

Research plan / Tutkimussuunnitelma

Evidencing the Effectiveness of Health Social Work Assessment and Interventions Terveyssozialityön arvioinnin ja intervention vaikuttavuus näkyväksi (Sostyö-TerVa)

1. Aim and objectives

1.1 Significance of research project in relation to current knowledge, research-based starting points: Despite growing awareness in Finland as to the importance of service paths integrating health and social care, there remains a lack of evidence about the effectiveness of social work in achieving these goals. There are approximately 1000 health social workers employed in a relatively integrated and effective system of health and social care provided by municipalities [kunta]. It has been documented that the current delivery of health and social care services has resulted in the decentralization and fragmentation of services, and service users with special needs, experience inequitable access to services, variable quality and efficiency of services and limited primary health care provision (Keskimäki et al., 2018; Saltman et al., 2016; Heinonen et al., 2001). Disparate health and social care professional identities (medicine, nursing social work) as the result of the siloing of education and training have contributed a problem of different conceptions of what the objectives of the health and social care system should be and most importantly what clients need from municipal health and social services (Keskimäki et al., 2018). The proposed project aims to address this gap in knowledge through a **quasi-experimental research** study, which draws on the principles of Practice Research to provide an evidence base for the development of social work service paths (Deneckereet et. al., 2012).

The study seeks to address the research question as to how effective social work interventions are in providing integrated service paths, linking hospital services with social care and achieving measurable patient well-being. An audit survey of health social work practice will be undertaken at Kuopio University Hospital (KYS). This data will be analyzed together with the dataset from preliminary research undertaken at Helsinki and Tampere Hospitals (n=279 health social workers) in 2019. Based on these results and guided by Practice Research methodologies (Joubert & Webber, 2020; Hüttemann & Sommerfeld, 2008; Muurinen & Satka, 2019), a quasi- experimental study will be implemented at each of the 3 hospital sites (Helsinki Children's Hospital (HUS), Tampere University Hospital (TAYS) and Kuopio University Hospital (KYS)). The study will investigate the efficacy of social work assessment, intervention, and linkage informing an evidence-based model of linkage between health and social care. This service path will integrate health and social services in relation to complex children's issues (Helsinki), psychiatric mental health (Tampere) and hospital cancer care (Kuopio). Participants will be assessed at discharge, 6 weeks and 6 months follow-up. If supported, our research will provide solid evidence, underpinning a model for health social work practice which may be scaled up for use in hospital services in urban and regional centers in Finland. This study will provide further evidence as effective integration of hospital services and social care. It involves an extension of preliminary research undertaken with the Heikki Waris Institute (HWI, Helsinki) in 2019 (Yliruka et. al, 2019) in collaboration with Professor Lynette Joubert (The University of Melbourne). This study audited the day-

to-day practice of health social workers in Helsinki and Tampere (Yliruka et. al, 2019) and provided important evidence for the role of health social work in implementing the service path between the hospital and the municipal services and Kela benefits.

1.2 Research questions and/or hypotheses

We hypothesize that targeted social work interventions will provide a seamless, sustainable and integrated pathway of care that links hospital services with municipality social care thereby achieving measurable service user capability and quality of life in health and service care outcomes. The study aims are as follows: **Aim 1:** Develop an evidence base to support a model for social work intervention for service users receiving hospital care. It will be informed by the audit survey data of health social work practice in Helsinki (HUS), Tampere (TAYS) and Kuopio (KYS). This will include a psychosocial assessment, a brief client-centred social work intervention and service and benefits linkage to support patients transitioning from hospital. The model will be applied while service users (patients) are hospitalised and subsequently inform services after discharge. **Aim 2:** Compare the results (health and social indicators) of the intervention group receiving the evidence informed social work service at the HUS (HCH), the TAYS (Mental Health Service) and the KYS (Cancer Centre) with a comparative group in each site exposed to usual social work care. **Aim 3:** Compare the process of the implementation of the intervention group (Social Work service Path - SWSP) of Care in HUS (Parents of pediatric service users), TAYS (Mental Health Service) and the KYS (Cancer Centre) with a comparative group in each site receiving usual social work care. **Aim 4:** To evaluate capacity building in Practice Research for health social workers developed during the implementation of the study. We will use researchers in university-based research centers in Helsinki, Tampere and Kuopio, and health social work practitioners at Helsinki Children's Hospital, Tampere Hospital mental health service and Kuopio Cancer Centre. The extension of this capacity building for Practice Research in health social work services may be subsequently scaled up for use in hospitals by the House of Effectiveness at University of Eastern Finland and the Heikki Waris Institute (Helsinki).

1.3 Expected research results and their anticipated scientific impact, potential for scientific breakthroughs and for promoting scientific renewal: The project will build an evidence base for the effectiveness social work service paths linking health and social services, and promoting improved access, choice and control over services and ultimately quality of life. The results will contribute to the knowledge-base relating to the contribution of health social workers to service integration. Research findings will inform appropriate service delivery for people presenting with health and social care needs in hospital. Evidence will be provided to support a scalable model for the social work pathway between hospital and social care.

1.4 Special objective of call: The constantly changing landscape of health and social care in Finland demands a fresh approach to the nexus between academic theory and research and Social Work practice. The study of the effectiveness of social work interventions in linking the system of social and healthcare benefits and services to meet the unmet service needs of health and social care is the primary focus. Our

priority is building professional capacity for the measurement of the effectiveness of social work practice (assessment, interventions and evaluation tools) in health and social care. The need to understand what works in current social work practice is critical if we are to understand the effectiveness of social Work models of intervention and develop an evidence base that helps raise the quality of social work. As social scientists, social workers seek to further the understanding of social work through evidence gathering and through research. Experimental studies done in everyday clinical practice settings are called effectiveness studies. Effectiveness studies in social work refer to the claim that social work services can be claimed to be worthwhile, because the distinctive methods and patterns of organization of the profession have been shown by scientific means to have had a measurable and significant impact upon the problems which fall within their scope (Sheldon, 1986). Such studies defined as how well a particular intervention, approach or policy operates in 'real-world' conditions (Moriarty & Manthorpe, 2016; Singal, Higgins & Waljee, 2014; Soydan, 2015). The effectiveness of social work interventions in a health setting demands a **quasi-experimental study design, which represents a** relatively underdeveloped social work research methodology (Joubert & Webb 2020; Thyer, 2012). Such studies have some potentially serious limitations in that they often include comorbid disorders and may not be able to ensure that treatments are provided fully and consistently. This reduces their internal validity for research purposes. On the other hand, using real-world settings enhances their external validity, meaning that the results are more likely to fit with actual practice with everyday clients and settings (Drisko & Grady, 2019). Random assignment of participants to intervention versus control groups is a way to strengthen internal validity and to limit bias in research results. Random assignment ideally generates (two or more) equivalent groups for the comparison of treatment effects versus an untreated control group. Quasi-experimental research designs however lack random assignment but do seek to limit other threats to the internal validity of study results. They are often used where random assignment is unethical or is not feasible for practical reasons (Drisko & Grady, 2019). Effectiveness studies in social work undertaken under the auspices of the House of Effectiveness (UEF), will offer innovation in services interventions design and measurement, and produce practical evidence to inform service development and professional practice.

The second objective involves research on the effectiveness of social work in promoting services user **linkages to health and social care benefits and services** in the current decentralized and fragmented system of service provision as lined. The concept of service path, sometimes referred to as a care pathways, is defined by the European Pathway Association (E-P-A) as a complex intervention focusing on the mutual decision making and organization of care processes for a well-defined group of patients during a well-defined period (Vanhaecht et al., 2010). The service path is seen as a holistic way of organizing and coordinating the service users various care and service processes across sectoral, organizational and professional boundaries. The aim of social work service paths is: 1) to enhance the quality of interventions measured by improving patient outcomes, wellbeing and safety, increasing patients choice, satisfaction and control, and optimizing the use of resources and services and benefits; and 2) to provide the client with appropriate, high-quality care or service that meets clients' needs and to ensure its continuity (Hujala & Lammintakanen, 2018). Our study employs scientific methods including an audit of hospital social work practice to inform the delivery of social work interventions

and service path trial for measuring the effectiveness of social work assessment and interventions in linking service users to health and social care benefits. The study will help identify the unmet needs of health and social care **service users requiring special benefits and services** as a consequence of living with debilitating and chronic health conditions i.e. a diagnosis of cancer, mental health or families caring for a child with a serious diagnosis.

Practice Research offers a framework to bridge the research-practice gap and has been developed by the Social Work profession. It allows theory to be informed by practice, where academics and practitioners collaborate in finding new and effective paradigms of service delivery that are based on real-life experience (Berger, Thompson & Joubert, 2019; Schiena et al., 2019; Manguy, Joubert & Bansemer, 2016). Academic-practice partnership promotes the production of research that is both relevant to practice and arises from practice issues. It is characterized by pragmatism and democratisation of knowledge (Saurama & Julkunen, 2012; Yliruka, 2015). Knowledge is seen to be built, shaped, and concretized in action and the significance of experiential knowledge based on individual situations in social work practice is strongly emphasized. No one source of knowledge is considered superior to others (Hothersall, 2019) and practice research offers ever-expanding opportunities for interdisciplinary and methodological collaboration in research Practice Research par excellence tests feasibility, efficacy (which can also include replicability), effectiveness (which can also include adaptability), scalability and ability to be monitored (Grahame, 2020). Practice research involves a knowledge development that will produce evidence to inform practice, policy, and directions for future research. The study is outcome-focused, and change-oriented (Fisher et al., 2016) as well as co-creative and involving researcher, practitioner and increasingly the client. In Finland, social work projects grounded in Practice Research have translated into operational models based on contextually based knowledge and frequently informed policy (Anand et al, 2020; Muurinen et al, 2020; Tapola-Haapala et al., 2020; Yliruka et al., 2020). Participating Finnish researchers from the Heikki Waris Institute (University of Helsinki) and the House of Effectiveness (University of Eastern Finland) are recognized as national and international leaders in this field.

2. Implementation

2.1 Work plan and schedule: The research will be undertaken across five (5) interconnected work packages involving an interdisciplinary research team outlined below.

Table 1. Description of Work packages

WP	Lead (PI), Practitioner Researcher (PR)	Org	Research Positions	Role
1	Janet Carter Anand (PI), Tomi Mäki-Opas (PI),	UEF HoE	3 x Professors (SW & SP)	Governance & Financial Reporting, Analysis, Comparative Analysis, Modeling & Dissemination of results for WPs, (Aims 1,2,3,4,5) Coordination of

	Lynette Joubert (PI)		1xEarlyStage Researcher (.5EFT) 1xPost Doc Researcher (.5EFT)	Common Protocol and measurement Tools. Liaison with External Experts Committee, Publications x2
2	Janet Anand (PI), Lynette Joubert, PI Sointu Riekkinen- Tuovinen (PR .5EFT)	UEF KYS	2x Professors (SW) 1x Post Doc Researcher SW	Delivery of KYS Social Work Audit (Aim 2,4) - Collection, Analysis of Data, Modelling, Publications x1
3	Heli Tirola (PI) Sointu Riekkinen- Tuovinen (PR .5EFT)	UEF KYS	1x Senior Researcher 1x Practitioner Researcher (PT)	Delivery of KYS SWSP* (Cancer) (Aim 3,4), Publication x 1, Policy Briefing
4	Anna Metteri (PI) Maija Perttula (PR)	UT TAYS	1 x Senior Researcher 1 Practitioner Researcher (PT)	Delivery of trial & collection of data – SWSP* (Mental Health) (Aim 3,4), Publication x 1, Policy Briefing
5	Maija Jäppinen (PI) Leena Männistö (PR)	HU HUS HWI	1 x Ass.Professor 1x Practice Researcher (PT)	Delivery of trial & collection of data -SWSP* (Children) (Aim 3,4) Publication x 1, Policy Briefing

***SWSP refers to Social Work Service Path**

WP1 (Project Management, Analysis Modeling and Dissemination - UEF): Project governance, coordination, development of research common protocols and measurement tools, monitoring, statistical analysis, financial reporting and dissemination of results will be delivered by the WPI. The House of Effectiveness will be a platform for the dissemination and distribution of the scientific and effectiveness results and experiences of the project to the wider audiences (such teaching, workshops and national conferences of effectiveness research), with leadership from docent Tomi Mäki-Opas, (Social Policy, Effectiveness & Implementation Studies). International expertise on the quasi-experimental design in practice research will be provided by Prof. Lynette Joubert, University of Melbourne, PI WP1. Her involvement will be mainly delivered online with a planned 3 month visit to establish the project, hosted by UEF. **WP2 (Service Audit - KYS)** is part of the **WP1** team, with the specific task of developing and delivering the audit (KYS) (Aim 1) Dr. Sointu Riekkinen-Tuovinen, an experienced KYS social worker, will be employed as a Practitioner Researcher (PR) and work closely with WP1 for completion of the audit. KYS is a large regional hospital employing over 44 social workers and 519 (KYS, 2018) beds offering generalist and specialist services. **WP3 (Cancer Service Path Trial - KYS)** will be led by Dr. Heli Tirola, (PI) and Dr. Sointu Riekkinen-Tuovinen (KYS) employed as PR.

Heli Tiirola, Ph.D., is a Lecturer in Social Work, UEF, who is particularly interested in the importance of illness and well-being, as well as qualitative health research and a therapist with the Finnish Cancer Society. The (KYS) Cancer center includes an outpatient clinic, a drug treatment outpatient clinic, a palliative care outpatient clinic, a radiotherapy unit, and a cancer ward. In addition, adult patients with cancer are treated in other wards according to the type of cancer the patient, employing a total of six social workers. **WP4 (Mental Health Service Path - TAYS)** is led by PI Anna Metteri from University of Tampere and Dr. Maija Perttula, an experienced TAYS social worker employed as a Practitioner Researcher. Social work in adult psychiatry includes both inpatient and outpatient care and a total of 30 social workers employed in psychiatric outpatient clinics and half in hospital wards. Anni Vanhala, Doc. Soc. Sc., is the leading social worker at TAYS, and Eeva-Liisa Lejon, M.Sc. (Econ.) is the leading social worker in outpatient adult psychiatry. WP4 will be responsible for the development and delivery of the common protocol and tool for inpatient and outpatient adult users of mental health social work services. The analysis and dissemination of findings will be coordinated with WP1 and other WPs. **WP5 (Parent and Children's Service Path - HUS)** will be led by Assistant Professor Maija Jäppinen, University of Helsinki and Heikki Waris Institute, and Leena Männistö employed as Practitioner Researcher. Männistö (M. Soc. Sc.) is the leading social worker of HUS children and youth social work. HUS social work for children and youth (under 16 years) with illness includes all specialties in children and young people with illnesses and employs a total of 53 social workers. 17 social workers work in children's somatic and 3 in child psychiatric wards. For somatic diseases, the New Children's Hospital serves the whole country for certain special areas. A total of 46 of the social workers of HUS children and youth social work are included in the research group, because legal psychology of children and adolescents is not included due to the different character of their work.

The distribution of personnel resources, and project milestones and deliverables over 2 years are outlined in the table below.

Table 2. Work packages, Tasks (T) and Results (R).

	Milestones and achievements / results
WP 1	UEF (Management, Analysis & Dissemination)
Tasks (Black)	<p>1. Year</p> <p>T1.1 Employment, start-up meetings/workshops and orientation of work packages x5 and social work participants</p> <p>T1.2 Scoping review - involving all WPs</p> <p>T1.3 Hospital consultations & finalization of ethics permit, common research protocol, common measurement tools and training with WP2,3,4,5.</p> <p>T1.4 Collection & Analysis of data</p> <p>2. Year</p>
Results (Red)	<p>T1.5 Statistical analysis & reporting of results</p> <p>T1.6 Storage and anonymization of data</p> <p>T1.7 Application for future funding applications</p>

	<p>1 Year R1.1 Online project launch Kuopio - All WPs R1.2 Online Research Workshop for health Social Workers (Practice Research) R1.3 1xPublication on scoping review – BJSW R1.4 Project Website (House of Effectiveness)</p> <p>2. Year R1.5 2xOnline webinar workshops for health Social Workers (Effectiveness & Modeling) R1.5 Final Workshop Helsinki - Preliminary results and analysis - All WPs R1.7 Project report & local x3 Public Forums & Briefings R1.7 1x Publication R1.9 Integration of results into MA and PhD curriculum through- House of Effectiveness, UEF</p>
WP 2 (Aim 1,2, 4)	KYH & UEF (Audit)
Tasks	<p>1. Year T2.1 Employment & Formation T2.2 Ethics permit T2.3 Consultation & Training T2.4 Data Collection & Input, Analysis</p>
Results	<p>2. Year R2.1. Analysis & Work Package Report R2.2 1x Publication - Comparisons of the results R 2.3 Dissemination results to local stakeholders R 2.4 Collaborate on training package for curriculum development and training</p>
WP 3, 4, 5 (Aim 3, 4)	KYS & UEF SWSP (Cancer) TUH & TU SWSP(Mental Health) HUS & HU (Children)
Tasks (Black)	<p>1. Year T3.1 Employment & Formation T3.2 Ethical permit T3.3 Consultation & Training T3.4 Data Collection & Input & Analysis</p>
Results (Red)	<p>Year 2 R3.1 Analysis & work pack report R3.2 3x publications (Aims 3 & 4) - Effectiveness of specialist SW Service Paths (Quantitative Social Work R3.3 Dissemination Results. Briefings to local and national stakeholders R3.4 Collaboration on curriculum development</p>

Table 3. Project Gantt Table (1. 9.2021–31.8.2023)

Year	2021	2022			2023	
Month	09-12	01-04	05-08	09-12	01-04	05-08
Work package 1						
Task 1.1						
Task 1.2						
Task 1.3						

Task 1.4						
Task 1.5						
Task 1.6						
Task 1.7						
Result 1.1						
Result 1.2						
Result 1.3						
Result 1.4						
Results 1.5						
Result 1.6						
Result 1.7						
Result 1.8						
Result 1.9						
Work package 2 Social work inspection (Audit) KYS & UEF						
Task 2.1						
Task 2.2						
Task 2.3						
Task 2.4						
Result 2.1						
Result 2.2						
Result 2.3						
Result 2.4						
Work package 3 SWSP Cancer KUH Work package 4 SWSP Mental Health TUH Work Package 5 SWSP Children HUS						
Task .1						
Task.2						
Task .3						
Task .4						
Results1						
Results .2						
Result 3.3						
Result 3.4						

2.2. Research data (data and material), research methods and research environment: The study will be implemented in two phases over the two-year period. **Phase 1.** The Health Social Work Audit: The aim of the social work audit in KYS is to quantify and define the contribution of health and mental health social workers as members of the health workforce, and to improved health outcomes. A previous audit undertaken in both Helsinki and Tampere with 294 health social workers (Yliruka et al., 2019) demonstrated that social workers play a key role in facilitating between hospital-based care and municipality funded social care and Kela benefits. The audit survey to be used was field-tested in Finland (see Yliruka et al., 2019). The original audit survey was developed in a practice research initiative between the University of Melbourne (Professor Joubert) and St Vincent’s Hospital, Department of Social Work, Australia. The findings from the audit in Kuopio will be included in an analysis with Helsinki and Tampere and will provide for the first time, an evidence base for health social work in Finland. The findings from the combined audit will inform the development of the service path

intervention in the experimental group in Phase 2 of the proposed study. The Audit team will conduct a 24-hour audit of social work activities, code all activities and critically analyse the data to identify interventions social workers perform, and models and theories utilised by social workers. All social workers within the service will be invited to participate in the audit. The data will be collected via a spreadsheet divided into 5-minute intervals. These are populated with data codes from a coding sheet. Social workers will be asked to code the activities carried out on one working day, as nominated by the social work department at KYS. Phase 1 will be undertaken in the first 6 months of the study and will inform the assessment and intervention to be used in Phase 2 of the study across of the 3 sites (Helsinki, Tampere, Kuopio). **Phase 2** is an effectiveness study, focusing on the process and outcome of an intervention, consisting of standardised psychosocial assessment (i.e. ecosystems assessment, brief client-centred social work intervention, and community linkage to support service users transitioning from hospital to social care using a quasi-experimental research design involving a pre-test and double post-test design. The evaluation will provide evidence informing the social work pathway of care from health to social care funded by the municipality. The sample will be recruited from service users referred to hospital social workers for services in Kuopio University Hospital (KYS), Helsinki Children's Hospital (HUS) and Tampere University Hospital (TAYS). A consecutive sample of 63 patients (based on our power calculation) referred to the social work department for services will be recruited into the study. Service users and their families will be provided with a plain language statement detailing the content of the research, together with a consent form to sign where they will give permission for their data to be utilised. They will be assured that their data will be de-identified and anonymous. They will be offered the opportunity to participate in a service user focus group and to receive a report on the outcomes of the study. Once service users have been consented to participate in the study, they will be assigned to either an intervention or control group using a table of random numbers. Exclusion criteria will be decided on in consultation with hospital social work practitioners in each site. All service users in the control group will receive usual social work care. Service users in the intervention group will be assessed using the standardised assessments described below, by the study social worker who will only be providing assessment and intervention to service users in the intervention group and not in the control group. This is to ensure consistency in the implementation of the study design (i.e. Capability, Social Support and QOL – to be described below). The intervention will be informed by the results of the Health Social Work Audit conducted in Phase 1 of the research. The analysis of the Helsinki and Tampere data suggests that the social work intervention will include one or more of solution focused, task centred social work with crisis intervention, family systems and strengths-based practice as the interventions most frequently implemented by hospital social workers. These frequently used interventions will be reviewed in a rapid effectiveness review in Phase 1 of the study. The decision on which intervention model to apply will be based on the assessment carried out by the social worker in Phase 2. The intervention will be implemented as the service path of referral to social care services funded by either the state or municipality in the community. This will be implemented by the study health social worker and will include a telephone tracking service to ensure that a relationship has been established with the social care service provider. This will ensure that service users and their families are integrated with these services to promote a seamless pathway of care from hospital to community.

Stage 2. Objectives: 1. Service user reported outcomes (Pre-Test, double Post-Test quasi-experimental research design). We will use a Pre-Test, double Post-Test group design with service users and their families in both the intervention and control group at the initial assessment phase, 6 weeks, and 6 months. The outcome of the intervention (Social work service path) will be measured using validated and reliable tools selected in consultation with participating social workers and hospital clinicians. Possible measurement tools include the World Health Organization Quality of Life (BREF version, 1996), the Birmingham Capability Scale ICECAP, and the MOS Social Support (Sherbourn & Stewart, 1991). The WHOQOL-BREF (1996) measures the impact of interventions on the subjective experience of physical, social, emotional, psychological and environmental health and wellbeing. The capability approach (ICECAP) is a framework for conceptualising wellbeing for public policy and increasingly used in social work (Kjellberg & Jansson, 2020; Walker, 2007; (ICECAP <https://www.birmingham.ac.uk/research/activity/mds/projects/haps/he/icecap/index.aspx>). The ICECAP short scale measures what service users 'do' and can 'be' in their life (i.e. choice and empowerment), two important are social work assessment goals. The Medical Outcome Study (MOS) Social Support Survey is a common instrument used for measuring social support for service users with serious health conditions. This simple scale measures emotional, tangible and practical support, positive and affectionate support (Sherbourn & Stewart, 1991), again key goals in an ecosystems assessment.

2 - Management of transition from health to social care pathway: (Process evaluation). We will use a Practice Research methodology ie Clinical Data Mining (Epstein, 2014) to describe and analyse the assessment and intervention records of patients in the single intervention group. Thematic analysis of the qualitative content of patient records will enable a detailed description of the lived experience of people transitioning to social care will be applied. A retrospective audit and focus group of hospital and social care providers' and service users' satisfaction with their participation in the model, will be done at the end of the 6-month period. Such modelling will involve the establishment of a decision tree framework, utilising Markov process and Monte Carlo Simulations for the assessment of uncertainty. Results will be expressed in terms of incremental cost-effectiveness ratios (ICERS) with scatter plots and acceptability curves.

Table 4. Research Design



Statistical analysis: The audit will be conducted with all invited social workers at KYS and results will be analysed using descriptive statistics. Sample size estimates for the evaluation have been calculated on the major outcome of interest i.e. the difference between means on the quality-of-life scores in the exposed and comparison groups. The total sample size required to obtain a power of 0.8 will be 378 (1 of 0.05 with a ratio of case to control 1 will be 63 in each group). Basic descriptive statistics will be computed for outcomes of interest in both groups. Within group comparisons will be made using the repeated measures ANOVA for continuous variables and repeated measures logistic regression analysis for categorical variables. Chi-square analysis will be used for determining differences in between groups' proportions. Thematic analysis of recurring content themes will be used in the qualitative analysis of the semi-structured interview data. The effectiveness of interventions to meet outcomes goals will be measured by validated social or psychometric tools, including WHOQOL-BREF (WHO, 1994), the Birmingham ICECAP (Capabilities) and the MOS Social Support (Services and support). Suitable statistical programs will be used to apply multivariate regression (GEE-models) (STATA 14) and structural equation modelling using latent variables (Smart PLS 3.0) to evaluate the effectiveness of social work interventions to the primary and secondary outcomes by comparing the exposed and comparison groups. The analyses will be conducted pre-test phase to examine the outcomes at baseline (T1) before the intervention and to be repeated regarding two follow-ups (double post-tests T2 (6 weeks) & T3 (6 months)) to examine the changes (T1->T2 & T1->T3) in the primary and secondary outcomes. Relevant independent variables will be adjusted: representation rates at emergency, hours in emergency and bed days in hospital, episodes of engagement with the social care service in the analysis.

Scientific impact: The study will provide a quantitative database of hospital social work across 3 major hospitals in Finland for planning and decision-making purposes. The first evaluation of social work service paths for special categories of service users in Finnish hospitals will be delivered to inform future decision making and research. Effectiveness results involve the comparison of evidence on the role and practice of social work with and across major Finnish hospitals. Our consortium of recognised leaders in Practice Research and health social work globally will not only build on academic standards but will promote the development of knowledge and skills through an evidence informed research approach. While the proposed research is addressing a concrete and pragmatic issue in social work practice i.e. an integrated pathway from health to social care, the research methodology, through its methodological pluralist approach, will allow for rigorous reflection on practice, captured through the focus groups and capacity building opportunities. The study will contribute and challenge practice through empirical research that will contribute to new theoretical models on social work assessment, intervention and linkage. The aim of the Audit Study is to acquire a comprehensive evidence-based understanding of the current elements of practice pertaining to social work practitioners in health and mental health services. These data will inform the future input and role of social work in the health sector. This collaborative initiative will generate internationally relevant data and expand the size of the original Australian and Finnish dataset thereby enabling generalization of findings. The study aims to describe amongst other key functions, patient/consumer-specific clinical interventions, non-specific patient/consumer attributable activities, non-clinical interventions as well as the theoretical underpinnings of current Social Work interventions used by Finnish social workers. This innovative and

unique dataset has the capacity to influence both policy and practice developments for health and social care in Finland. The academic practitioner partnerships strengthened through this study reflect a knowledge development process that is designed to inform practice, policy, and future research and a continuing search for ways to improve social services that promote the well-being of service users.

2.3. Risk assessment and alternative method of implementation: Critical to the project's success is the commitment of participating hospital social workers and the application of research permits from the three participating hospitals and universities. To date we have consulted widely and have the support of hospital social work managers. The employment of three practitioner researchers will ensure collaboration with hospital personnel. Ethical approval will be given immediate priority and involve a collaborative effort across all work packages. The implementation plan ensures centralised governance, interconnectedness of tasks and sharing of resources and expertise across work packages.

2.4 Added value of consortium: The consortium is part of an existing UEF network and draws upon national and international expertise in health and practice research. UEF is a leading institution in social work education and has the capacity to translate findings into curriculum and practice. The House of Effectiveness UEF (<https://sites.uef.fi/vaikuttavuuden-talo/>) is a national interdisciplinary center for effectiveness studies, offering a key source of interdisciplinary and clinical expertise, and a platform for the dissemination findings and ongoing social work research. University of Tampere and TAYS are leaders in Finnish health and mental research and services. HCH is the major pediatric hospital in Finland and brings the Heikki Waris Institute as an active partner to this study. Collaboration with The University of Melbourne offers world class expertise and the opportunity to disseminate globally. The study design will add value by modeling and promoting academic and practice partnerships in social work, like those existing in medicine in nursing.

3. Research team and collaborators

3.1 Project personnel and their project-relevant key merits: Research team members are drawn from diverse interdisciplinary backgrounds, including social work, social policy, social pedagogy, and psychology. PI, **Janet Carter Anand**, Professor in International Social Work, UEF, is an experienced medical social worker and academic, with extensive experience leading practice research projects in UK, ROI and Finland (i.e. STN, PROMEQ NEW Start Finland! 2016-2019). She conducted Finnish research (PROMEQ) involving the measurement (QoL & Capabilities) of social interventions and hospital based practice research (Care & Connect, Trinity College Dublin & Tallaught Hospital, ROI). **Lynette Joubert**, Professor in Social Work, TUM, is both a Social Worker and Clinical Psychologist, with extensive experience leading Health Social Work and Practice Research competitively funded studies. She has developed a model of Academic Practitioner Partnership in Health Social Work which has been implemented across teaching hospitals in Melbourne. She collaborated with Finnish colleagues on the study, *Evidencing health social work* in Helsinki and Tampere (Yliruka, Satka & Heinenen 2018) where her audit methodology and tool was adapted for use by Finnish hospital social workers. **Tomi Mäki-Opas (Social Policy)** is **Docent and Research Director, House of Effectiveness,**

UEF. Dr. Mäki-Opas is a national expert on effective social policies and programs in health and wellbeing promotion, inequalities in health and wellbeing, effectiveness evaluation and experimental study designs as well as implementation of research results into practice. He is a leader of a large research community on Effectiveness of Social and Health Services at UEF and PI in two research and development projects focusing on effective health and wellbeing promotion among disadvantaged groups (Kainuu HYTE; Hyvällä Mielellä Pohjois-Savo). **Anna Metteri**, University Lecturer Emerita, University of Tampere is a leading expert and pioneer in health and mental health social work. Anna was instrumental in the implementation of the Helsinki and Tampere health social work audit in 2019. She has a long history of intensive national and global collaboration in health and mental health social work in practitioner-academic partnerships. **Maija Jäppinen** is Assistant Professor of Social Work Practice Research at the University of Helsinki and Heikki Waris Institute, in which she does research-based development of social work practices in close collaboration with the municipalities of the Helsinki metropolitan area as well as with Helsinki and Uusimaa Hospital District HUS. The three **Practitioner Researchers** recruited from the participating hospitals will bring considerable practice knowledge, skills and expertise to ensure the success of the study and aim to develop a research-based culture in their departments. The study also involves an enthusiastic team of early stage and post-doctoral researchers.

3.2 Collaborators and their project-relevant key merits: A strength of this project is that it involves national and international collaborators from Heikki Waris Institute, Association of Health Social Workers, UEF House of Effectiveness and the three participating hospitals, who will be invited to form an external reference committee, which will meet three times during the study to monitor study.

4. Responsible science

4.1 Research ethics: Ethical review and applications for research permits for the study will be sought from the three participating hospitals and three universities. A shared ethics proposal will be developed in consultation with each of the hospitals, and will involve informed consent, a plain language statement, guaranteed anonymity of subjects as well as ensuring that participants may withdraw from the research at any stage.

4.2 Equality and nondiscrimination: No service user will be discriminated against, based on age, ethnic or national origin, nationality, language, religion, belief, opinion, health, disability, sexual orientation or other personal characteristics during the project work. Age, gender, ethnic origin, nationality, and health will be considered in the statistical analyses and reporting where relevant and possible. Moreover, recruitment for the quasi-experimental study will also take into consideration all equality issues.

4.3 Open science: An application for a permit for secondary use of health and social data through Findata ensures processing and data protection for individuals. We intend to make the data available beyond the project to both experienced researchers as well as early stage researchers. Results will be disseminated to participants and key hospital, health and social care stakeholders, including municipalities through briefings for service planning and development, and to university educators and

practitioners as examples of evidence informed practice. Findings will be published in both English and Finnish in open access social work and health journals. Updates on the progress of the study and final report will be made available through the House of Effectiveness and the IFSW-NBRRRC network (<https://www.nbrsocialwork.com/>) and through presentations at the International Practice Research and the Social Work Conference, European Conference on Social Work Research, in 2023.

4.4 Sustainable development objectives: The rationale for this study to provide evidence as to how health and wellbeing can be maintained and enhanced in a sustainable Finnish society (SDG 3). The study specifically addresses the issue of equitable access to health and social care services.

5. Societal effects and impact

5.1 Effects and impact beyond academia: While the proposed research is addressing a concrete and pragmatic issue in social work practice i.e. an integrated pathway from health to social care, the research methodology, through its methodological pluralist approach, will allow for rigorous reflection on practice, captured through the focus groups and capacity building opportunities. The study will contribute and challenge practice through empirical research that will contribute to new theoretical models on social work assessment, intervention and linkage.

Table 5. Summary of Outcomes and Professional & Societal Impact

	Outcomes	Professional and Societal impact
1.Evidence informed Hospital Social Work (Audit)	Public launch & Webpage, House of Effectiveness, UEF Mentoring & modeling practice research involving over 60 Social Workers x 3 hospital sites Publication -BJSW Policy briefing for hospitals, professionals, educators	National baseline on Finnish Hospital SW Provision of evidence for workforce planning Capacity building in practice research in social work in health and social care
2. Measurement tools for effectiveness in social work (Audit & Paths)	Operationalization of new social work service paths Evaluation of SW measurement tools Public report on the effectiveness Publication – (YHTEISKUNTAPOLITII KKA)	Model of intervention tested Measurement tools the effectiveness of social interventions Integration of social work practice research studies in the House of Effectiveness, UEF, for future research and teaching purposes

3. Comparison of SW Interventions in Response to Special Need (SW Service Paths)	Public Report on SW Service Paths Publication - Journal of Social Work in Health Care	Evaluated SW service paths for people with special health needs Comparative analysis and modeling of SW Service Paths
4. Building Practice Capacity (Practitioner Research)	Curriculum development for Effectiveness in Social Work Practice HoE, UEF A center for Effectiveness in Social Work Practice, UEF, House of Effectiveness Recommendations on building practice research capacity in health social work Publication on Practitioner Research (NSWR) International webinar in ESWP	Strengthened research skills and capacity amongst social workers Increased practitioner capacity for the evidencing of practice in clinical setting Representation in health and social care networks (conferences IPRC, ECSWR)

***List Research Aims and Publications:**

Aim 1 & 2- *Hospital SW Audits & Comparisons* (i.e. YHTEISKUNTAPOLITIIKKA);

Aim 3- *Effectiveness of Social Work Service Paths* (i.e. BJSW, Quantitative Social Work);

Aim 4 - *Models in Practice Research* (i.e. Journal of Practice Research).

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