy to navigate, and she usually gets to the places she wants on her own, as long as the physical surroundings are accessible. Her hands and arms are fairly mobile.

Amanda (visual impairment)
Amanda is a woman in her mid-forties, who has the qualifications required for the job. She has an inborn visual impairment, which means she can discern light, but not see people or objects. She can write on a computer and read braille, or has text read

aloud via a technical device. She does not drive herself, but receives assistance with transportation.

Jason (audio impairment)
Jason is a man in his mid-forties, who has the qualifications required for the job. He has a hearing impairment and uses a hearing aid. He understands most of the communication between a two people, but sometimes he has difficulties perceiving everything that is communicated in a group conversation.

Michael (schizophrenic symptoms)
Michael is a 42-year-old man who has the qualifications needed for the job. Occasionally, he hears voices that comment his everyday activities. Now and then he also thinks that people around him try to control his thoughts, which can lead him to say strange things or get irritated. These symptoms present themselves in periods lasting a few weeks at a time, but are otherwise completely absent for longer periods of time. Today, Michael is taking medications that give him good control of his symptoms. Michael is otherwise conscious and aware, and his intelligence is normal. There have not been any findings of organic brain disease, and he has no substance abuse problems. Michael's mother had the same condition, so there is reason to believe that the symptoms might be genetic.

Sarah (single mother)
Sarah is a 33-year-old mother who has recently returned from maternity leave with her second child. She also has a three-year old child. Sarah is divorced and shares custody for both children with her previous partner. Both children are in day care. Sarah is in normal health and has the required qualifications, but like most parents of young children, she sometimes struggles with a tight schedule, often catches a cold, and occasionally has to stay at home with sick children.

Abdul-Hameed (newly arrived immigrant)
Abdul-Hameed is a man in his mid-thirties who has the qualifications needed for the job and is in normal good health. He came to the country from Afghanistan three years ago. He has completed the compulsory language course for immigrants, and hopes to enter the local labour market.

Melissa (somatization disorder)
Melissa is a 38-year old woman who has the qualifications needed for the job. She often goes to see her general practitioner, and has been experiencing bodily aches and pains for as long as she can remember. She has had periods of chest pain, tenderness in her joints, dizziness and irregular menstruations. Sometimes she worries that her aches and pains may be signs of cancer or other serious disease. Her medical history is long and complex, and several specialists have examined her thoroughly without finding any medical cause for her problems. Melissa's symptoms

vary, and in periods where other parts of her life are going well she may feel completely healthy.

Questions asked after each vignette:

1. Given the current circumstances, how do you think [vignette character] fits into your work group?

☐ Very poorly

☐ Quite poorly

☐ Neither poorly nor well

☐ Quite well

☐ Very well

2. If [vignette character] does not fit quite/very well into your work group: What is the main reason? (Please select the one most important reason)

☐ Need for accommodation

☐ Economic consequences

☐ Collaboration/interaction with colleagues

☐ Collaboration/interaction with others

☐ Increased workload for colleauges

☐ Work capacity

☐ Other: _____________

3. Do you have previous experience with colleagues/employees like [vignette character]?

☐ Yes

☐ No

Two blocks of vignette descriptions were randomly assigned to supervisors (employees received all vignettes). Within each block, the vignettes were displayed randomly.

Block 1	**Block 2**
Single mother	Single mother
Newly arrived immigrant	2nd generation immigrant
Audio impairment	Visual impairment
Wheelchair user	Somatization disorder
Affective disorder (depression)	Severe mental illness (schizophrenic symptoms)
ADHD	

Doctoral Theses at The Faculty of Psychology, University of Bergen

1980	Allen, Hugh M., Dr. philos.	Parent-offspring interactions in willow grouse (Lagopus L. Lagopus).
1981	Myhrer, Trond, Dr. philos.	Behavioral Studies after selective disruption of hippocampal inputs in albino rats.
1982	Svebak, Sven, Dr. philos.	The significance of motivation for task-induced tonic physiological changes.
1983	Myhre, Grete, Dr. philos.	The Biopsychology of behavior in captive Willow ptarmigan.
	Eide, Rolf, Dr. philos.	PSYCHOSOCIAL FACTORS AND INDICES OF HEALTH RISKS. The relationship of psychosocial conditions to subjective complaints, arterial blood pressure, serum cholesterol, serum triglycerides and urinary catecholamines in middle aged populations in Western Norway.
	Værnes, Ragnar J., Dr. philos.	Neuropsychological effects of diving.
1984	Kolstad, Arnulf, Dr. philos.	Til diskusjonen om sammenhengen mellom sosiale forhold og psykiske strukturer. En epidemiologisk undersøkelse blant barn og unge.
	Løberg, Tor, Dr. philos.	Neuropsychological assessment in alcohol dependence.
1985	Hellesnes, Tore, Dr. philos.	Læring og problemløsning. En studie av den perseptuelle analysens betydning for verbal læring.
	Håland, Wenche, Dr. philos.	Psykoterapi: relasjon, utviklingsprosess og effekt.
1986	Hagtvet, Knut A., Dr. philos.	The construct of test anxiety: Conceptual and methodological issues.
	Jellestad, Finn K., Dr. philos.	Effects of neuron specific amygdala lesions on fear-motivated behavior in rats.
1987	Aarø, Leif E., Dr. philos.	Health behaviour and sosioeconomic Status. A survey among the adult population in Norway.
	Underlid, Kjell, Dr. philos.	Arbeidsløyse i psykososialt perspektiv.
	Laberg, Jon C., Dr. philos.	Expectancy and classical conditioning in alcoholics' craving.
	Vollmer, Fred, Dr. philos.	Essays on explanation in psychology.
	Ellertsen, Bjørn, Dr. philos.	Migraine and tension headache: Psychophysiology, personality and therapy.
1988	Kaufmann, Astrid, Dr. philos.	Antisosial atferd hos ungdom. En studie av psykologiske determinanter.

	Mykletun, Reidar J., Dr. philos.	Teacher stress: personality, work-load and health.
	Havik, Odd E., Dr. philos.	After the myocardial infarction: A medical and psychological study with special emphasis on perceived illness.
1989	Bråten, Stein, Dr. philos.	Menneskedyaden. En teoretisk tese om sinnets dialogiske natur med informasjons- og utviklingspsykologiske implikasjoner sammenholdt med utvalgte spedbarnsstudier.
	Wold, Bente, Dr. psychol.	Lifestyles and physical activity. A theoretical and empirical analysis of socialization among children and adolescents.
1990	Flaten, Magne A., Dr. psychol.	The role of habituation and learning in reflex modification.
1991	Alsaker, Françoise D., Dr. philos.	Global negative self-evaluations in early adolescence.
	Kraft, Pål, Dr. philos.	AIDS prevention in Norway. Empirical studies on diffusion of knowledge, public opinion, and sexual behaviour.
	Endresen, Inger M., Dr. philos.	Psychoimmuniological stress markers in working life.
	Faleide, Asbjørn O., Dr. philos.	Asthma and allergy in childhood. Psychosocial and psychotherapeutic problems.
1992	Dalen, Knut, Dr. philos.	Hemispheric asymmetry and the Dual-Task Paradigm: An experimental approach.
	Bø, Inge B., Dr. philos.	Ungdoms sosiale økologi. En undersøkelse av 14-16 åringers sosiale nettverk.
	Nivison, Mary E., Dr. philos.	The relationship between noise as an experimental and environmental stressor, physiological changes and psychological factors.
	Torgersen, Anne M., Dr. philos.	Genetic and environmental influence on temperamental behaviour. A longitudinal study of twins from infancy to adolescence.
1993	Larsen, Svein, Dr. philos.	Cultural background and problem drinking.
	Nordhus, Inger Hilde, Dr. philos.	Family caregiving. A community psychological study with special emphasis on clinical interventions.
	Thuen, Frode, Dr. psychol.	Accident-related behaviour among children and young adolescents: Prediction and prevention.
	Solheim, Ragnar, Dr. philos.	Spesifikke lærevansker. Diskrepanskriteriet anvendt i seleksjonsmetodikk.
	Johnsen, Bjørn Helge, Dr. psychol.	Brain assymetry and facial emotional expressions: Conditioning experiments.
1994	Tønnessen, Finn E., Dr. philos.	The etiology of Dyslexia.
	Kvale, Gerd, Dr. psychol.	Psychological factors in anticipatory nausea and vomiting in cancer chemotherapy.

	Asbjørnsen, Arve E., Dr. psychol.	Structural and dynamic factors in dichotic listening: An interactional model.
	Bru, Edvin, Dr. philos.	The role of psychological factors in neck, shoulder and low back pain among female hospitale staff.
	Braathen, Eli T., Dr. psychol.	Prediction of exellence and discontinuation in different types of sport: The significance of motivation and EMG.
	Johannessen, Birte F., Dr. philos.	Det flytende kjønnet. Om lederskap, politikk og identitet.
1995	Sam, David L., Dr. psychol.	Acculturation of young immigrants in Norway: A psychological and socio-cultural adaptation.
	Bjaalid, Inger-Kristin, Dr. philos.	Component processes in word recognition.
	Martinsen, Øyvind, Dr. philos.	Cognitive style and insight.
	Nordby, Helge, Dr. philos.	Processing of auditory deviant events: Mismatch negativity of event-related brain potentials.
	Raaheim, Arild, Dr. philos.	Health perception and health behaviour, theoretical considerations, empirical studies, and practical implications.
	Seltzer, Wencke J., Dr. philos.	Studies of Psychocultural Approach to Families in Therapy.
	Brun, Wibecke, Dr. philos.	Subjective conceptions of uncertainty and risk.
	Aas, Henrik N., Dr. psychol.	Alcohol expectancies and socialization: Adolescents learning to drink.
	Bjørkly, Stål, Dr. psychol.	Diagnosis and prediction of intra-institutional aggressive behaviour in psychotic patients
1996	Anderssen, Norman, Dr. psychol.	Physical activity of young people in a health perspective: Stability, change and social influences.
	Sandal, Gro Mjeldheim, Dr. psychol.	Coping in extreme environments: The role of personality.
	Strumse, Einar, Dr. philos.	The psychology of aesthetics: explaining visual preferences for agrarian landscapes in Western Norway.
	Hestad, Knut, Dr. philos.	Neuropsychological deficits in HIV-1 infection.
	Lugoe, L.Wycliffe, Dr. philos.	Prediction of Tanzanian students' HIV risk and preventive behaviours
	Sandvik, B. Gunnhild, Dr. philos.	Fra distriktsjordmor til institusjonsjordmor. Fremveksten av en profesjon og en profesjonsutdanning
	Lie, Gro Therese, Dr. psychol.	The disease that dares not speak its name: Studies on factors of importance for coping with HIV/AIDS in Northern Tanzania
	Øygard, Lisbet, Dr. philos.	Health behaviors among young adults. A psychological and sociological approach
	Stormark, Kjell Morten, Dr. psychol.	Emotional modulation of selective attention: Experimental and clinical evidence.

	Einarsen, Ståle, Dr. psychol.	Bullying and harassment at work: epidemiological and psychosocial aspects.
1997	Knivsberg, Ann-Mari, Dr. philos.	Behavioural abnormalities and childhood psychopathology: Urinary peptide patterns as a potential tool in diagnosis and remediation.
	Eide, Arne H., Dr. philos.	Adolescent drug use in Zimbabwe. Cultural orientation in a global-local perspective and use of psychoactive substances among secondary school students.
	Sørensen, Marit, Dr. philos.	The psychology of initiating and maintaining exercise and diet behaviour.
	Skjæveland, Oddvar, Dr. psychol.	Relationships between spatial-physical neighborhood attributes and social relations among neighbors.
	Zewdie, Teka, Dr. philos.	Mother-child relational patterns in Ethiopia. Issues of developmental theories and intervention programs.
	Wilhelmsen, Britt Unni, Dr. philos.	Development and evaluation of two educational programmes designed to prevent alcohol use among adolescents.
	Manger, Terje, Dr. philos.	Gender differences in mathematical achievement among Norwegian elementary school students.
1998 V	Lindstrøm, Torill Christine, Dr. philos.	«Good Grief»: Adapting to Bereavement.
	Skogstad, Anders, Dr. philos.	Effects of leadership behaviour on job satisfaction, health and efficiency.
	Haldorsen, Ellen M. Håland, Dr. psychol.	Return to work in low back pain patients.
	Besemer, Susan P., Dr. philos.	Creative Product Analysis: The Search for a Valid Model for Understanding Creativity in Products.
H	Winje, Dagfinn, Dr. psychol.	Psychological adjustment after severe trauma. A longitudinal study of adults' and children's posttraumatic reactions and coping after the bus accident in Måbødalen, Norway 1988.
	Vosburg, Suzanne K., Dr. philos.	The effects of mood on creative problem solving.
	Eriksen, Hege R., Dr. philos.	Stress and coping: Does it really matter for subjective health complaints?
	Jakobsen, Reidar, Dr. psychol.	Empiriske studier av kunnskap og holdninger om hiv/aids og den normative seksuelle utvikling i ungdomsårene.
1999 V	Mikkelsen, Aslaug, Dr. philos.	Effects of learning opportunities and learning climate on occupational health.
	Samdal, Oddrun, Dr. philos.	The school environment as a risk or resource for students' health-related behaviours and subjective well-being.
	Friestad, Christine, Dr. philos.	Social psychological approaches to smoking.
	Ekeland, Tor-Johan, Dr. philos.	Meining som medisin. Ein analyse av placebofenomenet og implikasjoner for terapi og terapeutiske teoriar.

H	Saban, Sara, Dr. psychol.	Brain Asymmetry and Attention: Classical Conditioning Experiments.
	Carlsten, Carl Thomas, Dr. philos.	God lesing – God læring. En aksjonsrettet studie av undervisning i fagtekstlesing.
	Dundas, Ingrid, Dr. psychol.	Functional and dysfunctional closeness. Family interaction and children's adjustment.
	Engen, Liv, Dr. philos.	Kartlegging av leseferdighet på småskoletrinnet og vurdering av faktorer som kan være av betydning for optimal leseutvikling.
2000 V	Hovland, Ole Johan, Dr. philos.	Transforming a self-preserving "alarm" reaction into a self-defeating emotional response: Toward an integrative approach to anxiety as a human phenomenon.
	Lillejord, Sølvi, Dr. philos.	Handlingsrasjonalitet og spesialundervisning. En analyse av aktørperspektiver.
	Sandell, Ove, Dr. philos.	Den varme kunnskapen.
	Oftedal, Marit Petersen, Dr. philos.	Diagnostisering av ordavkodingsvansker: En prosessanalytisk tilnærmingsmåte.
H	Sandbak, Tone, Dr. psychol.	Alcohol consumption and preference in the rat: The significance of individual differences and relationships to stress pathology
	Eid, Jarle, Dr. psychol.	Early predictors of PTSD symptom reporting; The significance of contextual and individual factors.
2001 V	Skinstad, Anne Helene, Dr. philos.	Substance dependence and borderline personality disorders.
	Binder, Per-Einar, Dr. psychol.	Individet og den meningsbærende andre. En teoretisk undersøkelse av de mellommenneskelige forutsetningene for psykisk liv og utvikling med utgangspunkt i Donald Winnicotts teori.
	Roald, Ingvild K., Dr. philos.	Building of concepts. A study of Physics concepts of Norwegian deaf students.
H	Fekadu, Zelalem W., Dr. philos.	Predicting contraceptive use and intention among a sample of adolescent girls. An application of the theory of planned behaviour in Ethiopian context.
	Melesse, Fantu, Dr. philos.	The more intelligent and sensitive child (MISC) mediational intervention in an Ethiopian context: An evaluation study.
	Råheim, Målfrid, Dr. philos.	Kvinners kroppserfaring og livssammenheng. En fenomenologisk – hermeneutisk studie av friske kvinner og kvinner med kroniske muskelsmerter.
	Engelsen, Birthe Kari, Dr. psychol.	Measurement of the eating problem construct.
	Lau, Bjørn, Dr. philos.	Weight and eating concerns in adolescence.
2002 V	Ihlebæk, Camilla, Dr. philos.	Epidemiological studies of subjective health complaints.

	Rosén, Gunnar O. R., Dr. philos.	The phantom limb experience. Models for understanding and treatment of pain with hypnosis.
	Høines, Marit Johnsen, Dr. philos.	Fleksible språkrom. Matematikklæring som tekstutvikling.
	Anthun, Roald Andor, Dr. philos.	School psychology service quality. Consumer appraisal, quality dimensions, and collaborative improvement potential
	Pallesen, Ståle, Dr. psychol.	Insomnia in the elderly. Epidemiology, psychological characteristics and treatment.
	Midthassel, Unni Vere, Dr. philos.	Teacher involvement in school development activity. A study of teachers in Norwegian compulsory schools
	Kallestad, Jan Helge, Dr. philos.	Teachers, schools and implementation of the Olweus Bullying Prevention Program.
H	Ofte, Sonja Helgesen, Dr. psychol.	Right-left discrimination in adults and children.
	Netland, Marit, Dr. psychol.	Exposure to political violence. The need to estimate our estimations.
	Diseth, Åge, Dr. psychol.	Approaches to learning: Validity and prediction of academic performance.
	Bjuland, Raymond, Dr. philos.	Problem solving in geometry. Reasoning processes of student teachers working in small groups: A dialogical approach.
2003 **V**	Arefjord, Kjersti, Dr. psychol.	After the myocardial infarction – the wives' view. Short- and long-term adjustment in wives of myocardial infarction patients.
	Ingjaldsson, Jón Þorvaldur, Dr. psychol.	Unconscious Processes and Vagal Activity in Alcohol Dependency.
	Holden, Børge, Dr. philos.	Følger av atferdsanalytiske forklaringer for atferdsanalysens tilnærming til utforming av behandling.
	Holsen, Ingrid, Dr. philos.	Depressed mood from adolescence to 'emerging adulthood'. Course and longitudinal influences of body image and parent-adolescent relationship.
	Hammar, Åsa Karin, Dr. psychol.	Major depression and cognitive dysfunction- An experimental study of the cognitive effort hypothesis.
	Sprugevica, Ieva, Dr. philos.	The impact of enabling skills on early reading acquisition.
	Gabrielsen, Egil, Dr. philos.	LESE FOR LIVET. Lesekompetansen i den norske voksenbefolkningen sett i lys av visjonen om en enhetsskole.
H	Hansen, Anita Lill, Dr. psychol.	The influence of heart rate variability in the regulation of attentional and memory processes.
	Dyregrov, Kari, Dr. philos.	The loss of child by suicide, SIDS, and accidents: Consequences, needs and provisions of help.
2004 **V**	Torsheim, Torbjørn, Dr. psychol.	Student role strain and subjective health complaints: Individual, contextual, and longitudinal perspectives.

	Haugland, Bente Storm Mowatt Dr. psychol.	Parental alcohol abuse. Family functioning and child adjustment.
	Milde, Anne Marita, Dr. psychol.	Ulcerative colitis and the role of stress. Animal studies of psychobiological factors in relationship to experimentally induced colitis.
	Stornes, Tor, Dr. philos.	Socio-moral behaviour in sport. An investigation of perceptions of sportspersonship in handball related to important factors of socio-moral influence.
	Mæhle, Magne, Dr. philos.	Re-inventing the child in family therapy: An investigation of the relevance and applicability of theory and research in child development for family therapy involving children.
	Kobbeltvedt, Therese, Dr. psychol.	Risk and feelings: A field approach.
2004 H	Thomsen, Tormod, Dr. psychol.	Localization of attention in the brain.
	Løberg, Else-Marie, Dr. psychol.	Functional laterality and attention modulation in schizophrenia: Effects of clinical variables.
	Kyrkjebø, Jane Mikkelsen, Dr. philos.	Learning to improve: Integrating continuous quality improvement learning into nursing education.
	Laumann, Karin, Dr. psychol.	Restorative and stress-reducing effects of natural environments: Experiencal, behavioural and cardiovascular indices.
	Holgersen, Helge, PhD	Mellom oss - Essay i relasjonell psykoanalyse.
2005 V	Hetland, Hilde, Dr. psychol.	Leading to the extraordinary? Antecedents and outcomes of transformational leadership.
	Iversen, Anette Christine, Dr. philos.	Social differences in health behaviour: the motivational role of perceived control and coping.
2005 H	Mathisen, Gro Ellen, PhD	Climates for creativity and innovation: Definitions, measurement, predictors and consequences.
	Sævi, Tone, Dr. philos.	Seeing disability pedagogically – The lived experience of disability in the pedagogical encounter.
	Wiium, Nora, PhD	Intrapersonal factors, family and school norms: combined and interactive influence on adolescent smoking behaviour.
	Kanagaratnam, Pushpa, PhD	Subjective and objective correlates of Posttraumatic Stress in immigrants/refugees exposed to political violence.
	Larsen, Torill M. B. , PhD	Evaluating principals` and teachers` implementation of Second Step. A case study of four Norwegian primary schools.
	Bancila, Delia, PhD	Psychosocial stress and distress among Romanian adolescents and adults.
2006 V	Hillestad, Torgeir Martin, Dr. philos.	Normalitet og avvik. Forutsetninger for et objektivt psykopatologisk avviksbegrep. En psykologisk, sosial, erkjennelsesteoretisk og teorihistorisk framstilling.

	Nordanger, Dag Øystein, Dr. psychol.	Psychosocial discourses and responses to political violence in post-war Tigray, Ethiopia.
	Rimol, Lars Morten, PhD	Behavioral and fMRI studies of auditory laterality and speech sound processing.
	Krumsvik, Rune Johan, Dr. philos.	ICT in the school. ICT-initiated school development in lower secondary school.
	Norman, Elisabeth, Dr. psychol.	Gut feelings and unconscious thought: An exploration of fringe consiousness in implicit cognition.
	Israel, K Pravin, Dr. psychol.	Parent involvement in the mental health care of children and adolescents. Emperical studies from clinical care setting.
	Glasø, Lars, PhD	Affects and emotional regulation in leader-subordinate relationships.
	Knutsen, Ketil, Dr. philos.	HISTORIER UNGDOM LEVER – En studie av hvordan ungdommer bruker historie for å gjøre livet meningsfullt.
	Matthiesen, Stig Berge, PhD	Bullying at work. Antecedents and outcomes.
2006 H	Gramstad, Arne, PhD	Neuropsychological assessment of cognitive and emotional functioning in patients with epilepsy.
	Bendixen, Mons, PhD	Antisocial behaviour in early adolescence: Methodological and substantive issues.
	Mrumbi, Khalifa Maulid, PhD	Parental illness and loss to HIV/AIDS as experienced by AIDS orphans aged between 12-17 years from Temeke District, Dar es Salaam, Tanzania: A study of the children's psychosocial health and coping responses.
	Hetland, Jørn, Dr. psychol.	The nature of subjective health complaints in adolescence: Dimensionality, stability, and psychosocial predictors
	Kakoko, Deodatus Conatus Vitalis, PhD	Voluntary HIV counselling and testing service uptake among primary school teachers in Mwanza, Tanzania: assessment of socio-demographic, psychosocial and socio-cognitive aspects
	Mykletun, Arnstein, Dr. psychol.	Mortality and work-related disability as long-term consequences of anxiety and depression: Historical cohort designs based on the HUNT-2 study
	Sivertsen, Børge, PhD	Insomnia in older adults. Consequences, assessment and treatment.
2007 V	Singhammer, John, Dr. philos.	Social conditions from before birth to early adulthood – the influence on health and health behaviour
	Janvin, Carmen Ani Cristea, PhD	Cognitive impairment in patients with Parkinson's disease: profiles and implications for prognosis
	Braarud, Hanne Cecilie, Dr.psychol.	Infant regulation of distress: A longitudinal study of transactions between mothers and infants
	Tveito, Torill Helene, PhD	Sick Leave and Subjective Health Complaints

	Magnussen, Liv Heide, PhD	Returning disability pensioners with back pain to work
	Thuen, Elin Marie, Dr.philos.	Learning environment, students' coping styles and emotional and behavioural problems. A study of Norwegian secondary school students.
	Solberg, Ole Asbjørn, PhD	Peacekeeping warriors – A longitudinal study of Norwegian peacekeepers in Kosovo
2007 H	Søreide, Gunn Elisabeth, Dr.philos.	Narrative construction of teacher identity
	Svensen, Erling, PhD	WORK & HEALTH. Cognitive Activation Theory of Stress applied in an organisational setting.
	Øverland, Simon Nygaard, PhD	Mental health and impairment in disability benefits. Studies applying linkages between health surveys and administrative registries.
	Eichele, Tom, PhD	Electrophysiological and Hemodynamic Correlates of Expectancy in Target Processing
	Børhaug, Kjetil, Dr.philos.	Oppseding til demokrati. Ein studie av politisk oppseding i norsk skule.
	Eikeland, Thorleif, Dr.philos.	Om å vokse opp på barnehjem og på sykehus. En undersøkelse av barnehjemsbarns opplevelser på barnehjem sammenholdt med sanatoriebarns beskrivelse av langvarige sykehusopphold – og et forsøk på forklaring.
	Wadel, Carl Cato, Dr.philos.	Medarbeidersamhandling og medarbeiderledelse i en lagbasert organisasjon
	Vinje, Hege Forbech, PhD	Thriving despite adversity: Job engagement and self-care among community nurses
	Noort, Maurits van den, PhD	Working memory capacity and foreign language acquisition
2008 V	Breivik, Kyrre, Dr.psychol.	The Adjustment of Children and Adolescents in Different Post-Divorce Family Structures. A Norwegian Study of Risks and Mechanisms.
	Johnsen, Grethe E., PhD	Memory impairment in patients with posttraumatic stress disorder
	Sætrevik, Bjørn, PhD	Cognitive Control in Auditory Processing
	Carvalhosa, Susana Fonseca, PhD	Prevention of bullying in schools: an ecological model
2008 H	Brønnick, Kolbjørn Selvåg	Attentional dysfunction in dementia associated with Parkinson's disease.
	Posserud, Maj-Britt Rocio	Epidemiology of autism spectrum disorders
	Haug, Ellen	Multilevel correlates of physical activity in the school setting
	Skjerve, Arvid	Assessing mild dementia – a study of brief cognitive tests.

	Kjønniksen, Lise	The association between adolescent experiences in physical activity and leisure time physical activity in adulthood: a ten year longitudinal study
	Gundersen, Hilde	The effects of alcohol and expectancy on brain function
	Omvik, Siri	Insomnia – a night and day problem
2009 V	Molde, Helge	Pathological gambling: prevalence, mechanisms and treatment outcome.
	Foss, Else	Den omsorgsfulle væremåte. En studie av voksnes væremåte i forhold til barn i barnehagen.
	Westrheim, Kariane	Education in a Political Context: A study of Konwledge Processes and Learning Sites in the PKK.
	Wehling, Eike	Cognitive and olfactory changes in aging
	Wangberg, Silje C.	Internet based interventions to support health behaviours: The role of self-efficacy.
	Nielsen, Morten B.	Methodological issues in research on workplace bullying. Operationalisations, measurements and samples.
	Sandu, Anca Larisa	MRI measures of brain volume and cortical complexity in clinical groups and during development.
	Guribye, Eugene	Refugees and mental health interventions
	Sørensen, Lin	Emotional problems in inattentive children – effects on cognitive control functions.
	Tjomsland, Hege E.	Health promotion with teachers. Evaluation of the Norwegian Network of Health Promoting Schools: Quantitative and qualitative analyses of predisposing, reinforcing and enabling conditions related to teacher participation and program sustainability.
	Helleve, Ingrid	Productive interactions in ICT supported communities of learners
2009 H	Skorpen, Aina Øye, Christine	Dagliglivet i en psykiatrisk institusjon: En analyse av miljøterapeutiske praksiser
	Andreassen, Cecilie Schou	WORKAHOLISM – Antecedents and Outcomes
	Stang, Ingun	Being in the same boat: An empowerment intervention in breast cancer self-help groups
	Sequeira, Sarah Dorothee Dos Santos	The effects of background noise on asymmetrical speech perception
	Kleiven, Jo, dr.philos.	The Lillehammer scales: Measuring common motives for vacation and leisure behavior
	Jónsdóttir, Guðrún	Dubito ergo sum? Ni jenter møter naturfaglig kunnskap.
	Hove, Oddbjørn	Mental health disorders in adults with intellectual disabilities - Methods of assessment and prevalence of mental health disorders and problem behaviour
	Wageningen, Heidi Karin van	The role of glutamate on brain function

	Bjørkvik, Jofrid	God nok? Selvaktelse og interpersonlig fungering hos pasienter innen psykisk helsevern: Forholdet til diagnoser, symptomer og behandlingsutbytte
	Andersson, Martin	A study of attention control in children and elderly using a forced-attention dichotic listening paradigm
	Almås, Aslaug Grov	Teachers in the Digital Network Society: Visions and Realities. A study of teachers' experiences with the use of ICT in teaching and learning.
	Ulvik, Marit	Lærerutdanning som danning? Tre stemmer i diskusjonen
2010 V	Skår, Randi	Læringsprosesser i sykepleieres profesjonsutøvelse. En studie av sykepleieres læringserfaringer.
	Roald, Knut	Kvalitetsvurdering som organisasjonslæring mellom skole og skoleeigar
	Lunde, Linn-Heidi	Chronic pain in older adults. Consequences, assessment and treatment.
	Danielsen, Anne Grete	Perceived psychosocial support, students' self-reported academic initiative and perceived life satisfaction
	Hysing, Mari	Mental health in children with chronic illness
	Olsen, Olav Kjellevold	Are good leaders moral leaders? The relationship between effective military operational leadership and morals
	Riese, Hanne	Friendship and learning. Entrepreneurship education through mini-enterprises.
	Holthe, Asle	Evaluating the implementation of the Norwegian guidelines for healthy school meals: A case study involving three secondary schools
H	Hauge, Lars Johan	Environmental antecedents of workplace bullying: A multi-design approach
	Bjørkelo, Brita	Whistleblowing at work: Antecedents and consequences
	Reme, Silje Endresen	Common Complaints – Common Cure? Psychiatric comorbidity and predictors of treatment outcome in low back pain and irritable bowel syndrome
	Helland, Wenche Andersen	Communication difficulties in children identified with psychiatric problems
	Beneventi, Harald	Neuronal correlates of working memory in dyslexia
	Thygesen, Elin	Subjective health and coping in care-dependent old persons living at home
	Aanes, Mette Marthinussen	Poor social relationships as a threat to belongingness needs. Interpersonal stress and subjective health complaints: Mediating and moderating factors.
	Anker, Morten Gustav	Client directed outcome informed couple therapy

	Bull, Torill	Combining employment and child care: The subjective well-being of single women in Scandinavia and in Southern Europe
	Viig, Nina Grieg	Tilrettelegging for læreres deltakelse i helsefremmende arbeid. En kvalitativ og kvantitativ analyse av sammenhengen mellom organisatoriske forhold og læreres deltakelse i utvikling og implementering av Europeisk Nettverk av Helsefremmende Skoler i Norge
	Wolff, Katharina	To know or not to know? Attitudes towards receiving genetic information among patients and the general public.
	Ogden, Terje, dr.philos.	Familiebasert behandling av alvorlige atferdsproblemer blant barn og ungdom. Evaluering og implementering av evidensbaserte behandlingsprogrammer i Norge.
	Solberg, Mona Elin	Self-reported bullying and victimisation at school: Prevalence, overlap and psychosocial adjustment.
2011 V	Bye, Hege Høivik	Self-presentation in job interviews. Individual and cultural differences in applicant self-presentation during job interviews and hiring managers' evaluation
	Notelaers, Guy	Workplace bullying. A risk control perspective.
	Moltu, Christian	Being a therapist in difficult therapeutic impasses. A hermeneutic phenomenological analysis of skilled psychotherapists' experiences, needs, and strategies in difficult therapies ending well.
	Myrseth, Helga	Pathological Gambling - Treatment and Personality Factors
	Schanche, Elisabeth	From self-criticism to self-compassion. An empirical investigation of hypothesized change prosesses in the Affect Phobia Treatment Model of short-term dynamic psychotherapy for patients with Cluster C personality disorders.
	Våpenstad, Eystein Victor, dr.philos.	Det tempererte nærvær. En teoretisk undersøkelse av psykoterapautens subjektivitet i psykoanalyse og psykoanalytisk psykoterapi.
	Haukebø, Kristin	Cognitive, behavioral and neural correlates of dental and intra-oral injection phobia. Results from one treatment and one fMRI study of randomized, controlled design.
	Harris, Anette	Adaptation and health in extreme and isolated environments. From 78°N to 75°S.
	Bjørknes, Ragnhild	Parent Management Training-Oregon Model: intervention effects on maternal practice and child behavior in ethnic minority families
	Mamen, Asgeir	Aspects of using physical training in patients with substance dependence and additional mental distress
	Espevik, Roar	Expert teams: Do shared mental models of team members make a difference
	Haara, Frode Olav	Unveiling teachers' reasons for choosing practical activities in mathematics teaching

2011 H	Hauge, Hans Abraham	How can employee empowerment be made conducive to both employee health and organisation performance? An empirical investigation of a tailor-made approach to organisation learning in a municipal public service organisation.
	Melkevik, Ole Rogstad	Screen-based sedentary behaviours: pastimes for the poor, inactive and overweight? A cross-national survey of children and adolescents in 39 countries.
	Vøllestad, Jon	Mindfulness-based treatment for anxiety disorders. A quantitative review of the evidence, results from a randomized controlled trial, and a qualitative exploration of patient experiences.
	Tolo, Astrid	Hvordan blir lærerkompetanse konstruert? En kvalitativ studie av PPU-studenters kunnskapsutvikling.
	Saus, Evelyn-Rose	Training effectiveness: Situation awareness training in simulators
	Nordgreen, Tine	Internet-based self-help for social anxiety disorder and panic disorder. Factors associated with effect and use of self-help.
	Munkvold, Linda Helen	Oppositional Defiant Disorder: Informant discrepancies, gender differences, co-occuring mental health problems and neurocognitive function.
	Christiansen, Øivin	Når barn plasseres utenfor hjemmet: beslutninger, forløp og relasjoner. Under barnevernets (ved)tak.
	Brunborg, Geir Scott	Conditionability and Reinforcement Sensitivity in Gambling Behaviour
	Hystad, Sigurd William	Measuring Psychological Resiliency: Validation of an Adapted Norwegian Hardiness Scale
2012 V	Roness, Dag	Hvorfor bli lærer? Motivasjon for utdanning og utøving.
	Fjermestad, Krister Westlye	The therapeutic alliance in cognitive behavioural therapy for youth anxiety disorders
	Jenssen, Eirik Sørnes	Tilpasset opplæring i norsk skole: politikeres, skolelederes og læreres handlingsvalg
	Saksvik-Lehouillier, Ingvild	Shift work tolerance and adaptation to shift work among offshore workers and nurses
	Johansen, Venke Frederike	Når det intime blir offentlig. Om kvinners åpenhet om brystkreft og om markedsføring av brystkreftsaken.
	Herheim, Rune	Pupils collaborating in pairs at a computer in mathematics learning: investigating verbal communication patterns and qualities
	Vie, Tina Løkke	Cognitive appraisal, emotions and subjective health complaints among victims of workplace bullying: A stress-theoretical approach
	Jones, Lise Øen	Effects of reading skills, spelling skills and accompanying efficacy beliefs on participation in education. A study in Norwegian prisons.

2012 H	Danielsen, Yngvild Sørebø	Childhood obesity – characteristics and treatment. Psychological perspectives.
	Horverak, Jøri Gytre	Sense or sensibility in hiring processes. Interviewee and interviewer characteristics as antecedents of immigrant applicants' employment probabilities. An experimental approach.
	Jøsendal, Ola	Development and evaluation of BE smokeFREE, a school-based smoking prevention program
	Osnes, Berge	Temporal and Posterior Frontal Involvement in Auditory Speech Perception
	Drageset, Sigrunn	Psychological distress, coping and social support in the diagnostic and preoperative phase of breast cancer
	Aasland, Merethe Schanke	Destructive leadership: Conceptualization, measurement, prevalence and outcomes
	Bakibinga, Pauline	The experience of job engagement and self-care among Ugandan nurses and midwives
	Skogen, Jens Christoffer	Foetal and early origins of old age health. Linkage between birth records and the old age cohort of the Hordaland Health Study (HUSK)
	Leversen, Ingrid	Adolescents' leisure activity participation and their life satisfaction: The role of demographic characteristics and psychological processes
	Hanss, Daniel	Explaining sustainable consumption: Findings from cross-sectional and intervention approaches
	Rød, Per Arne	Barn i klem mellom foreldrekonflikter og samfunnsmessig beskyttelse
2013 V	Mentzoni, Rune Aune	Structural Characteristics in Gambling
	Knudsen, Ann Kristin	Long-term sickness absence and disability pension award as consequences of common mental disorders. Epidemiological studies using a population-based health survey and official ill health benefit registries.
	Strand, Mari	Emotional information processing in recurrent MDD
	Veseth, Marius	Recovery in bipolar disorder. A reflexive-collaborative exploration of the lived experiences of healing and growth when battling a severe mental illness
	Mæland, Silje	Sick leave for patients with severe subjective health complaints. Challenges in general practice.
	Mjaaland, Thera	At the frontiers of change? Women and girls' pursuit of education in north-western Tigray, Ethiopia
	Odéen, Magnus	Coping at work. The role of knowledge and coping expectancies in health and sick leave.
	Hynninen, Kia Minna Johanna	Anxiety, depression and sleep disturbance in chronic obstructive pulmonary disease (COPD). Associations, prevalence and effect of psychological treatment.

	Flo, Elisabeth	Sleep and health in shift working nurses
	Aasen, Elin Margrethe	From paternalism to patient participation? The older patients undergoing hemodialysis, their next of kin and the nurses: a discursive perspective on perception of patient participation in dialysis units
	Ekornås, Belinda	Emotional and Behavioural Problems in Children: Self-perception, peer relationships, and motor abilities
	Corbin, J. Hope	North-South Partnerships for Health: Key Factors for Partnership Success from the Perspective of the KIWAKKUKI
	Birkeland, Marianne Skogbrott	Development of global self-esteem: The transition from adolescence to adulthood
2013 H	Gianella-Malca, Camila	Challenges in Implementing the Colombian Constitutional Court's Health-Care System Ruling of 2008
	Hovland, Anders	Panic disorder – Treatment outcomes and psychophysiological concomitants
	Mortensen, Øystein	The transition to parenthood – Couple relationships put to the test
	Årdal, Guro	Major Depressive Disorder – a Ten Year Follow-up Study. Inhibition, Information Processing and Health Related Quality of Life
	Johansen, Rino Bandlitz	The impact of military identity on performance in the Norwegian armed forces
	Bøe, Tormod	Socioeconomic Status and Mental Health in Children and Adolescents
2014 V	Nordmo, Ivar	Gjennom nåløyet – studenters læringserfaringer i psykologutdanningen
	Dovran, Anders	Childhood Trauma and Mental Health Problems in Adult Life
	Hegelstad, Wenche ten Velden	Early Detection and Intervention in Psychosis: A Long-Term Perspective
	Urheim, Ragnar	Forståelse av pasientaggresjon og forklaringer på nedgang i voldsrate ved Regional sikkerhetsavdeling, Sandviken sykehus
	Kinn, Liv Grethe	Round-Trips to Work. Qualitative studies of how persons with severe mental illness experience work integration.
	Rød, Anne Marie Kinn	Consequences of social defeat stress for behaviour and sleep. Short-term and long-term assessments in rats.
	Nygård, Merethe	Schizophrenia – Cognitive Function, Brain Abnormalities, and Cannabis Use
	Tjora, Tore	Smoking from adolescence through adulthood: the role of family, friends, depression and socioeconomic status. Predictors of smoking from age 13 to 30 in the "The Norwegian Longitudinal Health Behaviour Study" (NLHB)
	Vangsnes, Vigdis	The Dramaturgy and Didactics of Computer Gaming. A Study of a Medium in the Educational Context of Kindergartens.

	Nordahl, Kristin Berg	Early Father-Child Interaction in a Father-Friendly Context: Gender Differences, Child Outcomes, and Protective Factors related to Fathers' Parenting Behaviors with One-year-olds
2014 H	Sandvik, Asle Makoto	Psychopathy – the heterogenety of the construct
	Skotheim, Siv	Maternal emotional distress and early mother-infant interaction: Psychological, social and nutritional contributions
	Halleland, Helene Barone	Executive Functioning in adult Attention Deficit Hyperactivity Disorder (ADHD). From basic mechanisms to functional outcome.
	Halvorsen, Kirsti Vindal	Partnerskap i lærerutdanning, sett fra et økologisk perspektiv
	Solbue, Vibeke	Dialogen som visker ut kategorier. En studie av hvilke erfaringer innvandrerungdommer og norskfødte med innvandrerforeldre har med videregående skole. Hva forteller ungdommenes erfaringer om videregående skoles håndtering av etniske ulikheter?
	Kvalevaag, Anne Lise	Fathers' mental health and child development. The predictive value of fathers' psychological distress during pregnancy for the social, emotional and behavioural development of their children
	Sandal, Ann Karin	Ungdom og utdanningsval. Om elevar sine opplevingar av val og overgangsprosessar.
	Haug, Thomas	Predictors and moderators of treatment outcome from high- and low-intensity cognitive behavioral therapy for anxiety disorders. Association between patient and process factors, and the outcome from guided self-help, stepped care, and face-to-face cognitive behavioral therapy.
	Sjølie, Hege	Experiences of Members of a Crisis Resolution Home Treatment Team. Personal history, professional role and emotional support in a CRHT team.
	Falkenberg, Liv Eggset	Neuronal underpinnings of healthy and dysfunctional cognitive control
	Mrdalj, Jelena	The early life condition. Importance for sleep, circadian rhythmicity, behaviour and response to later life challenges
	Hesjedal, Elisabeth	Tverrprofesjonelt samarbeid mellom skule og barnevern: Kva kan støtte utsette barn og unge?
2015 V	Hauken, May Aasebø	«*The cancer treatment was only half the work!*» A Mixed-Method Study of Rehabilitation among Young Adult Cancer Survivors
	Ryland, Hilde Katrin	Social functioning and mental health in children: the influence of chronic illness and intellectual function
	Rønsen, Anne Kristin	Vurdering som profesjonskompetanse. Refleksjonsbasert utvikling av læreres kompetanse i formativ vurdering

	Hoff, Helge Andreas	Thinking about Symptoms of Psychopathy in Norway: Content Validation of the Comprehensive Assessment of Psychopathic Personality (CAPP) Model in a Norwegian Setting
	Schmid, Marit Therese	Executive Functioning in recurrent- and first episode Major Depressive Disorder. Longitudinal studies
	Sand, Liv	Body Image Distortion and Eating Disturbances in Children and Adolescents
	Matanda, Dennis Juma	Child physical growth and care practices in Kenya: Evidence from Demographic and Health Surveys
	Amugsi, Dickson Abanimi	Child care practices, resources for care, and nutritional outcomes in Ghana: Findings from Demographic and Health Surveys
	Jakobsen, Hilde	The good beating: Social norms supporting men's partner violence in Tanzania
	Sagoe, Dominic	Nonmedical anabolic-androgenic steroid use: Prevalence, attitudes, and social perception
	Eide, Helene Marie Kjærgård	Narrating the relationship between leadership and learning outcomes. A study of public narratives in the Norwegian educational sector.
2015 H	Wubs, Annegreet Gera	Intimate partner violence among adolescents in South Africa and Tanzania
	Hjelmervik, Helene Susanne	Sex and sex-hormonal effects on brain organization of fronto-parietal networks
	Dahl, Berit Misund	The meaning of professional identity in public health nursing
	Røykenes, Kari	Testangst hos sykepleierstudenter: «Alternativ behandling»
	Bless, Josef Johann	The smartphone as a research tool in psychology. Assessment of language lateralization and training of auditory attention.
	Løvvik, Camilla Margrethe Sigvaldsen	Common mental disorders and work participation – the role of return-to-work expectations
	Lehmann, Stine	Mental Disorders in Foster Children: A Study of Prevalence, Comorbidity, and Risk Factors
	Knapstad, Marit	Psychological factors in long-term sickness absence: the role of shame and social support. Epidemiological studies based on the Health Assets Project.
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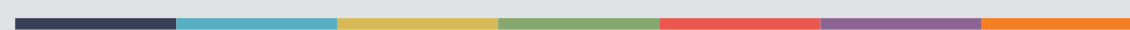

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