UiT The Arctic University of Norway

Faculty of Health Sciences

Can Individual Placement and Support (IPS) contribute to change the life of individuals experiencing mental health problems?

Challenges related to Efficacy, Effectiveness, and Implementation

Beate Brinchmann

A dissertation for the degree of Philosophiae Doctor

July 2024

Table of Contents

Preamble and Acknowledgements

Abstract

List of papers

Abbreviations

1 Mental health and work - introduction 1

1.1 Social determinants of health 3

1.1.1 Social causation or health selection? 4

1.2 Exclusion from a socially valued role 5

1.2.1 Healthy enough to work? A clinical perspective 7

1.3 Is work good or bad for mental health? 8

1.3.1 Models to understand the link between health and work 9

1.3.2 Even in times of trouble, work matters: The value of employment 13

1.4 Right based perspectives 17

1.4.1 A human rights perspective 17

1.4.2 Perspectives on disability 20

1.5 Welfare policies 21

1.5.1 Work and mental health policies in the OECD 22

1.5.2 Norwegian context 24

1.6 Are there effective means for supporting people with severe mental health problems in obtaining employment? 29

1.6.1 The history of vocational rehabilitation in psychiatry 29

1.6.2 Individual Placement and Support 30

1.6.3 Does IPS work in all contexts? 35

1.7 Implementation of IPS in routine clinical practice 37

1.7.1 Bridging the gap between research and practice 37

1.8 Aims 38

2 Method 39

2.1 Implementation 39

2.2 Is IPS efficacy generalizable across countries and context? (Paper I) 41

2.2.1 Inclusion and exclusion 42

2.2.2 Appraisal of quality 42

2.2.3 Moderators 43

2.2.4 Statistical methods 43

2.3 Do public employment service employees have attitudes compatible with the principles of IPS? (Paper II) 43
2.3.1 Survey 44
2.3.2 Sample 45
2.3.3 Statistical methods 46
2.4 Will IPS implementation have a measurable effect on employment outcomes at a societal level? (Paper III) 46
2.4.1 Setting and IPS implementation 47
2.4.2 Target population for IPS and eligibility 50
2.4.3 Study population and variables 51
2.4.4 Study design 51
2.5 Ethics 53
3 Results 55
3.1 Is IPS efficacy generalizable across countries and context? (Paper I) 55
3.2 Do public employment service employees have attitudes compatible with the principles of IPS? (Paper II) 55
3.2.1 Will IPS implementation have a measurable effect on employment outcomes at a societal level? (Paper III) 55
3.2.2 Employment outcomes on a societal level 57
4 Discussion 59
4.1 What is novel? 59
4.1.1 Is IPS efficacy generalizable across countries and context? (Paper I) 59
4.1.2 Do public employment service employees have attitudes compatible with the principles of IPS? (Paper II) 59
4.1.3 Will IPS implementation have a measurable effect on employment outcomes at a societal level? (Paper III) 60
4.2 Strengths and limitations 60
4.2.1 Paper I 60
4.2.2 Paper II 62
4.2.3 Paper III 63
4.3 Let`s say the results from the three papers are true. 65
4.3.1 Mechanisms 65
4.4 Relevance for practice and lessons learned 67
4.4.1 Complex institutional context 67
4.4.2 Integrated service models within health 69
4.5 Further research 70

4.5.1 Effects at population level 70
4.5.2 IPS for new populations? 73
4.6 Conclusion 75
References 77
Papers I-III 1
Appendices 5

Preamble and acknowledgement

Training to be a researcher was never my intention, but life takes its own paths, and for that, I am grateful. The purpose behind this project has always been to try to support implementation of vocational rehabilitation as part of the health service. I have worked within this field for almost 20 years, and knowledge and interventions in Norway related to work participation for individuals experiencing severe mental health problems have changed dramatically in this period. However, we still do not observe positive trends at the societal level indicating a decrease in exclusion from work due to mental health problems. This is an important issue, both for society, and for each of us, because it affects our opportunities to be participants in our society.

There have been, and still are, many people I have met during this time who mean a lot to me - too many to thank individually here, but I hope everyone knows the role they have played for me. Delving into this field has provided me with insights beyond the purely therapeutic clinical perspective where I started, leading me toward a broader social epidemiology perspective - shifting the focus from the individual to social structures and institutions. This work has granted me the privilege of collaborating with professionals from various fields and countries, including sociologists, health economists, other healthcare professionals, and notably, individuals with lived experiences—the real experts!

This PhD was part of a larger project funded by the Research Council of Norway at the Norwegian Institute of Public Health, under a project titled "Naturalistic Controlled Trial of Individual Placement and Support (IPS) in Bodø" and approved by the Regional Committees for medical and health research ethics (REK) early 2013. The project was a collaboration between The Norwegian Institute of Public Health and Nordland Hospital. My PhD has been conducted at UiT – The Arctic University of Norway.

The implementation and preparatory work for IPS in Bodø started many years before the research. During this time, I have collaborated with many professionals at Nordland Hospital, individuals within health care in Bodø municipality, the local work rehabilitation company Bodø Industri/FREM, and NAV. I have been part of a cross-sector collaboration for which I am very grateful.

Thanks to Nordland Hospital for letting me work with vocational rehabilitation as part of our mandate in the specialist mental health service. There are many leaders and colleagues who could be mentioned. I am incredibly grateful for the collaboration, leadership, and support I have received.

Thanks to Kari Bøckmann and Tony Bakkejord who were leaders of the psychosis team early on and decided to hire an IPS employment specialist in their team years before others dared to think of it.
Thanks to colleagues within health in Bodø municipality and NAV Bodø for good collaboration over many years.
Thanks to Lene Hellesvik Hansen and Leif-Ole Arntzen at NAV Nordland for collaboration, tears, and laughter since the beginning of time.
Thanks to all the employment specialists who have worked in IPS throughout the project. Here, only the first ones who truly broke new ground are mentioned: Frank Håvard Storvik, Leif-Ole Arntzen, Jørn Jenssen Tvervik, and Pål Wille Johnsen. Many are not mentioned but not forgotten!
Thanks to Simon Engelien, Alexandra Silberman, Barbara Stenvall, and Trond Esp for contributing their own experiences, knowledge, and drive.

Thanks to my PhD supervisor Arnstein Mykletun. It is hard to express how much your role has meant to me over the years, so I won't even attempt it. Thank you. My PhD, which was supposed to take me 3-4 years, has taken much longer. Since I first contacted you early in the last decade, we have together developed exciting projects I am incredibly proud of. The latest one we have now received funding for will last until at least 2030. We have turned gray during this time, and it will only get worse. I look forward to the continuation!

Thanks to my two co-supervisors, Samuel Harvey at Black Dog Institute for a wonderful research visit in Sydney, and Nils Fleten at the Department of Community Medicine at UiT for supporting med along the way and reading through my work and guiding me in the right direction.

Thanks to the IPSNOR research group for an inspiring, educational, and fun collaboration over many years. I am deeply grateful to have had the opportunity to work with every one of you over many years. Hope for many more! Eóin Killackey, Miles Rinaldi, David McDaid,

Marit Borg and Cathrine Fredriksen Moe. Thanks to A-La Park, Sina Wittlund, Elisabeth Sandtorv, Daniil Butenko, Maria Imtiaz Ahmed, Marianna Borowska, and Nils Abel Aars.

Thanks to everyone who works and has worked at Kaph over these years. You make up my everyday life, and I am incredibly happy that we work together! Stian Molvik, Elin Kristensen, Kristine S Steen, Alex Silberman, Barbara Stenvall, Trond Esp, Simon Engelien, Ingvild Bardal, Nils Abel Aars, Laurent O. Trichet, Mads Johansen, Knut H. Tjeldnes, Hilde E. Normann, Line Rasmussen and Oda Lekve Brandseth. And a special thanks to Unni Kolstad - thank you for being there.

Lastly, I thank my closest ones who enable me to face whatever comes my way. Jon Tomas, who is my rock, and my two beautiful children Rona and Johannes who always know what is important. Thanks to my mother, Bjørg, who is always there.

Abstract

Background: Mental health problems are registered as leading cause of disability in Western societies, with a rising proportion due to long-term mental health problems among young people. Employment is generally considered health-promoting, an important source of economic independence, and a human right. Participating in work is a key goal for individuals with severe mental health problems, and the vocational rehabilitation approach Individual Placement and Support (IPS) has proven effective. However, implementation has been challenging.

Aims: The dissertation explores possible barriers to IPS implementation through three research questions:

1. Is IPS efficacy generalizable across countries and context? (Paper I)
2. Do public employment service (PES) employees have attitudes compatible with the principles of IPS? (Paper II)
3. Will IPS implementation have a measurable effect on employment outcomes at a societal level? (Paper III)

Method and results: A systematic review and meta-analysis show IPS doubles employment rates compared to traditional vocational rehabilitation, with robust efficacy across countries and only marginally affected by strong legal protections against dismissals.

To study PES employees' attitudes, we use a cross-sectional study design and conduct a survey at two time points, investigating PES attitudes towards IPS principles. PES employees in municipalities with IPS have significantly more IPS-compliant attitudes compared to those without IPS. Attitudinal changes over time are minimal and do not significantly differ between regions

A difference-in-differences design using longitudinal registry data is used to compare the number of workdays per year for young adults receiving a temporary health-related rehabilitation benefit in a municipality where IPS is implemented versus ten municipalities without IPS. We find a significant positive impact on employment outcomes at the societal level.

Findings and conclusion: The dissertation conclude that IPS maintains efficacy even in generous welfare societies, PES employees have attitudes consistent with this way of working, and cross-sectoral collaboration shows promising effects on employment outcomes for young adults at a societal level. The conclusion is that IPS should be implemented as part of routine clinical practice.

List of papers

Paper I

Brinchmann, B., Widding-Havneraas, T., Modini, M., Rinaldi, M., Moe, C. F., McDaid, D., Park, A-La., Killackey, E., Harvey, S. & Mykletun, A. (2020). A meta-regression of the impact of policy on the efficacy of individual placement and support. Acta Psychiatrica Scandinavica, 141(3), 206-220. doi: 10.1111/acps.13129

Paper II

Brinchmann, B., Rinaldi, M., Sandtorv, E., Moe, C. F., McDaid, D., Killackey, E., & Mykletun, A. (2022). Are attitudes in employees of public employment service in line with the principles of individual placement and support? A questionnaire-based survey. Social Policy & Administration, 56(4), 681-692. doi:10.1111/spol.12828

Paper III

Brinchmann, B*., Wittlund, S*., Lorentzen, T., Moe, C.F., McDaid, D., Killackey, E., Rinaldi, M. & Mykletun, A. (2024). The societal impact of individual placement and support implementation on employment outcomes for young adults receiving temporary health-related welfare benefits: a difference-in-differences study. Psychological Medicine, 54(8), 1787–1795. doi:10.1017/S0033291723003744

*Brinchmann and Wittlund is joint first authors

Abbreviations

WHO: World Health Organization
DSM: Diagnostic and Statistical Manual of Mental health problems
ICD: International Classification of Diseases
ICPC: International Classification of Primary Care
ICF: International Classification of Functioning, Disability and Health
OECD: The Organisation for Economic Co-operation and Development
GDP: Gross Domestic Product
NOU: Norwegian Official Reports
NAV: the Norwegian Labour and Welfare Administration. (NAV is an integration of public employment service, social insurance and parts of municipal social assistance).
PES: Public Employment Services – (This term is used as equivalent to NAV)
ALMP: Active Labour Market Programs/Policies
SDH: Social determinants of health
IA-Agreement: Agreement for a More Inclusive Working Life
CHIME: stands for Connectedness; Hope and optimism about the future; Identity; Meaning in life; and Empowerment
IPS: Individual Placement and Support
RCT: Randomized Controlled Trial
EPIS: Exploration, Preparation, Implementation and Sustainment
CMHC: Community Mental Health Center
TSB: Substance misuse treatment
WAA: Work Assessment Allowance
DID: Difference-in-differences
ATET: Average Treatment Effect of the Treated group
REC: Regional Committee for Medical and Health Research Ethics

1 Mental health and work - introduction

Being employed is the norm in our society. Modern perspective on employment underline that work is considered to be meaningful, foster important friendships, and ideally be both enjoyable and a space for self-realization (1). Being an employee is central to our self-understanding, identity and well-being, and paid work is central to economic independence, and integration into society (2).

Although employment is the norm for most people, this norm is often reversed for those with severe mental health problems (3-11). Unemployment or disablement from employment appears to be the standard, making it one of the leading causes of living with disability according to the World Health Organization (WHO) (12).

In this thesis the terms "work" and "employment" are utilized somewhat interchangeably but are understood and defined in a narrow way as contractual paid work. This typically entails a formal contractual arrangement with terms and conditions established by the employer, involving both an employee and an employer. In other contexts, “work” could also refer to other productive activities such as volunteer work or household chores. This does not mean that other types of defined work are less important, but it is a delineation of the issue being investigated in this thesis.

Contractual working arrangements can vary widely, both in terms of the nature of the work, as well as working conditions. This can include factors such as working hours, salary conditions, the content of the work, the degree of control over one's tasks, perceived stress or collegial support, and the work environment in general. Poor working conditions can also be a cause of or contribute to health problems (13). Some have argued for a continuum perspective on employment rather than a dichotomous perspective (employed–unemployed). This includes research on individuals who work less than they desire (underemployment), those who are paid insufficiently to make a living, and skilled individuals in low-skilled jobs (14). This thesis primarily focuses on contributing to enabling people to get into employment, not conditions within employment.

The concept of mental health problems is used in this thesis to describe conditions that fulfill the criteria of a diagnosis from the classifications systems mostly used. This encompasses all diagnosable mental health problems according to established international classification

systems. The concept of mental illness is primarily classified according to two major international classification systems: The world Health organizations' International Classification of Diseases (ICD) version 11, chapter six (mental, behavioural or neurodevelopmental health problems) (15), and the Diagnostic and Statistical Manual of Mental health problems (DSM) from the American Psychiatric Association (16). Mental health problems classified within these systems are "characterized by clinically significant disturbance in cognition, emotion regulation or behavior". These classifications also encompass various degrees of severity, with some diagnoses correlating the number of symptoms with the severity of functional impairment. The relationship between severity and functional outcome is however not always consistent and can vary depending on other factors, such as cultural and social environment (17).

Given the involvement of primary healthcare services and general practitioners in applications and justifications for welfare benefits, a third diagnostic system is also relevant: the International Classification of Primary Care version (ICPC) (18). This classification was created to better describe patients' own accounts of why they seek healthcare – their own descriptions of complaints and symptoms (19).

A forth relevant classification system is The World Health Organization's International Classification of Functioning, Disability and Health (ICF), which classifies functioning and disability in relation to a health condition (20).

The relationship between mental health problems, disability, absence from work, and welfare benefits can be viewed and understood from different perspectives. When discussing ill-health, three terms are often used to describe different aspects of this concept. These are disease, illness, and sickness (21). Disease is described as a pathological process, often measurable objectively, and is frequently central to the medical perspective. Illness is often described as a subjective experience, commonly associated with disease, but it can also be present without a known cause or disease. The term sickness is described more as a social role, often negotiated between the individual and society. However, this relationship is not one-to-one, and in a cross-sectional survey of the working population in Sweden, little overlap was found between these categories (22).

The main title of this thesis reflects that being able to engage in paid work can have ripple effects on our life course. This thesis explores specific factors that may work as challenges to

the implementation, efficacy and effectiveness of the vocational rehabilitation approach Individual Placement and Support (IPS) in a generous welfare society. Furthermore, it evaluates employment outcomes at the societal level following the implementation of IPS compared to areas not implementing IPS.

Aiming to increase work participation among individuals with severe mental health problems can be driven by different rationales and might also influence whether an intervention is implemented and sustained. A health rationale (23) that also includes demands for interventions with proven efficacy, an economic and sustainability rationale (24) (with an aim of reducing welfare dependency), a legal base rationale (UN Convention on the Rights of Persons with Disabilities (UNCRDP) (25) but also a rationale based on violation of human rights and moral arguments (26). Within these perspectives there are many factors that could have been discussed. I have done a selection.

This thesis begins not at the individual level, but at the societal level. An emphasis on individual-based risk factors and disease as a causal chain might risk overlooking significant sociological processes and restricts the capacity to enhance health at a societal level (27). Our mental health (and whether we achieve competitive employment) is influenced by factors that are not only on the individual level but also by the conditions we encounter in the societies we live. The thesis starts by briefly touch upon the subject of social determinants of health, addressing structural conditions and how they might affect our health.

1.1 Social determinants of health

Social determinants of health (SDH) are structural conditions encountered throughout our lives that influence our health. Frameworks for social determinants aim to understand how health outcomes are shaped by the conditions in which people live and work (28).

Social determinants of mental health have been defined as different structural conditions such as “income, employment, socioeconomic status, education, food security, housing, social support, discrimination, childhood adversity, as well as the neighborhood social and physical conditions in which people live, and the ability to access acceptable and affordable healthcare” (29).

These social determinants can contribute to the development of physical and mental health problems. One of the most consistent and well-established findings in public health is the existence of health inequalities among individuals belonging to different social strata or layers

of society based on factors like income, education, occupation, and social status (28). The existence of social inequality in health is characterized by the fact that individuals belonging to lower social strata generally have significantly poorer health compared to those who are more privileged (in terms of education level or income level) (30). People from lower socioeconomic backgrounds may face greater exposure to adverse social conditions, such as poverty, limited access to healthcare, and increased levels of stress. Even in highly developed welfare states, socioeconomic health inequalities continue to persist (31), and these factors are proposed as fundamental determinants of disease (32). Employment is one of three typical dimensions when discussing important socioeconomical factors (the others being education and money) (27).

The World Health Organization (WHO) convened in 2005 a commission of Social Determinants of Health (CSDH) WHO (33). They created a platform that brought together evidence on health inequalities across the world. One of their action areas in this document state that a goal should be to "Make fair employment and decent work a central goal of national and international social and economic policy-making". The Nordic social democratic welfare model embeds reduction of social inequalities (34) and the development of the Norwegian welfare state have had this as an important political aim (35). Despite that Norway as many of the other countries in the Western welfare states, experienced a shift in policies already in the 1990s with an increased emphasis on activation-active measures aimed at returning welfare recipients to work, those with disability have still markedly lower employment rates than others (36-38).

1.1.1 Social causation or health selection?

The social gradient in health means that, generally, "the lower the individual's socioeconomic position, the worse their health" (39). The social gradient in health have been tried explained through generic modes, but mainly through two competing hypotheses: social causation or health selection (40-44). Social causation indicates that adversity and stress associated with low social statuses leads to downward selection, whereas social selection or health selection explain the downward mobility based on genetically predisposed individuals (42). The association between work and good mental health can be attributed to the understanding that individuals in good mental health are able to work, whereas mental health problems impede one's ability to work well or maintain employment. Low workforce participation among individuals with mental health problems can be attributed to a natural progression in which

the mental health problems is the explanation for the low participation in the workforce. This would fall under barriers related to individual characteristics.

On the contrary, social causation claims that an individual's health outcomes are influenced by social and economic factors that are socially stratified. Disparities in health can be attributed to the unequal distribution of resources, opportunities, knowledge, behavior, and power within society. Social causation highlights the impact of societal factors on health disparities and underscores the importance of addressing social inequalities to improve the overall well-being of the population.

The underlying causes of health inequality are intricate and multifaceted, making it difficult to establish clear direction of causality and determine the extent to which it is health-related selection or social causality that governs. These inequalities in health persist over time, also in welfare states like the Nordic with generous welfare policies (45, 46).

1.2 Exclusion from a socially valued role

Mental health problems might emerge early and have long-lasting consequences. The average peak for mental health problems is found through a large meta-analysis, to be 14.5 years, but with great variation between diagnostic categories and variation between what different studies report (47). Mental health problems are a risk factor for underachievement in school and thereby also potentially for further transition to working life (48). Failing to complete college or securing employment can increase the risk of experiencing worse economic position and lower living standards, and even a shorter life expectancy (49-52). More recent studies on young disability pensioners in Norway find that the majority of them are early school leavers and have less previous labour force participation and experience (53, 54). Exclusion from a socially valued role as being an employee might therefor start early and have long lasting consequences.

A literature review from 2011 shows that between 10-20 percent of people with schizophrenia are employed (3). This review comment that there are substantial methodological problems when comparing different studies because they differ a lot regarding method of recruitment, study setting, diagnostic practice and definition of what employment means. Still, other studies also report employment rates among people with severe mental health problems between 10-30 percent (4-7). For young individuals experiencing first episode psychosis approximately 40-50 percent are unemployed when seeking help and many have not

completed their education (55). In a subsample from the national survey of individuals with psychosis conducted in Australia, 22.4 % was currently employed, and this number has been stable since last survey in 1997 (8).

Epidemiological and observational studies (9), national surveys (10) and national and international registers of health-related social security benefits might also contribute to understand how mental health problems are connected to participation in the workforce.

A systematic review of epidemiological observational studies found that diagnostic category and severity are important factors to consider regarding their impact on labour force participation. (9). The rate for participation in employment for the most severe (psychosis) was 11.9 % to the least severe (affective disorders) 64.5 %. Studies included in this review had strict inclusion criteria with confirmed and differentiated diagnostic categories.

In Nordic welfare states with comprehensive welfare policies, we can assume that individuals with severe mental health problems, because of low rates of work participation, to a large degree will receive some form of welfare benefits after they have been diagnosed with a severe mental health problem (56). A longitudinal cohort study from Finland, which tracked individuals before and after their first hospitalization for severe mental health problems, found that only 14% of those hospitalized and diagnosed with schizophrenia were employed at the end of the same year they received the diagnosis. Individuals with non-affective psychosis or bipolar disorder had somewhat higher employment rates, at 33% and 43%, respectively. They also found a clear decrease in employment between the first and the second hospitalisation, but after that it was stabilised (56). A study from Norway that linked national health and welfare registers and investigated prevalence of schizophrenia and rate of employment during a 12-month period, found an employment rate of 9.8-10.5% percent for people diagnosed with schizophrenia (56, 57). A nationwide study from Finland, which linked individuals` personal identity numbers from the Hospital Discharge register with Employer-employee Data over a 27-year period, found that the rate of unemployment was highest among those with schizophrenia (ranging from 89-94 percent). The study concludes that individuals with severe mental health problems experience substantial losses in earnings and total income (11).

Individuals with mental health illness currently receive 45% more out-of-work benefits than those without mental health illnesses, and Norway has the highest rate of sickness absence

and disability caseload in the OECD (58). Compared to the national average in Norway, individuals with severe mental health problems experience a nine-fold higher rate of unemployment (58, 59). In general, it does not appear that those suffering from mental health problems benefit from a favourable labour market where unemployment rate decreases (58, 59). The OECD has expressed concerns and recommended reforms (60).

The substantial social and economic burdens attributed to severe mental health problems are widely acknowledged, giving rise to detrimental consequences for individuals, their families, and the broader societal context (51, 61). A UK study on the cost of schizophrenia reported that an estimated 15.8% of carers had to take an average of 12.5 days off work per year, and 4.8% had ended their employment because of their caregiving role (62).

To sum up, individuals with severe mental health problems have a significantly low rate of participation in the workforce, and longitudinal studies demonstrate that their social functioning trajectories tend to be consistently low (63). The burden of mental health problems on the individuals themselves, their families and society are profound, and mental health challenges has been recognised as one of the leading causes of disease burden in western societies which encompasses exclusion from work (64-66). What contributes to, as well as maintains, this low rate of participation is complex.

1.2.1 Healthy enough to work? A clinical perspective.

A clinical perspective that might have influenced the low employment rates of individuals with severe mental health problems is whether recovery or rehabilitation from mental health problems is possible (and to what degree that influence work capability). The concept of clinical recovery is based on objective measures on remission from clinical dimension (rating of symptoms, rehospitalization) and social/functional dimensions (daily functioning, social and vocational activities) within what is considered a normal range (67-69), although the concept is still discussed (70). This perspective is mostly based on longitudinal studies investigating recovery based on symptomatic remission (70, 71).

Historically, there has been a rather pessimistic view that might have created hopelessness in terms of integration in society and filling valued roles. Kraeplin is mentioned as one of the first to use the term “recovery” and “recovery with defect” in psychiatry (69). The concept of recovery is defined as “restoration or return to health from illness, an injury” (72). Kraeplins concept of dementia preacox was characterized as “a series of morbid pictures” with the

course (and remission) described as a downhill trajectory, albeit “frequently interrupted by more or less complete remissions” ultimately leading to “terminal dementia” (73).

Today, we know that this pessimistic view is not right. In 1969, the World Health organisation started the International Pilot Study of Schizophrenia (74), and after that, many longitudinal studied have shown broad heterogeneity in results, both course and end state (75-79). We now know that many recover (up to two thirds), either partly or fully.

The heterogeneity of reported outcomes from these studies still exists; a new systematic review and meta-analysis that included observational and longitudinal studies investigated clinical recovery after first episode’s schizophrenia and concluded with a 21% recovery rate (69). Another systematic review, including only naturalistic and observational studies, found that 57% of first episode psychosis experienced recovery (80). In a systematic review and meta-analysis that exclusively considered studies with a follow-up period of 20 years or more, researchers noted that the heterogeneity and range of measures utilized could reflect variations in the use of scales, definitions, and cut-offs. This variability may contribute to the diversity observed in outcomes (79). These studies show, as commented by Davidson and Roe, differences in course and outcome, but also across domains of functioning (81). This is important because it shows that there is no equivalence between symptom and function. Experiencing a high degree of symptoms does not necessarily prevent one from being able to work – conversely, mild symptoms don’t guarantee the ability to maintain employment.

There are different perspectives on what recovery means. Another perspective om recovery will be presented under the heading: 1.3.2. Even in times of trouble, work matters: The importance of employment for mental health.

1.3 Is work good or bad for mental health?

To start with the conclusion to this question: In general - those who work, have better health, including mental health than those who do not work (27, 82). This positive association between employment and good health has been reported consistently over time, across contexts and socioeconomic statuses in systematic reviews and metareviews (23, 82-84). Meta-analyses and longitudinal analyses of representative population samples also demonstrate a clear association between unemployment and poor health (85, 86). Studies have also found that when individuals move into work from unemployment, improvements are seen in mental health (87, 88).

In addition to the well-established link between participation in the workforce and good health, it has also been shown that participation in working life contributes to a more even distribution of benefits and is believed to reduce inequalities in health and socio-economic status in the population (89). The robust correlation between employment and good health may lead to the hasty conclusion that work is inherently beneficial for health. However, a deeper exploration/examination of the literature reveals that the relationship is significantly more complex and not as straightforward as it initially seemed.

1.3.1 Models to understand the link between health and work

The relationship between work and health has been examined for a long time across various traditions, methods, and populations (27).

Several models can be applied to describe this relationship. An attempt to compile some conceptual models has been made by Berkman, Kawachi and Glymor (27). They have combined knowledge from a longitudinal cohort study from Janlert and Hammarström with a review done by Bartley (90) and propose four potential models on *how* employment can affect health: through non-financial benefits of work, economic deprivation models, stress models and social support models. These models often combine elements from the different research traditions like sociological traditions, biomedical traditions (physiological and biological mechanism, mostly physical health), and a psychological tradition focusing on how unemployment influences mental health through individual possibilities and differences (91).

Starting within the sociological tradition, one of the most influential early studies was conducted in 1929 during the Great Depression. Maria Jahoda and her colleagues conducted the Marienthal study (92), and tried to describe what happened in a society that experienced massive unemployment. They used a mix of methods (participant observations, documents/written material, statistics, diaries, questionnaires) and identified several essential factors related to work that play significant roles in leading a fulfilling life and maintaining good health. This study shed light on both social and psychological consequences of unemployment, emphasizing that not only manifest factors like income influence health, but also more subtle, latent functions. Employment provides structure in daily routines, fosters social connections, and offers meaningful tasks that impact others. It enables individuals to be active participants, with their actions carrying meaning. The Marienthal study (92) give examples of non-financial benefits of work. Within the non-financial benefits models, adequate compensation for the financial loss resulting from unemployment may not

necessarily fully compensate for all the consequences of being out of work as economic deprivation models would argue.

Stress models, often stemming from the psychological or biomedical traditions, describe unemployment as a trigger/catalyst for stress mechanisms. For instance, meta-analysis demonstrate that systemic inflammation as a plausible mediator of the association between unemployment and health (93). Interventions could encompass stress-releasing individual interventions (both psychological and biomedical). Additionally, if stress is recognized as a cause of poverty – direct financial support to alleviate the issue would represent a political intervention aimed at solving the problem.

The social support models builds on classical theories like Durkheim (94) and psychoanalyst John Bowlby on attachment theory who explores the bonds between individuals and society and members of society (95). Social support refers to the psychological or material resources provided to an individual by others within a social relationship, and they might have a direct effect on outcomes or a more buffering role between other stressors and health outcomes (96).

These examples are used to briefly illustrate the complexity and multifaceted nature of the relationship between health and work, and the rationale for implementing various interventions based on these models of understanding.

1.3.1.1 Mental health and work

Studies investigating the relationship between work and health differentiate in the choice of health outcomes and how they are measured. For instance, some studies examine the association between job loss and mortality (97, 98), while others investigate outcomes such as suicide or other non-fatal health incidents (hospitalizations, accidents, myocardial infaRCTions and strokes) (99). In studies specifically investigating mental health outcomes, definitions of what they define as mental health varying ranging from well-being and psychological distress (85) to mental health problems assessed through diagnostic criteria (23).

One meta-analytic study (85) incorporated both cross-sectional studies comparing employed individuals with the unemployed and longitudinal studies investigating the consequences of unemployment and reemployment transitions. The authors concluded that there is a strong relationship between unemployment and adverse effects on mental well-being. However, this study did not control for mental health at baseline.

A systematic review, which encompassed both cross-sectional and cohort studies, particularly focusing on unemployment among young people, also discovered a positive association between unemployment and mental well-being, stress levels, and diagnostic conditions (100). The authors noted that the association weakened in cohort studies when controlling for baseline mental health status.

Studies defining health based on the diagnosis of common mental health problems, have also identified positive associations between the advantages of employment and mental health. A systematic meta-review of reviews investigated the potential mental health benefits of employment (23). This study included 11 reviews (reviews, meta-analysis, narrative reviews, qualitative synthesis, cohort-studies, longitudinal studies and cross- sectional studies). The result from the study indicates that work overall seem to be beneficial to employee's mental health. In the introduction to this paper, the authors highlight that "paid employment not only provides financial security but also offers daily structure, a sense of worth, and regular supportive social engagement" (23).

This echoes some of the issues raised in the classic Jahoda study from the 1920s, albeit examined in a different context and under different societal conditions, and through very different methods. However, they both highlight the complexity in understanding the link between employment and health. The authors of the meta-review highlight that the positive association found in their review could be due to the process of working, associated factors such as daily structure and financial reward, or a combination of these elements. They emphasize the complexity of this relationship, noting that mental ill-health can both result from and lead to changes in employment status (23).

Lastly, two studies especially focusing on the link between severe mental health problems and employment will be briefly mentioned. The first is a quasi-experimental study with a novel prospective design following individuals longitudinally through observational data. Individuals included in the study received public mental health services in a defined region, and their employment status and mental health status were periodically measured and collected as a routine part of care. The aim of this study was to measure causal effect of employment on mental health status using longitudinal data and represents the only study found using this method examining the link between severe mental health problems and employment. This study demonstrated positive effects between employment and various mental health measures and reduced cost associated with mental health spending (101).

The second paper to be mentioned in this regard, is a systematic review of more traditional longitudinal observational data on cohorts with severe mental health problems, comparing outcomes for those that achieved employment versus those who did not. The authors did not find clear evidence of reduced psychiatric symptoms, however, conclude that employment is not harmful to health or functioning of people with severe mental health problems (102). But can work conditions also be a risk factor contributing to worse mental health problems?

1.3.1.2 Work-place and mental well-being

We know that mental health problems are a significant cause of absenteeism from the workforce contributing to both sick leave and disability, and it has been questioned whether employment and certain work conditions also contributes to more common mental health problems (13, 103-105). Some studies have concluded that jobs with poor quality might deteriorate health in an equal manner as being unemployed (106-108). In a national panel survey from Australia, respondents who had jobs that scoring low on psychosocial quality, experienced greater decline in mental health than those who were unemployed (107).

The most known model to describe the relationship between the workplace and mental well-being is Karasek`s stress-management model of job strain (109). This model highlights the interaction between job demands placed on the worker and to what extent the employee can control the demands from work. The model describes that some combinations of job demand, job control, and social support are associated with higher strain and thereby reduced well-being than others. A systematic meta-review from 2017 summarizing reviews and meta-analyses from the period from 1990 and onwards, proposes a model with three clusters of risk factors in the workplace associated with higher rates of common mental health problems. These are imbalanced job design, occupational uncertainty and a lack of value and respect in the workplace. The paper concludes that some work situations are associated with increased risk of common mental health problems, and that appropriate interventions should be developed to promote good mental health (13).

To conclude, while work can be detrimental under certain conditions, (understanding factors connected to work and work-conditions is therefore also vital) but in general, work is considered to be beneficial for mental health and wellbeing (82).

1.3.2 Even in times of trouble, work matters: The value of employment

Another perspective for understanding the relationship between health and work is to shift the focus from symptoms and dysfunction to the value work holds to the individual. To do this, we take an alternative route through the concept of personal recovery. This perspective on recovery, differs from what's defined as clinical recovery, and originates from the Independent Living and Civil Rights Movements of the 1960s and 1970s. It challenges the notion that recovery entails being symptom-free or conforming to conventional norms of 'normal' living (110).

"It is inertia which paralyzes the will to do and to accomplish because there is no hope. It is being truly disabled, not by a disease or injury, but by despair".

Patricia E. Deegan (111).

Mental health problems are viewed as merely one facet of a person, and recovery is about getting out of the conditions that being a mental patient has created for you: poverty, unemployment and loss of identity (81).

An often-used definition of recovery is that of Anthony (1993) "…described as a deeply personal, unique process of changings one`s attitudes, values, feelings, goals, skills, and/or roles. It is a way of living a satisfying, hopeful, and contributing life even with limitations caused by illness. Recovery involves the development of new meaning and purpose in one's life as one grows beyond the catastrophic effects of mental health problems"(112).

This way of seeing recovery, and the influence of the recovery movement is a paradigm shift in how severe mental health problems is conceptualized and treated (111, 113-116). Recovery stories emphasize other aspects than the clinical perspective, underlining personal responsibility and taking charge of one's life, hope for the future and meaningful activities (117).

These perspectives stem from first-person narratives and qualitative studies exploring the experiences of individuals who have navigated their own paths of recovery, offering insights into how they personally define and evaluate the concept of recovery. This is often termed personal recovery (81). Personal recovery refers to what a person self considers to be vital for their growth and living a meaningful and fulfilled life (118).

"The goal of recovery is not to get main-streamed. We don't want to be main-streamed. We say let the mainstream become a wide stream that has room for all of us and leaves no one stranded on the fringes."

Patricia Deegan (119)

1.3.2.1 Work as part of everyday life

Several studies have investigated the recovery process and found work to be important in several ways, including as part of our normal everyday life (120-124). A Norwegian social anthropologist has highlighted two aspects of the concept of everyday life: the daily organization of various tasks, and the experience of everyday life as a life-world, where people strive to find meaning in their lives (125). Work contributes to daily routines and structure, helps in managing symptoms, and provides economic independence. Being employed can build self-efficacy and self-esteem, a sense of purpose and a feeling of making meaningful contributions and improve social and other skills (126, 127). It fosters a sense of belonging to a social community and instills a sense of pride and accomplishment in what one contributes (124). Engaging in activities unrelated to one's own issues is described as important (128). These last-mentioned studies primarily explore subjective experiences through qualitative interviews.

Given that personal recovery is inherently subjective, a general description is difficult. Through a systematic review and narrative synthesis of 97 papers, a conceptual framework has been created to support further research and has been given the acronym CHIME (129). CHIME stands for connectedness; hope and optimism about the future; identity; meaning in life; and empowerment. A collaborative paper involving experts from seven countries representing perspectives from personal experience with mental health problems, as well as clinicians, researchers and policymakers have identified ten pro-recovery approaches for mental health services. The inclusion criteria were that the interventions should target recovery outcomes such as the CHIME framework and be based on empirical investigation. Individual placement and support were one of the ten pro-recovery approaches recommended to be provided in a recovery-oriented mental health system (130).

Other designs and methods have also given insight to what role work play in our lives during contact with mental health care. A recently published study systematically reviewed and conducted a meta-analysis of the literature on the employment preferences of individuals with

mental health problems (131). This study included unemployed or individuals on sick leave, and competitive employment also included job training, education and participating in supported employment. The definition of mental health problems varied across the studies, but a part of the studies specifically included individuals with severe mental health problems. They found that over 60 percent of participants across the sample desired competitive employment, with preferences varying according to support setting - for example, lower in vocational rehabilitation services than inpatient and outpatient psychiatric treatment settings. The authors also noted differences between world regions (highest in Asia and Australia) and indicated that socio-economic and cultural factors could affect job preferences.

In an interview study from 2011, young individuals (mid-twenties) hospitalized for first episode psychosis in the United States (132), was asked about their life and treatment goals. This study investigated, through open ended questions, thoughts about both life and treatment goals and what mental health professionals could be helpful with. Securing employment (53%) and pursuing education (38%) were identified as important goals, with 80 % responding positively when queried about their interest in receiving support from mental health professionals to obtain employment or pursue education (75%). It is noteworthy that initially, the youths' life goals regarding work and education weren't reflected into their reported treatment goals. However, when directly asked about their interest in receiving assistance with these goals from healthcare professionals, they confirmed. This could imply a disconnect between expectations regarding the scope of healthcare assistance and the inclusion of such life goals.

In this life phase, amidst education and transitioning into adulthood, there is opportunities to support a critical phase that might be pivotal for long-term outcomes involving also completing education and embarking on a career (133).

In a qualitative interview study involving slightly older individuals experiencing a first episode psychosis in Canada, the significance of work identity and financial stability emerged as central themes pivotal for their recovery (134). In this study, one of the respondents reported that they believed financial worries also played a role in triggering their psychosis (reported at page 316 in the paper). A large naturalistic cohort study of people with psychotic disorder conducted in the Netherlands showed that between one-fifth and one third of reported dissatisfaction with their financial situation, a markedly higher proportion compared to the general population (135). Financial dissatisfaction is a predictor of poorer quality of life

(136), potentially shaping daily stress and might limit the possibility to participate in social activities.

There are several studies that use community samples with individuals diagnosed with severe mental health problems. Two studies from Germany will be reported; one observational cross-sectional study by Gühne and colleagues (137) that investigated desire for employment in individuals experiencing severe mental health problems. The individuals in this study had a mean age of 42.7 and considerable psychosocial impairments. Still, 59.8% had a strong preference for competitive employment and 65 % of the individuals specifically unemployed, had a strong preference for work. Another interview study that included a sample of community resident individuals diagnosed with schizophrenia or schizoaffective disorders, found that 85 % wanted work as a goal for the future (138). Some of them were already employed (34%) and additional 51% wanted to be employed. These studies included both individuals who had spent extended periods in psychiatric wards, as well as individuals with diverse diagnoses and employment statuses such as unemployment, disability, and permanent employment.

The different understandings of the concept of recovery (clinical and personal) shows that recovery might be seen as both an outcome and a process. A systematic review and meta-analysis investigated the strength of the relationship between personal and clinical recovery among individuals diagnosed with schizophrenia spectrum disorders and found a substantial heterogeneity across studies (139). The correlation between clinical recovery and personal recovery was smallest among persons with psychotic symptoms. They conclude that a focus on reducing positive symptoms might not contribute to improved personal recovery and outcome measures in clinical practice should focus more on personal recovery.

Even though the perspectives on clinical recovery and personal recovery are different, they have something in common. Results from both types of studies support that a focus on work has its rightful place. The results both from longitudinal studies focusing on clinical recovery, from studies investigating the subjective experiences of what is important or surveys asking individuals about goals – all support the prospects of positive futures despite experiencing severe mental health problems (71). But, importantly, although these concepts sometimes might overlap, yet a person can undergo one without necessarily experiencing the other (130) Clinical recovery should not be a necessity for pursuing competitive employment.

When I first started, I was quite convinced that the connection between work and health would become clearer to me. The link between work and good mental health is indeed fairly evident, but understanding the mechanisms, interactions, causes, and direction has grown in complexity, along with a respect for how challenging this field of research is.

1.4 Right based perspectives

A report published in the Lancet in 2011 stating that violations of the Human rights of people with mental and psychosocial disabilities is "an unresolved global crisis" (140). This paper is concerned about violations in low- and middle-income countries, but the message from respondents is universal: human rights is the possibility to be allowed to live a decent life within society.

1.4.1 A human rights perspective

"From a moral-practical standpoint, I am treating a human being as a mere thing if I do not take him as a person…Likewise, I am not treating a human being as a subject of rights if I do not take him as a member of a community founded on law, to which we both belong."

These words belong to Edmund Husserl from his book Ideas II (quote from Davidson 2003 (141)).

Work is a fundamental human right (142) – the right to be an active citizen, a contributor, and a valued member of society. The Universal Declaration of Human rights, article 23 declares that "everyone has the right to work, to free choice of employment, to just and favorable conditions of work and to protection against unemployment". The Human rights are designed to safeguard and prioritize the welfare of the most vulnerable groups in society, people exposed to discrimination and violence. Article 23 also comments on discrimination and the right of equal pay for equal work (142). Work is seen as a way of exercising freedom, a possibility to live a decent life with fair income, personal growth, and integration in society. The United Nations Convention on the rights of persons with disabilities state that: "the right of persons with disabilities to work on an equal basis with others" (25). Decent work for all is also part of the United Nations sustainable overarching developmental goals (143). Together, this represents a framework for justice, equality, and sustainable development in our society. They underscore the importance of international cooperation, legal protection, and collective actions to achieve a better and more just world.

Based on employment rates for people with severe mental health problems, it seems that this right is not fulfilled. The reasons are likely multifaceted, but addressing stigma, prejudice and discrimination could serve as a pivotal starting point. Originally the term *stigma* from the Greeks, refereed to bodily signs – usually visual, as advertisement of a status – someone to avoid – at traitor or a criminal. Stigma, as described by Ervin Goffman (144) is defined by attributes - a characteristic – something that indicates being different from others. In a paper by Thornicroft and colleagues they defined stigma as an overarching term that includes three elements: "problems of knowledge (ignorance), problems of attitudes (prejudice), and problems of behaviour (discrimination)" (145). Unemployment or not being able to or included into work, is not a visual stigma, but might still play out in a similar way through ignorance, prejudice and discrimination. If people with severe mental health problems is perceived as unable to work because of their illness, this influences our interactions, shapes our expectations, and impacts the way we organise our services. Is there a genuine need for services if competitive employment is not a viable or attainable option? Ignorance, prejudice and discrimination towards people with severe mental health problems exist and influence both the possibility to get a job, but also how people function at the workplace and influence job searching behaviours as a double stigma (146-149). This applies to both employers, but also clinicians, frontline workers in public employment services and the patient themselves through self-stigma (150). Stigma can have far-reaching consequences. Studies from the United States using national panel surveys and national health surveys have investigated job-related discrimination and wage differentials between individuals with mental health problems compared to nondisabled individuals. They found that stigma and discrimination can have direct economic consequences such as lower wages, and especially for those with severe mental health problems (151, 152). In a cross-sectional survey in 27 countries participants with schizophrenia was interviewed about their experiences with stigma, and many reported anticipating stigma in relation to applying for work, training or education and wanted to conceal their diagnosis (153).

The stigma associated with mental health problems, along with its consequences, can cause us to undervalue human rights and neglect the need to adapt our services to overcome the barriers faced by individuals with mental health problems. Human rights violations of people with mental health problems, including the discrimination in employment, is seen as an unresolved global crisis (140).

1.4.1.1 Citizenship - belonging to a community

The concept of citizenship has also been introduced regarding mental health problems and how the state can fulfill its commitments to citizens suffering from mental health problems (154, 155). Citizenship and what it means to be a citizen has been under philosophical debate since Aristoteles (156). Citizenship can be defined as "a person's strong connection to the 5 Rs of the rights, responsibilities, roles, resources and relationships that a democratic society makes available to its members" (157). In a paper by Rowe and Davidson, they argue that citizenship could be a means of pursuing recovery within the context and goal of community life, a dimension that the concept of personal recovery does not necessarily encompass (157). The concept of recovering citizenship was developed as a response to the tendency of adopting a narrow perspective that places the sole responsibility of recovery on the individual. Recovering citizenship encompasses both personal journeys of individuals and the provision of effective clinical services that enable active participation in society. Employment and labour market involvement are closely connected to citizenship, social inclusion, and good mental health (158-161).

WHO underlined in their guidance on community mental health services that supporting person-centred and right based approaches should be a core priority of mental health services (162). WHO has even included being *able* to work well as part of the definition of good mental health:

> "Mental health is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community."(163)

This describes a link between good mental health and being able to work. WHO's highlights that health is individual, personal, and relative. We come into the world with different starting points and conditions. We grow up under various circumstances and contexts and are affected differently by life circumstances. We are all quite different in how we cope with stress, realize abilities, and learn well, and every individual must therefore assess their own potential and determine their goals. The path to good mental health will thus be personal and vary between individuals. Good mental health is however not easily definable or confined to the degree of experienced symptoms. It is an interaction between many factors. While our journey across the life course is personal, addressing health inequalities and inequities influenced by social

determinants, remains a societal obligation and as WHO 'report of the commission on social determinants of health says: "social justice is a matter of life and death" (33).

1.4.2 Perspectives on disability

As mentioned in the introduction: mental health problems are one of the leading causes of living with disability, also for young people in European countries (12, 164, 165). Disability is a broad term; it does not differentiate based on etiology, and we cannot infer disability in different life areas (ex in education or employment) from a medical diagnosis alone (166).

However, the concept of disability is not straightforward. Disability has been defined quite differently over time, and a universal concept, definition and measurement is not agreed upon (167). The World Health Organization's International Classification of Functioning, Disability and Health (ICF) (20) classifies functioning and disability in relation to a health condition. According to this definition, disability has three dimensions: Impairment, activity limitation and participant restrictions (20). It is defined within a biopsychosocial model that integrates two different models of disability: the social model and the medical model (168, 169). The medical model describes impairments as cause for disability, while the social disability model claim that disability is caused by social circumstances – a radically different view (170). The social model builds historically on central principles from discussions between the Disability Alliance and the Union of the Physically Impaired Against Segregation and was outlined in the Fundamental Principles of Disability in 1975 (171, 172). How disabling something is, is conditioned by disabling barriers in society (169, 170). Disability in this way of thinking re-direct the attention - move it from being a medical issue, towards a social and political issue. This perspective changes the focus from cure and therapeutic care to overcome discrimination through political and social solutions (170). It also questions the role of health personnel in, for example, access to welfare services such as education or different allowances (170).

The social model is described as taking various forms, including a more Nordic type – the Nordic social relative model of disability (171). This model is placed within a more salutogenetic approach, rejecting a dichotomy between illness and health (173). The Nordic model recognize that functional aspects of impairment is seen as interacting with the environment on a continuum, and is described as more in alignment with WHOs definition (171). WHO`s combining of these two disability models is described as instrumental in shifting the focus from symptom-oriented approaches to an emphasis on the degree of health

and a focus on coping, where participation in society and the understanding that contextual factors might acts as barriers or facilitators for individuals (174).

The ICF was endorsed in 2001 and the UN Convention on the Rights of Persons with Disabilities (UNCRPD) was ratified in 2006. This Convention importantly defined that disability was a situation, not an attribute with the person, and this situation emerge as result of interaction between different factors (25, 174, 175). The UN Convention on the Right of Persons with Disabilities was the first legally binding document that stated that individuals with disabilities have the same rights as everyone else and that "the right of persons with disabilities to work, on an equal basis with others; this includes the right to the opportunity to gain a living by work freely chosen or accepted in a labour market and work environment that is open, inclusive and accessible to persons with disabilities" (25).

The understanding of 'disability' varies and will impact both the attitudes and expectations encountered, as well as the rights it triggers regarding financial benefits or expectations of workforce participation. Entitlement to various welfare benefits such as disability benefits is determined based on criteria established by legislation, policies, or guidelines applicable in a specific country or context. These criteria may encompass medical or physical conditions, social or environmental factors, or legal regulations. How these criteria are formulated and how our welfare policies facilitate participation will likely influence opportunities for workforce inclusion among individuals experiencing mental health problems.

1.5 Welfare policies

The latest report from OECD on disability, work and inclusion underline that the employment rate of persons with disability remain stubbornly low (176). The OECD reports that the employment rate is 20 percent less for individuals with a mental health condition than for those without (30 percent less in Norway) (66). This gap has increased in recent years so that there are now approximately a third of those with mental health problems outside the workforce. In addition, a pay gap of 17 percentage is reported between people with mental health conditions and people without in the workforce across countries (66). It is estimated that the direct and indirect costs associated with mental health problems probably exceed 4 percentage of gross domestic product (66, 177). These costs are estimated based on among other societal cost in the form of lost work productivity, sickness absence, unemployment, and disability (64, 178). This employment gap is considered a public health problem, since employment is considered to improve mental health and well-being (23), and it is reducing

the income to the state through taxes. Such high expenses challenge the sustainability of the welfare state. The impact of mental health problems needs to be addressed broadly by social welfare policies focused on lifestyle opportunities and social inclusion (2). Mental health has over time increasingly come onto the agenda both in Europe and globally (2). After several studies confirming the burden of illness and the impact these problems have on employment and dependency of welfare benefits (12, 164), this has been among key issue on the agenda within the Organisation for Economic Co-operation and Development (OECD) for over a decade [86, 87]. In 2022 the EU president Ursula von der Leyen announced a new initiative on mental health which puts mental health as a "multi-stakeholder approach" that involves many policy areas and include employment as one of the central areas (179).

The World Health Organization (WHO) has highlighted the social determinants of mental health (180) and the Joint Action on Mental Health in Europe has promoted "Mental Health in All Policies" to increase focus on mental health in areas outside health like welfare and employment (181). OECD has recommended a holistic "mental-health-in-all policies" approach with special emphasis on delivering services in a timely and integrated manner and involving frontline actors actively. In their recommendations, they emphasize that this challenge is not solely the responsibility of the healthcare sector. Changes should be incorporated into multiple systems, involving frontline personnel, and promoting a language that reduces stigma and encourages participation and involvement (66, 176). The OECD highlights the shift from small-scale projects and trials to the implementation and scaling of proven effective interventions. This challenge, the transition from evidence-based knowledge to the implementation and scaling of effective interventions, requires more than just having proven efficacy.

1.5.1 Work and mental health policies in the OECD

In 2012, OECD launched the report Sick on the Job? Myths and Realities about Mental Health and Work (182). This report was the first in a series of reports on mental health and work from the OECD and reflects a recognition of the huge impact mental health problems also has on employment and the welfare- and health systems. The report questioned myths about mental health and work, identified knowledge gaps and commented that "little is known about the connection between mental health, disability and employment" and how this vary by severity (182). The report also questioned the role of policy and system design. The OECD has, in addition to nine specific country reports on mental health and work, published two

central key publications. The report Fit mind, Fit job – From Evidence to Practice in Mental Health and Work (89) underline among other things the need for policy change, more integration between sectorised services (integrated policy approaches across different domains and sectors) and better timing of interventions. The second report Fitter mind, Fitter jobs (66) assess the implementation of their recommendations on integrated mental health, skills and work polices that the previous report set forth, and conclude that the policy changes have not translated itself into better labour market outcomes.

1.5.1.1 Generosity of welfare benefits and integration policies

One of the main challenges in labour and welfare policy is finding the right balance between promoting high employment and maintaining a generous benefits system. The economic burden and cost for benefit systems are high, and one of the barriers that quite early was discussed in OECD reports was the incentives and disincentives for labour market integration for individuals with disabilities (183). Disability policies balance between two aims that might potentially contradict each other: support integration of disabled citizens but at the same time compensate and give income security to those unable to work (167). Welfare policies aim to manage the balance between incentivizing and motivating as many people as possible to participate in the workforce. At the same time, they should aim to ensure dignified lives with sufficient financial support for those who, for various reasons, are unable to participate (184). This balance is addressed in very different ways across Europe, without a definitive answer to what is the most appropriate approach (185, 186). To attempt comparative analysis between countries with differing balances of these two aims, the OECD has developed a Disability Policy Typology that classify and cluster countries according to their policy approach (167). Two dimensions are central, compensation and integration. Simply put, the compensation dimension describes the main disability benefit scheme, including coverage, disability levels, minimum disability levels, permanence of benefits, and more. The integration dimension covers the entire range of employment and rehabilitation measures, such as assessment structures, supported employment program coverage, and the timing of vocational programs and more. Their policy conclusions from this empirical analysis made them recommend some key messages. One of them being that disability status should be recognised independent of work and income situation and that societies need to change how they think about disability and work ability. They also recommended new obligations and conditionality connected to benefits, like participation in employment, vocational rehabilitation, or integration measures. This would also put more demands of the

gatekeepers in the public employment sectors to promote access to all available interventions both benefits but also more active employment measures (167). OECD recommended more active labour market policies to avoid medicalization of what is labour markets problems but could end up as increased disablement from work (176, 183, 184).

1.5.2 Norwegian context

The OECD report on mental health and work in Norway, published in 2013, was part of the series of nine OECD reports. It highlighted that one-fifth of the Norwegian population received income support due to health issues and noted that the country's expenditure on disability and sickness benefits amounted to 5% of its GDP, the highest among OECD nations (58). Norway's sick-leave and disability benefit is described as comprehensive and with fewer reforms that reduce entitlements or improvements of work incentives measures compared with other countries (38, 187). In addition the public spending on disability and sickness far exceeds the OECD average (38). The expenditures to healthcare are also high in Norway compared to other countries. Norway has a universal tax-financed healthcare system and one of the highest per capita health expenditures in the world (188).

Recent statistics and a new OECD report confirms that Norway still has a significant proportion of their working age population receiving health-related benefits (sick leave, work assessment allowance, and disability benefits). 10.7% of the working age population receives disability benefits (38, 189). Data from the Norwegian Directorate of Labour and Welfare Administration (NAV) indicates that the dominant diagnostic group among young people receiving these benefits is mental health problems, which constitute 66% of the cases (190). In the Nordic countries, but especially in Norway, health related benefits are primary source of income for joblessness (191). Joblessness is here defined broadly and encompass different groups with different barriers towards employment, education or training (191).

A high share of young individuals categorized as having a disability, rely on health-related disability benefits, as opposed to social support which is more common in many other European countries (176). A Norwegian study utilizing interviews and surveys of both young service users and service providers identified several barriers to participation in work and education. It cautioned that mental health problems might camouflage social problems (192). In addition, a report from OECD comment that unemployment is disguised by the high dependency on health-related benefits (193). Despite many reforms in Norway, the outflow

from disability benefits of young people has not changed or been effective in leading to regular employment (194).

1.5.2.1 Active and passive labour market programs

The design of welfare benefits and activation policies through active labour market programs can differently impact groups receiving health-related benefits. In 2006, Norway allocated around 1% of gross domestic product (GDP) to active and passive labour market programs, with training being the most utilized (193). In a Norwegian report (prepared at the request of an expert committee working on a Norwegian Official Report (NOU) (195) which aimed to analyze the trends in employment and income support and propose measures to enhance workforce participation) it was noted that, on average, 19 to 29 percent of regular job seekers and individuals with reduced work capacity participated in such measures in 2022 (196). This report concluded that these measures play an important role in the Norwegian labour market policy, and have a positive impact on employment (196). The increasing effort towards active labour markets policies towards disadvantaged's citizens increased the needs to integrate different services, both social services and then also between welfare and health (197, 198). This has also been the case in Norway (199, 200). A meta-analysis (not peer reviewed) including studies from all around the world concluded that active labour market programs work positively (after two years) in regard to employment outcomes, but that the impact varied influenced by contextual factors, type of labour market programs, and the group receiving them (201). To what extent labour market policies explain employment disability gaps, is still debated (160), but geographical variation between countries in the disability employment gap, is perhaps less likely to be due to health problems, but more to differences in institutional and labour market policies (160). Some argue that the welfare regimes of the Scandinavian countries are better equipped to protect those affected by illness from unemployment, especially those with low education (202, 203). The recently published review of inequalities in health and wellbeing in Norway comment that there is a lack of knowledge of which type of measures and follow-up work that work best for individuals with reduced work capacity (46). Some describe policymaking targeting social inequality in health as complex, and often with political conflicts so that policies might have a tendency to reduce social inequalities to simpler problems with solutions often to be solved by the health sector (35, 204).

1.5.2.2 Work-place policies: A more inclusive working life and the working environment act (IA-agreement)

In a European context, Norway is perceived as having a well-functioning labour market, low unemployment, and a large proportion of the working-age population employed, all genders (38). The Norwegian working life model is often defined as an interaction between economic policy, organized labour and comprehensive public welfare benefits. This interaction is rooted in a tripartite collaboration at societal level (Letter of intent regarding a more inclusive working life) in Norway between the employers, the employees, and the authorities, and have an overarching goal that as many as possible can participate in the workforce for as long as they can (205). There is a strong focus on workplace conditions and the workplace is the main area for the inclusive work life. The Working Environment Act in Norway applies to all undertakings that engage employees, and its purpose is to secure a working environment as a basis for a healthy and meaningful working situation. It regulates, among other things, job security, working environment, and protection against discrimination (206). According to data from the European working conditions survey (207), 94% reports satisfaction with psychosocial working conditions in Norway. Job security is high, and three out of ten report that their health is positively affected by work (compared to one out of ten in the EU), and eight out of ten report that their health condition is good (also higher than the general rate in the EU). Since implemented, the IA agreement have not met the goals of reducing sickness absence in Norway (208-212), and no evidence as to my knowledge can confirm more inclusion of individuals outside of the labour market. The IA-agreement might have positive impacts for individuals already working with frequent sickness absence rather than for individuals outside the workforce (213). The latest OECD Economic report on Norway from OECD underline that public spending on disability and sickness far exceeds the OECD average, and call Norway the "OECD public spending champion" (38).

1.5.2.3 Health and work strategies

In 2006, the Ministry of Health and Care Services (HOD) in Norway emphasized the importance of employment in their national escalation plan for mental health. They focused particularly on individuals with severe mental health problems, aiming to empower patients to manage their own lives, reduce hospital stays, and enhance both the quantity and quality of mental healthcare provided by municipalities (214). This was supported by a Coordination reform that contributed to upgrade the municipality health service (215, 216). New services like community-based assertive treatment teams for people with severe mental health problems were established, but measures like Supported Employment (SE) was not

implemented as part of this new treatments at the time (217). Supported employment is defined by the European Union for Supported Employment as "a provision of support to people with disabilities or other disadvantaged groups to access and maintain paid employment in the open labour market" (218).

Policy changes directed towards work and mental health has been introduced gradually in Norway, and the leadership for new more "integrated services" was early on directed towards the public employment sector. Measures directed towards employment outcomes were funded from the health budget but directed to the public employment sector in order to retain a focus on employment outcomes and as a response to a need to increase knowledge about mental health and work in the public employment sector (219). A specific work-oriented project called "Where There's a Will – focus on work and mental health" was established in 2004, intended to build a bridge between the public employment sector and the mental healthcare sector. New efforts supporting individuals into work was tested (220), as in contrast to previous efforts mainly focused on maintaining contact with an already existing workplace or the workplace itself (221). In 2007 the first national plan for work and mental health was launched (222) This plan was followed by a follow-up plan (223) and a revision of the strategy for work and health (224). This revised strategy notes that it builds on the already strengthened cooperation between the public employment and health sectors and now moves on to other strategic goals and measures. The strategy includes five main pillars: 1) Provide effective services, 2) Take impactful measures early, 3) Invest in local actors, 4) Integrate services and create flow, and 5) Utilize the potential of digital tools. The measures that the directorates will use include digital solutions, financing that stimulates prevention and early intervention, developing standardizing products, regulations that facilitate collaboration, establishing educational opportunities that provide expertise in the field, and creating common frameworks, direction, and goal achievement through clear guidelines.

It is noteworthy that there has been a shift in policy language over the years. While previous policies focused on the most disabling conditions and employed specific strategies for mental health, recent policies have seen a move toward broader strategies encompassing work and health (not specified to mental health) and towards mental health problems, leaving the concept of illness. The policies have moved towards a broader scope and preventive measures to avoid illness or disconnection from education and employment (224). The strategic plans in Norway are highly ambitious, but they lack clear guidance on how regional and local stakeholders should act to achieve the goals in the national strategic plans (225).

1.5.2.4 Frontline workers in the Norwegian public employment sector (PES/NAV)

The 'mental-health-in-all policies' approach has also influenced the Norwegian context, directly shaping how frontline personnel in public employment sector engage with individuals facing more complex issues. Several major reforms have been implemented in the labour and welfare policy over the past decades, both in terms of organizational structure and in the design of the labour market measures/programs used. In recent years the public employment sector has undergone changes that have influenced the development of services for individuals experiencing mental health problems. Two of them will be mentioned here, and both influence the work role for frontline workers in the public employment sector.

The biggest reform was the merging of the employment and national insurance administrations (226), which can be seen as a "whole-of-government" initiative (227). One of the aims was to increase the ability to solve complex problems that span across policy administrations and government levels (199). New measures was also introduced to help strengthen employment and inclusion of individuals who were outside the labour market (228). Another change occurred in 2015, when the public employment sector launched a white paper which determined that previously outsourced services (like SE) could now be conducted in-house (229). This was further strengthened by relocating funding from private sector to the public employment sector specifically to strengthen IPS (230). But policy formation and policy implementation at street level is not necessarily a top down-process or happens automatedly (231, 232). Traditionally the public employment sector has used train and place approaches and implementations of new policies might create tension as reported in studies from several Scandinavian countries, including Norway (233-236).

A meta-ethnographic review and synthesis of qualitative studies referred that the approach IPS designed specifically to individuals with mental health problems, did not fit the rules and regulations in the public employment sector (237). Social workers in this sector were sceptical to whether the IPS process towards competitive employment could be too fast and be harmful, and that a prevocational rehabilitation approach was needed focusing on preparation and training. Investigating how new activation policies are implemented and the attitudes in front line workers in the public employment sector are still important (238). Frontline personnel may find themselves in situations where they must decide alone on striking the right balance between income and employment support – and which active labour market they should choose. Their attitudes and knowledge regarding work for individuals with severe mental health problems might be important.

1.6 Are there effective means for supporting people with severe mental health problems in obtaining employment?

The specialist health services are supposed to use methods, medical equipment, procedures, and organizational measures that are quality-assured and based on best possible evidence. At the time the implementation of IPS was beginning in Bodø, one of the questions asked was whether we had methods based on enough research evidence to support people with severe mental health problems in obtaining employment.

1.6.1 The history of vocational rehabilitation in psychiatry

The use of work as part of the treatment for patients with mental health problems is not a new phenomenon. In Norway, the first state asylums were established in the mid-19th century, with significantly improved material conditions and care. The idea of state responsibility and operation of large institutions was not unique to patients with mental health problems; it also applied to orphaned children, criminals, and the poor (239). The institutions were characterized by "moral treatment" paradigms until the late 1800s when a more biologically oriented psychiatry was introduced. The asylums had what they called "work therapy," which included farming, kitchen services, various handicrafts, or activities like mending fishing nets, as seen in the "Rønvig sindsygeasyl" locally in Bodø (240). The primary goal of the asylums may not have been rehabilitation for work specifically, but rather achieving as normal a life as possible within the institution's walls. Although the field became more professionalized with the involvement of occupational therapists and the establishment of industrial workshops, as well as the introduction of step-by-step rehabilitation toward employment, much of the old thinking from the large institutions was maintained. A protective atmosphere, gradual rehabilitation, low stress levels, and extensive training were implemented in sheltered workshops in the community. The development of vocational rehabilitation mirrors the same trends seen in general psychiatric rehabilitation (241).

Vocational rehabilitation for individuals with mental health problems is influenced by changes in several areas: workforce demographics, politics and various public health and welfare policy documents. The field is characterized by being multidisciplinary, involving different professions and sectors, both public and private. The rise of Supported Employment (SE) was part of a larger movement in society with a focus on independence and participation. The emphasis shifted from sheltered and segregated environments to active engagement in regular arenas and the mastery of everyday life. SE differs from traditional rehabilitation in several aspects, and some have described SE as a contrast to the medical model of psychiatric

rehabilitation where training on a range of skills is needed before you can handle real-world demands (242). Traditional rehabilitation involved training in segregated facilities, with guidance and assessment of one's abilities and tolerance for stress. People with mental health problems were treated based on the assumption that they were vulnerable, in need of protection, and training in segregated facilities. SE emphasizes the use of integrated jobs in community settings—a shift from a 'train and place' approach, where training is required to prepare for real life, towards integration into regular employment with a regular salary (242).

1.6.2 Individual Placement and Support

After the deinstitutionalization of the mental health services and a change in the perspectives of what people with severe mental health problems wanted and needed, the focus on recovering normal functioning as part of the society became stronger. This was advocated from patients and family members, but also clinicians that saw the need of delivering new types of services to better support the needs of people with severe mental health problems. A stronger focus that can be placed within the ideology of recovery based on other values was emerging (112), and IPS with its focus on shared decision making and a goal to improve community functioning in people with severe mental health problems share many of the same values although it grew out of a movement towards evidence-based care (243). In evidence-based medicine and when assessing medical interventions, there has traditionally been a hierarchical approach to methodological evaluations (244, 245). This was originally based on evaluations of new pharmacological products (246). The hierarchy typically starts with ideas and then build further with case reports, case series, case-control, cohort studies with historical controls, non-randomized controlled studies, prospective RCT`s, systematic reviews and meta-analyses both of them preferably based on RCT (247, 248). The concept of evidence-based medicine (EBM) is defined as “the ability to track down, critically appraise (validity and usefulness) and incorporate the body of evidence into clinical practice” (249, 250).

IPS was developed to achieve employment for people with severe mental health problems. The approach was developed in the division of mental health in New Hampshire in North America and has since spread throughout the world (251-253). The approach can be described through eight basic principles based on empirical evidence (117, 254).

1. Goal of competitive employment
2. Zero exclusion and eligibility based on clients’ choice

3. Rapid job search
4. Integration of rehabilitation and mental health treatment
5. Personalised benefits counselling
6. Job search based on preferences and choices
7. Targeted job development
8. Individualized, long-term support

1.6.2.1 Goal of competitive employment

The goal of competitive employment might sound obvious but contradict or stands in contrast to a treatment paradigm suggesting that patients with severe mental health problems require seclusion, tranquility, and minimal stress. Medical and clinical models have focused on managing and reducing symptoms. Symptoms are often seen as the primary cause of disablement and thus must also be managed or cured before addressing other life goals (242). A perspective that aligns with a medical models understanding of disability.

Employment in the regular workforce has often been categorized as harmful stress, but studies investigating non-vocational outcomes of competitive employment do not confirm these worries (255, 256). This also bears similarities to much of the general occupational medicine research, which has similarly focused on identifying adverse factors in the workplace. The first natural experiments testing the model that later became known as IPS, involved converting day centers into supported employment programs. It was demonstrated that more individuals went directly into regular employment without the detour of gradual training or testing in sheltered work settings (257). In addition to favorable employment outcomes, both family members and recipients of the program reported high levels of satisfaction. Several of those who received services in this pilot study were followed up ten years later, and it was found that the improved effects from IPS also persisted over time (258). Some of the initial studies also clearly showed that pre-qualification as the control condition did not seem to yield better outcomes for job seekers (259).

1.6.2.2 Zero exclusion and eligibility based on client's choice

The motivation and desire for employment by the job seeker should determine whether support for employment is provided. In a way, it's difficult to envision the opposite. Nevertheless, this likely reflects the uneven relationship between healthcare professionals and

patients, where healthcare professionals are assumed to have the best understanding of what is needed for the improvement of the mental health of those with severe mental health problems. This occurs both in individual interactions and on a societal level in terms of available interventions. This principle thus stands in clear contrast to a more paternalistic approach where the clinician or the public employment service assesses whether the client is ready for work based on their diagnosis, history, or symptoms burden. The factors most highlighted as positive individual factors include previous work history and short durations of unemployment (260-262). A lower level of symptom severity (262, 263) and a personal desire and belief that one can attain employment is also considered important individual factors (264). But no clear predictors of who succeeds and who fails in obtaining employment are established. Neither diagnosis, severity of symptoms, demographic factors, nor work history have consistently shown clear findings over time in accurately predicting who will succeed (265-267).

1.6.2.3 Rapid job search for ordinary employment, rather than training and assessment

If the objective is to secure a job, and you are both motivated and enthusiastic, what happens when you are placed in training or assessment, and others decide whether you are ready or not? The training situation might not even resemble the type of work you prefer, or the work hours might not be adapted to your health situation. This principle emphasizes the importance of focusing on regular employment when that is the goal of the individual, as well as the individual's right to decide for themselves when they are ready for this step. Two ethnographic studies illustrate the importance of learning while in work, solving problems and learning about strengths and weaknesses along the way (268, 269). A rapid search and placement into work support the patient’s goals. An early study on limiting the length of time in prevocational training by accelerating their journey increased the rate of competitive employment among people in rehabilitation, and this was also shown in a study with patients with severe mental health problems (270, 271). To date, the literature on IPS does not provide any evidence that training is more effective in securing employment than direct job placement.

1.6.2.4 Integration of employment support into clinical teams

One of the fundamental principles of IPS is the integration of vocational rehabilitation and mental health treatment within the same team or setting. Work should be integrated on an equal footing with other interventions offered by the healthcare system and should be part of

the treatment plan for anyone seeking employment. In the book "A Working Life for People with Severe Mental health problems," this concept is elaborated upon (117). The book describes that, in the past, there was an emphasis on delivering rehabilitation and clinical services separately and in parallel. This approach aimed to maintain a non-stigmatizing, mastery-oriented rehabilitation process distinct from the psychopathological focus of treatment. So, intentions were good. Through empirical evidence and experimentation, it was demonstrated that integrated services worked better (272-274). Integrated services not only refer to being co-located but also involve sharing a common medical record system and conducting joint meetings. Through integration, challenges arising from differing philosophies or attitudes towards treatment and rehabilitation can be discussed and resolved through scheduled or ad hoc meetings because professionals are working together. In the treatment of psychosis, the Zubin and Strauss stress-vulnerability model is frequently utilized (275). For healthcare professionals, the stress associated with participating in employment-related work can easily be categorized as something that should be limited or avoided. Close collaboration between the job seeker, employment specialist, and healthcare personnel will make it easier to maintain a shared plan and support all parties in feeling secure in their respective roles and assessments (276). This way of organizing services has many advantages. It counteracts conflicting attitudes and messages from separate services, improves communication, and prevents dropout from services because the clients themselves must coordinate (277, 278). Additionally, it is easier to manage resources and reach agreement on which target groups should be prioritized both organizationally and financially. A previous study has also shown that if vocational services are accessible and integrated within healthcare services, the proportion of individuals obtaining employment will increase (279).

1.6.2.5 Professional benefit counselling to understand the consequences of employment on other welfare benefits

This principle is perhaps particularly relevant to the structure of the welfare system in the United States, but it addresses a general topic – namely, how welfare benefits impact people's willingness to work. There are both fears and uncertainties regarding how finding employment may affect the welfare benefits individuals already receive, or how it will affect the inflow into benefits. The perspectives on these matters might be different seen from the USA context were giving up welfare benefits or the right to health insurance can be highly risky. However, similar locking effect might occur in generous welfare states, just maybe through other mechanisms. At one-point, specialized benefits counseling services were introduced in the USA to complement vocational services. The purpose was to assist

individuals in making informed choices about work participation based on information. Some research has shown a positive impact on increased earnings, but the effects on employment outcomes are not yet fully established (280).

1.6.2.6 Job search is targeted according to individual preferences

IPS emphasizes that job search should be guided by the individuals' job preferences. Several studies have found that following the individuals' preferences lead to longer job tenure and higher satisfaction with the jobs obtained. It appears that people are aware of what they want and are quite realistic about their preferences (281, 282) (!). The principle of prioritizing preferences regarding all rehabilitation goals has been advocated for a long time. Preferences can be based on several factors, and it is the task of the employment specialist to identify what is important for each individual and work accordingly. Preferences may include work hours, type of work, economic stability, and other job quality dimensions. A recent study from Japan examined five job preferences domains (occupation type, weekly work, commute time, illness disclosure and monthly income) and found that when matching three of four match levels – job tenure increased compared to only matching one domain (283). This enhances the importance of employment specialist`s role in finding jobs that align with several domains of an individual`s preferences. In general, job preferences are said to beneficial both for work motivations and well-being (284).

1.6.2.7 Systematic and targeted job development

The employment specialist works methodically to establish networks among employers and to target specific employers depending on the individual's interests and desires. This claim is supported by studies suggesting that many individuals with severe mental health problems may exhibit symptoms and behaviors (retreat) that can complicate the job search process. Furthermore, employment specialists with more employer contacts are more likely to obtain competitive employment than those with fewer employer contacts (285-287).

1.6.2.8 Time-unlimited support

This is a fundamental principle in IPS: providing individualized and ongoing support based on the individual's own assessment of their needs. Severe mental health problems can be both long-standing, and highly fluctuating in nature. Some studies have shown that job tenure is correlated with frequent contact with the employment specialist (288, 289).

Many of these principles represent a change to what has been standard practice in both health and employment sector. Already with the first basic principle of competitive employment

being the goal, there is an apparent discrepancy between actual employment rates for this population and the goal of this intervention. The employment rate is low, and the most common source of income is through welfare benefits. The attitudes of practitioners in both sectors are likely quite influenced by the factual reality of the low employment rate of people with severe mental health problems and might attribute this to both unwillingness to work, or that the burden of symptoms hinders the ability to work (290).

These principles can be summarized as follows: To achieve and sustain employment is the main goal of IPS, and relevant employers should be contacted face to face within 30 days after someone is referred to an IPS service. Employment is defined securing a job that anyone can apply for, not set aside jobs with lower wages. A person-centred approach with shared decision making to achieve the persons own goals is a fundamental prerequisite and is shown through several of the principles in the approach. Eligibility based on client's choice underlines that clinicians should not exclude employment support on basis of diagnosis, symptom severity, substance misuse, level of disability or even homelessness. Employment specialist should work according to the individuals' preferences when it comes to steer job search, job development and for how long they need support to stay in their job. Whether the individual chooses to disclose the support they receive or reveal their diagnosis or mental health problems to their employers is ultimately their own decision/at their own discretion.

1.6.2.9 Fidelity

The IPS approach is well described, but delivering services according to its principles requires demanding premises or assumptions for both the service and the employment specialist. It is a complex intervention that challenges service delivery across sectors, the actions of front-line workers and clinicians, and the collaboration between services (234, 291, 292). To support implementation, manuals and materials have been developed (293). Additionally, a fidelity scale has been developed to monitor and assess program fidelity, concretizing the eight core principles of IPS (294, 295). This fidelity scale aids in establishing and implementing IPS services while providing guidance to maintain service quality. Studies have consistently shown that high fidelity leads to better employment outcomes for those receiving the service, with a positive association between employment outcomes and fidelity ratings (296-299).

1.6.3 Does IPS work in all contexts?

IPS has experienced a widespread growth and expansion (300, 301) although a disproportionally low percentage of the population that could benefit from it, actually receives it (302, 303). Since 1993, IPS has been studied through randomized controlled trials, (259,

304-332) and the number of systematic reviews and meta-analysis of randomized controlled trials (RCT) has grown steadily (256, 333-338). Beyond the population of severe mental health problems, populations with first episode psychosis and Veterans with PTSD are the other groups with trial evidence (339), and other target groups are tested (313, 335, 339-343).

1.6.3.1 When is the evidence base good enough to incorporate into practice?

During the preparation period for the implementation of IPS in Bodø there was conducted several randomised controlled trials (259, 314, 316, 318-320, 322, 329-331, 344) quasi-experimental trials (257) and two meta-analyses (333, 338). The overarching finding was that IPS was showing advantage compared to treatments as usual for unemployed people with severe mental health problems. The approach was also recommended as evidence based practice (345).

But, most of the trials had been conducted in the United States (314, 320, 322, 329, 331), some in Australia (318, 344) and two in Hong Kong (327, 346). One multisite randomised trial from 2005 tested the model by recruiting from existing clinical populations in seven different states in USA and showed effectiveness also under different service delivery models (347). Even though the service models were diverse, there were still some common characteristics:

1. They all provided integrated services through a multidisciplinary team and served patients with defined severe mental health problems.
2. Most of the evidence came from a north American context.

Before 2015, IPS had not been tested in Scandinavia welfare states. Scandinavian welfare states are characterised by generous entitlements, low unemployment, and high levels of labour force participation with welfare and labour market policies quite different from the US (34). In 2007, the Eqolise study conducted a multisite randomized controlled trial in six European centres, affirming IPS's efficacy in European countries with different labour markets and welfare and health systems compared to North America (330). However, two of the sites reported no difference between the groups in the study (Groeningen and Ulm) and local unemployment rates were significantly associated with variations in IPS efficacy. In addition, higher long-term unemployment rates, lower risk of benefit trap and higher GDP per capita growth were significantly associated with getting a job. The “benefit trap”, in this study referred to IPS workers' perceptions of their client group's risk of income reduction if they took on a job.

Although the Eqolise study did not establish significant effects of the "benefit trap" on IPS's variations in effectiveness, they indicated that it could serve as a barrier to overall successful vocational rehabilitation for this group, and maybe especially in more generous welfare states. So, uncertainties also after this European multisite trial remained regarding IPS's suitability in countries such as the Scandinavians, known for their generous and active welfare states (348). In the UK context, several significant barriers to the implementation of IPS have been identified. These include attitudinal barriers stemming from different stakeholders; contextual factors linked to the welfare system and structure of the labour market; and factors related to organisation within mental health services and fidelity to the IPS model (290).

1.7 Implementation of IPS in routine clinical practice

The process of translating scientific discoveries into clinical applications and eventually reaching patient care can be envisioned, not only hierarchical but also like a pipeline (349). It starts with preclinical research, progresses through efficacy and effectiveness research, and concludes with implementation research before demonstrating any significant public health impact (349). While randomised controlled trials are seen as the gold standard in evaluation of effects, effectiveness of an intervention can be defined as beneficial effect under “real world” clinical settings (350).

But can we always imply that research moves from efficacy and then translates itself int routine clinical practice as a linear pathway?

1.7.1 Bridging the gap between research and practice

An example commonly used to demonstrate the gap between scientific evidence and its practical use, is what is called the first controlled trial and relates to the discoveries of James Lind on treating scurvy. Even though James Lind conducted his famous first controlled trial in 1747, demonstrating the effectiveness of citrus fruits in treating scurvy, orange juice did not enter in the British Navy's diet until 1795. Later studies have shown that it takes about 17-20 years to implement innovations in clinic into routine use (351). It is now well established that it is a challenge bridging the gap between research demonstrating efficacy and the actual implementation of those findings into clinical services. Centuries of experience have demonstrated that merely establishing the efficacy of a clinical innovation is inadequate to ensure its widespread adoption. In the 1960s, spread of interventions was described as a social process where factors beyond evidence play a significant role in determining the extent to which an intervention is implemented and scaled (352). Over time, the field known as

implementation science has evolved, and one definition states: «…the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practice into routine practice and, hence, to improve the quality and effectiveness of health services…”(353).

Unlike randomized controlled trials, the objective of this research is not to assess the direct effect of an intervention. Instead, the aim is to investigate factors that influence the adoption of an intervention and to develop strategies that account for these factors to increase the uptake of the intervention.

Translation of innovations towards implementation has been recognised as an important field to study (354) as well as understanding the organisational and policy context level (355). Glasgow and colleagues argued in 2003 that it is essential to place greater emphasis on documenting interventions reach, adoption, implementation, and maintenance both in efficacy and effectiveness studies to support translation of research into practice (356). In research involving complex health interventions, particularly those dependent on multiple factors and collaborations among various actors and sectors, documenting these factors becomes especially crucial (357). Additionally, in effectiveness research, avoiding a type III error. By this, it means drawing conclusions about the effect of an intervention without knowing what is implemented – or whether the intervention has been implemented with good quality. Evaluating the effect of an intervention inadequately implemented requires careful consideration on multilevel factors (358) and good descriptions of context. Implementation science strives to improve the incorporation of evidence-based practices leading to a greater impact on public health-services (351, 359-362). The question of application of research findings, the lack of adoption and implementation of evidence-based practices for people with severe mental health problems (363) and a translation of efficacy research to effectiveness research and implementation is called for to close the gap between research and practice (349, 356, 364).

1.8 Aims

The thesis introduction highlights that many individuals with severe mental problems aspire mainstream employment, yet integration into employment remains inadequate. Although an effective intervention like IPS exists, its integration into standard healthcare services is incomplete. IPS, with its values and working methods, challenges both us and our systems,

including our welfare system, on multiple levels. Its success may also hinge on factors such as unemployment rates and the structure of the welfare system.

This thesis investigates some challenges that could potentially hinder the effectiveness of IPS within a generous welfare society. Our first concern is whether the efficacy of IPS, compared to traditional vocational rehabilitation, remains equally robust when implemented in countries with more generous disability welfare benefits, integration policies, and stricter regulations on hiring, firing, and regulating temporary work. Secondly whether attitudes among frontline workers involved in gatekeeping active labor market policies are in alignment with IPS principles and whether they change over time with IPS exposure compared to frontline workers without exposure to IPS. Third, we examine whether the implementation of IPS within a municipality affects employment outcomes for all young adults receiving temporary health-related rehabilitation welfare benefits, measured at the societal level. This is compared to municipalities that do not implement IPS.

These questions cannot be fully resolved within this thesis; nevertheless, I aim to contribute to further research through my three specific objectives.

1. Is IPS efficacy generalizable across countries and context? (Paper I)

2. Do public employment service employees have attitudes compatible with the principles of IPS? (Paper II)

3. Will IPS implementation have a measurable effect on employment outcomes at a societal level? (Paper III)

2 Method

IPS is complex due to its multifaceted nature. It is not an injection or a pill. It involves different stakeholders, frontline workers, new ways of approaching unemployment among people with severe mental health problems and necessitates cross-sectoral collaboration.

2.1 Implementation

The three papers are situated within an implementation framework called the Exploration, Preparation, Implementation, and Sustainment (EPIS) (365, 366). This framework provided a systematic and structured approach to understanding the interplay between inner and outer context, bridging factors as well as aspect with the intervention itself. EPIS was developed

with a focus on implementation in public sector settings and describe the interplay between factors and movement between different stages.

The first aim of generalizability across contexts and countries, helps us understand how outer context through labour market conditions and regulations in welfare policies might influence the generalizability of IPS efficacy.

The second aim investigates individual characteristics as part of the inner context.

The third aim explores whether IPS implementation within a municipality can affect employment outcomes at the societal level for young people dependent on a temporary health-related rehabilitation welfare benefit. The framework was crucial to help me structure what was often a chaotic reality and collaboration between partners. It also helped understand the possible mechanisms by which local implementation efforts directed at services and users could lead to changes at a societal level.

The quasi-experimental design and the longitudinal registry data follow the implementation happening in the intervention municipality from 2010-2019. In figure 1 the overarching strategies and outcomes are visualised on a timeline with the EPIS stages.

Figure 1 Timeline for the EPIS stages and quasi-experimental design with outcomes and main strategies.

Epis stage **Study period** **Timeline**	**Exploration** **2005-2009**	**Preparation/** **Pre exposure period** **2010-2012**	**Implementation/ Sustainment** **Intervention and post-experiment period** **2013-2016**	**2017-2019**
Outcomes			**Short and intermediate**	**Long-term**
Service and Societal level			Formal agreement, financial agreement Fidelity (2013, 2014, 2015) ** Scaling of service**	Workdays** Scaling of service**
Staff level			ES employed** Attitudes (2013)*	ES employed** Attitudes (2017)*
IPS user level			Employment outcomes** Subsample (diagnosis, different clinical measures)***	Employment outcomes**
Strategies at service level	Build coalition between stakeholders	Financial strategies Needs assessment Formal agreements Early adopters Education/ conferences Community-academic partnership	Financial strategies Interagency work groups Educational meetings/conferences, Organization feedback on barriers and facilitators Early adopters Education (stakeholders, personnel, ES) Learning networks, inter-organizational networks Building a purveyor organization Facilitate uptake/implementation in the organizations based on outcome data and experiences in the organizations.	

*Paper II. ** Paper III. ***Unpublished data

2.2 Is IPS efficacy generalizable across countries and context? (Paper I)

Numerous randomized controlled trials have been carried out in various welfare contexts. Instead of planning a new RCT in a Northern Norwegian context, we used the variation in the trials already conducted to find answers to the question of whether efficacy holds across contexts. We investigated whether specific variables connected to welfare set-up, integration policies, labour market conditions and employer regulations affected the efficacy of IPS. We did this through three steps: First, a systematic review selecting randomised controlled trials based on predefined criteria (Figure 2). Secondly, we combined the findings from these selected studies and calculated an overall effects size, providing a quantitative summary of the collective evidence regarding the impact of IPS. Third, meta-regression was employed to examine the extent to whether welfare set-up, integration policies, labour market conditions and employer regulations influenced the efficacy of IPS.

2.2.1 Inclusion and exclusion

The search involved using a combination of keywords such as mental health problems, individual placement and support, and randomized trials, and the inclusion and exclusion criteria was predefined (Figure 2).

Figure 2 Inclusion and exclusion criteria

Population	Persons with mental health problems and without employment. Age above 18 years old
Intervention	Individual placement and support Fidelity reported
Comparison group	Traditional vocational services, ex sheltered workshops, courses, pre-employment training Services as usual (could be ordinary health services without any employment intervention at all)
Outcome	Paid competitive employment open to anyone. Not set aside jobs.
Study-design	Randomised controlled trials. Quality evaluated through Black and downs
Publication year	From 1993 – date for latest search (sept 10 2019)
Countries/Context	No limits
Language	English

We excluded studies with modified versions of IPS, without reports of fidelity towards IPS and one trial done separately with opioid users.

The search is described at page 209 in the published paper.

2.2.2 Appraisal of quality

In assessing quality of studies before inclusion, we used the Black and Downs Checklist (367). The checklist is to be used for both randomized and non-randomized trials. The checklist is organized into five sections evaluating study quality, external validity, study bias, confounding, selection bias and power of the study. It generates an overall score, and studies scoring below 12, were excluded. We excluded questions about blinding and concealing allocation. As for all psychosocial interventions, blinding is very difficult if not impossible for participants and for those administering the intervention. We know this is a risk for exaggerating treatment effects, but we wanted to include studies not able to blind or conceal allocation.

2.2.3 Moderators

One of the recurring questions is whether IPS can have an equally strong effect in countries with active and generous welfare benefits. Can active and generous welfare benefits create lock-in effects that hinder the transition to regular employment? If so, we might encounter difficulties in making a model like IPS work in the Norwegian context. In addition to active integration measures and generous welfare benefits there are also significant differences in workers' rights. In the Norwegian labour model, we have strong trade unions and robust employee rights. Mis-hiring's are considered highly costly, and terminating employment that is not working out is challenging. Could this also contribute as a barrier to employment for those who are already outside the workforce? We employed moderators from the OECD and World Bank to examine several factors that we believed may influence whether IPS has efficacy or not. The moderators are comprehensively described in the paper at page 209-211.

2.2.4 Statistical methods

Random effects meta-analysis and meta-regression were performed. This was to allow the true effect to vary between studies. The studies included have somewhat diverse population compositions (see page 212 in the paper), take place in different contexts, and we assumed that there is not just one true effect, but that the different studies would show some differences. The random effect model provides us with an average estimate of the effect across studies, and typically provides slightly wider confidence intervals than a fixed model. A binary competitive employment rate was main outcome. A single meta-analysis, including all studies, was conducted to determine the overall efficacy of IPS compared to traditional vocational rehabilitation. Meta-regressions were conducted in the primary analysis to examine the associations between IPS efficacy, and the four indexes developed by the OECD, which capture the characteristics of disability policies and employment regulation.

The statistical analysis is further described on page 211 in the paper.

2.3 Do public employment service employees have attitudes compatible with the principles of IPS? (Paper II)

In the preparatory phase before hiring IPS employment specialists, we spent time establishing common values and a knowledge base that would apply across sectors. Our closest collaboration was with the healthcare sector since the employment specialists were to be hired there. The collaboration with the public employment service was not as close at the case worker level, and we know they can play pivotal roles in the rehabilitation trajectory and are

gatekeepers to activation measures. As such, we wanted to examine their attitudes towards IPS core values through a survey to gain early insight into local barriers in the inner context. To do this we used a cross-sectional study design and conducted a survey at two different timepoints (2013, 2017) in Nordland County. The survey included a vignette and statements related to it, and we used independent samples t-test and multiple linear regression to analyse the data.

2.3.1 Survey

No pre-existing questionnaires suitable for addressing our research inquiries regarding PES employee attitudes towards the key principles of IPS were available. Consequently, we constructed a vignette (Vignette Line, appendix), and devised a survey rooted in the vignette to address this gap. The questions were piloted in two rounds; one to detect flaws in content, format, or grammar. This was done among colleagues. The second piloting was testing the questioning to two local experts on IPS working in PES. They were asked to categorise the questions to which key principles they thought they represented. In this round we took out three (3) questions which we got feedback was difficult to categorise. The survey consists of eight statements mirroring the attitudes within the eight key principles of IPS. One side of the Likert scale in alignment with the attitudes inherent in IPS, and the other mirroring attitudes more opposing attitudes within IPS (Figure 3 Questionnaire).

Figure 3 Questionnaire

We must emphasize Line's wishes. Line should be allowed to try and gain competitive employment.	○○○○○○	We must be realistic. Line has experienced many defeats and should be offered a new supported work position before a possible application for a permanent disability pension is sent
Health professionals should complete both their assessments and treatment of Line before the public employment office can help her get a job	○○○○○○	There is no reason to wait for further medical assessments and treatments. The Public Employment office must, in close collaboration with the health sector, facilitate the process of looking for competitive employment.
I think competitive employment should be the goal for Line as long as that is what she wants.	○○○○○○	Usually, it is not realistic for people with serious mental health problem such as Line, *to function in a competitive job*.
Line has been dependent on social welfare financial support/benefits for a long time and she is understandably scared of losing this. She will need advice and support in order to try competitive employment.	○○○○○○	If Line really wants to work, the financial support from the Labour and Welfare administration will not hinder her. Financial advice will not be deciding factor in Line getting a job or not.
Line wants to work now. This means that the job search should start as soon as possible.	○○○○○○	We need adequate time for work preparation and treatment before looking for competitive employment.
To help Line get employment her contact person must make direct contact with potential employers.	○○○○○○	The Labour and Welfare Administration has the country's largest register of vacant jobs in Norway. Line can apply for one of these.
Line must follow the rules from the Labour and Welfare Administration and regulations and normal follow-up period. If she later needs further help, the case can be reopened.	○○○○○○	Line should receive follow up from the Labour and Welfare Administration for as long as she wishes and needs it. This can mean in long term follow-up, without any formal end, independent of whether she gets a job or not.
Line's interests and preferences should first and foremost guide the search for employment.	○○○○○○	The vocational rehabilitation advisor has valuable expertise and experience, which must first and foremost guide the job search.

2.3.2 Sample

All employees within public employment services in Nordland were convened for two seminars in 2013 and 2017. IPS was not included on the agenda for these seminars. The gatherings provided a convenient opportunity to collect data from as many PES employees as possible. Attendance was mandatory and supported by the county-level PES, aiming to minimize selection bias. We only have data on respondents' workplace locations, enabling

comparison between employees in the intervention municipality Bodø and similar municipalities.

2.3.3 Statistical methods

We treated the scale as an interval scale with equal distance between the items. The items are viewed as measuring different underlying aspects of IPS, and that they combined through an aggregated mean show the attitude towards the underlying concept of IPS.

To check whether PES employees in Bodø had different attitudes than the other PES offices, we computed independent samples t-test and compared the means scores in Bodø compared to means from merged data from the other offices. Scores for each of the statements, as well as a sum score for overall attitude towards the IPS principles were computed at two timepoints and compared between Bodø and areas without IPS exposure.

Multiple linear regression was used to test the hypothesis that attitudes toward IPS changed over time dependent on whether training and concrete experience with IPS had happened.

2.4 Will IPS implementation have a measurable effect on employment outcomes at a societal level? (Paper III)

We sought to explore whether a comprehensive implementation process could yield results in terms of employment outcomes at a societal level beyond those directly receiving the intervention. To address effectiveness on employment outcomes at a societal level, this study employed a quasi-experimental design utilizing the difference-in-differences method.

Additionally, the study incorporated secondary data on the implementation process. Administrative and descriptive data describing the inner context was actively used by the implementation team/change agents to enhance and promote adaption and sustainability of IPS during the implementation period.

In this thesis, the section 2.4.1. titled 'Setting and IPS Implementation' is expanded compared to the published paper to include additional information relevant to the implementation. This is done to describe the inner setting in the intervention municipality thoroughly, illustrate the implementation process, and better understand its potential influence on the primary outcome and the applicability of that result. I have also chosen to place administrative IPS implementation data in the results section of the thesis, whereas in the published article, these were presented in the methods section for clarity and focus on the primary outcome—societal

employment outcomes. The administrative data outcomes for the target population, turnover rate among employment specialists, and quality data are presented as results to emphasize the importance of understanding the inner context and implementation outcomes that might influence the primary outcome measure of employment outcomes within the study population at societal level. These outcomes were key targets of change during years of preparation, implementation, and sustainability.

2.4.1 Setting and IPS implementation

Early in the exploration and preparation phase of implementation, we investigated local care pathways for individuals with severe mental health problems and engaged with leaders in both primary and specialist healthcare services. We recognized the necessity of involving both specialized and primary mental healthcare services to encompass our target population with severe mental health problems as the target population requires services spanning different healthcare levels and social domains. The implementation took place within the standard routine service setting and emphasized a cross-sectoral collaboration. The partners encompassed both specialized and primary mental healthcare and the public employment service, each with distinct mandates and funding sources.

The municipality of Bodø is the second largest in Northern Norway with a population of about 50 000 inhabitants. The city has a specialist mental health service consisting of a hospital with tertiary services for elderly, acute, security, eating disorders and patients with psychosis. In addition, it also consists of a local Community Mental Health Center (CMHC) and substance misuse treatment (TSB) both with inpatients and outpatient care. The municipal mental health service is multifaceted, encompassing general practitioners (GPs), substance abuse treatment, and mental health treatment. The municipality operate across a wide spectrum, serving a diverse target group that includes both preventive services and those tailored for individuals with severe mental health problems. Health services in Norway are universally with almost free access, mainly funded through taxes, and private medical insurances are very limited. In addition to the healthcare services, the local labour and welfare administration responsible for social and financial security and transitions into work, was part of this collaboration.

Bodø was chosen as one of the pilot locations in Norway to receive funding from the Health Directorate for piloting IPS. We explicitly requested exclusion from the planned Norwegian RCT by the authorities for the pilot programs. Our primary motivation for this decision was

the intent to be able to test whether we could implement IPS with good fidelity within routine clinical practice. We believed the method had proven its efficacy at individual level, and that different methods and perspective was needed to move the field forward. Another perspective deemed to be a prerequisite for randomised trials is the concepts of equipoise - that patients and clinicians do not have preference for treatment (247). The groundwork had resulted in a consensus among our key stakeholders, particularly healthcare clinicians. They were clearly reluctant to randomize patients into traditional services, citing ethical challenges based on existing research and knowledge in the field. They did not want to give their patients a less effective service.

2.4.1.1 Inner setting

An early decision was to fully integrate the IPS employment specialist into healthcare. This means being employed and paid through the healthcare system – vocational rehabilitation integrated within mental health. The requirement was that this role should be an equal partner to other more common professions in healthcare, document in official patient records, participate in treatment that also include patients not referred for employment support. The employment specialist should not be an add-on but contribute to healthcare teams integrating work and education as a natural part of their assessment, treatment, and rehabilitation. From the Community Mental Health Centre, we engaged a psychosis team consisting of 13 diverse healthcare professionals, including nurses, social workers, psychologists, and psychiatrists. This team served a varied clientele, encompassing individuals at high risk of their first psychotic episode and those prone to recurrent problems. On average, each clinician managed approximately 20 patients.

From primary mental healthcare, we incorporated a general referral-based mental health service. This involved minor adaptations to the intervention due to the absence of team structures and case management within primary mental healthcare. The service was responsible for approximately 600 patients, each with varying functioning levels, needs, and diagnoses. It operated with about 36 healthcare professionals working in shifts. The service dedicated specific time during morning meetings to address work-related topics.

From the public employment service, the department responsible for supporting users with Work Assessment Allowance (WAA) was engaged as partners. The project also established regular weekly meetings for the employment specialist with this department in PES hosting the meetings.

We added personnel (employment specialists) and provided training to all staff. The aim was to establish a solid knowledge base and shared values and goals among involved stakeholders. Visits to the originators of IPS was arranged, conferences, networks established, and discussions with stakeholders at local and national levels on funding and strategies to implement IPS. This happened both during preparation and implementation of the trial.

2.4.1.2 Flexibility in deliverance, adherence, and recruitment

The involved mental healthcare services delivered their services as usual. Patients would be recruited through their regular interactions with their clinicians and followed up as usual within the healthcare service, but the collaboration between health and PES was strengthen.

Our inclusion criteria of severe mental health problems created some need for further elaboration about what constitutes severe mental health problems. In numerous instances, healthcare professionals in primary mental healthcare are unaware of the patients' specific diagnoses. The inclusion criteria were elaborated to help employees understand the concept of severity for mental health problems (Figure 4).

Figure 4 Elaboration of how to understand the concept of Severe mental health problems

---

"Individual placement and support (IPS) is an approach designed for people with severe mental health problems. The definition of serious mental health problems often includes three conditions:
1. Diagnoses within the schizophrenia spectrum, mood disorders, anxiety disorders or pervasive developmental health problems
2. Duration of treatment of 2 years or more
3. Psychosocial dysfunction – major difficulties in functioning in social, work or school settings
...we do not use the term "severe mental health problems" as a strict inclusion criterion in the sense that a diagnosis such as schizophrenia, bipolarity or severe depression is necessary. If a patient within the service experiences substantial and persistent impairments in various aspects of their life due to a mental health problems, they would be considered a suitable candidate for IPS support, even if their diagnosis does not meet the formal criteria for severity. This would also encompass patients receiving early intervention for conditions like first episode psychosis, a group for which there is evidence of IPS effectiveness.

2.4.1.3 Quality - Fidelity

Quality routines were established during the implementation phase in response to emerging issues and collected administratively.

Independent fidelity review was measured by external reviewers using the IPS-25 Fidelity Scale (294), and further used for quality improvements. The scale has shown good predictive validity and has been used in three Scandinavian IPS trials (304, 305, 313).

2.4.1.4 Employment specialist turnover rate and IPS users' employment outcomes.

Administrative data on employment periods and weekly reporting's of employment outcomes from the employment specialist. The project management had weekly meetings to monitor and supervise regarding compliance to the IPS method as a regular supervisor role in IPS.

2.4.2 Target population for IPS and eligibility

The target population was all patients receiving treatment in the chosen services with severe mental health problems, but with certain limitations that was initially discussed between the collaborating partners and researchers. The inclusion criteria were age between 18-40 and at the same time they had to receive the temporarily health related benefit work assessment allowance (WAA).

All the participating stakeholders could agree to adopt a preventive perspective rather than a rehabilitative one. It was easy to agree upon an upper age limit of 40 years of age with the limited resource of employment specialist. The criteria of receiving WAA sparked considerably more debate. This was mostly due to the substantial caseload of individuals with permanent disabilities within the healthcare system who seek assistance in reintegrating into the workforce. This also challenged the zero exclusion in IPS. Clinicians argued that we should refrain from assuming inability to work among people on disability and support their development with a belief in their potential for regular employment. For the healthcare system, the welfare benefits patients receive have no bearing on the healthcare services they are entitled to receive. However, for PES, welfare benefits determine the services individuals are eligible for, and they aimed to prioritize those with temporary benefits to prevent permanent disability in the form of long-term welfare assistance.

We received feedback from the employment specialists that this criterion was not strictly enforced because it was deemed necessary to go beyond the parameters to be accepted by healthcare professionals and the patients they perceived as needing the most help. This involved enrolling patients older than 40 and on other welfare benefits like disability pension, social benefits, or no benefits at all. The project leadership did not object to this but had regular conversations with the employment specialist to remind them of the research design.

2.4.3 Study population and variables

The study population consisted of Norwegian inhabitants aged 18-40 with the temporary health-related benefit Work Assessment Allowance (WAA) in the intervention municipality and in ten control municipalities from 2010 to 2019. Variables included year of birth, gender, country background, marital status, WAA, diagnoses as the basis for WAA (classified either according to ICD or ICPD), workdays per quarter, and workdays per month.

2.4.3.1 Control municipalities

The ten municipalities were included a-priori based on five criteria (Figure 5).

Figure 5 Inclusion criteria for control municipalities.

Criteria	Data retrieved from
Comparable population size and economic framework	Statistics Norway has developed a municipal grouping based on the population size and economic framework conditions of the municipalities (KOSTRA)**
Municipalities close to big cities excluded.	Research group.
No funding* to do IPS	Directorate of Health.
No registration of fidelity checks.	Directorate of labour and welfare (NAV).
No registration of IPS activity in the relevant time-period.	Regional county coordinators for work and health (NAV).

*From the Directorate of Health. ** https://www.ssb.no/en

2.4.4 Study design

The implementation of IPS in Bodø occured through a natural collaborative implementation process carried out over several years. The implementation was not initiated with a purpose of research, and when evaluating different study design, we opted for a quasi-experimental design that could contribute to estimate an impact of this implementation effort on workdays in the study population at societal level. We utilized reliable registry data from NAV (PES) that tracks individuals in the years 2010-2019 both in the intervention municipality Bodø and in ten other comparisons municipalities. We observe workdays per person over time, both before and after the implementation of IPS. This allows for pre- and post-tests as well as analyses of trends (368).

2.4.4.1 Difference in Difference (DID) method

Although we observe changes over time in registry data both in Bodø and the comparison municipalities, this could have several causes.

Merely measuring the difference in workdays within the study population in Bodø and comparing it to workdays in the study population in the comparison municipalities would not be convincing. This way, we have no information about how the difference was before IPS was implemented. To claim that the implementation of IPS has an effect, measuring workdays per person before and after implementation is also not sufficient. Perhaps Bodø had higher (or lower) employment participation figures for young adults that stood out even before IPS was implemented compared to others. The method we employed in this study, Difference-in-Differences (DID), combines two different differences to try to infer a causal relationship. It involves the difference in outcome (workdays per year) between the study population in Bodø and the study population in comparison municipalities before the implementation of IPS (2009-2012) and afterward (2017-2019). Hence the name difference in difference. There are two dimensions: time (before and after) and treatment (whether IPS implementation is occurring or not). This gives us an estimation of an Average Treatment Effect on the Treated group (ATET), where the treated group is the study population in Bodø. This effect was estimated repeatedly to track the development over time and is visualized in the paper (Figure 2) page 5. The control municipalities in our study act as counterfactuals – our comparison group to what would have been the outcome (workdays per year) in Bodø if IPS was not implemented.

The Difference-in-Differences (DID) method is based on two critical assumptions: the Parallel Trends Assumption and the absence of time-varying 'shocks' that impact the intervention municipality and the control conditions differently. A 'shock' in this context refers to unforeseen and impactful events or factors that could influence the studied outcomes of workdays per year. A shock could, for example, be a major cornerstone company going bankrupt in Bodø, leading to significant unemployment or a shift resulting in many individuals transitioning to health-related disability benefits. This could impact the outcome measure of workdays per year in the treated group and create a bias compared to the comparison group. General changes that may occur, such as alterations in how access to WAA is regulated or a financial downturn in Norway, would presumably affect Bodø in the same way as the other ten comparison municipalities.

To establish the Parallel Trends Assumption, we require baseline data on the same outcome from at least two time points before the implementation of IPS in Bodø. Once this assumption is met, the method relies on the continuation of these parallel trends. The absence of time-varying shocks, referring to unanticipated events affecting the studied conditions, is not

something that can be directly tested. See page 2-5 in the published paper for a detailed description.

2.5 Ethics

All three papers have approval with reference number 2012/2239, obtained from the Regional Committee for Medical and Health Research Ethics (REC) Region North, Norway. Paper III also had approval from the Data Protection Officer at Nordland Hospital to use administrative data, notes, meeting minutes, fidelity reports from the implementation of IPS in Bodø (2019/8551), projectnr. 38. All data is stored in secure data facilities at Nordlandssykehuset.

These papers are part of three different projects with funding from the Research Council of Norway:

1. Interventions for reduced sickness absence and disability benefits (Bodø IPS I) (#227097)
2. There is strong evidence that patients with severe mental health problems can be successfully employed. Is the effect sustainable long-term? (Bodø IPS II) (# 280589)
3. We know Individual Placement and Support (IPS) works in clinical trials. Can it improve outcomes for patients in the real world? (IPSNOR) (#273665).

Paper I use available data from OECD:

- Disability welfare benefit receipt rate, employment by educational attainment rate, time series data for employment regulation indexes and their individual indicators (http://www.oecd.org/employment/emp/oecdindicatorsofemploymentprotection.htm)
- The data in the indexes (https://data.oecd.org/)
- Time series data for the compensation and integration index, along with their individual indicators, were provided by the OECD upon request.

In addition, data on GDP and the unemployment were gathered from the World Development Indicators (World Bank) online database (http://data.worldbank.org/)

Data for the generosity of welfare disability benefits index for Hong Kong and Bulgaria were extracted from another paper by Metcalfe et al (369).

2.5.1.1 Conflict of interest. Paper II and III

The author of this thesis oversaw the project of implementing IPS that is being examined in Paper III. The responsibility also involved funding for the positions and training of IPS employment specialist.

The sample in Paper II included the public employment office also located in the intervention municipality.

In conducting research connected to an intervention for which I am responsible, I recognize the potential for a conflict of interest. While I have no financial hardship, I could have a personal interest after years of investment in the intervention's success and sustainability. For paper II, I ensured that the respondents in the PES offices was unaware of my role in the survey. In paper III the data concerning the societal effectiveness was collected from registries and all the data analysis were done by the authors Wittlund and Lorentzen.

2.5.1.2 Use of AI

I have used Chat GPT`s latest free version to translate some sections in this thesis between Norwegian and English.

3 Results

3.1 Is IPS efficacy generalizable across countries and context? (Paper I)

The systematic review identified and analysed a total of 27 randomized controlled trials from Asia, Australia, North America, and central and northern Europe, with a total sample size of 6651. The studies had sample sizes from 37 to 2055 persons, and which a majority included patients with severe mental health problems (between study variance τ2, was 0.06). The employment rates exhibited an increase in IPS interventions when compared to controls (RR 2.07, 95% Cl 1.82–2.35). The effectiveness of IPS was found to be slightly influenced by the index for legal protection against employment dismissals (log(RR) = -0.15,CI 95% -0.28 to -0.02, *P*-value = 0.025). However, the regulation of temporary employment, level of disability benefits, integration policy approach, GDP, unemployment rate, and employment rate among individuals with lower education did not demonstrate any significant moderating effect on the efficacy of IPS interventions.

3.2 Do public employment service employees have attitudes compatible with the principles of IPS? (Paper II)

The response rate was 86% in 2013 and 68% in 2017. Attitudes were generally in line with IPS principles compared to the current practices among public employment offices. The municipality exposed to IPS showed more favorable attitudes (p=0.01). Changes in attitudes were minimal over time and did not differ between regions (p=0.287). The attitudes of PES employees were aligned with the principles of IPS and even more so if exposed to IPS.

3.2.1 Will IPS implementation have a measurable effect on employment outcomes at a societal level? (Paper III)

3.2.1.1 Setting and IPS implementation

The employment specialists were employed in healthcare, accessed and wrote in patient records, and participated in treatment meetings. The primary healthcare services that did not have team structures or case management had to find solutions for integration and struggled more to find natural meeting points internally in the service.

3.2.1.2 Quality - Fidelity

Fidelity was measured three times by external reviewers, and both health teams reached good quality during the implementation period (Table 1, page 3 in the published paper). The items

that scored lowest were primarily due to personnel shortage and lack of documentation. The only central theme that the project struggled with across all three years was being stable in having six face-to-face weekly employer meetings.

Many topics emerged, including collaboration between healthcare partners and cooperation with PES. Additionally, it became necessary to develop detailed descriptions for the new role of the IPS employment specialist within the healthcare system. See Figure 6 for some examples of new quality routines.

Figure 6 Overview over quality routines

Quality routines in the IPS services	Specifications
IPS critical incidents	Change of IPS employment specialist
	Handling aggression in meetings
	Handling collaboration with childcare-protection
	Suicide-risk
IPS leadership	IPS evaluation, fidelity
	Access for employment specialist to systems in health
	Agreement on duty of confidentiality for ES from PES
	Confidentiality and self-declaration for ES
For health personnel	What does IPS entail?
	How to refer to IPS
	To start a conversation about work with patients
	IPS ES – description
	IPS supervisor - description
	Integration in health – what does it mean?
IPS routines in general	To start up with IPS and search for jobs
	Follow- up after new job
	Feedback to PES
	Access for employment specialist to health systems
	Agreement on duty of confidentiality for ES
	Confidentiality and self-declaration for ES
	Termination of IPS
	IPS teams
	Presentations of case in employment team
	ES- registration of work
	Regulations about confidentiality, obligations to documentation

3.2.1.3 Employment specialist turnover rate and IPS user's employment outcomes

Administrative data revealed that around 200 individuals received the service during implementation, with approximately 49% transition rate to regular employment. During the same period, the team of three employment specialists, representing an average figure, experienced a significant turnover rate of 94%. Four out of the six individuals who held the positions remained relatively stable after the project's first year, but establishing new roles working across three organizations was challenging. Following the uncertainty in 2016-2017 regarding the future of the IPS initiative, a completely new team had to be assembled during the post-exposure period. In the subsequent years, up to 2019, the turnover rate remained high. Six out of the eight individuals who left these positions secured similar roles within the same professional domain, either in different departments of the same organizations or within the local community.

Expansion: In 2020 there were six employment specialists working with four different healthcare teams. Four out of these five were employed in the healthcare sector, and one in PES.

3.2.2 Employment outcomes on a societal level

The Difference in differences (DID) analysis revealed a positive and significant impact of implementing IPS on the outcome of workdays at a societal level. The ATET due to IPS implementation was an increase of 5.6 workdays per year per individual (p=0.001). This corresponds to an increment of 12.7 years of work for the IPS-affected group in Bodø, considering the country`s standard of 248 workdays per year.

The treatment effect also exhibited an increase over time, and three years after the initial IPS exposure, residents of Bodø worked approximately 10.5 more days per person per year. This is equivalent to an increase of 23.8 years of additional work compared to the control municipalities. Difference-in-difference-in differences (DiDiDi) suggested that individuals that received WAA due to mental health problems had a greater effect of this implementation (page 4 in the published paper).

Further details regarding study sample, granger plots, and sensitivity checks can be found in the published paper on page 5.

4 Discussion

The three aims of this thesis were whether IPS efficacy was generalizable across countries and context (Paper I), if public employment service employees have attitudes compatible with the principles of IPS (Paper II) and whether IPS implementation will have a measurable effect on employment outcomes at a societal level (Paper III).

The main goal with this thesis is to contribute to actionable causal inference. Something that can support decisionmakers regarding how to think about implementation and scale up of IPS. I believe Paper III is the paper that contributes the most novelty in that regard, and therefore, I will discuss this paper more thoroughly than the others.

4.1 What is novel?

4.1.1 Is IPS efficacy generalizable across countries and context? (Paper I)

Paper I was motivated by our belief that it might be unnecessary to test IPS through randomized trials in every single country. Our impression was that there was a concern that contextual factors related to the labour market, labour legislation, and the generosity of the welfare state could reduce or eliminate the effect of IPS. In Norway, for example, we have strong employment protection, generally low unemployment, and very generous welfare benefits. This could suggest that IPS would be less effective than, for example, in the USA. We could check this with an RCT here as well (which has been done by others (305)), but our idea was to assess whether these three possible effect moderators had any impact on the effectiveness of IPS across many countries. We did this in a meta-review with interaction terms for these three potential effect moderators, using RCTs from countries with quite different context as the data basis, supplemented with data from the OECD on these three effect moderators. We found some support for our concern; the index for legal protection slightly reduced the efficacy of IPS, but the impact is marginal and have no practical significance. We did not either find an association between IPS efficacy and GDP growth, which contrast a previous meta-analysis (369)

4.1.2 Do public employment service employees have attitudes compatible with the principles of IPS? (Paper II)

Paper II was motivated by our belief that the attitudes potentially could become a challenge or barrier to the implementation of IPS or lead to adjustment of the methods. This could be attitudes among PES, clinicians, employers and maybe also among jobseekers. Attitudes

among healthcare professionals have previously been examined (290, 370-372) as well as stigma, both in the form of self-stigma and stigma from providers and employers regarding the employment of individuals with severe mental health problems (373, 374). A less explored perspective was the attitudes of employees in the public employment sector. We did not find a suitable questionnaire, so we developed one that we believe has relatively good face validity. The results from Paper II suggest that PES employees support the core principles of IPS, even more so in municipalities with training and practical experience with an IPS service.

4.1.3 Will IPS implementation have a measurable effect on employment outcomes at a societal level? (Paper III)

Paper III was motivated by a twofold desire. First, the act of carrying IPS into routine clinical practice (making competitive employment a real opportunity) and use this opportunity to research the feasibility of the model. Would we be able to implement it in through a cross sectorial collaboration, support people into jobs, and achieve acceptable fidelity? And, secondly the most ambitious goal, could this investment show any effect at societal level compared to municipalities not implementing IPS? If we could demonstrate an effect at the societal level, this would be novel and contribute beyond merely reproducing another RCT. I consider Paper III in this thesis to provide the most substantial contribution. It combines administrative data from implementation with registry data at societal level, demonstrating that a combined effort through cross sectorial collaboration might influence a societal level employment outcome.

4.2 Strengths and limitations

The three papers have different strengths and limitations.

4.2.1 Paper I

IPS has been evaluated through randomized controlled trials in countries with varying generosity of welfare benefits, integration policies, employment regulations, and labour market conditions. Our aim was to assess the generalizability of IPS efficacy across these countries and contexts, thus avoiding the necessity of conducting RCT`s of IPS in every country. Meta-analysis has as one of its strengths that is increases the sample size and the power, in this case the ability to study overall efficacy across context and whether moderators challenged the efficacy. But such analysis also has its limitations often summarized into how

studies are identified, the heterogeneity of the results, availability of data and how the data are analyzed (375).

4.2.1.1 Strengths

Identifying and including studies: This paper utilizes a predetermined method for literature search based on PRISMA criteria and use inclusion criteria and quality assessment previously used in meta-analysis on IPS (334). We have been meticulous in only including studies that report quality according to the IPS quality scale, and all included studies was assessed by two individuals.

The data used come from highly diverse contexts from different countries but are collected from OECD and the World Bank and possess good internal and external validity. We extracted data based on the median follow-up time in all studies, effectively reflecting the context during the period of experimentation in each study.

4.2.1.2 Limitations

Identifying and including studies: As in all meta-analysis, publication bias is an issue, and the funnel plot indicated asymmetry indication bias in favor of positive findings. See page 213 in the published paper for details on this matter.

The included studies had services ranging from early interventions for people with first episode psychosis and veterans with PTSD to populations requiring disability insurance and those with criminal involvement. There were also variations in the control conditions, from high-quality supported employment to treatment as usual. Such differences can lead to a strengthening of the null hypothesis. However, direction is not always easy to guess - a meta-analysis investigating the impact of active control conditions, found more positive effects favouring IPS (340). The studies included in this meta-analysis exhibit variations in effect sizes, that might prompt consideration of whether a consistent pattern exists among them.

We did not check for participant blinding before inclusion. Blinding in studies investigating complex psychosocial interventions is difficult but can be maintained when assessing outcomes. Lack of blinding could introduce a systematic bias that reduces confidence.

The comparative dataset from the OECD on the indexes is derived from a combination of quantitative and qualitative data. The process of data collection may vary across countries, potentially introducing reliability issues. These variations in data collection methods between

countries could result in existing differences not being detected, thereby creating uncertainty regarding our ability to identify impact on IPS efficacy. Consequently, both the reliability and validity of using these data could be called into question. Another factor is that the sub-dimension in the indexes we use might be a bit arbitrary put together but are all given the same weight and score range (184). The definition of policy types based on these subdimensions might not be as clear cut as it seems. We should therefore be cautious to put weight on the secondary analysis on sub-components in the indexes.

4.2.2 Paper II

4.2.2.1 Strengths

This paper took advantage of an opportunity to conduct a survey during mandatory gatherings with all employees in the public employment sector in the municipality implementing IPS, as well as in the surrounding region. Additionally, local offices forwarded completed questionnaires from those who did not attend the meetings. The questions were designed by researchers familiar with the IPS model and the local context. Prior to administration, the questions underwent multiple quality checks by public employment staff well-acquainted with the IPS concept from international literature. Additionally, they helped ensure that the questions would be understood by the employees in the sector. I believe the conceptual validity to attitudes within IPS is upheld through the formulation of our survey questions.

4.2.2.2 Limitations

The main limitation in this study is the self-developed questionnaire with unknown psychometric properties. The surveys question might not cover all inherent meanings within the IPS core principles, although face validity is good, we can't be sure that concept validity is good - that it measures the attitudes in the IPS model.

Sampling and generalizability: The questionnaire was made with the purpose of measuring the attitudes with public employment personnel within and the generalizability to others might be limited. Another issue is using aggregated means to report results from our results. Some argue that ordinal data and Likert scales should not be used in this way because the assumption of equal distance between categories is not fulfilled (376).

It also appears to be a ceiling effect, possibly showing social desirability. Despite individual placement and support not being in use in public employment offices in general in 2013, the enthusiasm for more supported employment-oriented interventions had gained significant

attention as a contrast to the train and place approach. The positive attitudes might be a result of this.

While we examined attitudinal support among PES employees through a survey, it could have also been explored using ethnographic or narrative methods to understand the culture and context the PES employees operate under. Observing frontline workers and whether their knowledge and positive attitudes toward the idea that work is possible for individuals with severe mental health problems become reality in the form of decisions made in meetings and other decision-making processes.

Qualitative interviews could also have delved deeper into these attitudes, trying to understand how these attitudes would play out – would they lead to any practical implications in direct work with clients? Such studies could contribute to how evidence-based practice work and influence effectiveness. Since IPS was implemented within the healthcare services, it would also have been interesting to explore attitudes among healthcare workers.

4.2.3 Paper III

4.2.3.1 Strengths

Despite high internal validity of RCTs, their external validity is limited (377), both in terms of the clinical groups typically seen in clinics, the context, and organizations of the services, and in whether services are motivated to implement the intervention given the extra workload it entails. The primary strength of this papers design is external validity. The design aligns with real-world conditions and address questions regarding feasibility and acceptance among key partners and outcomes relevant for the target population and key stakeholders. IPS is implemented within the natural existing clinical structure, across healthcare levels (specialist and primary healthcare) and although the inclusion is set to be severe mental health problems – all patients belonging to the services were IPS was implemented, was introduced to the mindset of IPS and a new collaboration between health and public employment services.

The outcome aggregated at societal level lean on registry data gathered for administrative purposes assuring people their rights to welfare benefits. The Norwegian registry data have high reliability concerning our outcome of registered workdays, and no risk of recall bias to what people report. Most RCT studies on IPS rely on reported work experiences from individuals. The use of administrative registry data removes the risk of losing data, and the longitudinal design make it possible to analyze changes over time. The method difference in

difference is mostly used in economic and social sciences and contributes with a novel angle in the IPS literature. One studies from the Netherlands also uses DID, in combination with a matched sample (311). The combination of the DID method with detailed contextual data on the implementation of IPS is not, to the best of our knowledge, used before in IPS research.

4.2.3.2 Limitations

This study used a quasi-experimental design. One main shortcoming in this design is due to the lack of randomization and risk of bias and confounding factors.

Is the study population a representative sample of the target population?

If the individuals in the study population differ to much from those the intervention was intended to affect, it could introduce bias in estimating the intervention's impact.
The study population was chosen based on the outcome of interest: competitive employment/ number of workdays in competitive employment for young individuals aged 18-40 dependent on work assessment allowance. The inclusion criteria for the study population were much broader than for the target population, and the dosage of IPS in the intervention municipality might be homeopathic, increasing the risk of a Type II error.

To avoid selection bias between the study population in the intervention municipality and the control municipalities, we included only individuals who received WAA for the first time during the implementation years in the study population. This decision may have led to a study population less representative of the target population receiving direct employment support from employment specialists, and therefore inadvertently might have increased the risk of not finding an effect because the study population was less representative of the target population – could lead to a Type II error.

Control municipalities and selection bias.

There were some small differences between the study population in Bodø compared to control municipalities. The most notable, was the diagnostic criteria that determine eligibility for receiving the first WAA (A slightly lower proportion due to non-organic mental health problems and slightly higher somatic disorders in the intervention municipality) (Table 1, Appendix Table A). We don’t believe that the difference in diagnostic category for receiving first time WAA between the intervention municipality and the controls cause a selection bias in our sample, but perhaps represent a provider preference in which diagnosis are used in some areas when applying for WAA from the general practitioners.

4.3 Let`s say the results from the three papers are true.

Let's say the results from the three included papers are true: IPS efficacy is generalisable across countries and context, PES employees have attitudes comparable with the principles of IPS and even more in a municipality implementing IPS. Additionally, IPS implementation through a cross sectorial collaboration cause a positive societal impact on workdays for young adults on WAA in the intervention municipality compared to control municipalities. The positive attitudes presented in paper II could be interpreted as indicating increased awareness and knowledge to appropriate approaches, identifying jobs based on individuals' preferences and support integration into mainstream employment. National policy efforts in the field of work and health might have successfully elevated the understanding of this topic.

A convincing argument of the efficacy across context is that the meta-regressions demonstrate consistency and strength of association over time and across context. Meta-analyses enable the synthesis of evidence, providing a comprehensive overview by summarizing and calculating data from over 6000 participants across various contexts in randomized controlled trials (RCTs). The use of meta-regressions allows us to investigate moderator variables, enhancing our confidence in the generalizability of results without the need for repetitive and resource intensive RCTs. The moderator variables are based on solid data from the OECD and World Bank. Paper III employs an unconventional, and rather new method (DID) in this field of research, and the trial's design, with the goal of demonstrating effectiveness at the societal level, is quite ambitious. The risk of a Type II bias is probably higher than the risk of finding an effect where there is none (Type I). The trust in the results from Paper II might be weakest due to the self-made questionnaire, but could it perhaps still be telling us something important about the mechanisms driving the effect we observe in Paper III?

4.3.1 Mechanisms

The analysis used, depending on whether one accepts the premises, demonstrates a causal relationship. However, it cannot specify which mechanisms lead to this effect. Here, I will attempt to explore two possible mechanisms influencing a societal effect: attitudes and spill over.

4.3.1.1 Attitudes

Paper II demonstrates strong support for key principles among PES employees in Bodø. I believe this to be connected to both international and national trends (378), but also the local commitment and preparation between three dedicated sectors. As part of the project's

implementation strategy, personnel were trained during the preparation and implementation phases. This training included clinicians working with individuals with mental health problems and addiction issues, as well as PES employees directly serving those on WAA in the municipality. The training aimed to foster a shared professional understanding that work is a human right, its beneficial for health, and requires collaborative efforts from both sectors. It facilitated direct connections and trust in sharing information among professionals, reduced reliance on centralized communication methods, and facilitated the implementation. This also aligns well with earlier research highlighting acceptance of the model and the inherent attitudes that is important to implement IPS (379-381).

But Attitudes are just one of several pieces that must be in place to make IPS work.

4.3.1.2 Spill-over and social effects

Since Bodø was one of the pilot sites of IPS in Norway, many people from services in this municipality participated in national courses and training that involved frontline personnel, leaders and employment specialists. We received support for fidelity evaluations and took part in conferences where researchers from the national RCT funded by the Norwegian Labour and Welfare Administration put forward their results. The local implementation strategy was broad, involved meetings between the research group and political/administrative decision-makers, frontline leaders and frontline personnel. Change agents in each sector also worked with implementation support. I believe this broad implementation strategy in the intervention municipality might have contributed to a spillover and social effect between clusters of jobseekers, clinicians, frontline workers in PES, and across sectors. This would have been a confounding factor if this was a randomized trial, but during a natural implementation it is suitable as a context for analysis (382) (383).

Another local factor that might have influenced spill-over was the high turnover rate among employment specialists in the intervention municipality. Many transitioned into other roles directly involved in work rehabilitation for those receiving work assessment allowances in different parts of the municipality. This likely disseminated some core values and methods of IPS to other services not initially involved in its implementation in Bodø. During the sustainment phase (2017-2020), we also saw an increase in employment specialists, allowing more health teams to provide IPS services to more users. The enthusiasm and engagement of leaders and frontline personnel may have promoted new working methods, extending the impact beyond those directly supported by employment specialists. IPS implementation could

have worked through direct effects on individuals receiving employment support, spill-over effects of IPS attitudes and methods within all collaborating services, and spillovers between the involved services.

4.4 Relevance for practice and lessons learned

In our meta-analysis, we showed that IPS work across different countries and context – also in active and generous welfare context. In the next two papers we found that IPS was implemented with fair fidelity, individuals achieved employment, frontline workers in PES showed attitudes in line with core principles in IPS, and we found a beneficial societal effect on employment outcomes in the intervention municipality. This societal effect of implementing IPS needs to be replicated, but as a first result, it is promising.

The societal effect of increased workdays we find in Paper III, do not occur context-free and without some prerequisites. Implementing evidence-based practices within health can easily fail (384). The project had an overall aim of implementing IPS as a cross sectorial collaboration, with employment specialist fully integrated within mental health, both primary and specialized services, achieve good fidelity and create an IPS service that would sustain after the project funding was over. There are many factors both individual and organizational that influence whether implementation fail or succeed (385).

So, when it comes to lessons learned, my experiences based on leading the local implementation, are both positive and negative in nature, and my initially unequivocally positive stance as a clinician may have cooled somewhat in the face of these years of implementation. This is likely influenced by the fact that this project took place during the implementation phase in Norway, when national guidelines and legal clarifications were not yet established. Additionally, there was disappointment with some of the choices made in Norway regarding the responsibilities and organization of delivering IPS. Good overarching national guidelines, good attitudes and intentions and enthusiasts are not always easily translated into actions and lasting change.

I will attempt to discuss why and derive further research questions from it.

4.4.1 Complex institutional context

The comprehensive mental health action plan (2013-2030) from the World Health Organization (WHO) (386) emphasizes the need to create services that integrate mental health and social services within the community. Collaboration and integration are asked for to

support individuals that are described to have “complex and different social and health problems”(197, 198). This collaboration and integration are not necessarily easy.

In 2024, a new health and collaboration plan was introduced in Norway (387). There has been ongoing discussion about the inclusion of financial incentives for collaboration between, for example, specialized health services and primary health services, but details are currently vague. Funding to encourage collaboration, where the public employment sector (PES) is also involved, do not currently exist, and therefore require extra effort for establishment. Experiences from other Scandinavian countries also implementing IPS within the public employment sector confirms cross sectorial collaboration challenges (235, 292, 385, 388).

The implementation of IPS in Bodø had a shared mandate, supported by collaborating partners aligning with their overarching goals. Operating within regular services, no additional resources were provided, except for positions as employment specialists. However, a significant amount of work hours and effort were allocated in all sectors to undergo training in IPS and make it work. Collaboration complexity is often underestimated (389), especially given that IPS initiated changes at multiple levels, impacting attitudes, behavior, and interactions within and between organizations (385).

The IPS employment specialist role introduced new routines, necessitating internal adjustments and inter-sectoral coordination (390). High turn-over among employment specialist is one of the challenges we have experienced (391, 392).

During the four-phase implementation in the intervention municipality, employment specialists were initially stable for three years, but uncertainty arose in the final year with project funding. To navigate this, employment specialists were hired from a private rehabilitation institution we collaborated with, requiring staff training. Health teams adjusted to the new hires, yet the referral rate significantly dropped. The following years saw ambiguity in national guidelines on IPS organization, funding responsibilities, and legal regulations for integrated sectoral collaboration in Norway (378). Throughout all the years, there were 17 employment specialists in these positions (a range between three to six positions).

The employment specialist role in IPS is new to both healthcare and PES in Norway. During the implementation phase in Norway, there has been a notable focus on how to execute the role more than specifying formal requirements. Currently, there are no formal prerequisites or

dedicated training beyond the courses offered by PES. Career prospects in this position remain uncertain. The demands of the employment specialist role are substantial, often acting as a liaison between different sectors and assuming significant responsibility for connecting services and offering a comprehensive approach to individuals and their families. Being an employment specialist involves shared decision-making with individuals with severe mental health problems and their families, support in job tenure (393), and it should ideally involve well-trained employment specialists. What they should be well trained in is a discussion to be continued. High turnover rate is documented across Northern Norway (390), and could probably be reduced through a clearer formalization of the role, competence requirements, legal clarifications and educational/career opportunities (286, 390, 394).

Another consequence of the high turnover and uncertainty on how to collaborate between sectors is diminished trust and a strained collaboration. The high turnover and uncertainty in Bodø have had a long-lasting negative impact on the services, leading to their disintegration for an extended period afterward. Collaboration involves navigating conflict arising from differing mandates, goals, values, and cultures, and required continuous negotiation (385). This requires a constant rebuilding of trust - both internally within organizations and between sectors, and an understanding of each other's mandate and tasks. This is resource-intensive and would have been made easier with a clear mandate, stable funding, legally clarified collaboration structures, and defined interaction requirements between sectors.

Although paper II in this thesis found that attitudes among frontline workers in the public employment sector might be positive towards the evidence-based principles of IPS, the possibility to act upon them is another issue. A recent Norwegian interview study found that frontline workers' ability to coordinate between the health and welfare sectors is constrained, possibly due to administrative and organizational barriers (395). A recent Danish study analyzed the governance of employment services in Denmark and found that managers are 'caught in a standstill.' The study also noted that cross-service collaboration, which relies on trustful relationships, is both demanding and persistent and may be difficult to sustain in the long term (396).

4.4.2 Integrated service models within health

In 2024, there have been some legal clarifications, including that the role of IPS employment specialists is not considered a healthcare worker role and should not document in patient records unless their work includes other (unspecified) health activities (397, 398). The

expansion of positions is positive, but cross-sectoral collaboration is challenging. The health sector's ownership may have diminished due to defining the IPS employment specialist role as a clear responsibility of the PES sector. Reduced investment in health within IPS may lead to a gradual shift in priorities, potentially favoring other target groups that do not require close integration of vocational rehabilitation with mental healthcare. Besides cross-sector collaboration, there should also be a push for integrated services within each sector (225).

In Northern Norway where this implementation has taken place, is a region with a small population, sparsely populated but constitute 45% of the total land area in Norway. Specialized services for low-frequency disorders are primarily located in the two largest cities in the region and will become even more centralized in the future due to demographic development and a health service in economic crisis. Efforts are underway to establish more Flexible Assertive Community Treatment teams (FACT) teams; however, early intervention teams for young people with severe mental health problems are scarce.

IPS for individuals with severe mental health problems should ideally be integrated within a treatment structure and philosophy that many services do not have the requisite conditions to provide. This may encompass an interdisciplinary, outward-focused, long-term, and recovery-focused service approach. Perhaps rural areas might have better opportunities for wraparound services with co-location and team-based approaches involving personnel from different service levels, but the recruitment of qualified staff is a massive challenge.

4.5 Further research

An updated review of meta-analysis conducted after 2015, confirms better competitive employment outcomes for individuals with severe mental health problems compared to different control conditions across countries (301). They further comment that another review of these studies would now be duplicative (301). When it comes to IPS for individuals with severe mental health problems, we may have reached a point where it's appropriate to say "enough" regarding efficacy for short-term employment outcomes, and to consider other questions. What could be further investigated?

4.5.1 Effects at population level

With substantial government investments in IPS, as seen in Norway, and government facing tight budgets, return of investment is crucial. There are some questions that still might be asked?

Do we know if IPS withstands the transition from efficacy studies to effectiveness when the model is implemented as a standard part of our services? Could other designs than RCT be conducted to investigate this?

Reliable administrative registry data, like in the Scandinavian countries, allow for linking work- and health-related outcomes. This creates good opportunities for non-experimental research following national scale up. Exploring causal modeling through counterfactual methods and non-experimental approaches, such as Difference-in-Differences (DID) in Paper III, or propensity score matching and instrumental variable analysis, could be more investigated. Using a difference-in-differences study design before full geographical exposure to a policy change provides a valuable opportunity. This design ensures that time-dependent changes do not influence the outcome, unlike what can occur in purely observational studies with pre-posttests. This is also recommended in a OECD report advising impact evaluations of labour market policies (399). It should also be studies with larger study-populations than paper III in this thesis. Although it may be desirable to move away from designs that have strong control over internal validity, it is still important to maintain a focus on context and implementation.

4.5.1.1 Context

Investigating effects at the population level, also requires a focus on context and implementation to better understand the results. Hybrid studies have been proposed as a way to investigate both an interventions effectiveness, but also implementation through effectiveness-implementation hybrid approaches (349, 400). Implementation research aims to develop practical strategies to improve implementation processes, enhance equity and efficiency, enable scalability, and ensure sustainability, all with the goal of improving people's health. (401).

I will use the Norwegian context to illustrate why paying attention to contextual features and implementation is important alongside investigating effectiveness at societal level. Norway has undertaken a randomized controlled trial (RCT) (305) and has expanded IPS across the entire country. Currently, there are over 100 services in Norway providing IPS, approximately 350 IPS employment specialist and 6500 individuals had received IPS services during 2022 (402). In this context, services are defined as teams of employment specialists offering IPS as an Active Labour Market Policy (ALMP), collaborating with the health service. The strategic decision to define IPS as an ALMP was probably crucial, enabling substantial scaling.

However, this decision has resulted in some changes that may have compromised what is a crucial prerequisite for determining when to act on evidence (403). By determining that Individual Placement and Support (IPS) is part of Active Labour Market Policies (ALMP) while simultaneously not changing the laws that regulate collaboration between health and public employment services, some core elements of the IPS approach were sacrificed to facilitate the scaling up of the approach.

So, what impact will such changes have on effectiveness? If one is to conduct an evaluation at the population level, these contextual descriptions become crucial. Understanding the relationship between the implementation of the intervention and the frameworks within which it is provided helps us comprehend why the impact might vary, succeed for groups with common mental health problems, or even fail at the population level.

There is also a need to find good models for how we can make IPS work and sustain under the current conditions in Norway. ALMP are traditionally gatekept by frontline workers in the public employment sector. We know through paper II that attitudes in frontline workers in PES seem to be in alignment with key principles in IPS. But what when it comes to action? The process of being offered ALPM is described as both an assessment of eligibility and inclusion (404). A Norwegian cohort study following long term recipients of social benefits found that self-reported psychological distress reduced the participants participation in ALMPS, and the authors discuss a possible access bias toward people with mental health problems (405). This could also be described as creaming (406), and in our interview study investigating the implementation and development of IPS in Norway, this was expressed as an explicit concern connected to the change making IPS a vocational scheme within the public employment sector (378). One way of investigating this could be through comparative case studies as part of larger mixed methods and hybrid studies. Dependent on the specific research questions different sources of evidence might be relevant (documentation, archival records, interviews, direct or participant observation and physical artifact) (407).

4.5.1.2 Long-term follow-up and economic evaluations

Some studies have investigated long-term outcomes of IPS (311, 317, 321, 408, 409), but there still needs to be some caution regarding IPS-efficacy over long-term follow-up above 24 months. The meta-regression in paper I shows decreased effect size for employment above 12 months, but samples are smaller, so caution is warranted. Paper III is showing a steadily increase in workdays up to 4 years after people received their first WAA in the intervention

municipality, but we can't know whether we see transition to long term employment or a transition back into disability benefit. Perhaps this indicates that employment in the regular labor market is increasingly used as a measure during clarification in PES, but without necessarily leading to permanent employment or stable work over time. More research is warranted on these issues.

In a study done by our research group, we systematically reviewed economic evaluations of IPS/SE (410). The conclusion is that there is a strong, but conservative case for the implementation of programs, but there is a lack of long-term impacts. It's also not easy to know what the alternative costs to IPS are. Taking the example from Norway - what has IPS replaced? It's possible that RCTs provide an artificially heightened positive effect, and we need more studies with alternative designs to further investigate this. Health economic should also include measures on quality of life – preferably based on measures that might catch important outcomes, maybe on other well-being and outcomes inspired from the personal recovery process described in CHIME (411).

4.5.2 IPS for new populations?

If IPS is to be offered to new populations and in new organizational forms, should it be prompted by new RCT`s?

4.5.2.1 What works for whom?

Examples of sub-populations within individuals with severe mental health problems include patients sentenced to treatment or forensic patients, where recovery-oriented models of care are beginning to be more embraced (412). Differences in organizational and legal principles, along with the complexity of rehabilitation, might make it necessarily to improve contextual fit. Modifications are often necessarily when implementing evidence-based practices (413), and not necessarily requiring new RCT evidence. Fidelity to the approach is shown to be important for positive outcomes, so careful implementation is important (414, 415).

What about other populations like unemployed individuals in general? A systematic literature review (416) and meta-analysis (340) suggest that several other diagnostic groups may experience some effect, albeit less than individuals with severe mental health problems, and the number of studies is much lower. One reason why studies on common mental health problems (CMHP) show less effect might be that there is less difference in effect between the IPS and control groups (340). This could be because these groups also benefit from other

interventions, some of which are less resource intensive than IPS. Another explanation could be that CMHP are not consistently defined (340).

In the latest external environment analysis from the Norwegian Labour and Welfare Administration, it is stated that the expenses of the welfare state are to be reduced. Further, that IPS has given positive experiences in collaborating with health services, but that the approach is resource-intensive, and that structural barriers can limit further development (417).

Public resources are constrained, both in the healthcare sector and in the welfare sector, and costly interventions should be implemented where we know they have shown efficacy (418). It is important to conduct thorough cost-benefit evaluations to ensure that resources are used where they have the greatest impact. We know that early intervention and integrated services can impact both course and how it impacts function (306, 419). To achieve this, implementation needs to be guided and coordinated with the overall provision of services for this target group.

Policymakers are pressured to show efficient use of resources, but at the same time capacity for action towards the most pressing matters. From a public purse perspective in the field of work and mental health, it seems logical to prioritize larger groups with common mental health problems and muscle-skeleton since they constitute the largest proportion of those dependent on health-related disability benefits. We see this reflected in the latest strategy for heath and work in Norway (224). These are target groups where we still lack sufficient evidence of effectiveness of IPS. The barriers experienced by individuals with more common mental health problems might need other type of interventions. The widespread adoption of evidence-based models (without taking account of what the evidence is based on) for target groups with unknown effectiveness may turn out to be expensive measures, potentially even medicalizing groups that don't require the extensive wrap-around support provided by IPS. Adoptions should be described and tested before full up-scaling. This does not imply that the central values in IPS must be tested before it applies to everyone – namely that all have the right to decide for themselves whether work should be on the agenda and central for the support they are given.

4.6 Conclusion

This thesis contributes to the understanding of factors that may hinder the effectiveness of Individual Placement and Support (IPS) within generous welfare societies. The findings from the three articles provide insights into the research questions posed.

Generalizability of IPS efficacy across countries and context (Paper I): The meta-analysis demonstrates that IPS significantly improves employment outcomes for individuals with severe mental health problems, more than doubling employment rates compared to traditional vocational rehabilitation. This effect remains robust across different countries, indicating that the efficacy of IPS can be generalized even in generous and active welfare states.

Attitudes of public employment service employees (Paper II): The study reveals that frontline workers in public employment services generally hold positive attitudes towards IPS principles, especially in municipalities where IPS has been implemented. While attitudes in regions with IPS exposure are more favorable, the change in attitudes over time is minimal, suggesting a need for ongoing training and reinforcement of IPS principles among PES employees to align their practices with evidence-based vocational models.

Impact of IPS implementation on employment outcomes at the societal level (Paper III): The study shows that implementing IPS at the municipal level has a significant positive impact on employment outcomes for young adults receiving temporary health-related rehabilitation welfare benefits. Specifically, municipalities with IPS implementation see a notable increase in the number of workdays per year compared to those without IPS, highlighting the societal benefits of IPS implementation through cross-sectoral collaboration.

These insights emphasize the potential of IPS to address unemployment among individuals with severe mental health problems, advocating for broader adoption and implementation within health.

When I first started working on vocational rehabilitation as part of healthcare, I thought it was sufficient to base my desire to change our services on what people wanted from us in healthcare: "If people want help finding work, it is indeed our duty to assist with this." This is still a view I hold, but since my career path has taken me through various roles, including health services, NAV, and advisory council membership to the government and training to be a researcher, I have come to realize that multiple perspectives and justifications are necessary. In addition to addressing rights and value-based services, multiple perspectives must

complement each other. It should ideally be economically beneficial and sustainable. It must be feasible within the systems (and legal frameworks), and different sectors must understand each other's perspectives and responsibilities. The message must also be 'sold' to various decision-makers at different levels across multiple sectors. Responsibilities and roles must then be allocated, and funding must be assigned.

Nevertheless, based on the totality of evidence available in this field today, I have no doubt that IPS should be implemented as a part of clinical care for all individuals experiencing severe mental health problems. We know that IPS works, we know that its positive effects can be generalized to generous welfare societies, and we see that the attitudes of PES employees support the core values of IPS. We also see indications that this can have ripple effects at the societal level and be economically sensible. However, the issue is not with the knowledge itself but with translating that knowledge into action. I believe there are three steps that should be taken:

1. IPS must be integrated into a broader perspective that defines healthcare services according to the needs of their users, rooted in a human rights framework. Perhaps starting with upscaling services to young people together with a range of different stakeholders.
2. Clear strategies for upscaling must be developed based on a needs assessment grounded in hard data about health services, both in terms of how they are organized and how many individuals are expected to need IPS.
3. There must be clear expectations and performance goals for healthcare services, along with requirements for reporting.

This is a responsibility the healthcare system should take on. If the healthcare system does not bear this responsibility, the perspective of symptom reduction and dysfunction will continue to overshadow more recovery-oriented goals and social inclusion. The core values on which IPS rests are crucial in working towards a healthcare service that aims to support better social inclusion, combat stigmatization, prejudice, and discrimination, and provide services based on each individual's needs and desires for their own life. Our services should be centered on human rights (420) and be evidence-based (421). I believe IPS meets these criteria, and by incorporating it into our services, we can contribute to promoting hope and opportunities for everyone to find their own path toward how they would like to live their lives.

References

1. Svendsen LFH. Arbeidets filosofi. Universitetsforlaget2011.
2. Knapp M, McDaid D, Mossialos E. Mental Health Policy and Practice Across Europe. 2007.
3. Marwaha S, Johnson S. Schizophrenia and employment - a review. Soc Psychiatry Psychiatr Epidemiol. 2004;39(5):337-49.
4. Marwaha S, Johnson S, Bebbington P, Stafford M, Angermeyer MC, Brugha T, et al. Rates and correlates of employment in people with schizophrenia in the UK, France and Germany. The British Journal of Psychiatry. 2007;191(1):30-7.
5. Zivin K, Bohnert AS, Mezuk B, Ilgen MA, Welsh D, Ratliff S, et al. Employment status of patients in the VA health system: implications for mental health services. Psychiatric Services. 2011;62(1):35-8.
6. Byrne M, Agerbo E, Eaton WW, Mortensen PB. Parental socio-economic status and risk of first admission with schizophrenia: a Danish national register based study. Social psychiatry and psychiatric epidemiology. 2004;39:87-96.
7. Davidson M, Kapara O, Goldberg S, Yoffe R, Noy S, Weiser M. A nation-wide study on the percentage of schizophrenia and bipolar disorder patients who earn minimum wage or above. Schizophrenia bulletin. 2016;42(2):443-7.
8. Waghorn G, Chant D, Whiteford H. Clinical and non-clinical predictors of vocational recovery for Australians with psychotic disorders. Journal of Rehabilitation-Washington. 2002;68(4):40-51.
9. Jonsdottir A, Waghorn G. Psychiatric disorders and labour force activity. Mental Health Review Journal. 2015;20(1):13-27.
10. Waghorn G, Saha S, Harvey C, Morgan VA, Waterreus A, Bush R, et al. 'Earning and learning' in those with psychotic disorders: the second Australian national survey of psychosis. Aust N Z J Psychiatry. 2012;46(8):774-85.
11. Hakulinen C, Elovainio M, Arffman M, Lumme S, Pirkola S, Keskimäki I, et al. Mental disorders and long-term labour market outcomes: nationwide cohort study of 2 055 720 individuals. Acta Psychiatrica Scandinavica. 2019;140(4):371-81.
12. 2017 G. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet. 2018;392(10159):1789-858.
13. Harvey SB, Modini M, Joyce S, Milligan-Saville JS, Tan L, Mykletun A, et al. Can work make you mentally ill? A systematic meta-review of work-related risk factors for common mental health problems. Occup Environ Med. 2017;74(4):301-10.
14. Dooley D. Unemployment, Underemployment, and Mental Health: Conceptualizing Employment Status as a Continuum. American Journal of Community Psychology. 2003;32(1-2):9-20.
15. World Health Organization (WHO). ICD-11: International classification of diseases (11th revision). 2022.
16. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (5th ed., text rev.). 2022.
17. Njenga F. Factors that influence functional impairment and outcome of mental illness. World Psychiatry. 2009;8(2):95-6.
18. Lamberts H, Lamberts H, Wood M, World Organization of National Colleges A, Physicians AAoGPF, Party IW. ICPC, International Classification of Primary Care: Oxford University Press; 1987.
19. Lamberts H, Wood M. The birth of the International Classification of Primary Care (ICPC) Serendipity at the border of Lac Léman. Family Practice. 2002;19(5):433-5.
20. World Health Organization (WHO). International classification of functioning, disability, and health : ICF.: Geneva :World Health Organization; 2001.
21. Boyd KM. Disease, illness, sickness, health, healing and wholeness: exploring some elusive concepts. Med Humanit. 2000;26(1):9-17.

22. Wikman A, Marklund S, Alexanderson K. Illness, disease, and sickness absence: an empirical test of differences between concepts of ill health. J Epidemiol Community Health. 2005;59(6):450-4.
23. Modini M, Joyce S, Mykletun A, Christensen H, Bryant RA, Mitchell PB, Harvey SB. The mental health benefits of employment: Results of a systematic meta-review. Australas Psychiatry. 2016;24(4):331-6.
24. Campion J, Knapp M. The economic case for improved coverage of public mental health interventions. Lancet Psychiatry. 2018;5(2):103-5.
25. United Nations. Convention of the Rights of Persons with Disabilities UN: New York, NY, USA2006 [Volume 2515:[Available from: https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/convention-on-the-rights-of-persons-with-disabilities-2.html.
26. Patel V, Farmer PE. The moral case for global mental health delivery. The Lancet. 2020;395(10218):108-9.
27. Berkman IKMGL. Social epidemiology: Oxford University Press; 2nd edition (August 6, 2014); 2014.
28. Marmot M. Social determinants of health inequalities. The lancet. 2005;365(9464):1099-104.
29. Kirkbride JB, Anglin DM, Colman I, Dykxhoorn J, Jones PB, Patalay P, et al. The social determinants of mental health and disorder: evidence, prevention and recommendations. World Psychiatry. 2024;23(1):58-90.
30. Marmot M AJ, Boyce T, Goldblatt P, Morrison J. . Marmot Review 10 Years On. . Institute of Health Equity2020.
31. Mackenbach JP. The persistence of health inequalities in modern welfare states: The explanation of a paradox. Social Science & Medicine. 2012;75(4):761-9.
32. Link BG, Phelan J. Social conditions as fundamental causes of disease. J Health Soc Behav. 1995;Spec No:80-94.
33. CSDH. Closing the gap in a generation: health equity through action on the social determinants of health : Final report of the commission on social determinants of health. Geneva: World Health Organization; 2008.
34. Esping-Andersen G, editor The Three Worlds of Welfare Capitalism1990.
35. Fosse E. Norwegian policies to reduce social inequalities in health: Developments from 1987 to 2021. Scandinavian Journal of Public Health. 2022;50(7):882-6.
36. Clasen J. I. Lødemel and H. Trickey (eds): 'An offer you can't refuse': Workfare in international perspective. Bristol, Policy Press, 2001. 357 pp, ISBN 1–86134–195–4. European Journal of Social Work. 2002;5.
37. Dahl E, Lorentzen T. What works for whom? An analysis of active labour market programmes in Norway. International Journal of Social Welfare. 2005;14(2):86-98.
38. OECD. OECD Economic Surveys: Norway 2024. OECD Publishing, Paris; 2024.
39. World Health Organization (WHO). Social determinants of health: Key concepts 2024 [Available from: https://www.who.int/news-room/questions-and-answers/item/social-determinants-of-health-key-concepts.
40. Mackenbach JP, van de Mheen H, Stronks K. A prospective cohort study investigating the explanation of socio-economic inequalities in health in The Netherlands. Soc Sci Med. 1994;38(2):299-308.
41. Marmot M, and Richard G. Wilkinson. 1Introduction. In: Marmot M, Wilkinson RG, Marmot M, Wilkinson R, editors. Social Determinants of Health: Oxford University Press; 2005. p. 0.
42. Goldman N. Social factors and health: the causation-selection issue revisited. Proceedings of the National Academy of Sciences. 1994;91(4):1251-5.
43. Dohrenwend BP, Levav I, Shrout PE, Schwartz S, Naveh G, Link BG, et al. Socioeconomic status and psychiatric disorders: the causation-selection issue. Science. 1992;255(5047):946-52.
44. Kröger H, Pakpahan E, Hoffmann R. What causes health inequality? A systematic review on the relative importance of social causation and health selection. European Journal of Public Health. 2015;25(6):951-60.
45. Eikemo TA, Bambra C, Joyce K, Dahl E. Welfare state regimes and income-related health inequalities: a comparison of 23 European countries. European Journal of Public Health. 2008;18(6):593-9.

46. Peter Goldblatt AC, Jessica Allen , Lorenzo Lionello, Ruth Bell, Michael Marmot, Dina von Heimburg, Ottar Ness. Rapid review of inequalities in health and wellbeing in Norway since 2014. https://www.instituteofhealthequity.org/resources-reports/rapid-review-of-inequalities-in-health-and-wellbeing-in-norway-since-2014/read-the-full-report.pdf; 2023. Contract No.: 3.
47. Solmi M, Radua J, Olivola M, Croce E, Soardo L, Salazar de Pablo G, et al. Age at onset of mental disorders worldwide: large-scale meta-analysis of 192 epidemiological studies. Mol Psychiatry. 2022;27(1):281-95.
48. Schuurmans IK, Tamayo Martinez N, Blok E, Hillegers MHJ, Ikram MA, Luik AI, Cecil CAM. Child mental health problems as a risk factor for academic underachievement: A multi-informant, population-based study. Acta Psychiatr Scand. 2022;145(6):578-90.
49. Tesli M, Degerud E, Plana-Ripoll O, Gustavson K, Torvik FA, Ystrom E, et al. Educational attainment and mortality in schizophrenia. Acta Psychiatrica Scandinavica. 2022;145(5):481-93.
50. Crossley NA, Alliende LM, Czepielewski LS, Aceituno D, Castañeda CP, Diaz C, et al. The enduring gap in educational attainment in schizophrenia according to the past 50 years of published research: a systematic review and meta-analysis. Lancet Psychiatry. 2022;9(7):565-73.
51. Kessler R, Heeringa S, Lakoma M, Petukhova M, Rupp A, Schoenbaum M, et al. Individual and Societal Effects of Mental Disorders on Earnings in the United States: Results From the National Comorbidity Survey Replication. The American journal of psychiatry. 2008;165:703-11.
52. Levinson D, Lakoma M, Petukhova M, Schoenbaum M, Zaslavsky A, Angermeyer M, et al. Associations of serious mental illness with earnings: Results from the WHO World Mental Health surveys. The British journal of psychiatry : the journal of mental science. 2010;197:114-21.
53. Wittlund S, Mykletun A, Lorentzen T. Disability pension dynamics in early adulthood: A two-decade longitudinal study of educational, work and welfare-state trajectories in Norway. SSM - Population Health. 2022;17:101062.
54. Bråten RH, Sten-Gahmberg S. Unge uføre og veien til uføretrygd. Søkelys på arbeidslivet. 2022;39(1):1-19.
55. Caruana E, Allott K, Farhall J, Parrish EM, Davey CG, Chanen AM, et al. Factors associated with vocational disengagement among young people entering mental health treatment. Early Interv Psychiatry. 2019;13(4):961-8.
56. Hakulinen C, Elovainio M, Arffman M, Lumme S, Suokas K, Pirkola S, et al. Employment Status and Personal Income Before and After Onset of a Severe Mental Disorder: A Case-Control Study. Psychiatr Serv. 2020;71(3):250-5.
57. Evensen S, Wisløff T, Lystad JU, Bull H, Ueland T, Falkum E. Prevalence, Employment Rate, and Cost of Schizophrenia in a High-Income Welfare Society: A Population-Based Study Using Comprehensive Health and Welfare Registers. Schizophr Bull. 2016;42(2):476-83.
58. OECD. Mental Health and Work: Norway OECD Publishing, Paris; 2013.
59. Perkins R, Rinaldi M. Unemployment rates among patients with long-term mental health problems: A decade of rising unemployment. Psychiatric Bulletin. 2002;26(8):295-8.
60. OECD. OECD Economic Surveys: Norway 2022. OECD Publishing, Paris; 2022.
61. Knapp M, Wong G. Economics and mental health: the current scenario. World Psychiatry. 2020;19(1):3-14.
62. Mangalore R, Knapp M. Cost of schizophrenia in England. J Ment Health Policy Econ. 2007;10(1):23-41.
63. Velthorst E, Fett AJ, Reichenberg A, Perlman G, van Os J, Bromet EJ, Kotov R. The 20-Year Longitudinal Trajectories of Social Functioning in Individuals With Psychotic Disorders. Am J Psychiatry. 2017;174(11):1075-85.
64. Hewlett E, Moran V. Making Mental Health Count: The Social and Economic Costs of Neglecting Mental Health Care. 2014.
65. Harvey SB, Henderson M, Lelliott P, Hotopf M. Mental health and employment: much work still to be done. Br J Psychiatry. 2009;194(3):201-3.
66. OECD. Fitter Minds, Fitter Jobs: From Awareness to Change in Integrated Mental Health, Skills and Work Policies. 2021.
67. Lally J, Ajnakina O, Stubbs B, Cullinane M, Murphy KC, Gaughran F, Murray RM. Remission and recovery from first-episode psychosis in adults: systematic review and meta-analysis of long-term outcome studies. Br J Psychiatry. 2017;211(6):350-8.

68. Jääskeläinen E, Juola P, Hirvonen N, McGrath JJ, Saha S, Isohanni M, et al. A systematic review and meta-analysis of recovery in schizophrenia. Schizophr Bull. 2013;39(6):1296-306.
69. Hansen HG, Speyer H, Starzer M, Albert N, Hjorthøj C, Eplov LF, Nordentoft M. Clinical Recovery Among Individuals With a First-Episode Schizophrenia an Updated Systematic Review and Meta-Analysis. Schizophrenia Bulletin. 2022;49(2):297-308.
70. Andreasen NC, Carpenter WT, Jr., Kane JM, Lasser RA, Marder SR, Weinberger DR. Remission in schizophrenia: proposed criteria and rationale for consensus. Am J Psychiatry. 2005;162(3):441-9.
71. Davidson L, O'Connell MJ, Tondora J, Lawless M, Evans AC. Recovery in Serious Mental Illness: A New Wine or Just a New Bottle? Professional Psychology: Research and Practice. 2005;36(5):480-7.
72. Dictionary OE. Oxford English Dictionary 2024 [26.06.2024]. Available from: https://www.oed.com/.
73. Kraepelin E. Dementia Praecox and Paraphrenia. . 8 Auflage Reprinted 1971 ed. Leipzig, Austria: Barth; 1909.: Huntington, NY: Krieger Publishing; 1919 1909.
74. Sartorius N, Shapiro R, Jablensky A. The international pilot study of schizophrenia. Schizophrenia Bulletin. 1974;1(11):21-34.
75. McGlashan TH. The Chestnut Lodge follow-up study. II. Long-term outcome of schizophrenia and the affective disorders. Arch Gen Psychiatry. 1984;41(6):586-601.
76. Harrison G, Hopper K, Craig T, Laska E, Siegel C, Wanderling J, et al. Recovery from psychotic illness: a 15- and 25-year international follow-up study. Br J Psychiatry. 2001;178:506-17.
77. Modestin J, Huber A, Satirli E, Malti T, Hell D. Long-term course of schizophrenic illness: Bleuler's study reconsidered. Am J Psychiatry. 2003;160(12):2202-8.
78. Ashikaga T, Brooks GW, DeSisto MJ, Harding CM, McCormick RV. The Maine and Vermont Three-Decade Studies of Serious Mental Illness: I. Matched Comparison of Cross-Sectional Outcome. British Journal of Psychiatry. 1995;167(3):331-8.
79. Molstrom I-M, Nordgaard J, Urfer-Parnas A, Handest R, Berge J, Henriksen MG. The prognosis of schizophrenia: A systematic review and meta-analysis with meta-regression of 20-year follow-up studies. Schizophrenia Research. 2022;250:152-63.
80. Huxley P, Krayer A, Poole R, Prendergast L, Aryal S, Warner R. Schizophrenia outcomes in the 21st century: A systematic review. Brain Behav. 2021;11(6):e02172.
81. Davidson L, Roe D. Recovery from versus recovery in serious mental illness: One strategy for lessening confusion plaguing recovery. Journal of Mental Health. 2007;16(4):459-70.
82. Waddell G, Burton AK. Is work good for your health and well-being? 2006.
83. Rueda S, Chambers L, Wilson M, Mustard C, Rourke SB, Bayoumi A, et al. Association of returning to work with better health in working-aged adults: a systematic review. Am J Public Health. 2012;102(3):541-56.
84. van der Noordt M, H IJ, Droomers M, Proper KI. Health effects of employment: a systematic review of prospective studies. Occup Environ Med. 2014;71(10):730-6.
85. McKee-Ryan F, Song Z, Wanberg C, Kinicki A. Psychological and Physical Well-Being During Unemployment: A Meta-Analytic Study. The Journal of applied psychology. 2005;90:53-76.
86. Korpi T. Accumulating Disadvantage. Longitudinal Analyses of Unemployment and Physical Health in Representative Samples of the Swedish Population. European Sociological Review. 2001;17(3):255-73.
87. Warr P, Jackson P. Factors influencing the psychological impact of prolonged unemployment and of re-employment. Psychological medicine. 1985;15(4):795-807.
88. Thomas C, Benzeval M, Stansfeld SA. Employment transitions and mental health: an analysis from the British household panel survey. Journal of Epidemiology & Community Health. 2005;59(3):243-9.
89. OECD. Fit Mind, Fit Job: From Evidence to Practice in Mental Health and Work. OECD Publishing, Paris; 2015.
90. Bartley M. Unemployment and ill health: understanding the relationship. J Epidemiol Community Health. 1994;48(4):333-7.
91. Janlert U, Hammarström A. Which theory is best? Explanatory models of the relationship between unemployment and health. BMC Public Health. 2009;9(1):235.

92. Hans Zeisel PFL, Marie Jahoda. De arbeidsledige i Marienthal- en sosiografisk undersøkelse av virkningene av langtidsarbeidsledighet: Aschehoug; 1997.
93. Hughes A, Kumari M, McMunn A, Bartley M. Unemployment and inflammatory markers in England, Wales and Scotland, 1998–2012: Meta-analysis of results from 12 studies. Brain, Behavior, and Immunity. 2017;64:91-102.
94. Durkheim É. Selvmordet. En sosiologisk undersøkelse. 3 ed: Gyldendal; 1897; 2000.
95. Bowlby J. Attachment and loss. 2 ed: Random House, Basic Books; 1969, 1982.
96. Jolly P, Kong DT, Kim KY. Social Support at Work: An Integrative Review. Journal of Organizational Behavior. 2020;42.
97. Roelfs DJ, Shor E, Davidson KW, Schwartz JE. Losing life and livelihood: a systematic review and meta-analysis of unemployment and all-cause mortality. Soc Sci Med. 2011;72(6):840-54.
98. Roelfs DJ, Shor E, Blank A, Schwartz JE. Misery loves company? A meta-regression examining aggregate unemployment rates and the unemployment-mortality association. Ann Epidemiol. 2015;25(5):312-22.
99. Gallo WT, Teng HM, Falba TA, Kasl SV, Krumholz HM, Bradley EH. The impact of late career job loss on myocardial infarction and stroke: a 10 year follow up using the health and retirement survey. Occupational and Environmental Medicine. 2006;63(10):683.
100. Bartelink VHM, Zay Ya K, Guldbrandsson K, Bremberg S. Unemployment among young people and mental health: A systematic review. Scandinavian Journal of Public Health. 2020;48(5):544-58.
101. Gibbons BJ, Salkever DS. Working with a Severe Mental Illness: Estimating the Causal Effects of Employment on Mental Health Status and Total Mental Health Costs. Administration and Policy in Mental Health and Mental Health Services Research. 2019;46(4):474-87.
102. Luciano A, Bond GR, Drake RE. Does employment alter the course and outcome of schizophrenia and other severe mental illnesses? A systematic review of longitudinal research. Schizophr Res. 2014;159(2-3):312-21.
103. Knudsen AK, Harvey SB, Mykletun A, Øverland S. Common mental disorders and long-term sickness absence in a general working population. The Hordaland Health Study. Acta Psychiatr Scand. 2013;127(4):287-97.
104. Knudsen AK, Øverland S, Aakvaag HF, Harvey SB, Hotopf M, Mykletun A. Common mental disorders and disability pension award: seven year follow-up of the HUSK study. J Psychosom Res. 2010;69(1):59-67.
105. Henderson M, Harvey SB, Overland S, Mykletun A, Hotopf M. Work and common psychiatric disorders. J R Soc Med. 2011;104(5):198-207.
106. Broom DH, D'Souza RM, Strazdins L, Butterworth P, Parslow R, Rodgers B. The lesser evil: bad jobs or unemployment? A survey of mid-aged Australians. Soc Sci Med. 2006;63(3):575-86.
107. Butterworth P, Leach LS, Strazdins L, Olesen SC, Rodgers B, Broom DH. The psychosocial quality of work determines whether employment has benefits for mental health: results from a longitudinal national household panel survey. Occup Environ Med. 2011;68(11):806-12.
108. Welsh J, Strazdins L, Charlesworth S, Kulik CT, Butterworth P. Health or harm? A cohort study of the importance of job quality in extended workforce participation by older adults. BMC Public Health. 2016;16(1):885.
109. Karasek RA. Job Demands, Kob Decicion Latitude, and Mental Strain: Implications for Job Redesign. Administrative Science Quarterly. 1979;24(2):285.
110. Larry Davidson JR, John Strauss. The Roots of the Recovery Movement in Psychiatry. Lessons learned. : Wiley-Blackwell; 2010.
111. Deegan P. Recovery: The Lived Experience of Rehabilitation. Psychosocial Rehabilitation Journal. 1988;11:11.
112. Anthony W. Recovery From Mental Illness: The Guiding Vision of the Mental Health Service System in the 1990s. Psychosocial Rehabilitation Journal. 1993;16.
113. Leonhardt BL, Huling K, Hamm JA, Roe D, Hasson-Ohayon I, McLeod HJ, Lysaker PH. Recovery and serious mental illness: a review of current clinical and research paradigms and future directions. Expert Review of Neurotherapeutics. 2017;17(11):1117-30.
114. Andresen R, Oades L, Caputi P. The experience of recovery from schizophrenia: towards an empirically validated stage model. Aust N Z J Psychiatry. 2003;37(5):586-94.

115. Estroff SE. Self, identity, and subjective experiences of schizophrenia: In search of the subject. Schizophrenia Bulletin. 1989;15(2):189-96.
116. Ridgway P. Restorying psychiatric disability: learning from first person recovery narratives. Psychiatr Rehabil J. 2001;24(4):335-43.
117. Becker D, Drake R. A Working Life for People with Severe Mental Illness. A Working Life for People with Severe Mental Illness. 2009:1-216.
118. Slade M. Personal Recovery and Mental Illness: A Guide for Mental Health Professionals. Cambridge: Cambridge University Press; 2009.
119. Deegan P. Recovery as a journey of the heart. Psychiatric Rehabilitation Journal. 1996;19:91-7.
120. Secker J, Grove B, Seebohm P. Challenging barriers to employment, training and education for mental health service users: The service user's perspective. Journal of Mental Health. 2001;10:395-404.
121. Dunn EC, Wewiorski NJ, Rogers ES. The meaning and importance of employment to people in recovery from serious mental illness: results of a qualitative study. Psychiatr Rehabil J. 2008;32(1):59-62.
122. Axiotidou M, Papakonstantinou D. The meaning of work for people with severe mental illness: a systematic review. Mental Health Review Journal. 2021;26(2):170-9.
123. Dominy M, Hayward‐Butcher T. "Is work good for you?" Does paid employment produce positive social capital returns for people with severe and enduring mental health conditions? Mental Health and Social Inclusion. 2012;16(1):14-25.
124. Gammelgaard I, Christensen TN, Eplov LF, Jensen SB, Stenager E, Petersen KS. 'I have potential': Experiences of recovery in the individual placement and support intervention. Int J Soc Psychiatry. 2017;63(5):400-6.
125. Gullestad M. Kultur og hverdagsliv; på sporet av det fortapte Norge. Universitetsforlaget1989.
126. Provencher H, Gregg R, Mead S, Mueser K. The Role of Work in the Recovery of Persons with Psychiatric Disabilities. Psychiatric rehabilitation journal. 2002;26:132-44.
127. Honey A. Benefits and Drawbacks of Employment: Perspectives of People with Mental Illness. Qualitative Health Research. 2004;14(3):381-95.
128. Borg M, Kristiansen K. Working on the edge: The meaning of work for people recovering from severe mental distress in Norway. Disability & Society - DISABIL SOC. 2008;23:511-23.
129. Leamy M, Bird V, Le Boutillier C, Williams J, Slade M. Conceptual framework for personal recovery in mental health: systematic review and narrative synthesis. Br J Psychiatry. 2011;199(6):445-52.
130. Slade M, Amering M, Farkas M, Hamilton B, O'Hagan M, Panther G, et al. Uses and abuses of recovery: implementing recovery-oriented practices in mental health systems. World Psychiatry. 2014;13(1):12-20.
131. Adamus C, Richter D, Sutor K, Zürcher SJ, Mötteli S. Preference for Competitive Employment in People with Mental Disorders: A Systematic Review and Meta-analysis of Proportions. Journal of Occupational Rehabilitation. 2024.
132. Ramsay CE, Broussard B, Goulding SM, Cristofaro S, Hall D, Kaslow NJ, et al. Life and treatment goals of individuals hospitalized for first-episode nonaffective psychosis. Psychiatry Research. 2011;189(3):344-8.
133. Birchwood M, Todd P, Jackson C. Early intervention in psychosis. The critical period hypothesis. Br J Psychiatry Suppl. 1998;172(33):53-9.
134. Woodside H, Krupa T. Work and financial stability in late-onset first-episode psychosis. Early Intervention in Psychiatry. 2010;4(4):314-8.
135. Jansen JL, Bruggeman R, Kiers HAL, Pijnenborg GHM, Castelein S, Veling W, et al. Financial dissatisfaction in people with psychotic disorders - A short report on its prevalence and correlates in a large naturalistic psychosis cohort. Journal of Psychiatric Research. 2024;170:302-6.
136. Ngamaba KH, Armitage C, Panagioti M, Hodkinson A. How closely related are financial satisfaction and subjective well-being? Systematic review and meta-analysis. Journal of Behavioral and Experimental Economics. 2020;85:101522.

137. Gühne U, Pabst A, Löbner M, Breilmann J, Hasan A, Falkai P, et al. Employment status and desire for work in severe mental illness: results from an observational, cross-sectional study. Soc Psychiatry Psychiatr Epidemiol. 2021;56(9):1657-67.
138. Westcott C, Waghorn G, McLean D, Statham D, Mowry B. Interest in Employment Among People with Schizophrenia. American Journal of Psychiatric Rehabilitation. 2015;18(2):187-207.
139. Van Eck RM, Burger TJ, Vellinga A, Schirmbeck F, de Haan L. The Relationship Between Clinical and Personal Recovery in Patients With Schizophrenia Spectrum Disorders: A Systematic Review and Meta-analysis. Schizophrenia Bulletin. 2017;44(3):631-42.
140. Drew N, Funk M, Tang S, Lamichhane J, Chávez E, Katontoka S, et al. Human rights violations of people with mental and psychosocial disabilities: an unresolved global crisis. Lancet. 2011;378(9803):1664-75.
141. Davidson L. Living outside mental illness: qualitative studies of recovery in schizophrenia: New Your University Press; 2003.
142. United Nations. Universal Declaration of Human Rights https://www.ohchr.org/en/human-rights/universal-declaration/translations/english?LangID=eng1948 [
143. United Nations. The Sustainable Development Agenda 2015 [Available from: https://www.un.org/sustainabledevelopment/development-agenda/.
144. Goffman E. Stigma: Notes on the Management of Spoiled Identity. . New York: Simon & Schuster.; 1963.
145. Thornicroft G, Rose D, Kassam A, Sartorius N. Stigma: ignorance, prejudice or discrimination? Br J Psychiatry. 2007;190:192-3.
146. Schulze B, Angermeyer MC. Subjective experiences of stigma. A focus group study of schizophrenic patients, their relatives and mental health professionals. Soc Sci Med. 2003;56(2):299-312.
147. Hampson ME, Watt BD, Hicks RE. Impacts of stigma and discrimination in the workplace on people living with psychosis. BMC Psychiatry. 2020;20(1):288.
148. Staiger T, Waldmann T, Oexle N, Wigand M, Rüsch N. Intersections of discrimination due to unemployment and mental health problems: the role of double stigma for job- and help-seeking behaviors. Soc Psychiatry Psychiatr Epidemiol. 2018;53(10):1091-8.
149. Brouwers EPM. Social stigma is an underestimated contributing factor to unemployment in people with mental illness or mental health issues: position paper and future directions. BMC Psychol. 2020;8(1):36.
150. Knaeps J, Neyens I, van Weeghel J, Van Audenhove C. Perspectives of hospitalized patients with mental disorders and their clinicians on vocational goals, barriers, and steps to overcome barriers. Journal of Mental Health. 2015;24(4):196-201.
151. Baldwin MLM, S. C. Labor Market Outcomes of Persons with Mental Disorders. Industrial Relations: A Journal of Economy and Society. 2007;46(3):481-510.
152. Baldwin ML, Marcus SC. Perceived and measured stigma among workers with serious mental illness. Psychiatr Serv. 2006;57(3):388-92.
153. Thornicroft G, Brohan E, Rose D, Sartorius N, Leese M. Global pattern of experienced and anticipated discrimination against people with schizophrenia: a cross-sectional survey. Lancet. 2009;373(9661):408-15.
154. Crabtree SA, Chong GYM. Mental health and citizenship in Malaysia. International Social Work. 2000;43:217 - 26.
155. Rowe M, Pelletier J-F. Citizenship: A Response to the Marginalization of People with Mental Illnesses. Journal of Forensic Psychology Practice. 2012;12(4):366-81.
156. Leydet D. The Stanford Encyclopedia of Philosophy Fall 2023 Edition [Available from: https://plato.stanford.edu/archives/fall2023/entries/citizenship/>.
157. Rowe M, Davidson L. Recovering Citizenship. Isr J Psychiatry Relat Sci. 2016;53(1):14-20.
158. Barnes C, Mercer G. Disability, work, and welfare: Challenging the social exclusion of disabled people. Work, Employment & Society. 2005;19:527-45.
159. Cregan C, Kulik CT, Bainbridge HTJ. Differences in Well-being among People with Disabilities in Paid Employment: Level of Restriction, Gender and Labour Market Context. Social Policy & Administration. 2017;51(7):1210-30.

160. van der Zwan R, de Beer P. The disability employment gap in European countries: What is the role of labour market policy? Journal of European Social Policy. 2021;31(4):473-86.
161. Filia K, Jackson H, Cotton S, Killackey E. Understanding what it means to be socially included for people with a lived experience of mental illness. Int J Soc Psychiatry. 2019;65(5):413-24.
162. World Health Organization (WHO). Guidance on community mental health services: promoting person-centred and rights-based approaches. Geneva: World Health Organization; 2021 2021.
163. World Health Organization (WHO). Mental Health. Strengthening our response. Fact sheet https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response2022 [
164. Castelpietra G, Knudsen AKS, Agardh EE, Armocida B, Beghi M, Iburg KM, et al. The burden of mental disorders, substance use disorders and self-harm among young people in Europe, 1990-2019: Findings from the Global Burden of Disease Study 2019. Lancet Reg Health Eur. 2022;16:100341.
165. Christensen MK, Lim C, Saha S, Plana-Ripoll O, Cannon D, Presley F, et al. The cost of mental disorders: a systematic review. Epidemiology and psychiatric sciences. 2020;29:e161.
166. World Health Organization, Organisation Mondiale de la Santé. How to Use the ICF: A Practical Manual for Using the International Classification of Functioning, Disability and Health (ICF): Exposure Draft for Comment: WHO; 2013.
167. OECD. Transforming Disability into Ability: Policies to Promote Work and Income Security for Disabled People. OECD Publishing, Paris; 2003.
168. Engel GL. The need for a new medical model: a challenge for biomedicine. Science. 1977;196(4286):129-36.
169. Oliver M. The social model of disability: thirty years on. Disability & Society. 2013;28(7):1024-6.
170. Oliver M. Theories in health care and research: theories of disability in health practice and research. Bmj. 1998;317(7170):1446-9.
171. Owens J. Exploring the critiques of the social model of disability: the transformative possibility of Arendt's notion of power. Sociology of Health & Illness. 2015;37(3):385-403.
172. Union of the Physically Impaired Against Segregation TDA. Fundamental Principles of Disability. 1975.
173. Vinje HF, Langeland, E., & Bull, T. . Aaron Antonovsky's Development of Salutogenesis, 1979–1994. In: Mittelmark MB SS, Eriksson M, et al., editor. The Handbook of Salutogenesis. https://www.ncbi.nlm.nih.gov/books/NBK435860/: Cham (CH): Springer; 2017. p. 29–45.
174. Leonardi M, Lee H, Kostanjsek N, Fornari A, Raggi A, Martinuzzi A, et al. 20 Years of ICF—International Classification of Functioning, Disability and Health: Uses and Applications around the World. International Journal of Environmental Research and Public Health. 2022;19(18):11321.
175. Leonardi M, Bickenbach J, Ustun T, Kostanjsek N, Chatterji S. The definition of disability: What is in a name? Lancet. 2006;368:1219-21.
176. OECD. Disability, Work and Inclusion: Mainstreaming in All Policies and Practices. OECD Publishing, Paris; 2022.
177. OECD EU. Health at a Glance: Europe 2018: State of Health in the EU Cycle. OECD (European Union), Brussels; 2018.
178. OECD. A New Benchmark for Mental Health Systems: Tackling the Social and Economic Costs of Mental Ill-Health. OECD Publishing, Paris; 2021.
179. European Commission. Communication from the commision to the European Parliament, the Counsil, The European Economic and Social Committee and the Committee of the Regions on a comprehensive approach to mental health. 2023.
180. World Health Organization (WHO). Social determinants of mental health. World Health Organization; 2014. Report No.: 9241506806.
181. EU Directorate General for Health and Food Safety. Joint action on mental health and well-being. Mental Health in all Policies—situation analysis and recommendations for action. . 2015.
182. OECD. Sick on the Job?: Myths and Realities about Mental Health and Work. OECD Publishing, Paris; 2012.
183. OECD. Employment Policies for People with Disabilities: Report by an Evaluation Panel. OECD Publishing, Paris; 1992.

184. OECD. Sickness, Disability and Work: Breaking the Barriers: A Synthesis of Findings across OECD Countries. OECD Publishing, Paris; 2010.
185. Eikemo TA, Bambra C, Judge K, Ringdal K. Welfare state regimes and differences in self-perceived health in Europe: a multilevel analysis. Social science & medicine. 2008;66(11):2281-95.
186. Mackenbach JP, Stirbu I, Roskam A-JR, Schaap MM, Menvielle G, Leinsalu M, Kunst AE. Socioeconomic inequalities in health in 22 European countries. New England journal of medicine. 2008;358(23):2468-81.
187. Hemmings P, Prinz C. Sickness and disability systems: comparing outcomes and policies in Norway with those in Sweden, the Netherlands and Switzerland. 2020.
188. Kinge JM, Dieleman JL, Karlstad Ø, Knudsen AK, Klitkou ST, Hay SI, et al. Disease-specific health spending by age, sex, and type of care in Norway: a national health registry study. BMC Med. 2023;21(1):201.
189. Statistics Norway. Recipients of disability benefit 2021 (updated 26 June 2023) [updated 16.02.2024. 2021:[Available from: https://www.ssb.no/en/sosiale-forhold-og-kriminalitet/trygd-og-stonad/statistikk/uforetrygdede.
190. Norwegian Directorate of Labour and welfare. Developments in disability in 2023. Statistics notes. Directorate of Labour and Welfare https://www.nav.no/_/attachment/download/5afd0040-c992-4265-b932-2ebb2ceab82e:25bcaaff151107b5f5d544577842942efa5e80c2/Uf%C3%B8retrygd_Statistikknotat_Aaret_2023.pdf: Norwegian Directorate of Labour and welfare; 2024 [updated 16.02.2024. 09.02.2024:[
191. Fernandez R, Hijzen, A., Pacifico, D., Thewissen, S. Identifying and addressing employment barriers in Belgium, Korea and Norway. 2020.
192. Ose SO, Jensen C. Youth outside the labour force — Perceived barriers by service providers and service users: A mixed method approach. Children and Youth Services Review. 2017;81:148-56.
193. Duell N, Singh S, Tergeist P. Activation Policies in Norway. 2009.
194. Wittlund S, Lorentzen T. Changes in health-related rehabilitation trajectories following a major Norwegian welfare reform. BMC Public Health. 2023;23(1):1444.
195. NOU:2021:2. Kompetanse, aktivitet og inntektssikring — Tiltak for økt sysselsetting. In: Arbeids og sosialdepartementet, editor.
196. von Simson K. Hva virker for hvem? Kunnskapsoversikt over effekter av aktiveringstiltak på sysselsetting og arbeidstilbud. Norske erfaringer. file:///C:/Users/bbr001/Downloads/NAV-rapport%201-23%20Hva%20virker%20for%20hvem.%20Kunnskapsoversikt%20over%20effekter%20av%20aktiveringstiltak%20(1).pdf; 2023.
197. Champion C, Bonoli G. Institutional fragmentation and coordination initiatives in western European welfare states. Journal of European Social Policy. 2011;21(4):323-34.
198. OECD. Integrating Social Services for Vulnerable Groups: Bridging Sectors for Better Service Delivery. OECD Publishing, Paris; 2015.
199. Minas R. One-stop shops: Increasing employability and overcoming welfare state fragmentation? International Journal of Social Welfare. 2014;23(S1):S40-S53.
200. NOU 2004:13. En ny arbeids og velferdsforvaltning. Om samordning av Aetats, trygdeetatens og sosialtjenestens oppgaver. In: Sosialdepartementet, editor. 2004.
201. Card D, Kluve J, Weber A. What Works? A Meta Analysis of Recent Active Labor Market Program Evaluations. Journal of the European Economic Association. 2017;16.
202. van der Wel KA, Dahl E, Thielen K. Social Inequalities in "Sickness": Does Welfare State Regime Type Make a Difference? A Multilevel Analysis of Men and Women in 26 European Countries. International Journal of Health Services. 2012;42(2):235-55.
203. Holland P, Nylén L, Thielen K, van der Wel KA, Chen W-H, Barr B, et al. How Do Macro-Level Contexts and Policies Affect the Employment Chances of Chronically Ill and Disabled People? Part II: The Impact of Active and Passive Labor Market Policies. International Journal of Health Services. 2011;41(3):415-30.
204. Fosse E, Helgesen, M. K. . Addressing the social determinants of health in the Nordic countries: wicked or tame problem? . Socialmedicinsk Tidskrift (SMT). 2020;3:393-404.
205. Norwegian Ministry of Labour and Social Inclusion. Letter of Intent regarding a more inclusive working life. A working life with room for everyone. 1 January 2019 – 31 December 2022

(The IA Agreement). In: Inclusion NMoLaS, editor. https://www.regjeringen.no/contentassets/fc3b4fed90b146499b90947491c846ad/the-ia-agreement-20192022.pdf2019.
206. Lov om arbeidsmiljø, arbeidstid og stillingsvern mv. (arbeidsmiljøloven), (2006).
207. Statens arbeidsmiljøinstitutt. Arbeidsmiljøet i Norge og EU - en sammenligning. http://hdl.handle.net/11250/2466019; 2017.
208. Lie A. "Inclusive Working Life" in Norway–Experience from "Models of Good Practice" Enterprises. Croatian medical journal. 2008;49(4):553-60.
209. Foss L, Gravseth HM, Kristensen P, Claussen B, Mehlum IS, Skyberg K. "Inclusive working life in Norway": a registry-based five-year follow-up study. Journal of Occupational Medicine and Toxicology. 2013;8:1-8.
210. Hasting RL, Merkus SL, Hanvold TN, Kristensen P, Gran JM, Mehlum IS. Impact of the Norwegian Agreement for a More Inclusive Working Life on diagnosis-specific sickness absence in young adults: a difference-in-difference analysis. BMC Public Health. 2022;22(1):235.
211. Hanvold TN, Kristensen P, Corbett K, Hasting RL, Mehlum IS. Long-term sickness absence among young and middle-aged workers in Norway: the impact of a population-level intervention. BMC Public Health. 2020;20:1-12.
212. Mykletun A, Brinchmann, B. Effekter av tiltak under IA avtalen. Rapport fra forskermøte på oppdrag fra Arbeidsdepartementet. Nasjonalt folkehelseinstitutt. Divisjon for psykisk helse; 2013 Juni 2013.
213. Dahl E, Lorentzen T. Employment policy and social investment in Norway. 2017.
214. St.prop. nr 1. Nasjonal helseplan (2007-2010). In: Helse og omsorgsdepartementet, editor. 2006-2007.
215. Sosial og Helsedirektoratet. Distriktspsykiatriske sentre - med blikket vendt mot kommunene og spesialiserte sykehusfunksjoner i ryggen. 2009.
216. NOU 2005:3. Fra stykkevis til helt — En sammenhengende helsetjeneste. In: Helse- og omsorgsdepartementet, editor. 2005.
217. Landheim A, Ruud T, Clausen H, Evjen R, Heiervang K, Tembjerg P, et al. Utprøving av ACT-team I Norge. Hva viser resultatene. Oslo: Helsedirektoratet. In English: Research evaluation of Norwegian ACT-teams. What do the results show. 2015.
218. European Union of Supported Employment. [Available from: https://euse.org/about-euse/euse-history/.
219. St.prop.nr 6 (1997-98). Om opptrappingsplan for psykisk helse 1999 - 2006 Endringer i statsbudsjettet for 1998. In: Helse- og omsorgsdepartementet, editor. 1998.
220. Steihaug S, Harsvik, T. Evaluering av Jobbmestrende oppfølging i Østfold og Oslo. Sluttrapport. 2009.
221. Schafft AS, Ø. . 2010
222. Norwegian Ministry of Labor and Inclusion NMoHaC. National Strategic Plan for Work and Mental Health 2007-2012. 2007.
223. Norwegian Ministry of Labor NMoHaC. Follow-up plan for work and mental health (2013-2016). In: Ministry of Labor MoHaC, editor. 2013.
224. Arbeids- og velferdsdirektoratet og Helsedirektoratet. Strategi for fagfeltet Arbeid og Helse. 2021.
225. Arends I, Baer N, Miranda V, Prinz C, Singh S. Mental Health and Work. 2014.
226. Prp. 46. (2004-2005). Ny arbeids- og velferdsforvaltning. Proposal to the Goverment. Nr 46. In: Norwegian Ministry of Labour and Social Inclusion, editor.
227. Christensen T, Fimreite A, Lægreid P. Reform of the employment and welfare administrations - The challenges of co-coordinating diverse public organizations. International Review of Administrative Sciences - Iint Rev Adm Sci. 2007;73:389-408.
228. St.meld. nr. 9 (2006-2007). Work, Welfare and Inclusion. Report to the Storting No. 9. . In: Inclusion MoLaS, editor. 2006-2007.
229. St. Meld. St. 33 (2015–2016). NAV i en ny tid – for arbeid og aktivitet. In: Arbeids- og sosialdepartementet, editor. 2015.
230. Flere med psykiske helseproblemer skal få jobbhjelp [press release]. Regjeringen Solberg. Arbeids- og sosialdepartementet, 2017.

231. Hupe PL, Hill MJ. ‘And the rest is implementation.’ Comparing approaches to what happens in policy processes beyond Great Expectations. Public Policy and Administration. 2016;31(2):103-21.
232. Jackwerth-Rice D. Street-Level Bureaucrats and the Welfare State: Toward a Micro-Institutionalist Theory of Policy Implementation. Administration &amp Society. 2013;45:1038-62.
233. Bakkeli V. Handling Tensions in Frontline Policy Implementation: Legitimating, Interpreting, and Shielding a Disruptive Intervention. International Journal of Public Administration. 2023;46(9):625-35.
234. Bonfils IS. Challenges of integrating employment services with mental health services as part of the ‘Individual placement and support’ approach. Nordic Social Work Research. 2022;12(1):59-72.
235. Bonfils IS. Implementing the Individual Placement and Support approach in institutional settings for employment and mental health services – perceptions and challenges from a case study in Denmark. European Journal of Social Work. 2022;25(3):471-84.
236. Hasson H, Andersson M, Bejerholm U. Barriers in implementation of evidence-based practice: Supported employment in Swedish context. J Health Organ Manag. 2011;25(3):332-45.
237. Moen EÅ, Walseth LT, Larsen IB. Experiences of participating in individual placement and support: a meta-ethnographic review and synthesis of qualitative studies. Scandinavian Journal of Caring Sciences. 2021;35(2):343-52.
238. Hillörn M, Hillborg H, Lövgren V, Rosenberg D. Navigating the gap between policy and practice: frontline and second-tier management perspectives and strategies in offering vocational and educational support to young adults with mental health problems. Nordic Social Work Research.1-15.
239. Kringlen E. Norsk Psykiatri gjennom tidene: N.W. Damm og Søn AS; 2007.
240. Fygle S, psykiatri NB. Marmor og menneskeskjebner: Rønvik sykehus i det 20. århundre: Nordlandssykehuset Bodø psykiatri; 2002.
241. Corrigan PW, Mueser, Kim T., Bond, Gary R., Drake, Robert.E. and Solomon, Phyllis Principles and Practice of Psychiatric Rehabilitation. An empirical appraoch: The Guilford Press. New York London; 2008.
242. Corrigan P, McCracken S. Place First, Then Train: An Alternative to the Medical Model of Psychiatric Rehabilitation. Social work. 2005;50:31-9.
243. Bond GR, Salyers MP, Rollins AL, Rapp CA, Zipple AM. How evidence-based practices contribute to community integration. Community Ment Health J. 2004;40(6):569-88.
244. Burchett HED, Kneale D, Blanchard L, Thomas J. When assessing generalisability, focusing on differences in population or setting alone is insufficient. Trials. 2020;21(1):286.
245. Gabbay J, le May A. Evidence based guidelines or collectively constructed "mindlines?" Ethnographic study of knowledge management in primary care. Bmj. 2004;329(7473):1013.
246. How to evaluate a new drug. The American Journal of Medicine. 1954;17(5):722-7.
247. Walach H, Falkenberg T, Fønnebø V, Lewith G, Jonas WB. Circular instead of hierarchical: methodological principles for the evaluation of complex interventions. BMC Med Res Methodol. 2006;6:29.
248. Blunt C. The Pyramid Schema: The Origins and Impact of Evidence Pyramids2022.
249. Guyatt G, Cairns J, Churchill D, Cook D, Haynes B, Hirsh J, et al. Evidence-Based Medicine: A New Approach to Teaching the Practice of Medicine. JAMA. 1992;268(17):2420-5.
250. Sackett DL, Rosenberg WM. The need for evidence-based medicine. J R Soc Med. 1995;88(11):620-4.
251. Bond GR, Drake RE, Becker DR. Generalizability of the Individual Placement and Support (IPS) model of supported employment outside the US. World Psychiatry. 2012;11(1):32-9.
252. Drake RE, editor Becker, D.R., & Drake, R.E. A Working Life: The Individual Placement and Support (IPS) Program. Concord, NH: New Hampshire-Dartmouth Psychiatric Research Center, 19931993.
253. Becker DR, Drake RE. Individual Placement and Support: a community mental health center approach to vocational rehabilitation. Community Ment Health J. 1994;30(2):193-206; discussion 7-12.
254. Drake R, Bond G, Becker D. Individual Placement and Support: An Evidence-Based Approach to Supported Employment: Oxford University Press; 2012 01/01. 1-204 p.

255. Bond GR, Resnick SG, Drake RE, Xie H, McHugo GJ, Bebout RR. Does competitive employment improve nonvocational outcomes for people with severe mental illness? J Consult Clin Psychol. 2001;69(3):489-501.
256. Frederick DE, VanderWeele TJ. Supported employment: Meta-analysis and review of randomized controlled trials of individual placement and support. PLoS One. 2019;14(2):e0212208.
257. Drake RE, Becker DR, Biesanz JC, Torrey WC, McHugo GJ, Wyzik PF. Rehabilitative day treatment vs. supported employment: I. Vocational outcomes. Community Ment Health J. 1994;30(5):519-32.
258. Torrey WC, Becker DR, Drake RE. Rehabilitative day treatment vs. supported employment: II. Consumer, family and staff reactions to a program change. Psychosocial Rehabilitation Journal. 1995;18(3):67-75.
259. Drake RE, McHugo GJ, Becker DR, Anthony WA, Clark RE. The New Hampshire study of supported employment for people with severe mental illness. J Consult Clin Psychol. 1996;64(2):391-9.
260. Corbière M, Lecomte T, Reinharz D, Kirsh B, Goering P, Menear M, et al. Predictors of Acquisition of Competitive Employment for People Enrolled in Supported Employment Programs. J Nerv Ment Dis. 2017;205(4):275-82.
261. Charette-Dussault É, Corbière M. An Integrative Review of the Barriers to Job Acquisition for People With Severe Mental Illnesses. J Nerv Ment Dis. 2019;207(7):523-37.
262. Biegel DE, Stevenson LD, Beimers D, Ronis RJ, Boyle P. Predictors of competitive employment among consumers with co-occurring mental and substance use disorders. Research on Social Work Practice. 2010;20(2):191-201.
263. Tse S, Chan S, Ng KL, Yatham LN. Meta-analysis of predictors of favorable employment outcomes among individuals with bipolar disorder. Bipolar Disord. 2014;16(3):217-29.
264. Fyhn T, Øverland S, Reme SE. Predictors of employment in people with moderate to severe mental illness participating in a randomized controlled trial of Individual Placement and Support (IPS). Int J Soc Psychiatry. 2021;67(2):150-7.
265. Campbell K, Bond GR, Drake RE, McHugo GJ, Xie H. Client Predictors of Employment Outcomes in High-Fidelity Supported Employment: A Regression Analysis. The Journal of Nervous and Mental Disease. 2010;198(8):556-63.
266. Catty J, Lissouba P, White S, Becker T, Drake RE, Fioritti A, et al. Predictors of employment for people with severe mental illness: results of an international six-centre randomised controlled trial. Br J Psychiatry. 2008;192(3):224-31.
267. Michon HW, van Weeghel J, Kroon H, Schene AH. Person-related predictors of employment outcomes after participation in psychiatric vocational rehabilitation programmes--a systematic review. Soc Psychiatry Psychiatr Epidemiol. 2005;40(5):408-16.
268. Alverson M, Becker DR, Drake RE. An ethnographic study of coping strategies used by people with severe mental illness participating in supported employment. Psychosocial Rehabilitation Journal. 1995;18(4):115-28.
269. Quimby E, Drake RE, Becker DR. Ethnographic findings from the Washington, D.C., Vocational Services Study. Psychiatr Rehabil J. 2001;24(4):368-74.
270. Bond GR, Dincin J. Accelerating entry into transitional employment in a psychosocial rehabilitation agency. Rehabilitation Psychology. 1986;31(3):143-55.
271. Bond GR, Dietzen LL, McGrew JH, Miller LD. Accelerating entry into supported employment for persons with severe psychiatric disabilities. Rehabilitation Psychology. 1995;40(2):75-94.
272. Bond GR. Principles of the Individual Placement and Support model: Empirical support. Psychiatric Rehabilitation Journal. 1998;22(1):11-23.
273. Drake RE, Becker DR, Bond GR, Mueser KT. A process analysis of integrated and non-integrated approaches to supported employment. Journal of Vocational Rehabilitation. 2003;18(1):51-8.
274. Judith A. Cook, Ph.D. ,, Anthony F. Lehman, M.D. ,, Robert Drake, M.D. ,, William R. McFarlane, M.D. ,, Paul B. Gold, Ph.D. ,, H. Stephen Leff, Ph.D. ,, et al. Integration of Psychiatric and Vocational Services: A Multisite Randomized, Controlled Trial of Supported Employment. American Journal of Psychiatry. 2005;162(10):1948-56.

275. Zubin J, Spring B. Vulnerability--a new view of schizophrenia. J Abnorm Psychol. 1977;86(2):103-26.
276. Torrey WC, Bebout R, Kline J, Becker DR, Alverson M, Drake RE. Practice guidelines for clinicians working in programs providing integrated vocational and clinical services for persons with severe mental disorders. Psychiatric Rehabilitation Journal. 1998;21(4):388-93.
277. Drake RE, Becker, Deborah R., Xie, Haiyi & Anthony, William A. Barriers in the brokered model of supported employment for persons with psychiatric disabilities. Journal of Vocational Rehabilitation. 1995;5(2):141-9.
278. Harding CM, Strauss JS, Hafez H, Lieberman PB. Work and mental illness. I. Toward an integration of the rehabilitation process. J Nerv Ment Dis. 1987;175(6):317-26.
279. Macias C, DeCarlo LT, Wang Q, Frey J, Barreira P. Work interest as a predictor of competitive employment: policy implications for psychiatric rehabilitation. Adm Policy Ment Health. 2001;28(4):279-97.
280. Kaya C, Bishop M, Torres A. The Impact of Work Incentives Benefits Counseling on Employment Outcomes: A National Vocational Rehabilitation Study. Journal of Occupational Rehabilitation. 2023;33(3):538-49.
281. Becker DR, Drake RE, Farabaugh A, Bond GR. Job preferences of clients with severe psychiatric disorders participating in supported employment programs. Psychiatr Serv. 1996;47(11):1223-6.
282. Mueser K, Becker D, Wolfe R. Supported employment, job preferences, job tenure and satisfaction. Journal of Mental Health. 2001;10:411-7.
283. Igarashi M, Yamaguchi S, Sato S, Shiozawa T, Matsunaga A, Ojio Y, Fujii C. Influence of multi-aspect job preference matching on job tenure for people with mental disorders in supported employment programs in Japan. Psychiatr Rehabil J. 2023;46(2):101-8.
284. Esser I, Lindh A. Job Preferences in Comparative Perspective 1989–2015: A Multidimensional Evaluation of Individual and Contextual Influences. International Journal of Sociology. 2018;48:142-69.
285. Leff HS, Cook JA, Gold PB, Toprac M, Blyler C, Goldberg RW, et al. Effects of job development and job support on competitive employment of persons with severe mental illness. Psychiatric Services. 2005;56(10):1237-44.
286. Corbière M, Brouwers E, Lanctôt N, van Weeghel J. Employment specialist competencies for supported employment programs. J Occup Rehabil. 2014;24(3):484-97.
287. Rosenthal DA, Dalton JA, Gervey R. Analyzing vocational outcomes of individuals with psychiatric disabilities who received state vocational rehabilitation services: A data mining approach. International Journal of Social Psychiatry. 2007;53(4):357-68.
288. Bond GR, Kukla M. Impact of follow-along support on job tenure in the individual placement and support model. J Nerv Ment Dis. 2011;199(3):150-5.
289. McHugo GJ, Drake RE, Becker DR. The durability of supported employment effects. Psychiatric Rehabilitation Journal. 1998;22(1):55-61.
290. Boardman J, Rinaldi M. Difficulties in implementing supported employment for people with severe mental health problems. Br J Psychiatry. 2013;203(3):247-9.
291. Bakkeli V. Evidence-based activation work and service individualisation: client and frontline worker experiences with a standardised intervention. European Journal of Social Work. 2023;26(6):994-1006.
292. Bergmark M, Bejerholm U, Markström U. Critical Components in Implementing Evidence-based Practice: A Multiple Case Study of Individual Placement and Support for People with Psychiatric Disabilities. Social Policy & Administration. 2018;52(3):790-808.
293. Becker D, Swanson S, Bond G, Merrens M. Evidence-based Supported Employment Fidelity Review Manual. 2008.
294. Bond GR, Peterson AE, Becker DR, Drake RE. Validation of the Revised Individual Placement and Support Fidelity Scale (IPS-25). Psychiatr Serv. 2012;63(8):758-63.
295. Bond GR, Becker DR, Drake RE, Vogler KM. A fidelity scale for the Individual Placement and Support model of supported employment. Rehabilitation Counseling Bulletin. 1997;40(4):265-84.

296. Bond GR, Becker DR, Drake RE. Measurement of fidelity of implementation of evidence‐based practices: Case example of the IPS Fidelity Scale. Clinical Psychology: Science and Practice. 2011;18(2):126-41.
297. de Winter L, Couwenbergh C, van Weeghel J, Bergmans C, Bond GR. Fidelity and IPS: does quality of implementation predict vocational outcomes over time for organizations treating persons with severe mental illness in the Netherlands? Social Psychiatry and Psychiatric Epidemiology. 2020;55(12):1607-17.
298. Kim SJ, Bond GR, Becker DR, Swanson SJ, Langfitt-Reese S. Predictive validity of the Individual Placement and Support fidelity scale (IPS-25): A replication study. Journal of Vocational Rehabilitation. 2015;43:209-16.
299. Yamaguchi S, Sato S, Shiozawa T, Matsunaga A, Ojio Y, Fujii C. Predictive Association of Low- and High-Fidelity Supported Employment Programs with Multiple Outcomes in a Real-World Setting: A Prospective Longitudinal Multi-site Study. Administration and Policy in Mental Health and Mental Health Services Research. 2022;49(2):255-66.
300. Bond GR, Lockett H, van Weeghel J. International growth of individual placement and support. Epidemiology and Psychiatric Sciences. 2020;29:e183.
301. Drake RE, Bond GR. Individual placement and support: History, current status, and future directions. Psychiatry and Clinical Neurosciences Reports. 2023;2(3):e122.
302. Bruns EJ, Kerns SE, Pullmann MD, Hensley SW, Lutterman T, Hoagwood KE. Research, Data, and Evidence-Based Treatment Use in State Behavioral Health Systems, 2001-2012. Psychiatr Serv. 2016;67(5):496-503.
303. Twamley EW, Baker DG, Norman SB, Pittman JO, Lohr JB, Resnick SG. Veterans Health Administration vocational services for Operation Iraqi Freedom/Operation Enduring Freedom Veterans with mental health conditions. J Rehabil Res Dev. 2013;50(5):663-70.
304. Christensen TN, Wallstrøm IG, Stenager E, Bojesen AB, Gluud C, Nordentoft M, Eplov LF. Effects of Individual Placement and Support Supplemented With Cognitive Remediation and Work-Focused Social Skills Training for People With Severe Mental Illness: A Randomized Clinical Trial. JAMA Psychiatry. 2019;76(12):1232-40.
305. Reme SE, Monstad K, Fyhn T, Sveinsdottir V, Løvvik C, Lie SA, Øverland S. A randomized controlled multicenter trial of individual placement and support for patients with moderate-to-severe mental illness. Scand J Work Environ Health. 2019;45(1):33-41.
306. Killackey E, Allott K, Jackson HJ, Scutella R, Tseng YP, Borland J, et al. Individual placement and support for vocational recovery in first-episode psychosis: randomised controlled trial. Br J Psychiatry. 2019;214(2):76-82.
307. Davis LL, Kyriakides TC, Suris AM, Ottomanelli LA, Mueller L, Parker PE, et al. Effect of Evidence-Based Supported Employment vs Transitional Work on Achieving Steady Work Among Veterans With Posttraumatic Stress Disorder: A Randomized Clinical Trial. JAMA Psychiatry. 2018;75(4):316-24.
308. Erickson DH, Roes MM, DiGiacomo A, Burns A. "Individual Placement and Support" boosts employment for early psychosis clients, even when baseline rates are high. Early intervention in psychiatry. 2021;15(3):662‐8.
309. De Graaf-Zijl MS, Marcel; Zwinkels, Wim. Long-Term Effects of Individual Placement and Support. Services for Disability Benefits Recipients with Severe Mental Illnesses. . Institute of Labor Economics (IZA), Bonn; 2020.
310. Lones CE, Bond GR, McGovern MP, Carr K, Leckron-Myers T, Hartnett T, Becker DR. Individual Placement and Support (IPS) for Methadone Maintenance Therapy Patients: A Pilot Randomized Controlled Trial. Adm Policy Ment Health. 2017;44(3):359-64.
311. Pichler EM, Stulz N, Wyder L, Heim S, Watzke B, Kawohl W. Long-Term Effects of the Individual Placement and Support Intervention on Employment Status: 6-Year Follow-Up of a Randomized Controlled Trial. Front Psychiatry. 2021;12:709732.
312. Bejerholm U, Areberg C, Hofgren C, Sandlund M, Rinaldi M. Individual placement and support in Sweden—a randomized controlled trial. Nordic journal of psychiatry. 2015;69(1):57-66.
313. Bejerholm U, Larsson ME, Johanson S. Supported employment adapted for people with affective disorders-A randomized controlled trial. J Affect Disord. 2017;207:212-20.

314. Drake RE, McHugo GJ, Bebout RR, Becker DR, Harris M, Bond GR, Quimby E. A randomized clinical trial of supported employment for inner-city patients with severe mental disorders. Arch Gen Psychiatry. 1999;56(7):627-33.
315. Viering S, Jäger M, Bärtsch B, Nordt C, Rössler W, Warnke I, Kawohl W. Supported Employment for the Reintegration of Disability Pensioners with Mental Illnesses: A Randomized Controlled Trial. Front Public Health. 2015;3:237.
316. Heslin M, Howard L, Leese M, McCrone P, Rice C, Jarrett M, et al. Randomized controlled trial of supported employment in England: 2 year follow-up of the Supported Work and Needs (SWAN) study. World Psychiatry. 2011;10(2):132-7.
317. Hoffmann H, Jäckel D, Glauser S, Mueser KT, Kupper Z. Long-term effectiveness of supported employment: 5-year follow-up of a randomized controlled trial. American Journal of Psychiatry. 2014;171(11):1183-90.
318. Killackey E, Jackson HJ, McGorry PD. Vocational intervention in first-episode psychosis: individual placement and support v. treatment as usual. Br J Psychiatry. 2008;193(2):114-20.
319. Latimer EA, Lecomte T, Becker DR, Drake RE, Duclos I, Piat M, et al. Generalisability of the individual placement and support model of supported employment: results of a Canadian randomised controlled trial. Br J Psychiatry. 2006;189:65-73.
320. Lehman AF, Goldberg R, Dixon LB, McNary S, Postrado L, Hackman A, McDonnell K. Improving employment outcomes for persons with severe mental illnesses. Arch Gen Psychiatry. 2002;59(2):165-72.
321. Michon H, van Busschbach JT, Stant AD, van Vugt MD, van Weeghel J, Kroon H. Effectiveness of individual placement and support for people with severe mental illness in The Netherlands: a 30-month randomized controlled trial. Psychiatric rehabilitation journal. 2014;37(2):129.
322. Mueser KT, Clark RE, Haines M, Drake RE, McHugo GJ, Bond GR, et al. The Hartford study of supported employment for persons with severe mental illness. J Consult Clin Psychol. 2004;72(3):479-90.
323. Oshima I, Sono T, Bond GR, Nishio M, Ito J. A randomized controlled trial of individual placement and support in Japan. Psychiatr Rehabil J. 2014;37(2):137-43.
324. Poremski D, Rabouin D, Latimer E. A Randomised Controlled Trial of Evidence Based Supported Employment for People Who have Recently been Homeless and have a Mental Illness. Adm Policy Ment Health. 2017;44(2):217-24.
325. Twamley EW, Vella L, Burton CZ, Becker DR, Bell MD, Jeste DV. The efficacy of supported employment for middle-aged and older people with schizophrenia. Schizophr Res. 2012;135(1-3):100-4.
326. Waghorn G, Dias S, Gladman B, Harris M, Saha S. A multi-site randomised controlled trial of evidence-based supported employment for adults with severe and persistent mental illness. Aust Occup Ther J. 2014;61(6):424-36.
327. Kin Wong K, Chiu R, Tang B, Mak D, Liu J, Chiu SN. A randomized controlled trial of a supported employment program for persons with long-term mental illness in Hong Kong. Psychiatr Serv. 2008;59(1):84-90.
328. Davis LL, Leon AC, Toscano R, Drebing CE, Ward LC, Parker PE, et al. A randomized controlled trial of supported employment among veterans with posttraumatic stress disorder. Psychiatr Serv. 2012;63(5):464-70.
329. Bond GR, Salyers MP, Dincin J, Drake R, Becker DR, Fraser VV, Haines M. A randomized controlled trial comparing two vocational models for persons with severe mental illness. J Consult Clin Psychol. 2007;75(6):968-82.
330. Burns T, Catty J. IPS in Europe: The EQOLISE trial. Psychiatric Rehabilitation Journal. 2008;31(4):313-7.
331. Gold PB, Meisler N, Santos AB, Carnemolla MA, Williams OH, Keleher J. Randomized trial of supported employment integrated with assertive community treatment for rural adults with severe mental illness. Schizophr Bull. 2006;32(2):378-95.
332. Bond GR, Kim SJ, Becker DR, Swanson SJ, Drake RE, Krzos IM, et al. A Controlled Trial of Supported Employment for People With Severe Mental Illness and Justice Involvement. Psychiatr Serv. 2015;66(10):1027-34.

333. Kinoshita Y, Furukawa TA, Kinoshita K, Honyashiki M, Omori IM, Marshall M, et al. Supported employment for adults with severe mental illness. Cochrane Database Syst Rev. 2013;2013(9):Cd008297.
334. Modini M, Tan L, Brinchmann B, Wang MJ, Killackey E, Glozier N, et al. Supported employment for people with severe mental illness: systematic review and meta-analysis of the international evidence. Br J Psychiatry. 2016;209(1):14-22.
335. Bond GR, Al-Abdulmunem M, Marbacher J, Christensen TN, Sveinsdottir V, Drake RE. A Systematic Review and Meta-analysis of IPS Supported Employment for Young Adults with Mental Health Conditions. Adm Policy Ment Health. 2023;50(1):160-72.
336. Carmona VR, Gómez-Benito J, Huedo-Medina TB, Rojo JE. Employment outcomes for people with schizophrenia spectrum disorder: A meta-analysis of randomized controlled trials. Int J Occup Med Environ Health. 2017;30(3):345-66.
337. Suijkerbuijk YB, Schaafsma FG, van Mechelen JC, Ojajärvi A, Corbière M, Anema JR. Interventions for obtaining and maintaining employment in adults with severe mental illness, a network meta‐analysis. Cochrane Database of Systematic Reviews. 2017(9).
338. Crowther RE, Marshall M, Bond GR, Huxley P. Helping people with severe mental illness to obtain work: systematic review. BMJ. 2001;322(7280):204-8.
339. Bond GR, Drake RE, Pogue JA. Expanding Individual Placement and Support to Populations With Conditions and Disorders Other Than Serious Mental Illness. Psychiatr Serv. 2019;70(6):488-98.
340. de Winter L, Couwenbergh C, van Weeghel J, Sanches S, Michon H, Bond GR. Who benefits from individual placement and support? A meta-analysis. Epidemiol Psychiatr Sci. 2022;31:e50.
341. Hellström L, Bech P, Hjorthøj C, Nordentoft M, Lindschou J, Eplov LF. Effect on return to work or education of Individual Placement and Support modified for people with mood and anxiety disorders: results of a randomised clinical trial. Occup Environ Med. 2017;74(10):717-25.
342. Sveinsdottir V, Lie SA, Bond GR, Eriksen HR, Tveito TH, Grasdal AL, Reme SE. Individual placement and support for young adults at risk of early work disability (the SEED trial). A randomized controlled trial. Scand J Work Environ Health. 2020;46(1):50-9.
343. Marsden J, Anders P, Shaw C, Amasiatu C, Collate W, Eastwood B, et al. Superiority and cost-effectiveness of Individual Placement and Support versus standard employment support for people with alcohol and drug dependence: a pragmatic, parallel-group, open-label, multicentre, randomised, controlled, phase 3 trial. eClinicalMedicine. 2024;68.
344. Killackey E, McGorry P, Roffel K, Chinnery G, Jackson H. Vocational rehabilitation in first-episode psychosis: results of the first Australian randomized controlled trial of individual placement and support. Acta Neuropsychiatr. 2006;18(6):256-7.
345. Bond GR, Becker DR, Drake RE, Rapp CA, Meisler N, Lehman AF, et al. Implementing supported employment as an evidence-based practice. Psychiatr Serv. 2001;52(3):313-22.
346. Tsang HW. Supported employment versus traditional vocational rehabilitation for individuals with severe mental illness: a three-year study. Hong Kong Med J. 2011;17 Suppl 2:13-7.
347. Cook JA, Leff HS, Blyler CR, Gold PB, Goldberg RW, Mueser KT, et al. Results of a multisite randomized trial of supported employment interventions for individuals with severe mental illness. Arch Gen Psychiatry. 2005;62(5):505-12.
348. Mueser KT, Drake RE, Bond GR. Recent advances in supported employment for people with serious mental illness. Curr Opin Psychiatry. 2016;29(3):196-201.
349. Curran GM, Bauer M, Mittman B, Pyne JM, Stetler C. Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact. Med Care. 2012;50(3):217-26.
350. Gartlehner G, Nissman D, Lohr K, Carey T. Criteria for Distinguishing Effectiveness From Efficacy Trials in Systematic Reviews. Technical Review. 2006;12.
351. Bauer MS, Kirchner J. Implementation science: What is it and why should I care? Psychiatry Res. 2020;283:112376.
352. Rogers EM. Diffusion of Innovations. 5 ed: New York: Free Press; 2003.
353. Eccles MP, Mittman BS. Welcome to Implementation Science. Implementation Science. 2006;1(1):1.
354. Eccles MP, Armstrong D, Baker R, Cleary K, Davies H, Davies S, et al. An implementation research agenda. Implement Sci. 2009;4:18.

355. Brooks H, Pilgrim D, Rogers A. Innovation in mental health services: what are the key components of success? Implementation Science. 2011;6(1):120.
356. Glasgow RE, Lichtenstein E, Marcus AC. Why don't we see more translation of health promotion research to practice? Rethinking the efficacy-to-effectiveness transition. Am J Public Health. 2003;93(8):1261-7.
357. Richards D, Hallberg I. Complex interventions in health: An overview of research methods2015. 1-381 p.
358. Schwartz D, Lellouch J. Explanatory and pragmatic attitudes in therapeutical trials. J Chronic Dis. 1967;20(8):637-48.
359. Clarke GN. Improving the transition from basic efficacy research to effectiveness studies: methodological issues and procedures. J Consult Clin Psychol. 1995;63(5):718-25.
360. Weisz JR, Weiss B, Donenberg GR. The lab versus the clinic. Effects of child and adolescent psychotherapy. Am Psychol. 1992;47(12):1578-85.
361. Institute of Medicine Committee on Quality of Health Care in America. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington (DC): National Academies Press (US). Copyright 2001 by the National Academy of Sciences. All rights reserved; 2001.
362. Westfall JM, Mold J, Fagnan L. Practice-Based Research—"Blue Highways" on the NIH Roadmap. JAMA. 2007;297(4):403-6.
363. United States Public Health Service. Office Of The Surgeon General CFMHS, U. S. & National Institute Of Mental Health, U. S. Mental health: a report of the Surgeon General. [Rockville, Md.: Dept. of Health and Human Services, U.S. Public Health Service ; Pittsburgh, PA: For sale by the Supt. of Docs] [Web.]; 1999.
364. Paulus MP. Evidence-Based Pragmatic Psychiatry-A Call to Action. JAMA Psychiatry. 2017;74(12):1185-6.
365. Moullin JC, Dickson KS, Stadnick NA, Rabin B, Aarons GA. Systematic review of the Exploration, Preparation, Implementation, Sustainment (EPIS) framework. Implementation Science. 2019;14(1):1.
366. Aarons GA, Hurlburt M, Horwitz SM. Advancing a Conceptual Model of Evidence-Based Practice Implementation in Public Service Sectors. Administration and Policy in Mental Health and Mental Health Services Research. 2011;38(1):4-23.
367. Downs SH, Black N. The feasibility of creating a checklist for the assessment of the methodological quality both of randomised and non-randomised studies of health care interventions. J Epidemiol Community Health. 1998;52(6):377-84.
368. Leatherdale ST. Natural experiment methodology for research: a review of how different methods can support real-world research. International Journal of Social Research Methodology. 2019;22(1):19-35.
369. Metcalfe JD, Drake RE, Bond GR. Economic, Labor, and Regulatory Moderators of the Effect of Individual Placement and Support Among People With Severe Mental Illness: A Systematic Review and Meta-analysis. Schizophr Bull. 2018;44(1):22-31.
370. Marwaha S, Balachandra S, Johnson S. Clinicians' attitudes to the employment of people with psychosis. Social psychiatry and psychiatric epidemiology. 2009;44:349-60.
371. Brucker DL, Doty M. Community mental health center staff attitudes about employment for persons with serious mental illness. Psychiatric Rehabilitation Journal. 2019;42(1):32.
372. Finne J, Holt K. Mental health professionals' expectations and efforts to include employment for people with moderate to severe mental illness in treatment settings. BMC Psychiatry. 2023;23(1):82.
373. Biggs D, Hovey N, Tyson PJ, MacDonald S. Employer and employment agency attitudes towards employing individuals with mental health needs. Journal of mental health. 2010;19(6):505-16.
374. Janssens KM, van Weeghel J, Dewa C, Henderson C, Mathijssen JJ, Joosen MC, Brouwers EP. Line managers' hiring intentions regarding people with mental health problems: a cross-sectional study on workplace stigma. Occupational and Environmental Medicine. 2021;78(8):593-9.
375. Walker E, Hernandez A, Kattan M. Meta-analysis: Its strengths and limitations. Cleveland Clinic journal of medicine. 2008;75:431-9.
376. Harpe SE. How to analyze Likert and other rating scale data. Currents in Pharmacy Teaching and Learning. 2015;7(6):836-50.

377. Rothwell PM. External validity of randomised controlled trials: "to whom do the results of this trial apply?". Lancet. 2005;365(9453):82-93.
378. Moe C, Brinchmann B, Borg M, McDaid D, Rinaldi M, Killackey E, Mykletun A. Implementing individual placement and support in Norway. From vocational rehabilitation to an employment scheme. Social Policy & Administration. 2023;57(5):610-25.
379. Latimer E, Bordeleau F, Méthot C, Barrie T, Ferkranus A, Lurie S, Whitley R. Implementation of supported employment in the context of a national Canadian program: Facilitators, barriers and strategies. Psychiatric Rehabilitation Journal. 2020;43(1):2-8.
380. Hutchinson J, Gilbert D, Papworth R, Boardman J. Implementing Supported Employment. Lessons from the Making IPS Work Project. Int J Environ Res Public Health. 2018;15(7).
381. Hillborg H, Bergmark M, Bejerholm U. Implementation of individual placement and support in a first‐episode psychosis unit: A new way of working. Social Policy & Administration. 2020;55.
382. Zaslavsky AM. Exploring Potential Causal Inference Through Natural Experiments. JAMA Health Forum. 2021;2(6):e210289-e.
383. Christakis NA, Fowler JH. Social contagion theory: examining dynamic social networks and human behavior. Statistics in Medicine. 2013;32(4):556-77.
384. Jacobs SR, Weiner BJ, Reeve BB, Hofmann DA, Christian M, Weinberger M. Determining the predictors of innovation implementation in healthcare: a quantitative analysis of implementation effectiveness. BMC Health Services Research. 2015;15(1):6.
385. Bonfils IS, Hansen H, Dalum HS, Eplov LF. Implementation of the individual placement and support approach – facilitators and barriers. Scandinavian Journal of Disability Research. 2017.
386. World Health Organization (WHO). Comprehensive Mental Health Action Plan 2013-2030. 2013-2030. Report No.: 9789240031029.
387. St. Meld. St. 9 (2023–2024). Nasjonal helse- og samhandlingsplan 2024–2027 - Vår felles helsetjeneste. In: Helse- og omsorgsdepartementet, editor. 2023–2024.
388. Andreassen TA, Fossestøl K. Utfordrende inkluderingspolitikk - Samstyring for omforming av institusjonell logikk i arbeidslivet, helsetjenesten og NAV. Tidsskrift for samfunnsforskning. 2014;55(2):174-202.
389. Green AE, Aarons GA. A comparison of policy and direct practice stakeholder perceptions of factors affecting evidence-based practice implementation using concept mapping. Implementation Science. 2011;6(1):104.
390. Moe C, Brinchmann B, Rasmussen L, Brandseth OL, McDaid D, Killackey E, et al. Implementing individual placement and support (IPS): the experiences of employment specialists in the early implementation phase of IPS in Northern Norway. The IPSNOR study. BMC Psychiatry. 2021;21(1):632.
391. Butenko D, Rinaldi M, Brinchmann B, Killackey E, Johnsen E, Mykletun A. Turnover of IPS employment specialists: Rates and predictors. Journal of Vocational Rehabilitation. 2022;57:23-32.
392. Butenko D, Rinaldi M, Moe C, Brinchmann B, Wittlund S, Killackey E, et al. “What I thought was the dream job was a little different than I had expected”: A qualitative study exploring the turnover of IPS employment specialists. Journal of Vocational Rehabilitation. 2024;Preprint:1-13.
393. Corbière M, Villotti P, Berbiche D, Lecomte T. Predictors of job tenure for people with a severe mental illness, enrolled in supported employment programs. Psychiatric Rehabilitation Journal. 2024;47(1):64-72.
394. Butenko D, Rinaldi M, Brinchmann B, Brandseth OL, Killackey E, Mykletun A. The personality profile of IPS employment specialists, and how it relates to job satisfaction: A longitudinal cohort study. Scandinavian Journal of Psychology. 2023;64(1):71-9.
395. Bakken FM, van der Wel K. Cross-sectoral frontline delivery of welfare-to-work services for young adults with complex problems in Norway. Social Policy & Administration. 2023;57(3):304-17.
396. Andersen N, Breidahl K. Caught in a standstill—The unresolved challenges of integrated service delivery in public organizations. Public Administration. 2024:n/a-n/a.
397. Norwegian Directorate of Health. Samarbeid mellom helse- og omsorgstjenesten og NAV om individuell jobbstøtte (IPS)–rettslig grunnlag for tverrsektorielt samarbeid. [Collaboration between Health- and careservice and NAV about Indivudal placement and support (IPS)- legal basis for cross-sectoral collaboration]. Letter to municipalities and Regional health service Trusts 2022.

398. Norwegian Directorate of Health. Forklaring av rollen som arbeids-/ og utdanningsspesialist 2023.
399. OECD. Impact evaluation of labour market policies through the use of linked administrative data. Final report.; 2020.
400. Curran GM, Landes SJ, McBain SA, Pyne JM, Smith JD, Fernandez ME, et al. Reflections on 10 years of effectiveness-implementation hybrid studies. Frontiers in Health Services. 2022;2.
401. Theobald S, Brandes N, Gyapong M, El-Saharty S, Proctor E, Diaz T, et al. Implementation research: new imperatives and opportunities in global health. The Lancet. 2018;392(10160):2214-28.
402. Ose SK, Silje Lill. Kommunalt psykisk helse- og rusarbeid 2022: Årsverk, kompetanse og innhold i tjenestene. SINTEF; 2022.
403. Sheldon TA, Guyatt GH, Haines A. Getting research findings into practice. When to act on the evidence. Bmj. 1998;317(7151):139-42.
404. Bonoli G, Liechti F. Good intentions and Matthew effects: access biases in participation in active labour market policies. Journal of European Public Policy. 2018;25:894-911.
405. Bråthen M, van der Wel KA, Løyland B. Mental Health and Access to Active Labor Market Programs. Nordic Journal of Working Life Studies. 2020;10(3).
406. James J. Heckman, Jeffrey A. Smith. The Determinants of Participation in a Social Program: Evidence from a Prototypical Job Training Program. Journal of Labor Economics. 2004;22(2):243-98.
407. Yin RK. Case Study Research and Applications: Design and Methods 6th ed: Thousand Oaks, CA: Sage.; 2018.
408. Pelizza L, Ficarelli ML, Vignali E, Artoni S, Franzini MC, Montanaro S, et al. Implementation of individual placement and support in Italy: the Reggio Emilia experience. Community mental health journal. 2020;56(6):1128-38.
409. Holmås TH, Monstad K, Reme SE. Regular employment for people with mental illness—An evaluation of the individual placement and support programme. Social Science & Medicine. 2021;270.
410. Park AL, Rinaldi M, Brinchmann B, Killackey E, Aars NAP, Mykletun A, McDaid D. Economic analyses of supported employment programmes for people with mental health conditions: A systematic review. Eur Psychiatry. 2022;65(1):e51.
411. Stuart SR, Tansey L, Quayle E. What we talk about when we talk about recovery: a systematic review and best-fit framework synthesis of qualitative literature. Journal of Mental Health. 2017;26(3):291-304.
412. McKenna B, Furness T, Dhital D, Park M, Connally F. The transformation from custodial to recovery-oriented care: a paradigm shift that needed to happen. J Forensic Nurs. 2014;10(4):226-33.
413. Chambers DA, Glasgow RE, Stange KC. The dynamic sustainability framework: addressing the paradox of sustainment amid ongoing change. Implementation Science. 2013;8(1):117.
414. Bond GR. Modest implementation efforts, modest fidelity, and modest outcomes. Psychiatric Services. 2007;58(3):334-.
415. Latimer E. An effective intervention delivered at sub-therapeutic dose becomes an ineffective intervention. Br J Psychiatry. 2010;196(5):341-2.
416. Probyn K, Engedahl MS, Rajendran D, Pincus T, Naeem K, Mistry D, et al. The effects of supported employment interventions in populations of people with conditions other than severe mental health: a systematic review. Prim Health Care Res Dev. 2021;22:e79.
417. Norwegian Labour and Welfare Administration. NAVs omverdensanalyse 2023–2035 2023 [Available from: https://data.nav.no/fortelling/omverdensanalyse/.
418. Timonen V, Kautto M. Sustaining the Nordic welfare model in the face of population ageing. 2014. p. 279-90.
419. Correll CU, Galling B, Pawar A, Krivko A, Bonetto C, Ruggeri M, et al. Comparison of Early Intervention Services vs Treatment as Usual for Early-Phase Psychosis: A Systematic Review, Meta-analysis, and Meta-regression. JAMA Psychiatry. 2018;75(6):555-65.
420. Curtice MJ, Exworthy T. FREDA: a human rights-based approach to healthcare. The Psychiatrist. 2010;34(4):150-6.
421. Collins PY, Patel V, Joestl SS, March D, Insel TR, Daar AS, et al. Grand challenges in global mental health. Nature. 2011;475(7354):27-30.

Papers I-III

Paper I

Acta Psychiatrica Scandinavica

Acta Psychiatr Scand 2020: 141: 206–220
All rights reserved
DOI: 10.1111/acps.13129

ACTA PSYCHIATRICA SCANDINAVICA

Systematic Review or Meta-Analysis

A meta-regression of the impact of policy on the efficacy of individual placement and support

Brinchmann B, Widding-Havneraas T, Modini M, Rinaldi M, Moe CF, McDaid D, Park A-L, Killackey E, Harvey SB, Mykletun A. A meta-regression of the impact of policy on the efficacy of individual placement and support.

Objective: Individual placement and support (IPS) has shown consistently better outcomes on competitive employment for patients with severe mental illness than traditional vocational rehabilitation. The evidence for efficacy originates from few countries, and generalization to different countries has been questioned. This has delayed implementation of IPS and led to requests for country-specific RCTs. This meta-analysis examines if evidence for IPS efficacy can be generalized between rather different countries.
Methods: A systematic search was conducted according to PRISMA guidelines to identify RCTs. Overall efficacy was established by meta-analysis. The generalizability of IPS efficacy between countries was analysed by random-effects meta-regression, employing country- and date-specific contextual data obtained from the OECD and the World Bank.
Results: The systematic review identified 27 RCTs. Employment rates are more than doubled in IPS compared with standard vocational rehabilitation (RR 2.07 95% CI 1.82–2.35). The efficacy of IPS was marginally moderated by strong legal protection against dismissals. It was not moderated by regulation of temporary employment, generosity of disability benefits, type of integration policies, GDP, unemployment rate or employment rate for those with low education.
Conclusions: The evidence for efficacy of IPS is very strong. The efficacy of IPS can be generalized between countries.

B. Brinchmann[1,2], T. Widding-Havneraas[3], M. Modini[4,5], M. Rinaldi[6], C. F. Moe[1,7], D. McDaid[8], A-L. Park[1,8], E. Killackey[9,10], S. B. Harvey[11], A. Mykletun[1,2,3,12]

[1]Nordland Hospital Trust, Centre for Work and Mental Health, Bodø, Norway, [2]UiT – The Arctic University of Norway, Tromsø, Norway, [3]Centre for Research and Education in Forensic Psychiatry and Psychology, Haukeland University Hospital, Bergen, Norway, [4]School of Psychology, The University of Sydney, Sydney, NSW, Australia, [5]Concord Centre for Mental Health, NSW Health, Sydney, NSW, Australia, [6]South West London & St George's Mental Health NHS Trust, London, UK, [7]Faculty of Nursing and Health Sciences, Nord University, Bodø, Norway, [8]Care Policy and Evaluation Centre, Department of Health Policy, London School of Economics and Political Science, London, UK, [9]Orygen, The National Centre of Excellence in Youth Mental Health, Parkville, Vic, Australia, [10]Centre for Youth Mental Health, The University of Melbourne, Parkville, Vic, Australia, [11]Black Dog Institute, University of New South Wales, Sydney, NSW, Australia and [12]Division of Mental Health, Norwegian Institute of Public Health, Oslo, Norway

Key words: individual placement and support; systematic review; meta-analysis; meta-regression; employment; disability benefits; employer regulations; unemployment; supported employment; mental illness

Beate Brinchmann, Nordlandssykehuset HF, PO Box 1480, 8092 Bodø, Norway. E-mail: beate.brinchmann@nordlandssykehuset.no

Accepted for publication November 13, 2019

Summary

- Most of the early research on IPS was conducted in the United States, but increasingly researchers outside the United States, especially northern Europe, have begun contributing to the IPS literature. IPS was developed in the United States in a context of less generous welfare systems than the average of Europe and particularly in Scandinavia. It may be questioned if a generous welfare system reduces the efficacy of IPS, as employment is not a necessity to avoid poverty. Our study suggests the generosity of the welfare system does not influence the efficacy of IPS.
- Similarly, legal protection against dismissal for employees in the United States is weaker than in European countries. It may be questioned whether strong employment protection is a barrier for employment of individuals with severe mental disorder, thus reducing the efficacy of IPS. Our study indicates strong legal protection against dismissal does reduce the efficacy of IPS, but the effect is modest.
- It is often suggested that high unemployment rates may challenge the efficacy of IPS as increased supply of labour force increases competition. We find no support for this hypothesis.

Limitations

- Varying definitions of competitive employment in the published literature are a challenge. The content and quality of the services provided in the control groups of published trials are also a challenge.
- Similarly, inclusion criteria varied. All studies included individuals on the basis of mental illness, but varied as to severity of mental illness, disability benefits, criminal convictions, comorbid drug- and alcohol problems.
- Finally, the control group condition varied between studies and included variations in types of vocational rehabilitation and treatment as usual.

Introduction

The disabling effects of severe mental illness are well-recognized (1), one of them being that it greatly reduces the likelihood of being employed (2–5). The number of people who are outside the workforce due to mental illness has been rising for years in developed economies (4). Mental disorder is now the leading cause of disability in most western societies and in turn is costly, not only for the individual but also for welfare systems and for the economy as a whole (5). This is a challenge both for society at large and for individuals with severe mental illness who report that appropriate work is essential for their recovery (6). Participation in competitive employment is shown to enhance self-esteem, improve health and increase income (7–9), while unemployment can lead to further economic deprivation and social exclusion (10). This non-participation probably contributes to the stigmatizing attitudes surrounding people living with mental illness that suggest that they are incapable of work. This, in turn, creates vicious circles where people with mental illness internalize these thoughts as self-stigmatization and lose faith in seeking work (11–13).

However, there are ways to reduce the high unemployment rate seen in people with mental disorders and do more to support their recovery. The efficacy of the vocational rehabilitation approach using Individual Placement and Support (IPS) is reported in three Cochrane reports (14–16) and two meta-analysis covering 21 different randomized controlled trials across Europe, Asia and North America (17, 18). The results are convincing; IPS is more effective in achieving competitive employment for patients with severe mental illness (SMI) than traditional vocational rehabilitation. Where traditional vocational rehabilitation use sheltered and other forms of non-competitive training or employment, IPS place people into competitive jobs in line with their preferences without preparation or clinician's screening (19). Employment specialists in IPS are integrated in health services, but collaborate directly with managers and employers in the open job market. The efficacy of IPS may thus be vulnerable to labour market conditions. High unemployment rates may also challenge IPS, as may legal regulation of temporary contracts and legal protection against dismissal.

Despite evidence for the efficacy of IPS, implementation at a large scale and as a standard intervention within more traditional treatment approaches has not been the norm (20–24). There are several reasons for this. One of the major obstacles for implementation is that policy makers and clinicians in many countries are still uncertain

about generalizability of IPS efficacy to their specific country and context. One of the contextual factors is welfare policies. Welfare policies face two possibly contradictory goals. On the one hand, they aim to avoid attracting people onto welfare and the concern is that benefits may become too generous compared with expected income. On the other hand, welfare benefits must be generous enough to provide a social welfare safety net that should provide a decent economic life to individuals unable to work. The generosity of and access to welfare benefits varies much between countries where IPS has been tested, and it is fair to be concerned that the generous Scandinavian welfare system may challenge the efficacy of IPS as employment is not necessary to avoid poverty. The Organisation for Economic Co-operation and development (OECD) has raised concerns that generous disability welfare benefits may encourage income from welfare benefits rather than employment (25). One large European study commented that welfare benefit traps were an impediment to successful vocational employment overall, but not to IPS' effect size relative to other options (26). A meta-analysis reported that IPS was more effective in countries with less generous benefits, less active integration strategies between health and employment sectors and less robust employment legislative frameworks (17). Since this meta-analysis, more RCTs have been conducted in countries with a very generous welfare state, inviting the hypothesis to be re-investigated.

Employment regulations that govern employers' rights and flexibility on hiring practices, as well as rules governing termination of employment and the rights of temporary and contract workers, are hypothesized to influence the willingness of employers to hire new employees. The basic argument is that employers may be reluctant to hire patients with moderate or severe mental disorder in the context of strong legal protection against temporary contracts and legal protection against dismissal (27). It is fair to be concerned that this may challenge the efficacy of IPS.

A final factor that has been proposed to potentially impact the relative efficacy of IPS is labour market conditions. Recession (falling gross domestic product (GDP)) and high unemployment rates among individuals with low educational levels may challenge the efficacy of IPS, as the supply of labour force supposedly then on average is healthier. Studies have suggested that recession and high unemployment rates may challenge the efficacy of IPS, but findings are mixed (18, 26, 28).

IPS is an evidence-based alternative to the current train-and-place approach still dominating the western world. The request for RCT evidence for efficacy of IPS in every country and context is understandable as hypotheses of contextual factors' influence of IPS efficacy has great face validity. Still, it is costly and time-consuming, slowing IPS implementation with years and decades. The randomization in eventual further trials may also be unethical as we now are aware of the detrimental effect of the control conditions.

IPS has been tested through randomised controlled trials in countries with diversity in generosity of welfare benefits, integration policies, employment regulations and labour market conditions. This heterogeneity provides a unique possibility to explore if evidence of IPS efficacy is generalizable across countries and contexts.

Aim of the study

This systematic review and meta-analysis aim to determine if we now can safely generalize IPS efficacy between countries and contexts. First, we will systematically review the RCTs of IPS for mental illness. Second, we will estimate the overall efficacy of IPS compared to treatment as usual by meta-analysis. Third, with meta-regression, we will examine if the efficacy of IPS challenged by generous welfare benefits, strong integration policies, strong legal employment protection rights and strong legal protection against dismissals.

Method

This systematic review and meta-analysis were conducted according to the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guidelines (http://www.prisma-statement.org) following a predetermined, but unregistered protocol.

Inclusion and exclusion criteria

A study was eligible for inclusion if it was a randomized controlled trial (RCT) comparing individual placement and support with traditional vocational services/service as usual. Modified or enhanced IPS was to be excluded, and studies focusing solely on substance abuse were also to be excluded. Study participants had to have a mental illness and the outcome was competitive employment defined as permanent jobs paying commensurate wages available to anyone (not set aside jobs for individuals with disabilities) (29). The IPS in the trials had to demonstrate moderate to high fidelity, as measured by the IPS fidelity scale (30), or evidence that fidelity was adhered to needed to

be included in the paper. Studies published in peer-reviewed journals and in the English language after 1993 were included. This date was selected as it represents the earliest controlled trials of IPS. Disagreements about inclusion and exclusion, two other researchers would assist (AM and MR).

Searches

The electronic databases PsychINFO, EMBASE and Medline were searched for published studies from 1 January 1993 to 10 September 2019. The search was a combination of keywords of mental illness, individual placement and support, and randomized trials. The reference list of included studies was also reviewed to increase coverage and identify studies the searches did not identify. The Cochrane Central register of controlled trials was searched using the search terms 'individual placement and support' and 'supported employment and mental illness'. The search strategies in PsycINFO, Medline and EMBASE are visualized in Fig. 1. We also contacted active IPS researchers to locate other relevant studies. Two researchers (BB and TWH) independently went through every title and abstract according to the inclusion and exclusion criteria. The full texts of papers that met inclusion criteria were carefully reviewed to confirm inclusion. If there were disagreements, a third and fourth researcher (AM and MR) would assist.

Appraisal of quality

The Downs & Black Checklist (31) was used to assess the quality of included studies. The checklist consists of 27 items with five subscales that measure reporting, external validity, bias, confounding and power. This checklist was used in a previous meta-analysis of IPS from Modini et al. (18) and shows strong criterion validity (0.90) and good interrater validity (32). As reported in the Cochrane review (15), blinding of employment specialist, clinical personnel and patients are not possible in these trials. As in the Modini meta-analysis, we have also excluded questions 14 and 15 concerning blinding. Question 27 asking for a clinically important effect is modified to a yes (1 point) or no (0 point) for studies with less power than 0.80 with $\alpha = 0.05$ scored zero. Because of these modifications the total potential maximum score was 26 points. Scores of 12 or less were classified as overall poor quality and excluded. Two researchers (BB and TWH) independently assessed the quality of each included study and further discussed the results with one other researcher to take account of any considerations arising (AM).

Data extraction

The following variables were extracted from each included randomized controlled trial: sample characteristics, country of origin, length of follow-up and competitive employment rate for the experimental and control groups. The data used as moderators were grouped under the following headlines:

Generosity of welfare disability benefits. This represents an index constructed by the OECD named *Compensation index* which describes access to welfare benefits, population coverage, duration and generosity. The index is composed of ten sub-components. These sub-components are measured according to a predefined score between zero to five and are based on both qualitative and quantitative measures. The higher the score the more generous the welfare benefit, with easier access and longer duration. A score close to zero indicated less generosity, poorer access and shorter duration. The scores from all the sub-components were added to obtain the overall score, with the highest possible score of 50 for ten components. Traditionally, the USA and the UK have scored lower than countries with more generous welfare states like Germany, Switzerland and Scandinavian countries. Time series data for this index and the integration index and it is sub-components were made available by the OECD. These measures give us the opportunity to adjust our analyses for changes over time in indexes, compared to the more static scores reported in OECD reports (33–35).

Integration policies. This is measured through the *Integration index* constructed by the OECD and describes different employment and vocational rehabilitation schemes – their extent, permanence and flexibility. It also consists of anti-discrimination legislation, suspension of welfare benefit and possibilities of combining work and benefits. This index is composed of ten sub-components and each sub-component has scores between zero and five, of which zero represents a less active state effort to integrate people into the workforce again. The index is based on a summative score from all these sub-components, and the highest possibly score would be 50. A higher score would indicate a more active approach from the state.

Legal protection against employment dismissals. This index measures procedures and costs of individual dismissals. It is a summative index constructed by

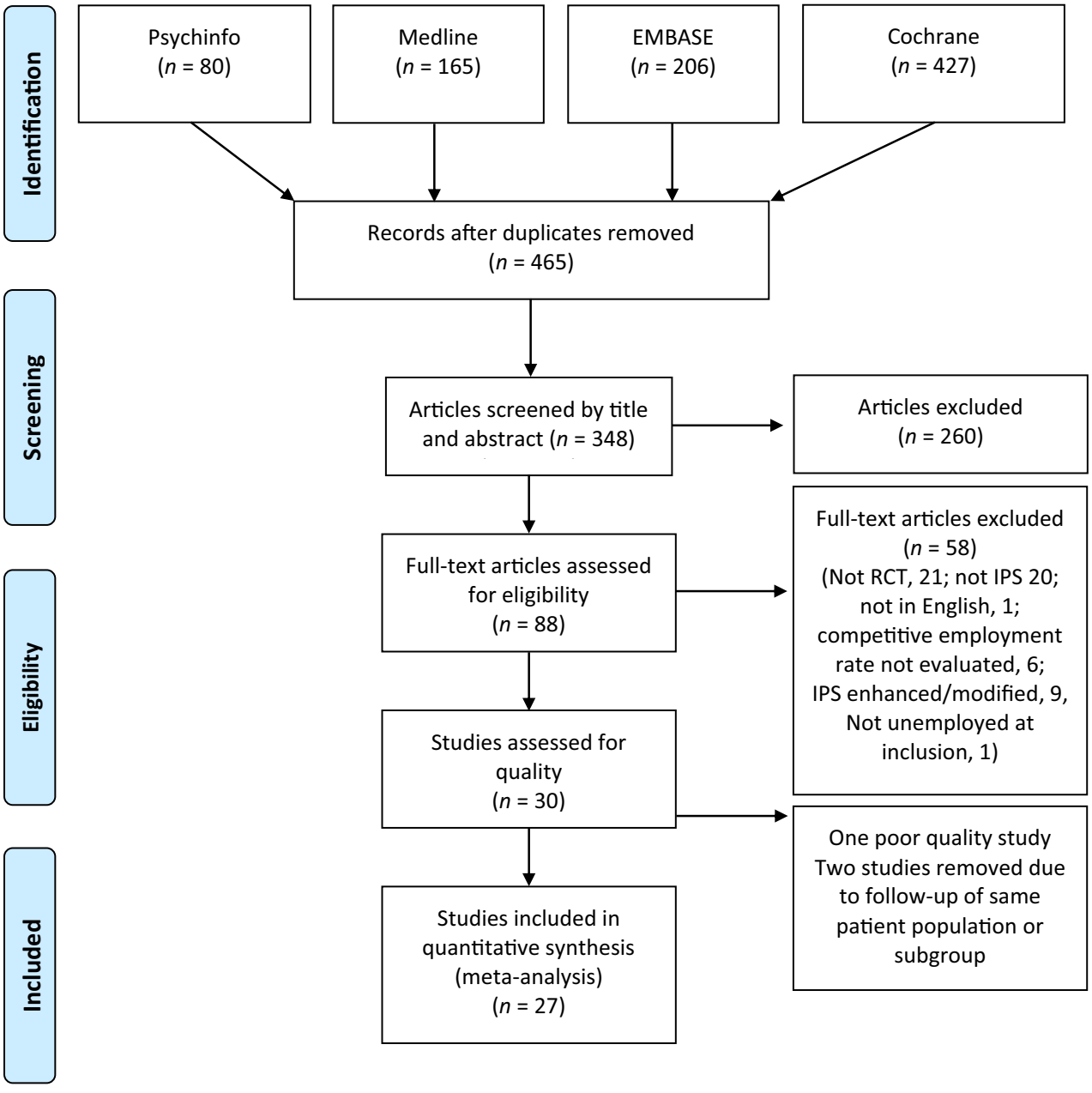


Fig. 1. Systematic literature search and quality assessment. Individual placement and support; randomized controlled trial, mental illness. [Colour figure can be viewed at wileyonlinelibrary.com]

the OECD named *strictness of employment protection – individual dismissals (regular contracts)*. The index consists of nine indicators that capture procedural inconveniences employers meet in dismissal processes, notice periods, severance pay and difficulty of dismissal (36). The indicators are measured on a continuous 6-point scare derived from national statutes, and based on an established methodology (37). A higher score represents stricter regulations for the employer and more protective regulations for employees already employed, while a lower score means that employers to a greater degree can 'hire and fire' as they please. OECD has developed two versions of this index over time due to availability of more information. The first version is based on eight indicators from 1985 to 2013, while the second version includes information on maximum time to make a claim of unfair dismissal and is based on nine indicators from 2008 to 2013. The second version is currently the main indicator of employment protection for individual dismissals used by OECD and is used when available.

Regulation of temporary employment. This index measures regulations on temporary employment. The index is constructed by the OECD and named

strictness of employment protection legislation for temporary employment. The index consists of six indicators that include regulation of fixed-term and temporary work agency contracts and their duration (36). The index is based on the same methodology described under legal protection against dismissals and is also measured on a continuous scale from 0 to 6 in a summative score. A higher score represents stricter regulations on employer's scope to offer employees temporary contracts.

Unemployment, employment by educational attainment, economic growth and disability welfare benefit rate. Data on each countries' disability welfare benefit receipt rate and employment by educational attainment rate were extracted from the OECD database. Data on GDP and the unemployment rate from the World Development Indicators (World Bank) online database were used to assess the economic situation in the countries where studies were carried out.

The data in the indexes are collected and systemized by the OECD (https://data.oecd.org/) and the data on GDP growth and unemployment rate are collected from World Bank (http://data.worldbank.org). Time series data for employment regulation indexes and their individual indicators are available at OECD (http://www.oecd.org/employment/emp/oecdindicatorsofemploymentprotection.htm), while time series data for the compensation and integration index and their individual indicators were made available from OECD upon request. Data for the generosity of welfare disability benefits index for Hong Kong and Bulgaria were extracted from Metcalfe et al. (17).

Time for inclusion of data. Data were extracted from the median follow-up time for each study. The median was calculated by extracting the start and end date for recruitment in each study. We added the follow-up time to the end date of recruitment and calculated the median between start of recruitment and the conclusion of follow-up. For the four indexes and their sub-components, we used last available data when there were no observations. For disability benefit recipiency rate, we used available data and for employment for those with lower education we used data from 2014 for most studies as this was the first time series data from OECD, unless the median follow-up time was post 2014.

Statistical analysis

Random-effects meta-analysis and meta-regressions were performed as this approach allows the true effect to vary by study (38). A binary competitive employment rate (i.e. achieved/not achieved competitive employment) was the main outcome, which makes it possible to calculate risk ratios. The summary effect of the meta-analysis was presented as a risk ratio with a 95 % confidence interval. One meta-analysis comprising all studies was conducted to determine the overall efficacy of IPS compared to traditional vocational rehabilitation. Meta-regressions were conducted for the primary analysis which examined associations between IPS efficacy, and the four indexes developed by OECD to capture characteristics of disability policies and employment regulation. The secondary analysis examined the association between IPS efficacy and single indicators in the indexes to explore whether single variables yielded different results to the overall indexes. Finally, meta-regressions were carried out to examine associations between IPS efficacy and labour market conditions, assessed by GDP growth, unemployment rate, disability welfare benefit receipt rate and employment by educational attainment rate to assess labour market conditions. The meta-analysis includes Nordic registry studies that differ from the other studies as competitive employment is measured by registry data instead of self-reported data. Nordic registry studies additionally have higher mean index values. Due to concern of confounding introduced by Nordic registry studies, we adjusted meta-regressions with a binary registry study indicator. Study site at country level is used as our unit of analysis (total $n = 32$).

Restricted maximum likelihood (REML) is applied to estimate the value of tau-squared (τ^2, i.e. the estimated variance of true effects) (39) Heterogeneity between studies in the meta-analysis was assessed with Cochran's Q statistic and the I^2 statistic. We assessed publication bias visually with funnel plots and statistically with Egger's test and Duval and Tweedie's trim-and-fill method. The random-effects meta-analysis and meta-regressions were performed in STATA SE 16 (40) and Comprehensive Meta-Analysis version 3.3 (41).

Results

Aim 1: Identifying RCTs on IPS for mental illness

The database search revealed 348 titles from 1993. All titles and abstract were examined independently by two researchers (BB and TWH). Eighty-eight articles met initial criteria and then full texts were examined, whereof 30 studies met our full criteria. Hoffmann et al. (42, 43) and Howard et al and Heslin et al (44, 45) report the efficacy of IPS

for the same patient population at two follow-up periods, so we only included the latter study from both in our meta-analysis. The meta-analysis is based on 27 studies (26, 43, 45–69) (Fig. 1). Total sample size in these trials is 6651, with a mean of 207.8 (SD = 358.54). Median sample size is 118.5. The smallest trial consists of 37 and the biggest of 2055 persons.

Two of the included studies have a majority of patients with moderate mental illnesses, mainly affective disorders (63, 66), two studies included young patients with first-episode psychosis (56, 57), and two studies were for military veterans with PTSD (50, 51). Three studies had requirements for inclusion beyond mental illness; one required that the patients had prior involvement with the criminal justice system (47), and two required patients to be receivers of some form of disability insurance (53, 66). One of these studies is the Drake et al. (2013) study. This is a large study that the previous review chose to exclude, mainly because of many sites and the large sample size (17). The Drake study is treated as one site only in our review, and therefore not excluded. There was also a range in the control conditions, from high-quality version of treatment as usual (TAU – vocational rehabilitation) and non-integrative SE (49, 63, 67) to the possibility to apply for other vocational services (66).

Studies include trials from Asia (Japan, Mainland China, Hong Kong), Australia, North America (Canada and the United States) central and northern Europe (Italy, Switzerland, Germany, Netherlands, Norway, Sweden, Denmark and the United Kingdom) and Eastern Europe (Bulgaria) (Table 1). We excluded two studies from Scandinavia, and one from the United States that used a modified version of IPS with patients with moderate mental illness and substance abuse (70–72). One Norwegian study with enhanced IPS and no fidelity report were excluded (73), and we also excluded one randomized trial performed at a methadone clinic in the United States (74), with primarily opioid use disorders.

Aim 2: Meta-analysis of the overall efficacy of IPS

The overall meta-analysis (Fig. 2) shows that recipients of IPS were more than twice (RR = 2.07, CI 95% 1.82–2.35, $P < 0.0001$) as likely to find competitive employment than recipients of TAU. The homogeneity test, Q, is 75.57 with a P-value of <0.0001, which indicate that heterogeneity is present. The between-study heterogeneity, $I^2 = 59.82$, implies that about 60% of the variability in the effect size estimates is due to between-study differences instead of sampling variation. This is considered moderate to high according to Higgins et al. (75). The between-study variance, τ^2, is 0.06. The effect size at ≤12 months follow-up was RR 2.61 (CI 95% 2.08–3.28, $P < 0.0001$), and at >12 months follow-up RR 1.96 (CI 95% 1.70–2.25, $P < 0.0001$). However, as these samples are smaller ($n = 8$ and $n = 24$) caution is warranted for conclusions, especially regarding the effect size for ≤12 months follow-up. There is evidence for a decrease in IPS efficacy over follow-up time, as tested by including a binary covariate in a meta-regression (log(RR) = −0.36, CI 95% −0.66 to −0.005, P-value = 0.047). There is also evidence to support a decrease in IPS efficacy using the year the study was conducted as a discrete covariate in meta-regression (log(RR) = −0.03, CI 95% −0.04 to −0.01, $P < 0.001$) (see Figure S7 for a graphical presentation).

Aim 3: Meta-regressions to determine if IPS efficacy is challenged by country- and context-specific factors

Table 1 summarizes the studies and the moderators.

Meta-regressions were carried out to test for moderators of IPS efficacy adjusted for registry study (Fig. 3, see Table S3 for unadjusted and adjusted estimates). We found evidence for a marginal decrease in efficacy of IPS with increases in the index for legal protection against employment dismissals (log(RR) = −0.15, CI 95% −0.28 to −0.02, P-value = 0.025).

There was no support for a moderating effect for IPS efficacy for the generosity of welfare benefits index (log(RR) = −0.02, CI 95% −0.05 to 0.01, P-value = 0.23), nor the integration polices index (log(RR) = −0.03, CI 95% −0.07 to 0.004, P-value 0.08), or the regulation of temporary employment index (log(RR) = −0.16, CI 95% −0.38 to 0.05, P-value 0.14).

Economic growth, unemployment, disability welfare benefit rate and employment by educational level

There was no support for a moderating effect of labour market conditions, including GDP growth (log(RR) = 0.02, CI 95% −0.03 to 0.06, $P = 0.54$), unemployment rate (log(RR) = −0.04, CI 95% −0.09 to 0.02, $P = 0.18$), disability welfare benefit rate (log(RR) = −0.03, CI 95% −0.12 to 0.06, $P = 0.56$) or employment rate for people with low education (log(RR) = −0.005, CI 95% −0.04 to

Table 1. Studies, year of publication, and moderators

Study	Year	*n*	Country	Generosity of disability benefits	Integration policies	Legal protection against dismissals	Regulation of temporary employment	Unemployment rate (%)	Employment by educational attainment (%)	GDP growth (annual %)	Disability welfare benefit rate (%)
North America											
Drake	1996	143	USA	20	25	0.26	0.25	6.1	55	4.0	5.8
Drake	1999	150	USA	20	25	0.26	0.25	5.7	55	2.7	5.8
Lehman	2002	219	USA	20	25	0.26	0.25	4.5	55	4.5	5.8
Mueser	2004	204	USA	20	25	0.26	0.25	4.5	55	4.5	5.8
Gold	2006	143	USA	20	25	0.26	0.25	4.5	55	4.5	5.8
Latimer	2006	150	Canada	16	23	0.92	0.25	7.7	56	3.0	4.3
Bond	2007	187	USA	20	25	0.26	0.25	4.7	55	1.0	5.8
Twamley	2008	58	USA	20	25	0.26	0.25	4.6	55	2.9	5.8
Davis	2012	85	USA	20	25	0.49	0.33	9.3	55	-2.5	5.8
Drake	2013	2055	USA	20	25	0.49	0.33	9	55	1.6	5.8
Bond	2015	85	USA	20	25	0.49	0.33	8.1	55	2.3	5.8
Davis	2018	541	USA	20	25	0.49	0.33	5.3	55	2.9	5.8
Asia and Australia											
Killackey	2008	41	Australia	21	28	1.42	0.88	4.8	60	2.8	5.4
Wong	2008	92	Hong Kong	20				7.3		1.7	
Tsang	2009	111	Hong Kong	20	25	0.26		4.8		7.0	
Oshima	2014	37	Japan	21	27	1.37	0.88	3.9		1.7	2
Waghorn	2014	139	Australia	21	28	1.13	0.79	5.6	60	1.9	5.4
Zhang	2017	108	China			3.31	1.88	4.6		7.3	
Killackey	2019	126	Australia	21	28	1.57	1.04	5.7	58	2.9	5.4
Europe											
Burns	2007	52	Germany	32	35	2.68	1	10.7	58	1.2	4.4
		50	UK	21	28	1.26	0.38	4.6	61	2.4	7
		52	Italy	26	18	2.76	2	7.9	50	1.6	3.3
		52	Switzerland	37	23	1.6	1.13	4.3	68	2.8	5.4
		52	Netherlands	28	34	2.88	0.94	4.7	59	2	8.3
		54	Bulgaria	25				12.0		6.4	
Heslin	2011	190	UK	21	29	1.26	0.38	5.4	61	2.6	7
Hoffmann	2014	100	Switzerland	32	27	1.5	1.38	4.8	68	3	5.4
Michon	2014	150	Netherlands	24	35	2.84	1.17	3.4	59	-3.7	8.3
Bejerholm	2015	87	Sweden	30	36	2.52	0.79	8.4	66	-5.2	10.8
Viering	2015	248	Switzerland	32	27	1.5	1.38	4.5	68	1	5.4
Reme	2019	408	Norway	33	37	2.23	3.42	4.3	61	2	10.3
Christensen	2019	482	Denmark	28	37	2.1	1.79	6.2	61	2.3	7.2

Study: First author, Publication Year: Year of publication. Country: Study site. 1. Generosity of disability benefits: Higher scores indicate more generous benefits, on an index ranging from 0 to 50. 2. Integration policies: Higher scores indicate more integrative policies, on an index ranging from 0 to 50. The employment protection regulation against dismissals for individual contracts (regular contracts), and employment protection regulation for temporary contracts indexes ranges from 0 to 6, with higher scores indicating stronger employee protections. Unemployment rate at time of the study. Employment by educational attainment: Employment rate (percent) among people with low formal education. GDP growth: Gross domestic product growth rate, annual, at time of the study (time of study = two years before publication date to account for publication time). Disability benefit rate: Percent of working-age population in the country receiving long-term disability benefits. Generosity of disability = Compensation index: Hong Kong from Metcalfe et al. (2018) (19).

0.03, $P = 0.76$) (see Table S8 for unadjusted and adjusted estimates).

Secondary analysis for sub-components in the indexes

Secondary analyses were carried out to determine if there was any moderating effect of single indicators in indexes on the efficacy of IPS. For an overview of the single indicators explored as moderators in the efficacy of IPS, we refer to Table S4–S7.

There was no evidence of effects of single indicators in the adjusted analyses for generosity of welfare benefits, the integration policies index or the regulation of temporary employment index. However, in the legal protection against employer dismissals, there was evidence to support a moderating effect of notification procedure (log (RR) = −0.09, CI 95% −0.18 to −0.01, $P = 0.029$) and definition of justified or unfair dismissals (log(RR) = −0.07, CI 95% −0.14 to −0.004, $P = 0.04$) (see Table S6 for unadjusted and adjusted estimates).

Publication bias

Visual inspection of the funnel plot of standard error and precision indicates asymmetry consistent with publication bias in favour of positive findings: Smaller studies tend to have higher

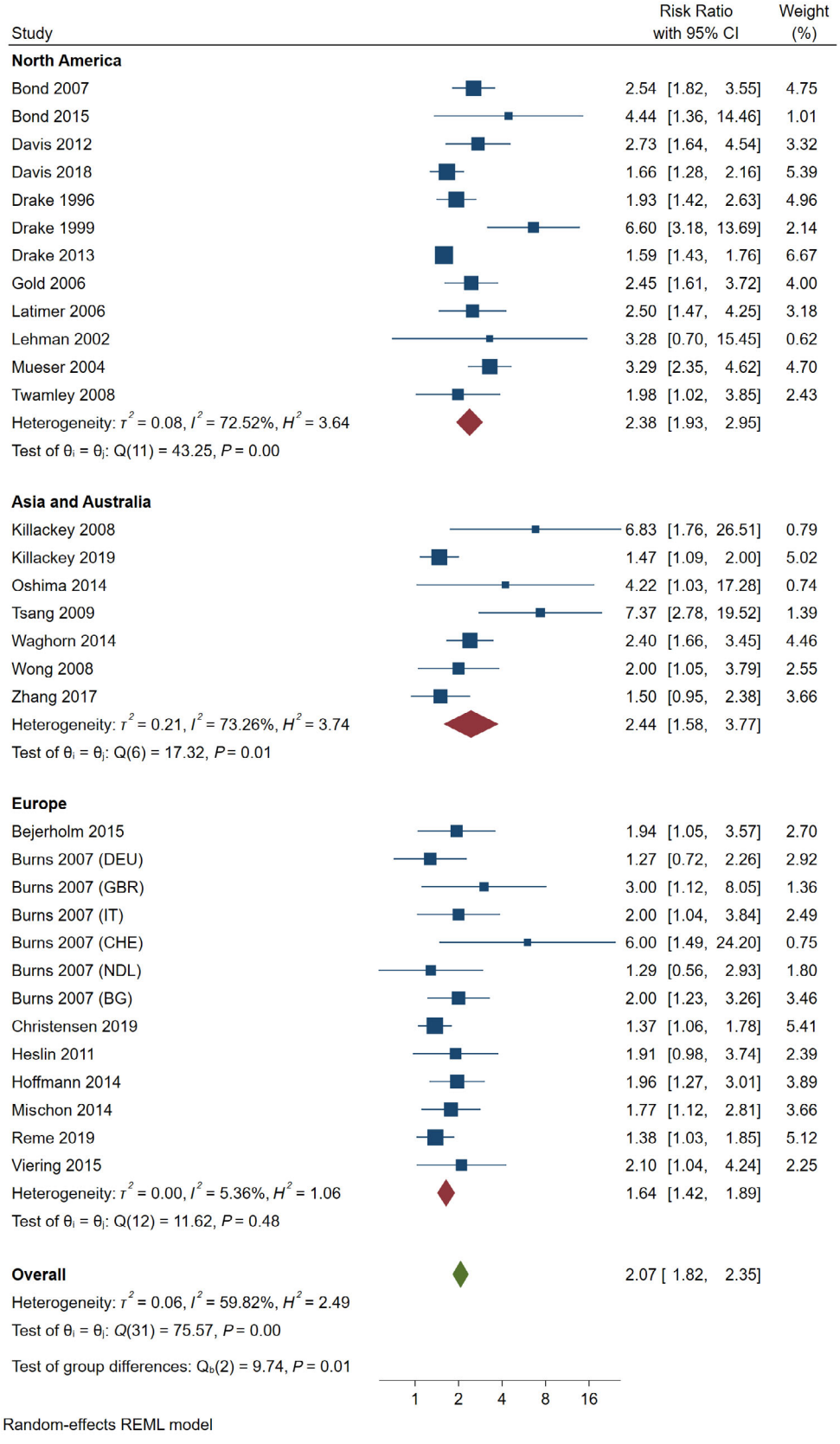


Fig. 2. Relative risk of competitive employment comparing IPS to the control condition. [Colour figure can be viewed at wileyonlinelibrary.com]

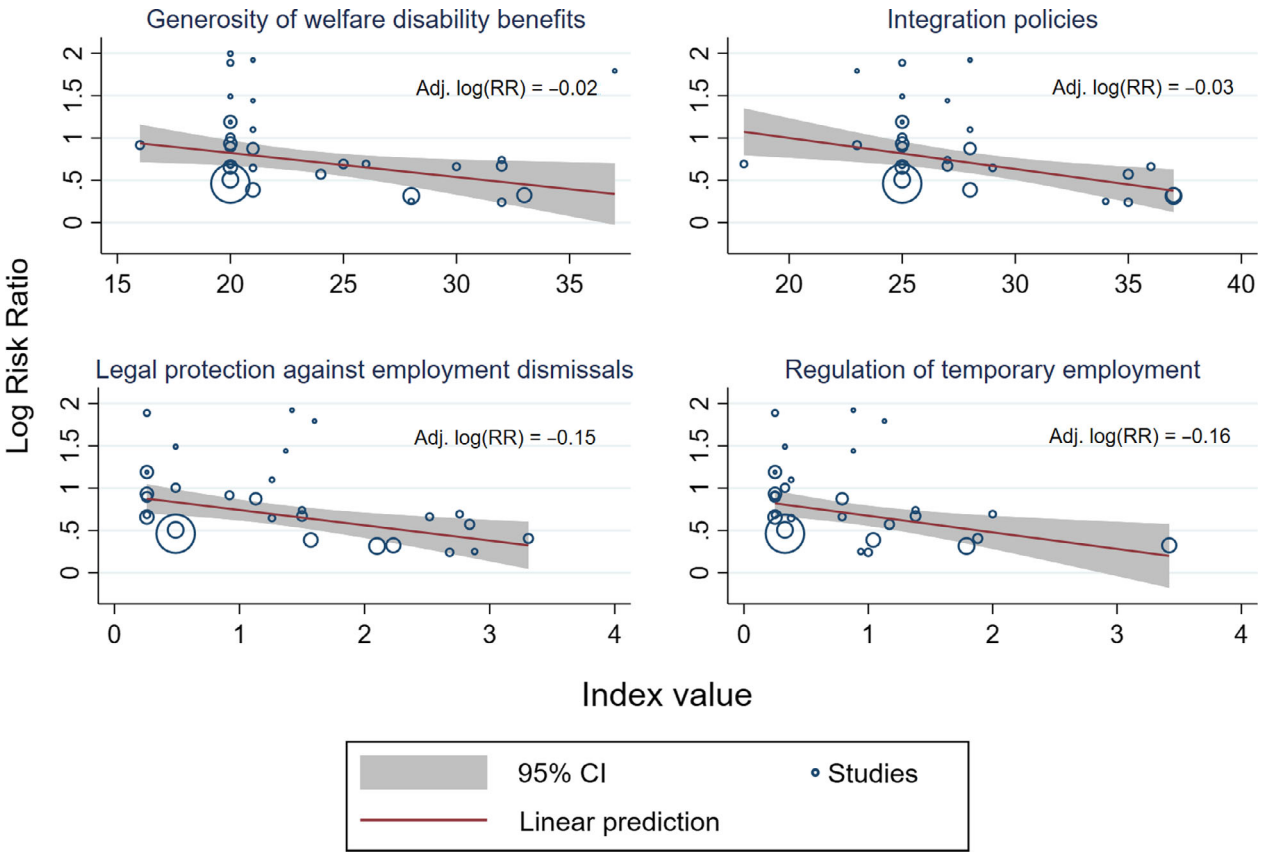


Fig. 3. Meta-regression of efficacy of IPS for the generosity of welfare disability benefits, integration policies, legal protection against employment dismissals and regulation of temporary employment index. [Colour figure can be viewed at wileyonlinelibrary.com]

effect size than larger studies (Figure S1–S3). The Egger's test indicates publication bias (β_1 = 1.64, SE 0.44, P = 0.0002). Duval and Tweedie's trim-and-fill method (specified to look for missing studies to the left of the summary effect) imputes nine studies. When these are added, the adjusted summary effect size for the meta-analysis is reduced from RR 2.07 to RR = 1.83 (CI 95% 1.57–2.14).

Discussion

The primary aim of this systematic review and meta-analysis was to examine whether the efficacy of IPS compared to traditional vocational rehabilitation was equally strong when implemented in countries with more generous disability welfare benefit, integration policies and also stricter employment regulations on whether employers can hire, fire and regulate temporary work. The systematic review identified 27 randomized controlled trials from 14 different countries. IPS is more than twice as effective (RR = 2.07, CI 95% 1.82–2.35, $P < 0.0001$) as traditional vocational rehabilitation in getting people with mental illness into competitive work, which is line with past reviews (14–18). IPS efficacy is not challenged by generous disability welfare benefits, integration policies or legal restriction on temporary employment. IPS efficacy is slightly reduced by legal employee protection against 'hire and fire' flexibility.

The efficacy of IPS is apparently somewhat stronger in countries with a 'hire-and-fire' attitude than in countries with stricter legal protection for employees' rights against dismissals. Legal regulations aimed at protecting employees may in turn have the unforeseen side-effect in increasing employers' reluctance towards job seekers with mental disorders, which may be understandable. On the opposite side regulations could also lead to higher job retention if first accepted, higher employee rights to higher wages and paid sickness leave. This could support job retention and more stable economic living conditions for people with severe mental illness. IPS needs to function and possibly adapt to conditions where labour rights are high. We acknowledge that the labour markets work quite differently across countries, and the hypothesis that the efficacy of IPS should vary between labour and welfare systems has face validity. The lack of clear effect moderation is perhaps reassuring from an implementation perspective,

though still somewhat surprising. This analysis did not find an association between the efficacy of IPS and GDP growth, in contrast to a previous meta-analysis (18). Further we found no association with disability welfare benefit rate, unemployment rate or employment by educational attainment compared to traditional vocational rehabilitation.

The main aim of this study is if IPS efficacy can safely be generalized between countries and contexts with rather different policies and welfare systems. We believe our study strongly supports generalization. We have used a whole range of highly relevant indexes developed by the OECD, and we have investigated how different policies may challenge the efficacy of IPS. We are thankful to the OECD for enabling this analysis by making available a whole range of relevant indexes for topics here investigated which have previously not been available for IPS meta-analyses. Our nil finding on generosity and active state integration differs from the results of a recent meta-analysis addressing some of the same questions (17). Our meta-analysis has included 6 more trials, included two trials from Scandinavia which expands the variation on key indexes on the 'left' side of policies. We also included populations of patients with moderate mental illness. Our study included only the index on regulation on individual dismissals, not collective dismissals that we believe would affect all employees, not only those with mental illness. We have also included an index describing regulations on temporary contracts.

Our analysis concludes that concerns over reduced IPS efficacy in more generous and active welfare states may be dismissed. Although IPS seems to become less effective under stricter employment regulations relating to flexibility of 'hiring and- firing', IPS still remains more than twice as effective as traditional vocational rehabilitation even in generous welfare states. This is an important nil finding because it means the requirement to conduct efficacy randomized trials before implementation within a country is unnecessary as the efficacy of IPS is generalizable to very different welfare states.

We found evidence of some associations between IPS efficacy and single indicators in indexes in our secondary analysis. These findings could be a result of Type I error (chance findings as a result of a high number of analyses). The number of positive findings among secondary analyses is not higher than what could be expected as chance findings, and should be interpreted with caution. Still, the findings underline that legal protections against dismissals have a small and negative association with IPS efficacy. The procedures for notification of dismissals and the definition of justified or unfair dismissals indicate that more restrictions on employer's flexibility to fire, reduces IPS' relative efficacy.

Strengths and limitations

There are two main strengths to this systematic review and meta-analysis that enhance its validity. First, it covers more studies and more diverse welfare contexts than previous reviews and included a search of trial registries in order to reduce, but not eliminate, publication bias. All studies were examined regarding the fidelity of the IPS intervention and reviewed by two independent researchers. Secondly, indexes and variables used to compare disability policies, employment regulations and labour market variables are gathered from the OECD and World Bank, and provide good internal and external validity. We believe this provides robust and objective data on the efficacy of IPS over traditional vocational rehabilitation across very different welfare states.

All reviews of IPS efficacy are limited by the variation in definitions of outcomes in different RCTs. In the IPS literature competitive employment is defined differently between studies, some define it as 1 day's work (26), and others as a month (44) during varying time frames. The way in which this outcome is measured also differs across studies. Two studies used national registry data for all employment outcomes (49, 63) providing a more reliable and accurate source of employment than self-reporting and log-books which have been used in all other IPS trials. This more robust data appears to reduce the observed effect. To account for the reduced effect estimate in registry studies, we adjusted all analyses for a binary registry study covariate. As there are only two registry studies, the distribution of this covariate is highly skewed. The meta-regressions are performed on a small sample, so the introduction of an additional variable will increase uncertainty and reduce power for statistical inference. As the main results for our indexes change from significant to non-significant with the introduction of the additional covariate in our meta-regressions, we have chosen to include all unadjusted and adjusted analyses in the Supplementary Material. However, we believe the inclusion of the additional covariate reduces the problem of confounding, thereby providing more precise estimates for the indexes than the unadjusted models do. A related issue is whether competitive employment is the best occupational outcome to examine. Traditional vocational rehabilitation schemes

may be more likely to lead to subsidized employment than competitive employment, but for many this may be a satisfying and potentially more stable than competitive employment.

The variation in control conditions in the included trials is another limitation. The control conditions are all labelled as traditional vocational rehabilitation, but there is diversity between high quality supported TAU (63) and possibility of vocational support (66).

In all meta-analyses, publication bias in favour of positive findings may inflate observed effects. Our funnel plot (Figure S1–S3) showed some asymmetry that could be explained by a small study effect. However, publication bias analysis and imputation using the trim-and-fill method did not alter our main conclusion on the efficacy of IPS.

The lack of blinding of participants, clinicians and evaluators is a limitation across all the literature which cannot be safeguarded against as in a traditional RCT. This is difficult in all research relating to all psychosocial interventions and may increase the efficacy of the intervention under investigation.

To conclude, IPS is now well established as a more effective vocational rehabilitation for severe mental illness than more traditional train-and-place approaches. This result is consistent across countries with very different disability policies, employment regulations and labour conditions. There are now 27 randomized trials confirming this. Further trials are not necessary as the IPS efficacy may now be safely generalized between countries and contexts. When it comes to new populations in need of effective vocational rehabilitation like IPS, more trials are needed (76). Our conclusion stands for severe and moderate mental illness.

This should inspire both further implementation and funding of IPS across different countries, but also move research and evaluation from efficacy to effectiveness. The pressing issue now is how to make IPS replace current practices and create infrastructure that supports implementation (77). We are yet to see large trials testing the effectiveness of high-fidelity IPS, when implemented in larger scale, in regular clinical practice, and with more diverse populations. We also need more implementation and evaluation research to understand the barriers and factors that hamper the implementation or make it less successful. The current expansion of services in various countries (including Norway and the UK) provides an opportunity to explore implementation issues.

IPS is an intervention that operates in the crossover between mental healthcare and welfare commissioners. It challenges attitudes and traditional ways of working. The sectorial responsibility for IPS must also be addressed more clearly as it sits between public sectors responsible for welfare services and health services, which may confuse issues of ownership and responsibility.

Acknowledgements

We thank Senior Policy Analyst Christopher Prinz, at the Skills and Employability Division at OECD for detailed time series data on the compensation and integration index. This study is funded by The Research Council of Norway (grant numbers 280589, 273665 and 227097). SBH received additional funding from the icare foundation and NSW Health.

Declaration of interest

None declared.

Author contributions

BB, SBH, TWH, MM and AM devised the study. BB, MM and TWH devised the literature search and assessed for inclusion and the quality of the studies. BB, TWH and AM wrote the first draft of this manuscript. TWH extracted and analysed the data. All authors read and contributed to subsequent versions and approved the final version of this manuscript.

References

1. Summergrad P. Homeless and impaired: the burden of serious psychiatric illness. Acta Psychiatr Scand 2015; **131**:238–239.
2. Marwaha S, Johnson S, Bebbington P et al. Rates and correlates of employment in people with schizophrenia in the UK, France and Germany. Br J Psychiatry 2007;**191**:30–37.
3. Kooyman I, Dean K, Harvey S, Walsh E. Outcomes of public concern in schizophrenia. Br J Psychiatry. 2007;**191**:29–36.
4. OECD. Sick on the job? Myths and realities about mental health and work. OECD,2012.
5. OECD. Fit Mind, Fit Job.: OECD, 2015.
6. Drake RE, Whitley R. Recovery and severe mental illness: description and analysis. Can J Psychiatry 2014;**59**:236–242.
7. Bond GR, Resnick SG, Drake RE, Xie H, McHugo GJ, Bebout RR. Does competitive employment improve nonvocational outcomes for people with severe mental illness? J Consult Clin Psychol 2001;**69**:489–501.
8. Burns T, Catty J, White S et al. The impact of supported employment and working on clinical and social functioning: results of an international study of individual placement and support. Schizophr Bull 2009;**35**:949–958.
9. Rinaldi M, Perkins R. Implementing evidence-based supported employment. BJPsych Bulletin 2007;**31**:244–249.
10. Carlier BE, Schuring M, Lötters FJB, Bakker B, Borgers N, Burdorf A. The influence of re-employment on quality of life and self-rated health, a longitudinal study among unemployed persons in the Netherlands. BMC Public Health 2013;**13**:503.
11. Glozier N. Workplace effects of the stigmatization of depression. J Occup Environ Med 1998;**40**:793–800.

12. Perkins DV, Raines JA, Tschopp MK, Warner TC. Gainful employment reduces stigma toward people recovering from schizophrenia. Community Ment Health J 2009;**45**:158–162.
13. Rinaldi M, Perkins R, Glynn E, Montibeller T, Clenaghan M, Rutherford J. Individual placement and support: from research to practice. Adv Psychiatr Treat 2008;**14**:50–60.
14. Crowther RE, Marshall M, Bond G, Huxley P. Vocational rehabilitation for people with severe mental illness. Cochrane Database Syst Rev 2001(1. Art. No.: CD003080.).
15. Kinoshita Y, Furukawa TA, Kinoshita K et al. Supported employment for adults with severe mental illness. Cochrane Database Syst Rev 2013;**9**:CD008297.
16. Suijkerbuijk YB, Schaafsma FG, van Mechelen JC, Ojajärvi A, Corbière M, Anema JR. Interventions for obtaining and maintaining employment in adults with severe mental illness, a network meta-analysis. Cochrane Database Syst Rev 2017.
17. Metcalfe JD, Drake RE, Bond GR. Economic, labor, and regulatory moderators of the effect of individual placement and support among people with severe mental illness: a systematic review and meta-analysis. Schizophr Bull. 2018;**44**:22–31.
18. Modini M, Tan L, Brinchmann B et al. Supported employment for people with severe mental illness: systematic review and meta-analysis of the international evidence. Br J Psychiatry 2016;**209**:14–22.
19. Bond GR. Supported employment: evicence for an evidence-based practice. Psychiatr Rehabil J 2004;**27**:345–359.
20. Mueser KT, Drake RE, Bond GR. Recent advances in supported employment for people with serious mental illness. Curr Opin Psychiatry 2016;**29**:196–201.
21. Waghorn G, Hielscher E. The availability of evidence-based practices in supported employment for Australians with severe and persistent mental illness. Aust Occup Ther J 2015;**62**:141–144.
22. Fioritti A, Burns T, Hilarion P et al. Individual placement and support in Europe. Psychiatr Rehabil J 2014;**37**:123–128.
23. Bruns EJ, Kerns SE, Pullmann MD, Hensley SW, Lutterman T, Hoagwood KE. Research, data, and evidence-based treatment use in state behavioral health systems, 2001–2012. Psychiatr Serv 2015;**67**:496–503.
24. Mueser KT, Cook JA. Why cant't we fund supported employment? Psychiatr Rehabil J 2016;**39**:85–89.
25. OECD. OECD Employment Outlook 2009.
26. Burns T, Catty J, Becker T et al. The effectiveness of supported employment for people with severe mental illness: a randomised controlled trial. Lancet 2007;**370**:1146–1152.
27. Barbieri P, Cutuli G. Employment protection lagislation, labour market dualism, and inequality in Europe. Eur Sociol Rev 2016;**32**:501–516.
28. Cook JA, Mulkern V, Grey DD et al. Effects of local unemployment rate on vocational outcomes in a randomized trial of supported employment for individuals with psychiatric disabilities. J Vocat Rehabil 2006;**25**:71–84.
29. Bond GR, Drake RE, Becker DR. Generalizability of the Individual Placement and Support (IPS) model of supported employment outside the US. World Psychiatry 2012;**11**:32–39.
30. Bond GR, Becker DR, Drake RE, Vogler KM. A fidelity scale for the individual placement and support model of supported employment. Rehabil Couns Bull 1997;**40**:265–284.
31. Downs SH, Black N. The feasibility of creating a checklist for the assessment of the methodological quality both of randomised and non-randomised studies of health care interventions. J Epidemiol Community Health 1998;**52**:377–384.
32. Olivo SA, Macedo LG, Gadotti IC, Fuentes J, Stanton T, Magee DJ. Scales to assess the quality of randomized controlled trials: a systematic review. Phys Ther 2008;**88**:156–175.
33. OECD. Transforming Disability into Ability. http://www.virk.is/static/files/4_disability to ability.pdf 2003.
34. OECD. Pathways onto (and off) Disability Benefits: Assessing the Role of Policy and Individual Circumstances, 2009. http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DELSA/ELSA/WP5(2009)5&docLanguage=En
35. OECD. Sickness, Disability and Work: Breaking the Barriers: A Synthesis of Findings Across OECD Countries (Organisation for Economic Co-operation and Development Directorate for Employment, Labour and Social Affairs. http://www.oecd.org/els/soc/46446944.pdf. Accessed October 31, 2011.
36. OECD. Methodology used to compile the OECD indicators of Employment Protection, 2018. Available from: http://www.oecd.org/employment/emp/oecdindicatorsofemploymentprotection-methodology.htm
37. Nicoletti, Scarpetta, Boyland. Summary indicators of product market regulation with an extension to employment protection legislation: OECD. ECO Working Paper No. 226, 1999.
38. Borenstein M. Introduction to meta-analysis. Chichester: Wiley; 2009.
39. Langan D, Higgins JP, Jackson D et al. A comparison of heterogeneity variance estimators in simulated random-effects meta-analyses. Res Synth Methods 2019;**10**:83–98.
40. StataCorp. Stata Statistical Software: Release 16. College Station, TX: StataCorp LLC, 2019.
41. Borenstein M, Hedges LV, Higgins JPT, Rothstein HR. Comprehensive Meta-Analysis. 3.3. ed. Englewood, New Jersey: Biostat; 2015.
42. Hoffmann H, Jäckel D, Glauser S, Kupper Z. A randomised controlled trial of the efficacy of supported employment. Acta Psychiatr Scand 2012;**125**:157–167.
43. Hoffmann H, Jäckel D, Glauser S, Mueser KT, Kupper Z. Long-term effectiveness of supported employment: 5-year follow-up of a randomized controlled trial. Am J Psychiatry 2014;**171**:1183–1190.
44. Howard LM, Heslin M, Leese M et al. Supported employment: randomised controlled trial. Br J Psychiatry 2010;**196**:404–411.
45. Heslin M et al. Randomized controlled trial of supported employment in England: 2 Year follow-up of the Supported Work and Needs (SWAN) study. World Psychiatry 2011;**10**:132–137.
46. Bejerholm U, Areberg C, Hofgren C, Sandlund M, Rinaldi M. Individual placement and support in Sweden: A randomized controlled trial. Nord J Psychiatry 2015;**2015**:57–66.
47. Bond GR, Kim SJ, Becker DR, Swanson SJ, Drake RE, Krzos IM. A controlled trial of supported employment for people with severe mental illness and justice involvement. Psychiatric Services 2015;**66**:1027–1034.
48. Bond GR, Salyers MP, Dincin J et al. A randomized controlled trial comparing two vocational models for persons with severe mental illness. J Consult Clin Psychol 2007;**75**:968–982.

49. Christensen TN, Wallstrom IG, Stenager E et al. Effects of individual placement and support supplemented with cognitive remediation and work-focused social skills training for people with severe mental illness: a randomized clinical trial. JAMA Psychiatry 2019;**76**:1232.
50. Davis LL, Leon AC, Toscano R et al. A randomized controlled trial of supported employment among veterans with posttraumatic stress disorder. Psychiatric Services 2012;**63**:464–470.
51. Davis LL, Kyriakides TC, Suris AM et al. Effect of evidence-based supported employment vs transitional work on achieving steady work among veterans with posttraumatic stress disorder: a randomized clinical trial. JAMA Psychiatry 2018;**75**:316–324.
52. Drake RE, McHugo GJ, Bebout RR et al. A randomized clinical trial of supported employment for inner-city patients with severe mental disorders. Archives General Psychiatry 1999;**56**:627.
53. Drake RE, Frey W, Bond GR et al. Assisting Social Security Disability Insurance beneficiaries with schizophrenia, bipolar disorder, or major depression in returning to work. Am J Psychiatry 2013;**170**:1433.
54. Drake RE, McHugo GJ, Becker DR, Anthony WA, Clark RE. The New Hampshire study of supported employment for people with severe mental illness. J Consult Clin Psychol 1996;**64**:391–399.
55. Gold PB, Meisler N, Santos AB, Carnemolla MA, Williams OH, Keleher J. Randomized trial of supported employment integrated with assertive community treatment for rural adults with severe mental illness. Schizophr Bull 2006;**32**:378–395.
56. Killackey E, Allott K, Jackson HJ et al. Individual placement and support for vocational recovery in first-episode psychosis: randomised controlled trial. Br J Psychiatry 2019;**214**:76–82.
57. Killackey E, Jackson HJ, McGorry PD. Vocational intervention in first-episode psychosis: individual placement and support v. treatment as usual. Brit J Psychiatry 2008;**193**:114.
58. Latimer EA, Lecomte T, Becker DR et al. Generalisability of the individual placement and support model of supported employment: Results of a Canadian randomised controlled trial. Br J Psychiatry 2006;**189**:65–73.
59. Lehman AF, Goldberg R, Dixon LB et al. Improving employment outcomes for persons with severe mental illnesses. Arch Gen Psychiatry 2002;**59**:165–172.
60. Michon H, Busschbach JT, Stant AD, Vugt MD, Weeghel J, Kroon H. Effectiveness of individual placement and support for people with severe mental illness in The Netherlands: a 30-month randomized controlled trial. Psychiatr Rehabil J 2014;**37**:129–136.
61. Mueser KT, Clark RE, Haines M et al. The Hartford study of supported employment for persons with severe mental illness. J Consult Clin Psychol 2004;**72**:479–490.
62. Oshima I, Sono T, Bond GR, Nishio M, Ito J. A randomized controlled trial of individual placement and support in Japan. Psychiatr Rehabil J 2014;**37**:137–143.
63. Reme SE, Monstad K, Fyhn T et al. A randomized controlled multicenter trial of individual placement and support for patients with moderate-to-severe mental illness. Scand J Work Environ Health 2019;**45**:33–41.
64. Tsang HW, Chan A, Wong A, Liberman RP. Vocational outcomes of an integrated supported employment program for individuals with persistent and severe mental illness. J Behav Ther Exp Psychiatry 2009;**40**:292–305.
65. Twamley EW, Narvaez JM, Becker DR, Bartels SJ, Jeste DV. Supported employment for middle-aged and older people with Schizophrenia. Am J Psychiatric Rehabil 2008;**11**:76–89.
66. Viering S, Jäger M, Bärtsch B et al. Supported employment for the reintegration of disability pensioners with mental illnesses: a randomized controlled trial. Frontiers Public Health 2015;**3**:237–237.
67. Waghorn G, Dias S, Gladman B, Harris M, Saha S. A multi-site randomised controlled trial of evidence-based supported employment for adults with severe and persistent mental illness. Aust Occup Ther J 2014;**61**:424–436.
68. Wong KK, Chiu R, Tang B, Mak D, Liu J, Chiu SN. A randomized controlled trial of a supported employment program for persons with long-term mental illness in Hong Kong. Psychiatric Services 2008;**59**:84–90.
69. Zhang GF, Tsui CM, Lu AJB, Yu LB, Tsang HWH, Li D. Integrated supported employment for people with schizophrenia in mainland china: a randomized controlled trial. Am J Occup Ther 2017;**71**:7106165020p7106165021-7106165020p7106165028.
70. Hellstrom L, Bech P, Hjorthoj C, Nordentoft M, Lindschou J, Eplov LF. Effect on return to work or education of Individual Placement and Support modified for people with mood and anxiety disorders: results of a randomised clinical trial. Occup Environ Med 2017;**74**:717–725.
71. Bejerholm U, Larsson ME, Johanson S. Supported employment adapted for people with affective disorders-A randomized controlled trial. J Affect Disord 2017;**207**:212–220.
72. LePage JP, Lewis AA, Crawford AM et al. Incorporating in- dividualized placement and support principles into vocational re- habilitation for formerly incarcerated veterans. Psychiatr Serv 2016;**67**:735–742.
73. Reme SE et al. Work-focused cognitive-behavioural therapy and individual job support to increase work participation in common mental disorders: a randomised controlled multicentre trial. Occup Environ Med 2015;**72**:745–752.
74. Lones CE et al. Individual placement and support (IPS) for methadone maintenance therapy patients: a pilot randomized controlled trial. Adm Policy Ment Health 2017;**44**:359–364.
75. Higgins JP, Thompson SG, Deeks JJ, Altman DG. Measuring inconsistency in meta-analyses. BMJ 2003;**327**:557–560.
76. Bond GR, Drake RE, Pogue JA. Expanding Individual Placement and Support to populations with conditions and disorders other than serious mental illness. Psychiatr Serv 2019;**70**:488–498.
77. Drake RE, Becker DR, Bond GR. Introducing individual placement and support (IPS) supported employment in Japan. Psychiatry Clin. Neurosci. 2018;**73**:47–49.

Supporting Information

Additional Supporting Information may be found in the online version of this article:

Figure S1 Funnel plot.
Figure S2 Contour-enhanced funnel plot.
Figure S3 Publication bias with imputed missing studies.
Figure S4 L'Abbe plot.
Figure S5 Bubble plot for reg1 "notification procedures" with adjusted log(rr).
Figure S6 Bubble plot for reg5 "Definition of justified or unfair dismissal" with adjusted log(rr).
Figure S7 Bubble plot for year study was conducted with log (rr).

Table S1 Regression-based Egger test for small-study effects. Random-effects model (REML).
Table S2 Nonparametric trim-and-fill analysis of publication bias (Duval & Tweedie).
Table S3 Indexes with and without adjustment for register study and examination of multicollinearity between index and register indicator for adjusted models.
Table S4 Generosity of welfare disability benefits Index sub-indicators. Unadjusted and adjusted for register study.
Table S5 Integration policies index sub-components. Unadjusted and adjusted for register study.
Table S6 Legal protection against employment dismissals index sub-indicators.
Table S7 Regulation of temporary employment index sub-indicators.
Table S8 GDP, unemployment, disability welfare benefit rate and employment by educational attainment.

Paper II

Received: 24 September 2021 | Revised: 6 February 2022 | Accepted: 29 April 2022

DOI: 10.1111/spol.12828

SPECIAL ISSUE ARTICLE

WILEY

Are attitudes in employees of public employment service in line with the principles of individual placement and support? A questionnaire-based survey

Beate Brinchmann[1,2] | Miles Rinaldi[1,3] | Elisabeth Sandtorv[1,4] | Cathrine Fredriksen Moe[1,5] | David McDaid[6] | Eóin Killackey[7,8] | Arnstein Mykletun[1,2,9]

[1]Nordland Hospital trust, Centre for work and mental health, Bodø, Norway

[2]UiT–The Arctic University of Norway, Tromsø, Norway

[3]South West London and St George's Mental Health NHS Trust, London, UK

[4]Department of Clinical Medicine, University of Bergen, Bergen, Norway

[5]Faculty of Nursing and Health sciences, Nord University, Bodø, Norway

[6]Department of Health Policy, London School of Economics and Political Science, Care Policy and Evaluation Centre, London, UK

[7]Orygen, Melbourne, Australia

[8]Centre for Youth Mental Health, The University of Melbourne, Melbourne, Australia

[9]Norwegian Institute of Public Health, Oslo, Norway

Correspondence
Beate Brinchmann, Nordland Hospital trust, Centre for work and mental health, Bodø, Norway.
Email: beate.brinchmann@nordlandssykehuset.no

Funding information
Norges Forskningsråd, Grant/Award Numbers: 227097, 273665, 280589

Abstract

A high proportion of people with severe mental illness (SMI) want to work, consider it essential for recovery, yet employment rates are low. Many employees in public employment services (PES) work according to traditional attitudes that people with SMI are unable to work and if they do, risk harm from work-related stress. These attitudes conflict with principles in evidence based vocational models like individual placement and support (IPS) and probably contributes to the low-employment rate. The aim of this study was to investigate attitudes towards the evidence-based principles of IPS among PES employees with and without exposure to

IPS. A case vignette describing a person with SMI and statements referring to this vignette was developed and administered to PES employees at two timepoints, 4 years apart. Respondents indicated their attitudes on a six-point Likert scale to statements in accordance to the principles of IPS. Independent two-tailed sample *t*-tests were used to analyse differences between respondents in municipalities with IPS exposure, compared to municipalities without. Multiple linear regressions with attitudes as a dependent variable was used to test whether attitudes changed over time dependent on exposure to IPS. Attitudes were generally aligned with IPS principles compared to current PES practice. The municipality with IPS exposure had more favourable attitudes ($p < 0.01$). Changes in attitudes were minimal over time and did not differ between regions ($p < 0.287$). Attitudes of employees in PES are aligned with the principles of IPS and to a greater extent if exposed to IPS.

1 | INTRODUCTION

Mental disorders are a leading reason for incapacity benefits and sickness absence in many high-income countries (OECD, 2003, 2012). This has been an increasing problem for policymakers over the last decade with growing costs to the individual, employers and society as a whole (McDaid et al., 2007). One European study estimated that 50% of total costs related to mental ill health was due to welfare expenditure and reduced productivity (Gustavsson et al., 2011). In Norway, it is estimated that expenditure on disability and sickness benefits are approximately 5% of gross domestic product (OECD, 2013).

For individuals with mental health conditions, work can be an essential element of recovery and social inclusion. Good quality work, if sustained, has also been associated with better mental and physical health, improved quality of life and less contact with health services (Luciano et al., 2014; Modini, Joyce, et al., 2016; van der Noordt et al., 2014). Policy makers recognise the importance of employment integration as a central part of mental health policies, contributing to better health outcomes and the OECD identify the need for the transformation and redesign of existing pathways to support people with mental health conditions into work rather than onto incapacity and disability benefits (OECD, 2015).

One approach that works in alignment with mental health policies and a human-rights based approach is the evidence-based practice individual placement and support (IPS) approach to vocational rehabilitation. IPS enables people with moderate and severe mental health illness to obtain competitive employment. IPS is a form of supported employment and differs from other types of vocational rehabilitation which have traditionally taken a 'train-and place'-approach. Traditional vocational services typically focus time and resources on training and supporting people to develop new skills in segregated and sheltered environments. In contrast, the primary goal of IPS is to directly find a job and then provide continued support–a 'place-and-train' approach. An important evidence based principle of IPS is the emphasis on the preferences of each individual's own employment goals, thus supporting their own personal recovery process (Bond, 2004). A recent meta-regression including more than 6000 people in 27 controlled trials found that IPS increases the likelihood of achieving competitive employment for people with moderate and

severe mental illness (SMI) two-fold, compared to current traditional approaches (Brinchmann et al., 2020). IPS has also been tested in the Scandinavian countries with a somewhat hesitant attitude to implementation because of generous welfare policies despite this approach being effective (Bejerholm et al., 2015; Christensen et al., 2019; Reme et al., 2019). While the efficacy of IPS is well established (Kinoshita et al., 2013; Modini, Tan, et al., 2016) and policies support upscaling, the intervention is not fully scaled up as standard intervention anywhere in the world (Drake, 2020). Mainstream funding is lacking and access rates for people with moderate to severe mental conditions to IPS are low (Bond et al., 2020; Robert et al., 2016). We can point to initiatives to expand the availability of IPS in countries, such as the UK (Melleney & Kendall, 2020) and Norway but barriers at multiple levels are reported (Bonfils, 2021; Vukadin et al., 2021).

Supporting people with moderate and severe mental health illness into competitive employment can be challenging among personnel within public employment services (PES) (Bonfils, 2021). Such organisations often follow defined rules and regulations in accordance with 'train-and-place' approaches to vocational rehabilitation for people with limited employment experience or long-term unemployment (Hasson et al., 2011). Employees in PES' may have both negative and positive attitudes to 'place-and-train' approaches such as IPS. On the positive side, they may embrace IPS due to the evidence on efficacy (Modini, Tan, et al., 2016) and its alignment with active labour market policies (Rizza & Fioritti, 2020). However, scepticism towards IPS and its evidence-based principles could have policy and or practical implications (Casper & Carloni, 2007), impact on implementation efforts (Bejerholm et al., 2015; Drake et al., 2008), and negatively influence jobseekers' beliefs and motivation in finding and managing competitive work (Rinaldi et al., 2008). If PES professionals unduly favour traditional vocational rehabilitation principles this could limit the effectiveness of new pathways into work for people with moderate and moderate and SMI and undermine positive recovery processes towards work. There appears to be only one other study looking at PES staff attitudes towards IPS which found that more specialised and trained staff showed more favourable attitudes and beliefs in competitive employment being realistic for people with SMI (Knaeps et al., 2015). However, the many barriers reported at local level when implementing IPS (Bonfils et al., 2017) might also influence or change attitudes towards the principles of IPS and so attitudes should therefore also be followed over time.

Therefore, there are two aims of this study: firstly, to examine the attitudes of employees in a PES towards the evidence-based principles of IPS during an early phase of implementation of IPS. Secondly, to examine whether these attitudes change over time for PES employees with IPS exposure compared to employees without exposure to IPS.

2 | METHODS

This paper follows the STROBE statement for reporting (von Elm et al., 2007), following a predetermined but unregistered protocol.

2.1 | Setting

The context of this study was an effectiveness study of IPS in a municipality in Northern Norway. Norway makes an interesting case for research on IPS, both because of its generous and accessible welfare benefits, and also because of high-welfare dependency among people with mental illness in general (Brinchmann et al., 2020; Iacono, 2018; OECD, 2013). In addition, the responsibility and the employment of IPS employment specialists are within the PES system, not mental health services as is found in the majority of other countries. For this reason the attitudes among PES employees is vital to understand in this context (Government of Norway, 2017). IPS was implemented in the capital municipality in one county, the largest city in the area, with 50,000 inhabitants. Other municipalities in the region were included as a reference group. The region has 44 municipalities, 43 of these having their own PES. These offices represent Norway's PES, functions defined at EU level: (https://ec.europa.eu/social/main.jsp?catId=105&langId=en).

In 2013, there were 450 employees in these offices, increasing to 480 employees by 2017. The frontline PES workers have a dual role as gatekeepers towards welfare benefits as well as helping unemployed gain employment (Sadeghi & Fekjær, 2019). Traditionally there has been little coordination between PES staff and mental health services to support individuals with moderate and SMI into work. The traditional way of working has been a stepwise 'train and place' approach (Spjelkavik, 2012). Prior to 2013, there was no IPS activity in this region. In 2013, the PES together with the mental health service in the capital municipality, began implementing IPS and employed three full-time IPS employment specialists. Between 2012 and 2017, employees in the affected mental health services and PES were trained in the evidence-based principles of IPS. The IPS program had three independent IPS fidelity reviews during the period: the first in 2013 scored fair fidelity, while the second and third scored good fidelity. The rest of the region did not start implementing IPS before 2017.

2.2 | Questionnaire

A questionnaire was developed based on the acknowledged eight key principles of IPS (Drake, 2012).

BOX 1 Key principles in IPS*

1. Eligibility into IPS is based on patient choice; zero exclusion policy
2. The vocational and clinical services are integrated
3. Competitive employment is the primary goal
4. Each client gets personalised benefits counselling
5. Focus on rapid job search (within a month)
6. IPS employment specialist work systematic with job development
7. Clients gets time-unlimited support
8. Job search is guided by individual preferences

(*Ref: Drake, R.E., Bond, G. R., Becker, D. R. *IPS Supported Employment: An evidence-based approach*. 2012: New York: Oxford University Press.)

The questionnaire began with a case vignette about a hypothetical patient "Line" and continued with statements with reference to this vignette (Supplement text box Vignette Line S1). Eight paired statements were developed according to the eight key principles for IPS (Supplement figure Questionnaire S1). For each pair, one statement was in accordance to an IPS principle whilst the other statement opposed it. The statements opposing IPS were generally in line with current practice in the PES and in accordance with 'train-and-place' approaches to vocational rehabilitation. For example, for the IPS principle "Rapid job search" we developed the statement: "Line wants to work now. This means that the job search should start as soon as possible" paired with the divergent statement: "We need adequate time for work preparation and treatment before looking for competitive employment". Responses were collected on a six-point Likert scale defined by each pair of statements. Respondents were asked to read the case vignette and respond to the statements, marking on the Likert scale which best indicated their view. For two of the questions, 2 and 7, a score of six on the scale indicated attitudes in accordance with IPS, whereas a score of six on all other questions indicated attitudes more in accordance with usual practice. To check conceptual validity and as part of further questionnaire development, a focus group was conducted with representatives from a local PES office which further refined the questionnaire.

2.3 | Design and participants

The survey was conducted initially between September and October 2013, and repeated in May 2017. Survey data were collected in the context of meetings and seminars, or distributed by office managers at each of the 43 offices.

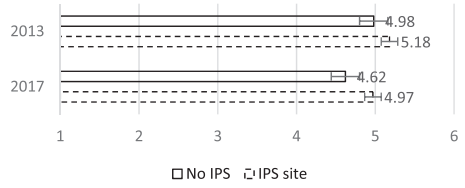
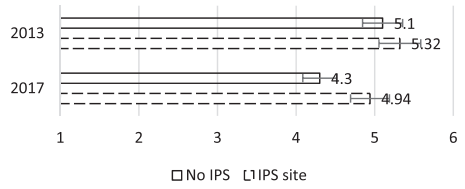
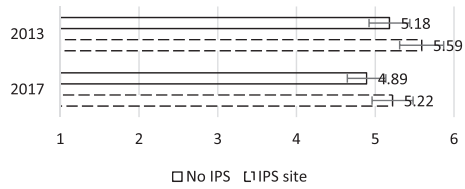
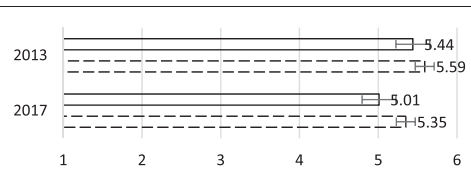
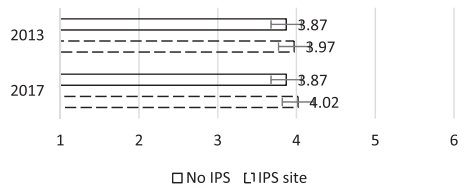
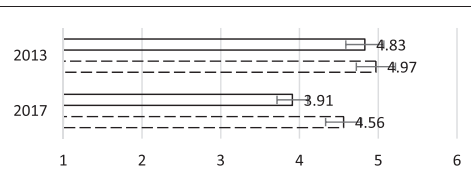
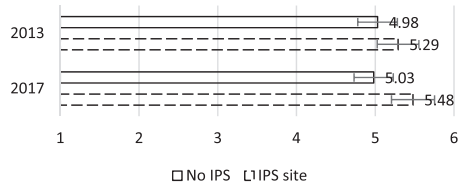
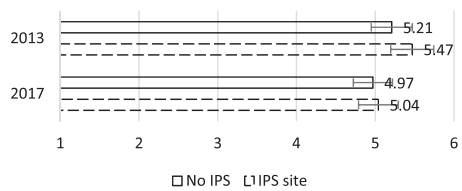
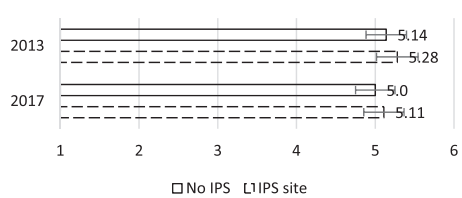
IPS principle	Opposing to IPS	Distribution of responses, visualised as means on a 6-point Likert scale. Data from 2013 and 2017 separated into IPS site versus sites with no IPS service.	According to IPS	Tests (details in supplementary table 1)
Sumscore				Difference pre-IPS 2013 p=.004* Difference post IPS 2017 p=.0013* Change in IPS-area p=.034 Change outside IPS area p<.001* Interaction time vs place p=.287
Eligibility based on client's choice	We must be realistic. Line has experienced many defeats and should be offered a new supported work position before a possible application for a permanent disability pension is sent		We must emphasize Line's wishes. Line should be allowed to try and gain competitive employment.	Difference pre-IPS 2013 p=.127 Difference post IPS 2017 p=.0045* Change in IPS-area p=.062 Change outside IPS area p<.001* Interaction time vs place p=.088
Integration of mental health with employment services	Health professionals should complete both their assessments and treatment of Line before the public employment office can help her get a job		There is no reason to wait for further medical assessments and treatments. The Public Employment office must, in close collaboration with the health sector, facilitate the process of looking for competitive employment.	Difference pre-IPS 2013 p=.004* Difference post IPS 2017 p=.0969 Change in IPS-area p=.03* Change outside IPS area p=.005* Interaction time vs place p=.739
Competitive employment	Usually it is not realistic for people with a serious mental illness such as Line, to function in a competitive job.		I think competitive employment should be the goal for Line as long as that is what she wants.	Difference pre-IPS 2013 p=.151 Difference post IPS 2017 p=.044* Change in IPS-area p=.076 Change outside IPS area p<.001* Interaction time vs place p=.287
Personalized welfare benefit counselling	Line has been dependent on social welfare financial support/benefits for a long time and she is understandably scared of losing this. She will need advice and support in order to try competitive employment.		If Line really wants to work, NAV's financial support will not hinder her. Financial advice will not be deciding factor in Line getting a job or not.	Difference pre-IPS 2013 p=.655 Difference post IPS 2017 p=.580 Change in IPS-area p=.895 Change outside IPS area p=.931 Interaction time vs place p=.861
Rapid job search	We need adequate time for work preparation and treatment before looking for competitive employment.		Line wants to work now. This means that the job search should start as soon as possible.	Difference pre-IPS 2013 p=.368 Difference post IPS 2017 p=.006* Change in IPS-area p=.093 Change outside IPS area p=. p<.001* Interaction time vs place p=.086

FIGURE 1 Aggregated reported means at two different locations and timepoints

Systematic job development	NAV has the country's largest register of vacant jobs in Norway. Line can apply for one of these.		To help Line get employment her contact person must make direct contact with potential employers.	Difference pre-IPS 2013 p=.071 Difference post IPS 2017 p=.009* Change in IPS-area p=.218 Change outside IPS area p=. p=.716 Interaction time vs place p=.510
Time unlimited and individualized Support	Line must follow NAV's rules and regulations and normal follow-up period. If she later needs further help, the case can be reopened.		Line should receive follow up from NAV for as long as she wishes and needs it. This can mean in long term follow-up, without any formal end, independent of whether she gets a job or not.	Difference pre-IPS 2013 p=.097 Difference post IPS 2017 p=.721 Change in IPS-area p=.032* Change outside IPS area p=.011* Interaction time vs place p=.443
Attention to client's preferences	The vocational rehabilitation advisor has valuable expertise and experience, which must first and foremost guide the job search.		Line's interests and preferences should first and foremost guide the search for employment.	Difference pre-IPS 2013 p=.356 Difference post IPS 2017 p=.465 Change in IPS-area p=.343 Change outside IPS area p=.141 Interaction time vs place p=.898

*Statistically significant finding (p<.05)

FIGURE 1 (Continued)

At the seminars, one of the authors collected the responses with help from personnel from PES. When the survey was completed in the local PES offices, the local office managers sent the responses to the researchers by post. Completing the survey was voluntary and anonymous.

2.4 | Statistics

Data were analysed by Stata version 15 (StataCorp, 2017). Scores for each of the statements, as well as a sum score for overall attitude towards the IPS principles were computed. The internal consistency of this scale was analysed by Cronbach's coefficient alpha. The independent samples *t*-test was used to analyse differences between responses from the geographical area with IPS exposure and areas without IPS exposure. This was executed for the total sum-score and for each of the individual items at two timepoints. Multiple linear regressions with attitudes as the dependent variable were also used to test the hypothesis that attitudes changed over time, dependent on IPS exposure. The hypothesis for interaction was tested by an interaction term (time by site) where both were coded as dichotomous, indicating 2013 versus 2017 and IPS versus no IPS exposure.

3 | RESULTS

The response rate was 86% in 2013 (385 out of 450), and 68% in 2017 (324 out of 480).

The Cronbach's coefficient alpha based on standardised items for the sum score was 0.616. In Figure 1, responses are illustrated with histograms. The survey done in areas without IPS experience are shown as bars with black borders in the histogram, and the survey done at areas with experience with IPS are shown as bars with dotted

borders. The figure illustrates aggregated means with 95% confidence intervals for responses on each IPS principle in 2013 and 2017 for areas with and without IPS. P-values from independent *t*-test show whether changes in scores between 2013 and 2017 were significant. (Figure 1 and supplement Table S1). The statements consistent with IPS principles are on the right side of the figure, and the statements that are inconsistent with IPS principles are on the left. Respondents reported attitudes in favour with the IPS principles, and in disagreement to the current practice, they were expected to follow. The result regarding the item on the role of personalised welfare benefits counselling, was the only item that revealed a neutral attitude between opposing statements.

The total sum-score for attitudes was in favour of the IPS principles with mean scores of 4.98 in municipalities without exposure to IPS and 5.18 with IPS exposure in 2013. Attitudes changed in a less favourable direction, from an IPS perspective, from 2013 until 2017. In 2017, the average score was 4.62 in municipalities without IPS exposure and 4.97 with IPS exposure. The difference in average attitudes between regions with and without IPS exposure were statistically significant in 2013 and 2017 ($p < 0.01$). The decrease in favourability towards IPS exposure was also statistically significant ($p < 0.001$). There was no time by place interaction in the development of attitudes (all $p > 0.05$) and the trends were parallel in areas with and without IPS exposure (Figure 1 and Supplement Table S1).

4 | DISCUSSION

This study is to the best of our knowledge the first study looking at PES attitudes to IPS in a Scandinavian context. The findings from this survey suggests attitudes strongly in favour of the key principles in a 'place and train' approach. These positive attitudes are statistically stronger in the municipality with training and practical IPS-exposure, compared to municipalities without exposure to IPS. All municipalities show a statistically significant decrease in positive attitude towards these principles after 4 years, with the strongest decrease in the area without IPS-exposure. However, the scores, as defined by the scale, are still positive and there is no statistical difference between the two groups for how attitudes changed dependent of time and exposure to IPS.

The decline in positive attitude between time periods is significant but small and suggests that the initial favourable perspective has been tempered over time, although still positive. In Norway, the Directorate of Labour and Welfare (PES) has been an advocate for IPS, and several policy documents have supported the development towards a more general 'place-and-train' approach in the PES (NOU, 2012:6, Arbeids- og velferdsdirektoratet, 2015). This might partly explain the positive attitudes in favour of this approach among PES staff across all areas in our study, although more positive in areas exposed to IPS. The decline in attitudes might reflect both the experiences and practical implications of trying to implement IPS in Norway, but also a regression towards the means after the first survey.

It's interesting to note that all PES staff significantly decreased their positive attitudes towards specific questions regarding integration of employment support with health services and time unlimited support. These principles rely on close and timely collaboration between sectors, and although we see a large scale-up of IPS in Norway, integration challenges are one of the biggest barriers (Fyhn et al., 2021; Moe et al., 2021).

Responses to the item on the role of personal benefit counselling were less in favour of IPS than the average of the other items. The IPS implementation literatures focus on welfare benefits and became an additional evidence based principle based on randomised controlled trials outside of North America (Bond, 2004). In a Scandinavian context, in-work poverty does not really exist compared to other countries. Norway is a generous and comprehensive welfare state and has an active labour market policy. Living in a well-resourced welfare state might affect norms and values (van der Wel & Halvorsen, 2015). The latent functions of work like having colleagues, social support, the achievements of personal goals, time structure and quality of life might be considered as potentially more important motivators for whether people want a job or not, rather than the need to reduce public expenditure.

If this study is capturing the true attitudes of PES employees, there is little reason to believe that employees hold a strong belief in the traditional principles following a 'train-and-place' approach that they might have been

expected to follow in their daily work. The findings suggest that competitive employment is viewed as both possible and realistic for people with moderate and SMI. This is reassuring as such attitudes should prevail from PES staff who are tasked with helping unemployed and disadvantaged people back into the labour market. Nevertheless, a prevocational training approach across the sector and a focus on direct placement into competitive employment without prevocational training or through a stepwise training approach in sheltered working environments still prevails.

The positive attitudes might also suggest that PES employees consider there are employment opportunities for a range of workers with little or no current work history within a labour market which is highly unionised with good job security. This may be partly influenced by prevailing economic circumstances. The unemployment rate has been low in this region over a long period, and there is also growth in employment possibilities, although lower than the median growth in the rest of Norway during the same period.

The findings from our study appear to align with results from Knaeps et al., 2015 that more specialised trained counsellors believe more in competitive employment for people with SMI. Most studies that have examined attitudes towards employment and IPS, have been focused on health and social care staff. This reflects the dominant implementation stance across the world where IPS is delivered by mental health services rather than PES'. The attitudes of health and social care staff has shown that they underestimate people with moderate to SMI' wishes to return to work and their capability to work, along with overestimating the risks connected to work related stress and fears of relapse (Boardman et al., 2003; Brucker & Doty, 2019; Marwaha et al., 2009). Training and exposure to IPS for health staff have been shown to result in more positive attitudes and behaviours towards supporting clients to gain and retain employment (Brucker & Doty, 2019; Craig et al., 2014; Rinaldi et al., 2011).

5 | IMPLICATIONS FOR POLICY

Norway has seen a shift in policy from 'train-and-place' to a more evidence-based 'place-then-train' approach. The positive attitudes among PES employees in this study probably reflects that shift in policy. Policies and attitudes seem to be in place to support an upscaling of IPS, but important steps remain. The pathway from attitude to behaviour is still to be investigated, and to enhance a shift in behaviour, several steps might be considered. Practical implementation of IPS requires investment in a system for training, supervision and technical support to achieve good understanding of how well the evidence-based practice has been implemented (fidelity) and its sustainability over time (Isett, 2008). Training, fidelity checks and supervision is currently funded through the PES in Norway but it remains to be seen whether these systems sustain over longer time-periods (Helsedirektoratet og velferdsdirektoratet, 2019). Fidelity monitoring will help understand organisational dynamics and how the principles work in daily practice in PES and in the collaboration between PES and health services. This can support further necessary pragmatic adaption of rules and regulations as well as minimise problems arising from siloed separation of budgets between PES and health. Flexibility in welfare benefits are also issues that policy should address to support further service redesign for people with moderate to SMI. It is possible that people with moderate to SMI might be reluctant to consider work if this means period of financial hardships between work periods. From a wider perspective, the economic case for IPS also needs to be considered as a critical input to plan and prioritise the further upscaling of IPS. If in the long-term IPS can achieve better mental (and physical) outcomes while reducing long-term welfare dependency (Holmås et al., 2021) there are potential economic benefits to both the health sector and PES. Based on the efficacy of IPS for people with moderate to SMI, the approach is rapidly expanding into other client populations around the world (Hellström et al., 2021; Probyn et al., 2021). Research will be critical to the understand whether adaptations or adjustments to the existing IPS principles are needed for these populations.

Furthermore, wider societal attitudes towards mental illness in society may need to be addressed; negative public attitudes towards active labour market interventions like IPS may limit their expansion. It must be remembered

that while supported employment and a right-based approach is supported by employees in PES, social stigma around mental illness in society in general still persists (Brouwers, 2020; Fyhn, 2021).

6 | LIMITATIONS

This study has some limitations. First; the attitude checklist applied in this study was developed by us for this project. Secondly; the Cronbach's Alpha was 0.616, indicating this may not be a univariate latent construct with high-internal consistency. There also appears to be a ceiling-effect in the responses, which were more in favour of IPS than the current practice the respondents were expected to follow in their daily work. This may be due to a social-desirability. Third, a vignette with a more severe diagnosis or lower function level would most likely have reduced the support for the IPS principles, hence also reducing the potential ceiling-effect. A vignette with a person with an addiction may, for example, be perceived as more self-inflicted, blameworthy and dangerous and might influence willingness to assist with job seeking and job keeping (Corrigan, 2007). Despite limitations the results clearly show favourable attitudes towards the key principles of IPS reported by a large sample at two time-points over several years and so we believe the results to be valid.

7 | CONCLUSION

Attitudes of PES employees appear to be in line with the policy direction of IPS and 'place and train' approaches to vocational rehabilitation in Norway. These attitudes do not appear to have changed significantly over time but in areas where PES employees have training and exposure to IPS, their attitudes are more positive. However, we do not know whether such attitudes translate into behaviours and improved labour market outcomes for people with moderate to severe mental health conditions.

AUTHORS' CONTRIBUTIONS

Beate Brinchmann and Arnstein Mykletun devised the study. Beate Brinchmann extracted the data, and together with Elisabeth Sandtorv and Arnstein Mykletun conducted the analysis. Beate Brinchmann, Miles Rinaldi and Arnstein Mykletun interpreted the results and discussed the analysis and the visualisation of the analysis with Eóin Killackey, Cathrine Fredriksen Moe and David McDaid. Beate Brinchmann wrote the manuscript. All authors read and contributed to subsequent versions, and approved the final version of this manuscript.

ACKNOWLEDGMENTS

The authors want to acknowledge the Labour and Welfare Administration Office (NAV) in Nordland for facilitating for this study. We also want to thank all the participants from the different local Labour and Welfare Offices that contributed.

FUNDING INFORMATION

This study is funded by research grants from the Research Council of Norway: 273665, 280589, 227097 and Nordland Hospital Trust.

CONFLICT OF INTEREST

There are no financial or non-financial competing interest from the authors of this article. First author work with the implementation of the individual placement and support approach in the geographical area where this survey was conducted. There are no gains connected to the results of the study.

DATA AVAILABILITY STATEMENT

The handwritten responses of the questionnaires will not be shared. The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

The study conforms to the principles outlined in the Declaration of Helsinki. The regional ethics committee approved the study (2012/2239). The study is approved by the Data Protection Officer at Nordland Hospital Trust. All participants who answered the questionnaire received verbal information about the study and the purpose. Participation was voluntary, with no personally identifiable data, and the ethics committee approved the study without collecting consent.

ORCID

Beate Brinchmann https://orcid.org/0000-0002-5793-7668
Cathrine Fredriksen Moe https://orcid.org/0000-0001-9520-4011
Arnstein Mykletun https://orcid.org/0000-0002-3878-0079

REFERENCES

Arbeids-og velferdsdirektoratet (2015). Et NAV med muligheter. Bedre brukermøter, større handlingsrom og tettere på arbeidsmarkedet. https://www.regjeringen.no/globalassets/departementene/asd/dokumenter/2015/sluttrapport-ekspertgruppen-nav_9.4.15.pdf

Bejerholm, U., Areberg, C., Hofgren, C., Sandlund, M., & Rinaldi, M. (2015). Individual placement and support in Sweden-a randomized controlled trial. *Nordic Journal of Psychiatry*, *69*(1), 57–66.

Boardman, J., Grove, B., Perkins, R., & Shepherd, G. (2003). Work and employment for people with psychiatric disabilities. *The British Journal of Psychiatry: the Journal of Mental Science*, *182*, 467–468. https://doi.org/10.1192/bjp.182.6.467

Bond, G. R. (2004). Supported employment: Evicence for an evidence-based practice. *Rehabilitation Journal*, *27*(4), 345–359. https://doi.org/10.2975/27.2004.345.359

Bond, G. R., Drake, R. E., & Becker, D. R. (2020). An update on individual placement and support. *World psychiatry: official journal of the World Psychiatric Association (WPA)*, *19*(3), 390–391. https://doi.org/10.1002/wps.20784

Bonfils, I. S. (2021). Implementing the individual placement and support approach in institutional settings for employment and mental health services – Perceptions and challenges from a case study in Denmark. *European Journal of Social Work*, *1-14*, 471–484. https://doi.org/10.1080/13691457.2020.1870216

Bonfils, I. S., Hansen, H., Dalum, H. S., & Eplov, L. F. (2017). Implementation of the individual placement and support approach – Facilitators and barriers. *Scandinavian Journal of Disability Research*, *19*(4), 318–333. https://doi.org/10.1080/15017419.2016.1222306

Brinchmann, B., Widding-Havneraas, T., Modini, M., Rinaldi, M., Moe, C. F., McDaid, D., Park, A-La., Killackey, E., Harvey, S. B., & Mykletun, A. (2020). A meta-regression of the impact of policy on the efficacy of individual placement and support. *Acta Psychiatrica Scandinavica*, *141*(3), 206–220.

Brouwers, E. P. M. (2020). Social stigma is an underestimated contributing factor to unemployment in people with mental illness or mental health issues: Position paper and future directions. *BMC Psychology*, *8*(1), 36. https://doi.org/10.1186/s40359-020-00399-0

Brucker, D. L., & Doty, M. (2019). Community mental health center staff attitudes about employment for persons with serious mental illness. *Psychiatric Rehabilitation Journal*, *42*(1), 32–40. https://doi.org/10.1037/prj0000326

Casper, E. S., & Carloni, C. (2007). Assessing the underutilization of supported employment services. *Psychiatric Rehabilitation Journal*, *30*(3), 182–188. https://doi.org/10.2975/30.3.2007.182.188

Christensen, T. N., Wallstrom, I. G., & Stenager, E. (2019). Effects of individual placement and support supplemented with cognitive remediation and work-focused social skills training for people with severe mental illness: A randomized clinical trial (vol 821, 9781, 2019). *JAMA Psychiatry*, *76*(12), 1319.

Corrigan, P. W., Larson, J. E., & Kuwabara, A. (2007). Mental illness stigma and the fundamental components of supported employment. *Rehabilitation Psychology*, *52*(4), 451–457.

Craig, T., Shepherd, G., Rinaldi, M., Smith, J., Carr, S., Preston, F., & Singh, S. (2014). Vocational rehabilitation in early psychosis: Cluster randomised trial. *The British Journal of Psychiatry*, *205*(2), 145–150.

Drake, R., Skinner, J., & Goldman, H. H. (2008). What explains the diffusion of treatments for mental illness? *The American Journal of Psychiatry*, *165*(11), 1385–1392. https://doi.org/10.1176/appi.ajp.2008.08030334

Drake, R. E. (2020). Introduction to the special issue on individual placement and support (IPS) international. *Psychiatric Rehabilitation Journal*, *43*(1), 1. https://doi.org/10.1037/prj0000401

Drake, R. E., Bond, G. R., & Becker, D. R. (2012). *IPS supported employment: An evidence-based approach*. Oxford University Press: New York.

Drake, R. E., Bond, G. R., Goldman, H. H., Hogan, M. F., & Karakus, M. (2016). Individual placement and support services boost employment for people with serious mental illnesses. *But Funding Is Lacking. Health Affairs*, *35*(6), 1098–1105. https://doi.org/10.1377/hlthaff.2016.0001

Fyhn, T. (2021). Barriers and facilitators to increasing work participation among people with moderate to severe mental illness the University of Bergen. https://bora.uib.no/bora-xmlui/handle/11250/2738019

Fyhn, T., Øygarden, O., Monstad, K., & Skagseth, M. (2021). *Evaluering av samarbeidet mellom NAV og helsetjenesten om individuell jobbstøtte (IPS)*. NORCE, 1-2021.

Government of Norway. (2017). More people with mental health problems will receive help to find work. https://www.regjeringen.no/no/aktuelt/flere-med-psykiske-helseproblemer-skal-fa-jobbhjelp/id2574912/

Gustavsson, A., Svensson, M., Jacobi, F., Allgulander, C., Alonso, J., Beghi, E., … Olesen, J. (2011). Cost of disorders of the brain in Europe 2010. *European Neuropsychopharmacology: The Journal of the European College of Neuropsychopharmacology*, *21*, 718–779. https://doi.org/10.1016/j.euroneuro.2011.08.008

Hasson, H., Andersson, M., & Bejerholm, U. (2011). Barriers in implementation of evidence-based practice: Supported employment in Swedish context. *Journal of Health, Organisation and Management*, *25*(3), 332–345.

Hellström, L., Pedersen, P., Christensen, T. N., Wallstroem, I. G., Bojesen, A. B., Stenager, E., Bejerholm, U., van Busschbach, J., Mischon, H., Mueser, K. T., Reme, S. E., White, S., & Eplov, L. F. (2021). Vocational outcomes of the individual placement and support model in subgroups of diagnoses, substance abuse, and forensic conditions: A systematic review and analysis of pooled original data. *Journal of Occupational Rehabilitation*, *31*(4), 699–710. https://doi.org/10.1007/s10926-021-09960-z

Helsedirektoratet og Arbeids- og velferdsdirektoratet (2019). *Tilstand og utfordringer på arbeid-helseområdet*. Rapport fra Arbeids- og velferdsdirektoratet og Helsedirektoratet til Arbeids- og sosialdepartementet og Helse- og omsorgsdepartementet.

Holmås, T. H., Monstad, K., & Reme, S. E. (2021). Regular employment for people with mental illness – An evaluation of the individual placement and support programme. *Social Science & Medicine*, *270*, 113691 10.1016/j.socscimed.2021.113691

Iacono, R. (2018). The Nordic model of economic development and welfare: Recent developments and future prospects. *Intereconomics*, *53*(4), 185–190. https://doi.org/10.1007/s10272-018-0747-2

Isett, K. R., Burnam, M. A., Coleman-Beattie, B., Hyde, P. S., Morrisey, J. P., Magnabosco, J., Rapp, C., Ganju, G., & Goldman, H. H. (2008). The role of the state mental health authorities in managing change for the implementation of evidence-based practices. *Community Mental Health Journal*, *44*, 195–211. https://doi.org/10.1007/s10597-007-9107-6

Kinoshita, Y., Furukawa, T. A., Kinoshita, K., Honyashiki, M., Omori, I. M., Marshall, M., Bond, G. R., Huxley, P., Amano, N., & Kingdon, D. (2013). Supported employment for adults with severe mental illness [meta-analysis research support, non-U.S. Gov't review]. *Cochrane Database of Systematic Reviews*, *9*, CD008297. https://doi.org/10.1002/14651858.CD008297.pub2

Knaeps, J., Neyens, I., Donceel, P., van Weeghel, J., & Van Audenhove, C. (2015). Beliefs of vocational rehabilitation counselors about competitive employment for people with severe mental illness in Belgium. *Rehabilitation Counseling Bulletin*, *58*(3), 176–188. https://doi.org/10.1177/0034355214531075

Luciano, A., Bond, G. R., & Drake, R. E. (2014). Does employment alter the course and outcome of schizophrenia and other severe mental illnesses? A systematic review of longitudinal research. *Schizophrenia Research*, *159*(2–3), 312–321. https://doi.org/10.1016/j.schres.2014.09.010

Marwaha, S., Balachandra, S., & Johnson, S. (2009). Clinicians' attitudes to the employment of people with psychosis. *Social Psychiatry and Psychiatric Epidemiology*, *44*(5), 349–360. https://doi.org/10.1007/s00127-008-0447-5

McDaid, D., Knapp, M., & Medeiros, H. (2007). *Employment and mental health: Assessing the economic impact and the case for intervention*. MEEN Network 2008.

Melleney, L., & Kendall, T. (2020). Individual placement and support (IPS) in England. *Psychiatric Rehabilitation Journal*, *43*(1), 76–78. https://doi.org/10.1037/prj0000367

Modini, M., Joyce, S., Mykletun, A., Christensen, H., Bryant, R. A., Mitchell, P. B., & Harvey, S. B. (2016). The mental health benefits of employment: Results of a systematic meta-review. *Australasian Psychiatry*, *24*(4), 331–336. https://doi.org/10.1177/1039856215618523

Modini, M., Tan, L., Brinchmann, B., Wang, M. J., Killackey, E., Glozier, N., Mykletun, A., & Harvey, S. B. (2016). Supported employment for people with severe mental illness: Systematic review and meta-analysis of the international evidence. *British Journal of Psychiatry*, *209*(1), 14–22.

Moe, C., Brinchmann, B., Rasmussen, L., Brandseth, O. L., McDaid, D., Killackey, E., … Mykletun, A. (2021). Implementing individual placement and support (IPS): The experiences of employment specialists in the early implementation phase of IPS in northern Norway. *The IPSNOR study*. *BMC Psychiatry*, *21*(1), 632. https://doi.org/10.1186/s12888-021-03644-x

NOU 2012. Arbeidsrettede tiltak. Oslo https://www.regjeringen.no/no/dokumenter/nou-2012-6/id672029/

OECD. (2003). Transforming Disability into Ability: Policies to Promote Work and Income Security for Disabled People, Paris. https//doi.org/10.1787/9789264158245-en. OECD Publishing

OECD. (2012). *Sick on the job?* Myths and Realities about Mental Health and Work. OECD Publishing, Paris. https//doi.org/10.1787/9789264124523-en.

OECD. (2013). *Mental health and work: Norway*, *Mental Health and Work*. OECD Publishing, Paris. https//doi.org/10.1787/9789264178984-en.

OECD. (2015). Fit Mind. *Fit Job: From Evidence to Practice in Mental Health and Work*. Mental Health and Work, OECD Publishing, Paris. https://doi.org/10.1787/9789264228283-en

Probyn, K., Engedahl, M. S., Rajendran, D., Pincus, T., Naeem, K., Mistry, D., Underwood, M., & Froud, R. (2021). The effects of supported employment interventions in populations of people with conditions other than severe mental health: A systematic review. *Primary Health Care Research & Development*, *22*, e79. https://doi.org/10.1017/S1463423621000827

Reme, S. E., Monstad, K., Fyhn, T., Sveinsdottir, V., Løvvik, C., Lie, S. A., & Øverland, S. (2019). A randomized controlled multicenter trial of individual placement and support for patients with moderate-to-severe mental illness. *Scandinavian Journal of Work, Environment & Health*, *1*, 33–41. https://doi.org/10.5271/sjweh.3753

Rinaldi, M., Montibeller, T., & Perkins, R. (2011). Increasing the employment rate for people with longer-term mental health problems. *The Psychiatrist*, *35*(9), 339–343. https://doi.org/10.1192/pb.bp.109.028050

Rinaldi, M., Perkins, R., Glynn, E., Montibeller, T., Clenaghan, M., & Rutherford, J. (2008). Individual placement and support: From research to practice. *Advances in Psychiatric Treatment*, *14*(1), 50–60. https://doi.org/10.1192/apt.bp.107.003509

Rizza, R., & Fioritti, A. (2020). Is individual placement and support an "active" labor market policy? *Psychiatric Rehabilitation Journal*, *43*(1), 60–64. https://doi.org/10.1037/prj0000396

Sadeghi, T., & Fekjær, S. B. (2019). Frontline workers' competency in activation work. *International Journal of Social Welfare*, *28*(1), 77–88. https://doi.org/10.1111/ijsw.12320

Spjelkavik, Ø. (2012). Supported employment in Norway and in the other nordic countries. *Journal of Vocational Rehabilitation*, *37*(3), 163–172.

StataCorp. (2017). *StataCorp. Stat statistical software: Release 15*. StataCorp LLC.

van der Noordt, M., IJzelenberg, H., Droomers, M., & Proper, K. I. (2014). Health effects of employment: A systematic review of prospective studies. *Occupational and Environmental Medicine*, *71*(10), 730–736.

van der Wel, K. A., & Halvorsen, K. (2015). The bigger the worse? *A Comparative Study of the Welfare State and Employment Commitment*, *29*(1), 99–118. https://doi.org/10.1177/0950017014542499

von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., & Vandenbroucke, J. P. (2007). The strengthening the reporting of observational studies in epidemiology (STROBE) statement: Guidelines for reporting observational studies. *The Lancet*, *370*(9596), 1453–1457. https://doi.org/10.1016/S0140-6736(07)61602-X

Vukadin, M., Schaafsma, F. G., Michon, H. W. C., de Maaker-Berkhof, M., & Anema, J. R. (2021). Experiences with individual placement and support and employment – A qualitative study among clients and employment specialists. *BMC Psychiatry*, *21*(1), 181. https://doi.org/10.1186/s12888-021-03178-2

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

How to cite this article: Brinchmann, B., Rinaldi, M., Sandtorv, E., Moe, C. F., McDaid, D., Killackey, E., & Mykletun, A. (2022). Are attitudes in employees of public employment service in line with the principles of individual placement and support? A questionnaire-based survey. *Social Policy & Administration*, *56*(4), 681–692. https://doi.org/10.1111/spol.12828

Paper III

Psychological Medicine

cambridge.org/psm

Original Article

*Beate Brinchmann and Sina Wittlund are joint first authors.

Cite this article: Brinchmann B, Wittlund S, Lorentzen T, Moe C, McDaid D, Killackey E, Rinaldi M, Mykletun A (2024). The societal impact of individual placement and support implementation on employment outcomes for young adults receiving temporary health-related welfare benefits: a difference-in-differences study. *Psychological Medicine* 1–9. https://doi.org/10.1017/S0033291723003744

Received: 11 August 2023
Revised: 21 November 2023
Accepted: 5 December 2023

Keywords:
individual placement and support; IPS; mental illness; IPS implementation; health-related rehabilitation; welfare benefits; cross-sector collaboration; societal impact; employment; return-to-work; difference-in-differences method; causal effect

Corresponding author:
Sina Wittlund;
Email: sina.m.wittlund@nord.no

The societal impact of individual placement and support implementation on employment outcomes for young adults receiving temporary health-related welfare benefits: a difference-in-differences study

Beate Brinchmann[1,*], Sina Wittlund[1,2,3,*], Thomas Lorentzen[1,2], Cathrine Moe[1,4], David McDaid[5], Eoin Killackey[6,7], Miles Rinaldi[1,8,9] and Arnstein Mykletun[1,9,3,10]

[1]Centre for Work and Mental Health, Nordland Hospital Trust, Bodø, Norway; [2]Institute of Sociology, University of Bergen, Bergen, Norway; [3]Department of Community Medicine, UiT– The Arctic University of Norway, Tromsø, Norway; [4]Faculty of Nursing and Health sciences, Nord University, Bodø, Norway; [5]Department of Health Policy, Care Policy and Evaluation Centre, London School of Economics and Political Science, London, UK; [6]Orygen, Melbourne, Australia; [7]Centre for Youth Mental Health, The University of Melbourne, Melbourne, Australia; [8]South West London and St George's Mental Health NHS Trust, London, UK; [9]Centre for Research and Education in Forensic Psychiatry, Haukeland University Hospital, Bergen, Norway and [10]Division for Health Services, Norwegian Institute of Public Health, Oslo, Norway

Abstract

Background. Individual placement and support (IPS) is an evidence-based practice that helps individuals with mental illness gain and retain employment. IPS was implemented for young adults at a municipality level through a cross-sectoral collaboration between specialist mental healthcare, primary mental healthcare, and the government funded employment service (NAV). We investigated whether IPS implementation had a causal effect on employment outcomes for all young adults in receipt of a temporary health-related rehabilitation (work assessment allowance, WAA) welfare benefit, measured at the societal level compared to municipalities that did not implement IPS.

Method. We used a difference in differences design to estimate the effects of IPS implementation on the outcome of workdays per year using longitudinal registry data. We estimate the average effect of being exposed to IPS implementation during four-years of implementation compared to ten control municipalities without IPS for all WAA recipients.

Results. We found a significant, positive, causal effect on societal level employment outcomes of 5.6 ($p = 0.001$, 95% CI 2.7–8.4) increased workdays per year per individual, equivalent to 12.7 years of increased work in the municipality where IPS was implemented compared to municipalities without IPS. Three years after initial exposure to IPS implementation individuals worked, on average, 10.5 more days per year equating to 23.8 years of increased work.

Conclusions. Implementing IPS as a cross sectoral collaboration at a municipality level has a significant, positive, causal, societal impact on employment outcomes for all young adults in receipt of a temporary health-related rehabilitation welfare benefit.

Introduction

Individual placement and support (IPS) is an evidence-based practice that helps individuals with mental illness gain and retains employment (Bond, 2004). It is a form of supported employment that is integrated with mental health services to provide comprehensive multidisciplinary support. IPS is manualized (Becker & Drake, 2003) with a fidelity scale (Bond, Peterson, Becker, & Drake, 2012) which assesses whether it is being implemented as intended. IPS has been shown to be both the most effective and cost-effective way of supporting individuals with mental illness into employment with over 27 randomized controlled trials (RCTs) finding employment rates to be more than doubled in IPS compared to other vocational approaches (Brinchmann et al., 2020; Park et al., 2022). Internationally, observational studies demonstrate IPS can be implemented into routine clinical practice to good fidelity with local contextual adaptations (Bond, Lockett, & van Weeghel, 2020; Richter & Hoffmann, 2019). Based on the effectiveness for individuals with mental illness, IPS is expanding, with positive emerging findings, to serve health conditions beyond mental illness (Bond, Drake, & Pogue, 2019) including young adults at risk of early work disability (Sveinsdottir et al., 2020). At a macro-economic level, IPS effectiveness is found to be independent of gross domestic product,

unemployment rates, generosity of welfare benefits, or type of integration policies (Brinchmann et al., 2020).

For people with mental illness there is good RCT evidence for IPS at the individual level (de Winter et al,. 2022) and emerging positive RCT evidence for other health conditions (Probyn et al., 2021). However, there is a lack of evidence for a societal impact (Boardman & Rinaldi, 2013) and a need for a higher order test beyond individual level efficacy and effectiveness RCTs. This study reports on the implementation of IPS as a cross sectoral collaboration at a municipality level for young adults with mental illness and in receipt of a temporary health-related rehabilitation welfare benefit. An assumption was made that by implementing IPS as a cross sectoral collaboration it would influence employment outcomes that extend beyond the target group as the implementation of IPS would impact on the ways of working across both specialist and primary mental healthcare, and the government funded employment service. It is important to test this hypothesis because of the potential population health and economic benefits as well as implications for societal well-being. Considering this, the aim of this study is to test whether IPS implementation within a municipality area has an effect on employment outcomes for all young adults in receipt of a temporary health-related rehabilitation welfare benefit, measured at the societal level compared to municipalities that did not implement IPS.

Methods

Setting

The intervention municipality was Bodø, which is the second largest city in northern Norway and the capital in Nordland County. The municipality has approximately 50 000 inhabitants and a population density of 39.3/km^2. The specialist mental health services in Bodø provide both inpatient and outpatient care and in primary care there is a mental health outreach service for people with mental illness who need longer-term support based on the nature, duration, and complexity of their needs. The city has a government funded employment service (NAV) which provides all employment and welfare services.

IPS implementation

IPS was implemented at a municipality level through a cross sectoral collaboration, led by specialist mental health services with the primary care outreach service and NAV. An implementation support team included a 'change agent' within each sector responsible for the preparation and implementation of IPS. Throughout the implementation, clinicians, NAV frontline staff and leaders were frequently brought together for education, training, and guidance about IPS and associated ways of working to counteract the traditional silos between services. To understand the impact of this, repeated testing of NAV staff attitudes towards IPS happened in 2013 and 2017 (Brinchmann et al., 2022).

Two implementation frameworks were used during the preparation and implementation stages: The New Hampshire-Dartmouth Research Center Toolkit (Swanson, Becker, Drake, & Merrens, 2008) with the IPS fidelity scale and, the Exploration, Preparation, Implementation, Sustainment (EPIS) framework (Aarons, Hurlburt, & Horwitz, 2011) to understand the inner and outer contexts within the implementation and the interplay between them. For a review of the outer context see (Moe et al., 2021).

IPS implementation occurred in three stages: a preparation stage (2010–2012), an implementation stage (2013–2016) and a sustainability stage (2017–2019). Table 1 shows the preparation and implementation stage factors, timeline, implementation context and process outcome data including independently assessed fidelity scores.

Target population for IPS

The target population for IPS were young adults (18–40 years) receiving support from a multidisciplinary psychosis team within specialist mental health services, those receiving support from the primary care mental health outreach service and, receiving the work assessment allowance (WAA) welfare benefit. Clinicians were instructed that individuals they considered being unable to pursue life goals such as employment could be included. The WAA is the only temporary health-related rehabilitation benefit in Norway and is available to individuals assessed as having at least a 50% reduced work capacity due to a medical condition (National Insurance Act, 2017).

Study population

Norwegian inhabitants aged 18–40 with an ongoing WAA in Bodø municipality or ten comparable control municipalities without IPS were our study population. Control municipalities were selected a priori based on KOmmune STat RApportering (KOSTRA) reporting from Statistics Norway (SSB). The KOSTRA report classifies Norwegian municipalities into "population size, economic workload, and economic capacity. Economic workload and capacity measures are estimated by the local government spending behavior model and depend on local government income, socio-demographic factors and geographic variables" (Kringlebotten & Langørgen, 2020). Control municipalities were Kongsberg, Lier, Røyken, Horten, Tønsberg, Larvik, Faerder, Porsgrunn, Grimstad, and Steinkjær.

Study data source

We used high quality longitudinal registry data collected and linked by NAV. Demographics, contractual man-days (defined as "the number of days a person has agreed to work for his employer in a given period, adjusted for fraction of employment, weekends and public holidays." (Statistikk sentralbyrå (Statistics Norway), 2000), WAA, and diagnoses were included in the dataset. WAA was originally recorded with exact start and stop dates. WAA main diagnoses were registered using either International Classification of Diseases (ICD-9 or 10) or International Classification of Primary Care (ICPC, ICPC-1, ICPC-2). Before 2015, workdays were reported quarterly; after 2015, monthly. Workdays per month/quarter were merged into 'workdays per year' for comparison across the study period.

Longitudinal data from 2010–2019 enables us to follow individuals. Deaths and migrations are included for the time they were present. To avoid selection bias, first-time WAA exposure in the intervention group (Bodø), where IPS was implemented, is compared to first time WAA exposure controls. Thus, both controls and intervention groups had WAA-triggering health conditions the same year.

Study design

Registry data allowed us to use a longitudinal interrupted time series quasi-experimental design, one of the strongest non-experimental difference-in-differences (DID) estimate methods that facilitates causal inference when randomization is not

https://doi.org/10.1017/S0033291723003744 Published online by Cambridge University Press

Table 1. Preparation and implementation stage factors, timeline, implementation context, and process outcome data

Implementation measure	Preparation stage			Implementation stage				Implementation context[1]	Data source
	2010	2011	2012	2013	2014	2015	2016		
Organizational – bridging factors									
Formal agreements between organizations								Inner & Outer	Admin data
Community academic partnership								Inner & Outer	Admin data
Funding								Inner & Outer	Admin data
Implementation team and change agents								Inner	Admin data
Assessment of organizational readiness to implement IPS								Inner	Hansen (2012)
Organizational - IPS									
Employment specialists (FTE)					*n* = 3			Inner	Admin data
Employment Specialist turnover rate (voluntary employee turnover rate)					94%			Inner	Admin data
Health teams delivering IPS					*n* = 2			Inner	Admin data
NAV counselors' attitudes towards IPS								Inner & Outer	Brinchmann et al. (2022)
Individual characteristics – IPS users									
IPS users					*n* = 200			Inner	Admin data
IPS users employment outcomes achieved					*n* = 98,49%			Inner	Admin data
Quality - Fidelity									
Fidelity support and ongoing quality improvement								Inner	Admin data
Independent fidelity reviews								Inner & Outer	-
-Primary care fidelity scores				93 (Fair)	107 (Good)	105 (Good)		Inner	Admin data
-Specialist care fidelity scores				96 (Fair)	106 (Good)	105 (Good)		Inner	Admin data

[1]Inner context is understood as micro- and meso-level influences, whereas the outer context refers to macro-level influences.

possible (Leatherdale, 2019). We used a DID to estimate the effects of IPS implementation on workdays per year. DID estimates the average treatment effect on the treated group (ATET). We estimate the ATET of being exposed to IPS implementation in Bodø during four-years of implementation (2013–2016). IPS-exposure is estimated for all Bodø WAA recipients.

The DID framework is based on two differences: the difference in outcome before and after treatment for both controls and treatment groups and, the difference in mean outcome between the two groups. This second difference, given some restrictions, provides unbiased estimates of the effect of interest.

Given the longitudinal format and repeated observations on each individual, we specify a fixed effects panel data model for the DID analyses.

$$Y_{ict} = \alpha_i + \Upsilon_t + z_{ict}\beta + \mathrm{D}_{ct}\delta + \varepsilon_{ict} \quad (1.1)$$

Here, y_{ict} represents the dependent variable 'work-days-per-year' for individual i at time t which ranges from year 1 to 7, where 4 is the intervention year. Thus, we follow individuals for three years before and after intervention. The group-level variable c denotes city of residence. α_i are the individual fixed effects and Υ_t are time fixed effects. z_{ict} are time-varying covariates depicting marital status and children, and e_{is} is the error term. D_{ct} denotes IPS-exposure that varies over time and municipality-level. IPS was implemented in Bodø in 2013–2016, and the DID model in 1.1 is estimated for the four years combined, thus providing an overall effect of the program.

The fixed-effects procedure has great strengths. It allows the control for effects of measured and unmeasured time-constant variables and unmeasured variables need not be independent from the measured (Petersen, 2004). Unfortunately, these advantages only allow estimation of time-varying variables. The fixed effects estimator uses the within-individual-level deviation from the mean of each variable across time; it is not possible to estimate the effects of time-constant background variables. Thus, variables such as gender, country of birth, and family background can only be controlled for, but not estimated directly in the fixed-effects model.

https://doi.org/10.1017/S0033291723003744 Published online by Cambridge University Press

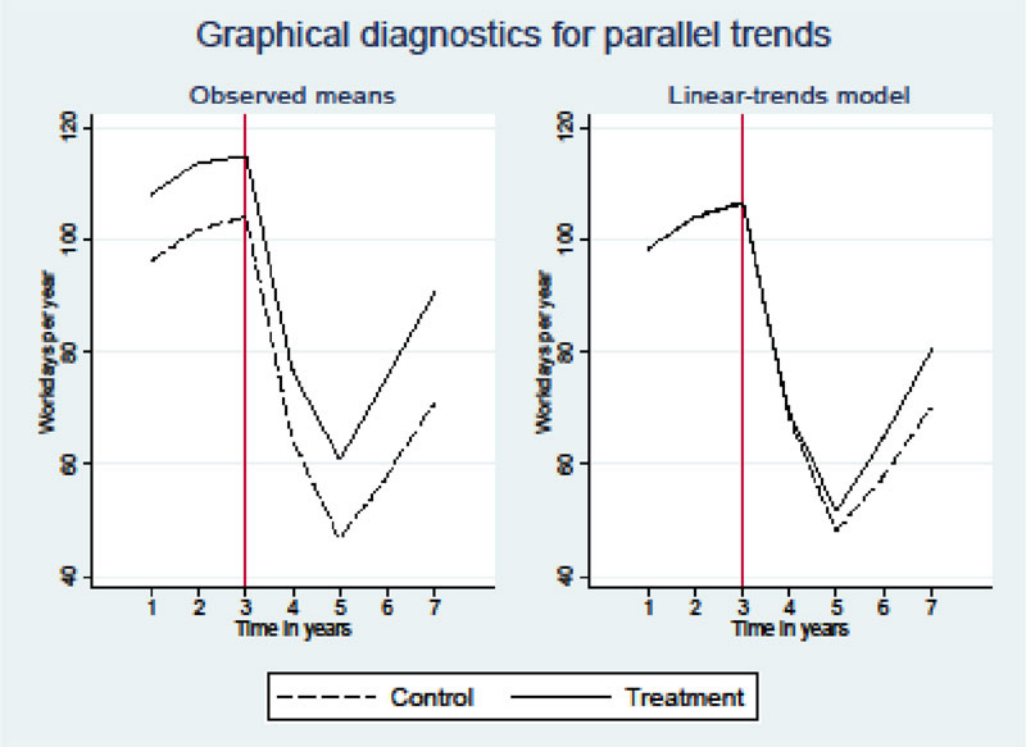


Figure 1. Parallel trend plots to assess the parallel-trends assumption[2].
[2]Internal validity of DID models rely on the parallel trends assumption: That there are parallel trends between controls and treatment before the intervention to ensure the effects are not driven by trends unrelated to the intervention.

Unbiased estimates rely on two assumptions. Firstly, there are parallel trends between controls and treatment before the intervention to assure the effects are not driven by trends not related to the intervention. Second, the parallel development would have been the same without the intervention. Only the first assumption is testable.

Figure 1 shows trend plots used to assess the parallel-trends assumption. The left-hand plot depicts the mean outcome over time for treatment and control groups. The right-hand plot incorporates interactions of time with a treatment indicator into our DID model and calculates predicted values of our augmented model for both groups. The vertical lines indicate one year before treatment. Additional F-tests on the trajectories of the mean number of workdays confirms the null-hypothesis of parallel trends cannot be rejected.

Post treatment effects over time

Rather than assuming a single treatment-effect estimate is constant, we examined ATET changes over time. We fitted a DID model that included lags and leads of an indicator at the time of IPS initiation. Lag coefficients were used to evaluate any changes in ATET during the post treatment era. Granger plots (Fig. 2, online Supplementary Appendix Figure 2) illustrate pre- and post-intervention treatment effects of IPS implementation in Bodø.

Testing if the IPS effect is dependent on diagnosis by triple difference estimation

We used a triple difference method (DiDiD) (Olden & Møen, 2022), an extension of the DiD method, to delve deeper into the impact of IPS implementation across four diagnostic subgroups: (1) all non-organic mental disorders, (2) severe mental illness (SMI), (3) non-severe, non-organic mental disorders, and (4) somatic disorders. The DiDiD method enables a more nuanced causal inference by introducing a third layer of comparison (in this case, diagnostic subgroups). By doing this, we aimed to isolate and estimate the causal effects of IPS exposure within each diagnostic category while controlling for potential biases due to time trends, geographic variations, and other unobserved heterogeneities. The DiDiD approach can estimate if the causal impact of the IPS intervention varied systematically across different diagnostic groups, thus providing a more comprehensive and detailed understanding of the intervention's effectiveness and applicability across diverse patient groups in the context of workdays per year.

The DiDiD estimator is computed as the difference between two difference-in-difference estimators. In our case, the differences between the broad group of WAA participants in Bodø and controls as well as the difference between the diagnostic subgroups in Bodø and controls. The triple difference estimator does not require two parallel trend assumptions for a causal interpretation (Olden & Møen, 2022).

The fixed effects triple-difference model is given by

$$y_{icst} = \alpha_i + \Upsilon_t + \Upsilon_t \Upsilon_c + \Upsilon_t \Upsilon_s + z_{ict}\beta + D_{ct}\delta + \varepsilon_{icst} \qquad (1.2)$$

In addition to the elements in 1.1, the triple-difference model in 1.2 incorporates the interactions of the group level variables and time. Thus, the city of residence c is interacted with time t, as well as the diagnostic group-variables with time t.

https://doi.org/10.1017/S0033291723003744 Published online by Cambridge University Press

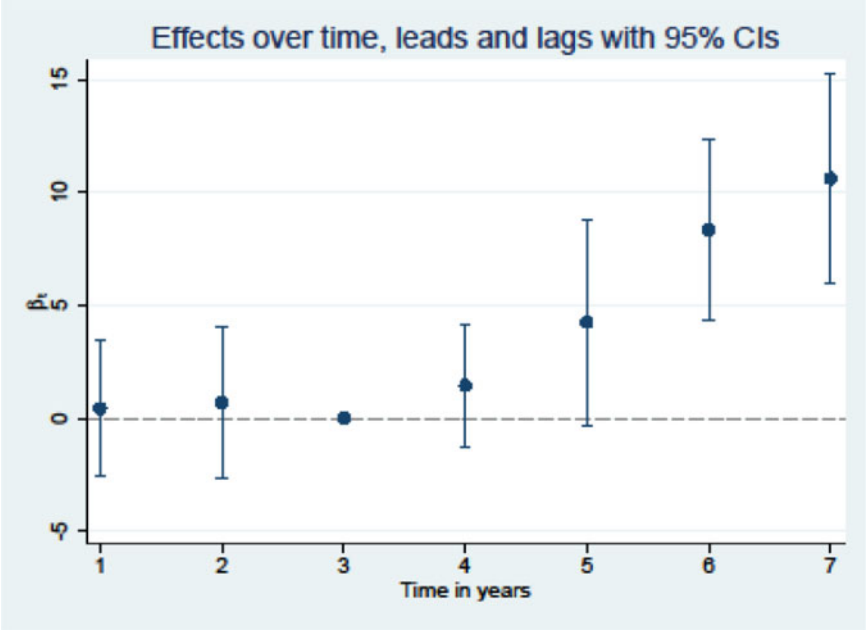


Figure 2. Granger plot – post treatment effects over time[7]. [7]Granger plots show time-specific treatment effects. Time 1–3 represents the pre-exposure period, the three years before an individual received WAA. Time 4 represents the year an individual started receiving the WAA for the first time (and was thus exposed to IPS implementation). Time 5–7 corresponds to the post-exposure period, i.e. the three years following initial WAA receipt/exposure to IPS implementation.

Ethics and consent statement

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. All procedures involving human subjects/patients were approved by The Regional Committee for Medical and Health Research Ethics Region North, Norway, approval number: 2012/2239. The ethics committee waived the need for individual consent for this study, given that the register data used are in an anonymized and in a de-identified format.

Results

Descriptives

Bodø and controls were comparable across most demographic variables (Table 2). Our sample is fairly homogeneous, made up of individuals who are on average in their late-20s. While women are generally overrepresented, Bodø had 5.6% ($p = 0.01$) more females than the control group. Bodø residents were also significantly less likely than controls to be married/de-facto ($p = 0.003$) although their average number of children was similar. Bodø had a slightly lower proportion of individuals with SMI and other non-organic mental disorders and a slightly higher proportion with somatic disorders compared to controls.

Causal effects of IPS exposure: difference-in-differences

Our analyses using the DiD method found that exposure to IPS implementation has a significant, positive, effect on workdays per year at a societal level. The ATET of IPS implementation was 5.6 ($p = 0.001$) increased workdays per year per individual. This is equivalent to 3141.6 increased workdays per year for the total Bodø sample ($n = 561$). In Norway, there are 248 workdays per year, an ATET of 5.6 workdays per year corresponds to 12.7 (3141.6/248) increased years of work for the whole group exposed to IPS implementation.

The associated granger plot (Fig. 2) indicates the treatment effect improves over time. The coefficients on leads for the first three years (time 1–3) are close to 0, indicating no anticipatory effects prior to IPS-exposure. However, following initial exposure (time 4), treatment effects increased steadily throughout the post-exposure period (time 5–7). Three years after initial exposure to IPS implementation (time 7), Bodø residents worked, on average, around 10.5 more days per year equating to 23.8 years of increased work.

Causal effects of IPS exposure: triple difference

While all our analyses using the DiDiD method were statistically insignificant (Table 3), they do suggest that exposure to IPS implementation was more effective in the context of workdays per year for individuals who receive the WAA due to mental disorders than it is for those who receive the WAA recipients due to somatic disorders.

Sensitivity check

Our results came from Bodø or control municipalities residents with valid-observation years across the observation period. Thus, contributing to the estimates for the years they were present in the municipality. This is comparable to an 'intention to treat' RCT design.

A design could include only those who are resident in the municipalities over the full observation period which would be comparable to an RCT design including only the treated. Excluding the possibility of selection effects driving our results, we ran analyses excluding those who died, moved, or migrated. 980 individuals were lost to follow-up. 682 moved to another municipality, 31 died, 13 migrated, and 254 were unknown.

Descriptive statistics for this second analytical sample (online Supplementary Appendix Table 1) are markedly like the first analytical sample (Table 1). The most notable difference is within both groups there was a slightly lower proportion granted WAA due to non-organic mental disorders and a slightly higher

https://doi.org/10.1017/S0033291723003744 Published online by Cambridge University Press

Table 2. Demographics and diagnostic distribution[3]

Demographic variables	Bodø	Control group (10 municipalities)	Significance tests
n	561	3150	
Gender (%)			$X^2 = 6.1$ df = 1 $p = 0.01$
Female	61.0%[4] ($n = 342$)	55.4% ($n = 1744$)	
Male	39.0% ($n = 219$)	44.6% ($n = 1406$)	
Mean age (years)	29.1 (s.d. 6.9)	28.5 (s.d. 6.9)	t = −1.9, df = 3709, $p = 0.06$
Civil status (%)			$X^2 = 9.8400$ df = 1 $p = 0.002$
Married/de-facto	12.3% ($n = 69$)	17.7% ($n = 557$)	
Single	87.7% ($n = 492$)	82.3% ($n = 2593$)	
Country background (%)			$X^2 = 6.7821$ df = 2 $p = 0.03$
Norway	18.9% ($n = 106$)	23.5% ($n = 739$)	
Other	2.0% ($n = 11$)	2.6% ($n = 81$)	
Missing[5]	79.1% ($n = 444$)	74.0% ($n = 2330$)	
Children under 18 (mean)	0.8	0.8	t = −0.4, df = 3709, $p = 0.70$
Diagnostic distribution			$X^2 = 5.5706$ df = 4 $p = 0.23$
Severe mental illness (SMI)[6]	9.8% ($n = 55$)	11.6% ($n = 366$)	
Non-severe, non-organic mental disorders	44.7% ($n = 251$)	46.5% ($n = 1465$)	
Organic mental disorders	0.0% ($n = 0$)	0.2% ($n = 6$)	
Somatic disorders	45.1% ($n = 253$)	41.0% ($n = 1291$)	
Missing	0.4% ($n = 2$)	0.7% ($n = 22$)	

[3]Measured at first time of WWA recipiency.
[4]Note that percentages may not add up to 100 due to rounding up.
[5]The ¨Missing¨ category indicates that this data was missing from the register.
[6]Severe mental illness as defined in the Norwegian Opptrappingsplan for psykisk helse (Escalation plan for mental health) (2023–2033): Substance use disorders, severe bipolar disorders, major depressive disorder, schizophrenia, and personality disorders.

Table 3. Triple difference results

Diagnostic group	ATET: Work days per year
All non-organic mental disorders	4.4 ($p = 0.26$) (CI −3.9 to 12.8)
Severe mental illness	4.1 ($p = 0.32$) (CI −4.7 to 12.9)
Other non-organic mental disorders	5.7 ($p = 0.15$) (CI −2.4 to 13.7)
Somatic disorders	−2.0 ($p = 0.63$) (CI −11.2 to 7.1)

proportion with somatic disorders (Table 1, online Supplementary Appendix Table 1).

Parallel trends plots (online Supplementary Appendix Figure 1) and F-tests confirmed the parallel trends assumption was fulfilled for this narrower study population and DID analysis again found a significant positive result in favor of Bodø, with ATET of 5.9 ($p = 0.002$) workdays per year, corresponding to a societal impact of 11.0 increased years of work for the whole treatment group. Furthermore, the associated granger plot (online Supplementary Appendix Figure 2) shows the effect of IPS exposure improved over time, after three years the ATET was around 9.5 workdays per year equating to 17.8 increased years of work for the treatment group.

DiDiD estimates, excluding those lost to follow-up, were all statistically insignificant (online Supplementary Appendix Table 2).

Discussion

We tested the bold assumption that implementing IPS as a collaborative partnership within a municipality would have a societal impact on the employment outcomes for young adults who received WAA. We found a significant, positive, effect on societal level employment outcomes corresponding to 5.6 ($p = 0.001$) increased workdays per year per individual which is equivalent to 12.7 years of increased work where IPS was implemented, compared to municipalities without IPS. The effect found is measured for a large population, all WAA recipients, not just those who received IPS employment support, or individuals with mental illness. Additionally, the effect improves over time, three years after initial exposure to IPS implementation individuals worked, on average, around 10.5 more days per year equating to 23.8 years of increased work. When carefully conducted, quasi-experimental designs can be a robust alternative to RCTs (Kontopantelis, Doran, Springate, Buchan, & Reeves, 2015). Assuming one accepts the premises of the statistical model and that the assumptions have been satisfied; longitudinal interrupted time series quasi-experimental design models provide unbiased estimates. However, and given the design of the study, the analytical approach does not allow the direct identification of the mechanism mediating the effect. In our case the effects can be the result of two separate mechanisms or the combination of them. Thus, the estimated effects can be a direct cause of IPS participation for the approximately 200 IPS participants, or it can be a spill-

https://doi.org/10.1017/S0033291723003744 Published online by Cambridge University Press

over effect stemming from the larger WAA population of Bodø. Thirdly, and most likely, the estimated effect from IPS can be a combination of direct and spill-over effects.

As far as we know, this is the first study to investigate a societal impact of IPS implementation on employment outcomes. To date, RCTs demonstrate the effectiveness of IPS for individuals with mental illness (de Winter et al., 2022) with emerging evidence for other populations (Bond et al., 2019; Probyn et al., 2021; Sveinsdottir et al., 2020). The majority of IPS implementation studies demonstrate effectiveness at the individual level with only one study demonstrating a population level impact on the employment rates of individuals using specialist mental health services (Rinaldi, Montibeller, & Perkins, 2011).

From an implementation perspective, the estimated direct and spill-over effects found have several possible explanations. IPS implementation was a purposeful collaborative partnership between specialist and primary mental healthcare services, and NAV with the aim to implement the values, principles, and practice of IPS across each organization. It is therefore unsurprising to find that exposure to IPS implementation was more effective for individuals with mental illness than it was for those with somatic disorders. NAV frontline staff and primary and specialist mental healthcare professionals received extensive IPS training and technical assistance before and during implementation. The change agents actively used the inner context implementation outcome data to enhance implementation efforts and improve the quality of services. Whilst health professionals' attitudes to individuals with mental illness gaining employment are well documented (Finne & Holt, 2023; Lettieri, Soto-Pérez, Díez, Bernate-Navarro, & Franco-Martín, 2022) it was important for the implementation team to understand the attitudes of NAV frontline staff as they are pivotal in the assessment, decision-making and trajectories of all WAA and Disability Pensions claimants. NAV frontline staff in Bodø were consistently more positive towards the evidence-based principles of IPS and associated ways of working compared to municipalities where IPS was not implemented (Brinchmann et al., 2022). Media (newspapers and social media) were actively used to frame the unemployment of individuals with mental illness as a community challenge. The collaborative partnership ensured IPS was embedded within each organization's broader strategies whilst the employment specialists and the implementation team worked horizontally and vertically across the organizations to bridge the silos between specialist and primary mental healthcare and NAV. Frequent collaborative meetings brought together leaders, clinicians, employment specialists and frontline NAV staff which we believe provided an implementation mechanism to help to counteract the traditional silos of services, supported the diffusion and spread of IPS, challenged stigma and discrimination for individuals with mental illness whether or not they received IPS and provided better continuity of support for individuals across the organizations.

The IPS service received 'good' ratings from independent fidelity reviews. Though, short-term annual project funding caused a high turnover of employment specialists which appears to be a common phenomenon (Butenko et al., 2022). However, all employment specialists who left their IPS roles continued to support unemployed individuals with mental illness or somatic disorders to gain and retain employment within Bodø. They left to work in NAV, health services or private vocational rehabilitation agencies which may have further supported the spill-over effect found.

Regardless of the merits of IPS as an intervention, how such interventions are implemented within and across systems matters. In most countries, health services and government funded employment services operate independently of each other, with different aims and objectives along with different approaches and are often organized under different government departments. Since 1997, Norwegian health policy has prioritized the employment of individuals with mental illness (Ministry of Health & Care Services, 1997) and in 2007, the Ministry of Labour and Social Inclusion and, Ministry of Health and Care Services jointly published a national strategic plan for work and mental health (Ministry of Health & Care Services & Ministry of Labour & Social Inclusion, 2007). This policy framework highlighted IPS and recognized the need for coordinated support from health and social services and the Labour and Welfare Administration to support individuals with mental illness to be able to work. The effects found in our study support the use of multisectoral and collaborative approaches to the implementation of IPS. Individuals exposed to IPS implementation had a shorter duration on WAA before returning to employment suggesting they received an early vocational intervention with support that was personalized and addressed their needs.

There are several strengths to our study. Control municipalities were selected a priori, and registry data was used for the main outcome measure. Before being approved for research, registry data is subjected to rigorous quality controls. The study is well powered, and causality is assured as the parallel trend assumptions for a DID were met. The NAV interventions in the control municipalities were also available in Bodø. Finally, author SW under the supervision of author TL, neither involved in the IPS implementation, performed the statistical analysis. There are several limitations. Whilst well powered, this is an $n = 1$ study and our findings warrant replication. There could be a bias to something else occurring however, to the best of our knowledge we are unaware of other initiatives occurring in the control municipalities and, NAV financial allocations are per capita. Unemployment rates across all the municipalities ranged from a 1% decrease to a 1.8% increase during the study period; however, IPS effectiveness is not moderated by unemployment rates. This study addressed societal employment outcomes and the impact on welfare benefits is unknown but will be addressed through a future publication. Finally, we do not know whether the higher employment outcomes come at the expense of lower hourly wages though, IPS is typically associated with higher wages earned (Bejerholm, Areberg, Hofgren, Sandlund, & Rinaldi, 2015; Burns et al., 2007; Drake et al., 1999).

This study is the first in the IPS literature to move from RCTs or observational studies at the individual level to showing the relationship between IPS implementation, a societal impact on employment outcomes for individuals on temporary health-related welfare benefits and a policy effect. The findings have implications for population health and economic benefits as well as implications for societal well-being. The traditional separation of health services from employment and education services typically results in those individuals with the greatest need not receiving effective approaches or support to enable them to achieve their goals. This separation can, in part, be driven by attitudes but also by siloed government funding. Instead, by integrating services through multisectoral and collaborative approaches, there is an impact that is larger than the sum of its parts.

Supplementary material. The supplementary material for this article can be found at https://doi.org/10.1017/S0033291723003744.

Data availability statement. The datasets analyzed in this study cannot be shared publicly because of Norwegian data protection regulations.

Nevertheless, the owners of the data, the Norwegian Labour and Welfare Administration (NAV), can provide access to the register data. Interested researchers can submit applications to NAV to obtain access to the relevant data. https://www.nav.no/no/nav-og-samfunn/kunnskap/data-og-forskning-pa-nav

Acknowledgements. We thank the peer reviewers for their valuable reviews.

Author's contributions. All authors reviewed the manuscript prior to submission. All authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Beate Brinchmann: conceptualization, study design, methodology, visualizations, writing – original draft, writing – editing. Sina Wittlund: conceptualization, study design, methodology, formal analysis, visualizations, writing – original draft, writing – editing. Thomas Lorentzen: supervision, conceptualization, study design, methodology, formal analysis, writing – original draft, writing – critical review & editing. Cathrine Moe, PhD: conceptualization, writing – critical review & editing. David McDaid, MSc: conceptualization, writing – critical review & editing. Eoin Killackey, PhD: conceptualization, writing – critical review & editing. Miles Rinaldi, BA (Hons), Dip Psych: supervision, conceptualization, study design, methodology, project administration, writing – original draft, writing – editing. Arnstein Mykletun: supervision, conceptualization, study design, methodology, project administration, software, writing – critical review.

Funding statement. This work was funded by the Research Council of Norway. Grant/Award Numbers: 227097, 273665, 280589.

Competing interests. S. W., B. B., T. L., M. R., D. M. D, and A. M. received funding from the Research Council of Norway (project number 227097 for IPS Bodø 1, 280589 for IPS Bodø 2, and 273665 for IPSNOR). B.B., M.R., E.K., and A.M. were involved in IPS implementation in Bodø municipality, Norway.

Transparency declaration. We affirm that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted. There are no discrepancies from the study as planned.

Analytic code availability. The analytic code used in this study is available from the authors upon reasonable request.

References

Aarons, G. A., Hurlburt, M., & Horwitz, S. M. (2011). Advancing a conceptual model of evidence-based practice implementation in public service sectors. *Administration and Policy in Mental Health*, *38*(1), 4–23. doi:10.1007/s10488-010-0327-7.

Becker, D. R., & Drake, R. E. (2003). *A working life for people with severe mental illness*. New York: Oxford University Press.

Bejerholm, U., Areberg, C., Hofgren, C., Sandlund, M., & Rinaldi, M. (2015). Individual placement and support in Sweden: A randomized controlled trial. *Nordic Journal of Psychiatry*, *69*(1), 57–66. doi:10.3109/08039488.2014.929739.

Boardman, J., & Rinaldi, M. (2013). Difficulties in implementing supported employment for people with severe mental health problems. *The British Journal of Psychiatry: the Journal of Mental Science*, *203*(3), 247–249. doi:10.1192/bjp.bp.112.121962.

Bond, G. R. (2004). Supported employment: Evidence for an evidence-based practice. *Psychiatric Rehabilitation Journal*, *27*(4), 345–359. doi:10.2975/27.2004.345.359.

Bond, G. R., Drake, R. E., & Pogue, J. A. (2019). Expanding individual placement and support to populations with conditions and disorders other than serious mental illness. *Psychiatric Services*, *70*(6), 488–498. doi:10.1176/appi.ps.201800464.

Bond, G. R., Lockett, H., & van Weeghel, J. (2020). International growth of individual placement and support. *Epidemiology and Psychiatric Sciences*, *29*, e183. doi:10.1017/S2045796020000955.

Bond, G. R., Peterson, A. E., Becker, D. R., & Drake, R. E. (2012). Validation of the revised individual placement and support fidelity scale (IPS-25). *Psychiatric Services*, *63*(8), 758–763. doi:10.1176/appi.ps.201100476.

Brinchmann, B., Rinaldi, M., Sandtorv, E., Moe, C. F., McDaid, D., Killackey, E., & Mykletun, A. (2022). Are attitudes in employees of public employment service in line with the principles of individual placement and support? A questionnaire-based survey. *Social Policy & Administration*, *56*(4), 681–692. doi:10.1111/spol.12828.

Brinchmann, B., Widding-Havneraas, T., Modini, M., Rinaldi, M., Moe, C. F., McDaid, D., … Mykletun, A. (2020). A meta-regression of the impact of policy on the efficacy of individual placement and support. *Acta Psychiatrica Scandinavica*, *141*(3), 206–220. doi:10.1111/acps.13129.

Burns, T., Catty, J., Becker, T., Drake, R. E., Fioritti, A., Knapp, M., … Wiersma, D., & EQOLISE Group (2007). The effectiveness of supported employment for people with severe mental illness: A randomised controlled trial. *Lancet (London, England)*, *370*(9593), 1146–1152. doi:10.1016/S0140-6736(07)61516-5.

Butenko, D., Rinaldi, M., Brinchmann, B., Killackey, E., Johnsen, E., & Mykletun, A. (2022). Turnover of IPS employment specialists: Rates and predictors. *Journal of Vocational Rehabilitation*, *57*(1), 23–32. doi:10.3233/JVR-221195.

de Winter, L., Couwenbergh, C., van Weeghel, J., Sanches, S., Michon, H., & Bond, G. R. (2022). Who benefits from individual placement and support? A meta-analysis. *Epidemiology and Psychiatric Sciences*, *31*, e50. doi:10.1017/S2045796022000300.

Drake, R. E., McHugo, G. J., Bebout, R. R., Becker, D. R., Harris, M., Bond, G. R., & Quimby, E. (1999). A randomized clinical trial of supported employment for inner-city patients with severe mental disorders. *Archives of General Psychiatry*, *56*(7), 627–633. doi:10.1001/archpsyc.56.7.627.

Finne, J., & Holt, K. (2023). Mental health professionals' expectations and efforts to include employment for people with moderate to severe mental illness in treatment settings. *BMC Psychiatry*, *23*(1), 82. doi:10.1186/s12888-023-04568-4.

Hansen, L. (2012). Implementering av Individuell Jobbstøtte / IPS i Bodø. Retrieved from https://nordopen.nord.no/nord-xmlui/handle/11250/140521.

Kontopantelis, E., Doran, T., Springate, D. A., Buchan, I., & Reeves, D. (2015). Regression based quasi-experimental approach when randomisation is not an option: Interrupted time series analysis. *BMJ* (*Clinical Research ed.*), *350*, h2750. doi:10.1136/bmj.h2750.

Kringlebotten, M., & Langørgen, A. (2020). Gruppering av kommuner etter folkemengde og økonomiske rammebetingelser 2020. Retrieved from https://www.ssb.no/offentlig-sektor/artikler-og-publikasjoner/_attachment/439744?_ts=177cdffee70.

Leatherdale, S. T. (2019). Natural experiment methodology for research: A review of how different methods can support real-world research. *International Journal of Social Research Methodology*, *22*(1), 19–35. doi:10.1080/13645579.2018.1488449.

Lettieri, A., Soto-Pérez, F., Díez, E., Bernate-Navarro, M., & Franco-Martín, M. (2022). The attitudes of mental health professionals on the employability of people with mental illness: A different view limiting employment rehabilitation. *Brain and Behavior*, *12*(10), e2767. doi:10.1002/brb3.2767.

Ministry of Health and Care Services. (1997–1998). Om opptrappingsplan for psykisk helse. Retrieved from https://www.regjeringen.no/nb/dep/hod/dok/regpubl/stprp/19971998/Stprp-nr-63.

Ministry of Health and Care Services & Ministry of Labour and Social Inclusion. (2007–2012). National strategic plan for work and mental health (Publication No. I-1127). Retrieved from https://www.regjeringen.no/globalassets/upload/hod/vedlegg/planer/i-1127eweb.pdf.

Moe, C., Brinchmann, B., Rasmussen, L., Brandseth, O. L., McDaid, D., Killackey, E., … Mykletun, A. (2021). Implementing individual placement and support (IPS): The experiences of employment specialists in the early implementation phase of IPS in Northern Norway. The IPSNOR study. *BMC Psychiatry*, *21*(1), 632. doi:10.1186/s12888-021-03644-x.

National Insurance Act. (2017). Retrieved from https://lovdata.no/dokument/SF/forskrift/2017-12-13-2100.

Olden, A., & Møen, J. (2022). The triple difference estimator. *The Econometrist Journal*, *25*(3), 531–553. doi:10.1093/ectj/utac010.

Park, A. L., Rinaldi, M., Brinchmann, B., Killackey, E., Aars, N. A. P., Mykletun, A., & McDaid, D. (2022). Economic analyses of supported employment programmes for people with mental health conditions: A systematic review. *European Psychiatry: the Journal of the Association of European Psychiatrists*, *65*(1), e51. doi:10.1192/j.eurpsy.2022.2309.

Petersen, T. (2004). Analyzing panel data: Fixed-and random-effects models. In S. Balduzzi, J. C. Fuhrer, & A. Schaumburg (Eds.), *Panel data and structural labor market models* (pp. 109–140). Thousand Oaks, CA: SAGE Publications. doi:10.4135/9781848608184.n14.

Probyn, K., Engedahl, M. S., Rajendran, D., Pincus, T., Naeem, K., Mistry, D., … Froud, R. (2021). The effects of supported employment interventions in populations of people with conditions other than severe mental health: A systematic review. *Primary Health Care Research & Development*, *22*, e79. doi:10.1017/S1463423621000827.

Richter, D., & Hoffmann, H. (2019). Effectiveness of supported employment in non-trial routine implementation: Systematic review and meta-analysis. *Social Psychiatry and Psychiatric Epidemiology*, *54*(5), 525–531. doi:10.1007/s00127-018-1577-z.

Rinaldi, M., Montibeller, T., & Perkins, R. (2011). Increasing the employment rate for people with longer-term mental health problems. *The Psychiatrist*, *35*(9), 339–343. https://doi.org/0.1192/pb.bp.109.028050.

Statistikk sentralbyrå (Statistics Norway). (2000). Concept variable: Contractual man-days. Retrieved from https://www.ssb.no/a/metadata/conceptvariable/vardok/2238/en.

Sveinsdottir, V., Lie, S. A., Bond, G. R., Eriksen, H. R., Tveito, T. H., Grasdal, A. L., & Reme, S. E. (2020). Individual placement and support for young adults at risk of early work disability (the SEED trial). A randomized controlled trial. *Scandinavian Journal of Work, Environment & Health*, *46*(1), 50–59. doi:10.5271/sjweh.3837.

Swanson, S. J., Becker, D. R., Drake, R. E., & Merrens, M. R. (2008). *Supported employment: A practical guide for practitioners and supervisors*. Lebanon, NH: Dartmouth Psychiatric Research Center.

https://doi.org/10.1017/S0033291723003744 Published online by Cambridge University Press

Appendices

Ethics

Vignett Line, Paper II

Questionnaire Paper II

REK
REGIONALE KOMITEER FOR MEDISINSK OG HELSEFAGLIG FORSKNINGSETIKK

Region:	Saksbehandler:	Telefon:	Vår dato:	Vår referanse:
REK vest	Anne Berit Kolmannskog	55978496	05.03.2013	2012/2239/REK vest
			Deres dato:	Deres referanse:
			07.02.2013	

Vår referanse må oppgis ved alle henvendelser

Arnstein Mykletun
Nasjonalt folkehelseinstitutt

2012/2239 Naturalistisk kontrollert forsøk med utprøving av Individuell Jobbstøtte (IPS) i Bodø

Forskningsansvarlig: Nordlandssykehuset HF
Prosjektleder: Arnstein Mykletun

Vi viser til søknad om forhåndsgodkjenning av ovennevnte forskningsprosjekt. Søknaden ble behandlet av Regional komité for medisinsk og helsefaglig forskningsetikk (REK vest) i møtet 14.02.2013. Vurderingen er gjort med hjemmel i helseforskningsloven (hfl.) § 10, jf. forskningsetikklovens § 4.

Prosjektomtale
Formålet med denne studien er å undersøke hvor effektiv metoden «Individual Placement and Support» (IPS) er i å få personer på uføretrygd i Bodø ut i lønnet arbeid. IPS-metoden har som mål å finne arbeid for de med alvorlig psykisk lidelse og gi individuell støtte på en ordinær arbeidsplass i stedet for å tilby dem tradisjonelle jobbtilbud i skjermede bedrifter. Målgruppen er unge mellom 18 og 40 år med psykiske lidelser. Hvorvidt Bodø kommune oppnår å redusere gruppens avhengighet av trygdeordninger, og om prosjektet er kostnadseffektivt, skal kontrolleres mot ti andre sammenlignbare kommuner som ikke implementerer IPS i samme periode. Studien har følgende fem delprosjekt: 1. Effektiviteten til IPS-tiltaket skal måles. 2. Kostnytteanalyse av tiltaket. 3. Prospektiv oppfølgingsstudie av de som mottar IPS i Bodø kommune over 15 år. 4. Retrospektiv studie av bakgrunnen for uføretrygd. 5. Holdningsundersøkelse blant helsearbeidere og NAV-ansatte. Registerdata fra FD trygd, Nasjonal utdanningsdatabase (NUDB), Strafferegisteret, Norsk Pasientregister, Dørsårsakregisteret og Reseptregisteret skal benyttes til dette arbeidet. Det søkes om fritak fra samtykkekravet for å gjennomføre delstudie 1 og 2.

Tidligere behadling i REK
Søknaden ble første gang behandlet på møte 10.01.2013. Komiteen mente den gang at prosjektet virket gjennomarbeidet og godt strukturert. De ønsket imidlertid tilbakemelding på behovet for antall variabler, og da spesielt behovet for data fra Strafferegisteret/Straffesaksregisteret, og hvordan disse data skulle kobles til de andre opplysningene i prosjektet. Ville data bli koble på individnivå og hvem ville få rollen som tiltrodd tredjepart? Videre ønsket komiteen en begrunnelse for den lange oppfølgingstiden i delstudie 3. Tilbakemelding fra prosjektleder forelå ved ny behandling av saken i møte 14.februar 2013.

Vurdering
Komiteen vurderer tilbakemelding fra prosjektleder som tilfredsstillende og har ingen ytterliggere innvendinger til prosjektplanen slik den nå foreligger.

Antall variabler er redusert i delstudie 1 og 2 og disse vil nå inneholde data fra FD trygd, Nasjonal

utdanningsdatabase (NUDB) og Dørdsårsakregisteret. Det er også argumentert godt for behov for det planlagte datasettet og den lange oppfølgingstiden i delstudie 3. Her vil utvalgte variabler fra følgende registre kobles; Registerdata fra FD trygd, Nasjonal utdanningsdatabase (NUDB), Strafferegisteret, Norsk Pasientregister(NPR), Dørsårsakregisteret og Reseptregisteret.

Komiteen er oppmerksom på at det i tilbakemeldingen er lagt opp til å benytte den samme koblingen mot de aktuelle registrene også i delstudie 4., noe som er nytt i forhold til opprinnelig søknad. Komiteen har imidlertid ingen innvendinger til dette og legger til grunn at informasjon til deltakerne vil bli utformet slik at samtykket dekker det nye som skal skje.

Samtykke
Deltakelse i delstudie 3, 4 og 5 er frivillig og komiteen har ingen innvendinger til rekrutteringsprosedyrene. Informasjonsskrivene er forbedret og synes å være dekkende for det som skal skje. Det er også gjort klart at datamengden som samles inn i prosjektet gjelder den enkelte deltaker. Komiteen godkjenner at det benyttes data fra FD trygd, Nasjonal utdanningsdatabase (NUDB), Strafferegisteret, Norsk Pasientregister, Dørsårsakregisteret og Reseptregisteret som beskrevet og har ingen innvendinger til den planlagte oppdateringen etter 3, 7 og 15 år. Statistisk sentralbyrå vil være tiltrodd tredjepart for koblingen og koblingsnøkkelen vil ikke være tilgjengelig for forsker. Utlevering av data fra FD-trygd og Nasjonal utdanningsdatabase og Strafferegisteret må godkjennes av registereier. Datatilsynet må godkjenne utlevering av data fra Reseptregisteret.

Fritak fra samtykkekravet
Komiteen innvilger fritak fra samtykkekravet jf. helseforskningsloven § 35. for datainnsamling i delstudie 1 og 2. Komiteen har ingen innvendinger til kobling mellom FD trygd, Nasjonal utdanningsdatabase (NUDB) og Dødsårsaksregisteret. Komiteen vurder formålet med datainnsamlingen som nyttig og anser den enkelte deltaker sin velferd og integritet for ivaretatt slik prosjektet er lagt opp. Komiteen forutsetter at datasettet utleveres avidentifisert til forsker og at Statistisk sentralbyrå er tiltrodd tredjepart for koblingen. Utlevering av data fra FD-trygd og Nasjonal utdanningsdatabase må godkjennes av registereier.

Informasjonssikkerhet
Forskningsdata skal lagres etter interne rutiner ved Nasjonalt folkehelseinstitutt. Personidentifiserbare forskningsdata og koblingsnøkkel skal slettes straks det ikke lenger er behov for dem og senest fem år etter prosjektslutt. Ved eventuelt behov for lengre oppbevaring, må det sendes en velbegrunnet endringssøknad til REK. Prosjektslutt er satt til 15.12.2033.

Vilkår
Statistisk sentralbyrå er tiltrodd tredjepart for koblingene i alle delprosjekt og datasettene skal utleveres til forsker i avidentifisert form.

Vedtak

1. *REK Vest godkjenner prosjektet på betingelse av at ovennevnte vilkår tas til følge.*
2. *REK Vest godkjenner søknad om bruk av angitte helseopplysninger til forskning, uten innhenting av samtykke i delstudie 1 og 2.*

Sluttmelding og søknad om prosjektendring
Prosjektleder skal sende sluttmelding til REK vest på eget skjema senest 15.06.2034, jf. hfl.
12. Prosjektleder skal sende søknad om prosjektendring til REK vest dersom det skal gjøres vesentlige endringer i forhold til de opplysninger som er gitt i søknaden, jf. hfl. § 11.

Klageadgang

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

Med vennlig hilsen

Jon Lekven
komitéleder

Anne Berit Kolmannskog
sekretariatsleder

Kopi til: knut.sorgaard@nordlandssykehuset.no

Vignette Line

Line is a 27 years old single mum with a 3-year-old daughter. Line and her daughter live in a small rental apartment. Her daughter goes to kindergarten everyday, which is paid for by the childcare services. Line has been diagnosed with bipolar disorder and experiences episodes of acute clinical deterioration which has resulted in many (sometimes involuntary) hospital admissions.

During her manic phases Line may have many unrealistic plans and ideas. She has audible dialogues with her voices which people around her find difficult to cope with. During the depressive phases Line becomes socially withdrawn and isolates herself in her apartment. She has difficulty getting out of bed and only manages the bare necessities. Between these phases, Line feels ashamed over what she may have done which has led to further social withdrawal and a lot of absences from work.

As a young person Line received help and support from child and adolescent psychiatric outpatient services because of her mood swings and sleeping problems. She also faced significant challenges at elementary school onwards and her school grades were average. High School initially started well for Line, however she didn't pass her exams and consequently dropped out. Line has had support from social services for many years. She has attended many courses at sheltered workplaces to assess her ability to work but has been unable to complete most of these courses. Line has had two jobs, one part-time at a street café and another full-time job as a hotel maid. Both jobs lasted less than 6 months. Line's history of dropping-out from school, needing help with supported work and her work record appear to have a clear connection with her mental health.

As mentioned Line has bipolar disorder which is a serious mental illness. Other serious mental illnesses include schizophrenia, other types of psychotic disorders and severe depression. Line attends regular appointments at the adult psychiatric outpatient clinic and she is occasionally hospitalized voluntarily. She receives Work Assessment Allowance (temporary benefit for health-related work disability) from the Norwegian Labour and Welfare Administration (NAV) and at times additional financial support for social reasons.

Despite many disappointments at school, in sheltered/supported workplaces and within the labour market Line would like an ordinary job.

Questionnaire

As a worker at the Labour and Welfare Services Adminstration office you are required to carry out assessments and make decisions. Below are some examples of decisions made based on different considerations and assessments. Read these choices and put a cross in the circle, which best indicates your view

We must emphasize Line's wishes. Line should be allowed to try and gain competitive employment.	○○○○○○	We must be realistic. Line has experienced many defeats and should be offered a new supported work position before a possible application for a permanent disability pension is sent
Health professionals should complete both their assessments and treatment of Line before the public employment office can help her get a job	○○○○○○	There is no reason to wait for further medical assessments and treatments. The Public Employment office must, in close collaboration with the health sector, facilitate the process of looking for competitive employment.
I think competitive employment should be the goal for Line as long as that is what she wants.	○○○○○○	Usually it is not realistic for people with a serious mental illness such as Line, *to function in a competitive job*.
Line has been dependent on social welfare financial support/benefits for a long time and she is understandably scared of losing this. She will need advice and support in order to try competitive employment.	○○○○○○	If Line really wants to work, the financial support from the Labour and Welfare administration will not hinder her. Financial advice will not be deciding factor in Line getting a job or not.
Line wants to work now. This means that the job search should start as soon as possible.	○○○○○○	We need adequate time for work preparation and treatment before looking for competitive employment.
To help Line get employment her contact person must make direct contact with potential employers.	○○○○○○	The Labour and Welfare Administration has the country's largest register of vacant jobs in Norway. Line can apply for one of these.
Line must follow the rules from the Labour and Welfare Administration and regulations and normal follow-up period. If she later needs further help, the case can be reopened.	○○○○○○	Line should receive follow up from the Labour and Welfare Administration for as long as she wishes and needs it. This can mean in long term follow-up, without any formal end, independent of whether she gets a job or not.
Line's interests and preferences should first and foremost guide the search for employment.	○○○○○○	The vocational rehabilitation advisor has valuable expertise and experience, which must first and foremost guide the job search.