Received: 6 February 2019 | Revised: 14 November 2019 | Accepted: 7 February 2020

DOI: 10.1111/jep.13380

SPECIAL ISSUE

Journal of Evaluation in Clinical Practice
International Journal of Public Health Policy and Health Services Research

WILEY

Ready for shared decision making: Pretesting a training module for health professionals on sharing decisions with their patients

Simone Kienlin Msc[1,2,3] | Kari Nytrøen PhD[3,4] | Dawn Stacey Prof[5,6] | Jürgen Kasper Prof[1,7]

[1]Faculty of Health Sciences, Department of Health and Caring Sciences, UiT The Arctic University of Norway, Langnes, Norway

[2]The South-Eastern Norway Regional Health Authority, Department of Medicine and Healthcare, Hamar, Norway

[3]Division of Internal Medicine, University Hospital of North Norway, Tromsø, Norway

[4]Faculty of Medicine, University of Oslo, Oslo, Norway

[5]School of Nursing, University of Ottawa, Ottawa, Ontario, Canada

[6]Ottawa Hospital Research Institute, Ottawa, Ontario, Canada

[7]Faculty of Health Sciences, Department of Nursing and Health Promotion, OsloMET Metropolitan University, Oslo, Norway

Correspondence
Simone Kienlin, Faculty of Health Sciences, Department of Health and Caring Sciences, UiT The Arctic University of Norway, Langnes, Norway.
Email: simone.kienlin@helse-sorost.no

Abstract

Introduction: While shared decision-making (SDM) training programmes for health professionals have been developed in several countries, few have been evaluated. In Norway, a comprehensive curriculum, "klar for samvalg" (ready for SDM), for interprofessional health-care teams was created using generic didactic methods and guidance to tailor training to various contexts. The programmes adapted didactic methods from an evidence-based German training programmes (doktormitSDM). The overall aim was to evaluate two particular SDM modules on facilitating SDM implementation into clinical practice.

Method: A descriptive mixed methods study using questionnaires and a focus group guided by the Medical Research Council Complex Interventions Framework. The training was provided as two different applications (module AB [introduction and SDM-basics] and module ABC [introduction, SDM-basics and interactive training]) with differing learning objectives, extent of interactivity, and duration (1 vs 2 hours). Groups of participants were recruited consecutively based on requests for health professional SDM training in university/college- and hospital-settings. By a focus group and a self-administered questionnaire comprehensibility, relevance and acceptance were assessed and qualitative feedback collected after the training. Data passed descriptive and content analysis, respectively. Knowledge was assessed twice using five multiple-choice items and analysed using paired *t*-tests.

List of abbreviations: SDM, shared decision-making; HCP, health-care provider; EBM, evidence-based medicine.

Results: In 11 (six AB and five ABC) training sessions, 357/429 (296 AB and 133 ABC) eligible nurses, physicians and health professional students with varying clinical backgrounds and previous levels of SDM-knowledge participated. SDM-knowledge increased from 25-78% (range pretest) to 85-95% (range post-test) ($P \leq .001$).
The training was rated easy to understand, acceptable and relevant for practice. Findings to improve the education suggest higher emphasis on interprofessional teaching methods.
Conclusions: The two SDM training modules met the basic requirements for use in a broader SDM implementation strategy and can even improve knowledge.

KEYWORDS
curriculum, decision making, interprofessional, medical education, training, shared decision making

1 | INTRODUCTION

Although, shared decision making (SDM) is a best practice approach for decision-making communication about health-related issues, it has not yet been routinely adopted by most health-care professionals. Research shows an unsatisfactory extent of patient involvement in health-care consultations[1,2] and generally in health care. Compared to unilateral approaches, combined interventions comprising both training for health-care providers (HCP) and interventions targeting patients, such as patient decision aids are proven more effective.[3]

Internationally, several SDM training programmes for HCP have been developed, but few have been evaluated. An international environmental scan,[4,5] identified a total of 148 programmes developed in 18 countries targeting licenced HCPs in various levels of training.[5] Of the 148, 43 training programmes have been systematically evaluated, but only 37 evaluation reports are available. And few of these studies measured efficacy of the educational program(s).[4,5] The programmes vary greatly in what training is delivered, the manner of delivery, and the length of time. In addition, the review finds a lack of detail and transparency with regard to the didactic contents.[4,5] In a recent update of the review, increasing activity in producing SDM trainings is indicated, however, the level of evaluation is still poor and interprofessional approaches to SDM is missing.[4]

Patients and policy makers in Norway are calling for SDM. The Norwegian term for SDM, "Samvalg," was introduced in 2014[6] with strong support from patients and the Ministry of Health published a series of documents indicating the need for better use of SDM.[7-10] In addition, the Ministry of Health established a set of criteria for judging the quality of patient decision aids (interventions for facilitating SDM) to be published on the national platform *helsenorge.no*.[11] However, there is no proven effective SDM training for HCPs available in Norway.[5]

Given full implementation of SDM in the health system requires use by all professions across the various settings, a comprehensive training curriculum is desired capable to adjust to varying needs and conditions as time, setting, or profession. The findings from the environmental scan on SDM trainings suggested the need to embed any newly developed training within The Medical Research Council Complex Interventions Framework.[4,12] This framework provides recommendations for structuring the development process of a complex intervention by five steps of evaluation on guiding the continuum of increasing evidence.[13] The first step is to make use of existing empiric and theoretic evidence. Further steps combine qualitative evidence from modelling studies with quantitative evidence from experimental studies to build an understanding of the mediating mechanisms, which makes efficacy traceable under implementation conditions.

There were a few interesting programmes to choose from, but the doktormitSDM training programme (see Table 5) had been rigorously evaluated and appeared to be a good programme to be used as a starting point of the development of the Norwegian curriculum (Norwegian: "klar for samvalg", English "ready for SDM"). This approach had been proven effective to improve communication in terms of SDM. According to several studies, it is adaptable for various settings (eg, one-on-one and self-studies), media (eg, web based), and time frames (eg, from 15 minutes to several hours).[5,14-17] Rather than rebuilding the entire training, the Norwegian development was supposed to adopt elements of doktormitSDM on the level of the didactic principles (see Table 5). Unlike doktormitSDM, which hitherto has been used for physicians only, the new development should take into account the needs of a much broader professional target group by providing a variety of modules.

The overall aim of this study was to pretest the two first group training modules of "ready for SDM." Within the context of the entire curriculum portfolio for Norwegian HCPs, these modules are intended to introduce SDM and related basics as a door opener. Specific objectives were to (a) evaluate the modules' feasibility of applying to various target groups including interprofessional groups; (b) determine the training module's comprehensibility and acceptability; and (c) as a preparation for further evaluation, steps in terms of the Complex Interventions Framework, pretested the modules' ability to achieve a gain of knowledge.

2 | METHODS

2.1 | Research design

Using mixed methods, the descriptive study pretested two applications of the training module "ready for SDM/ group": AB (introduction to SDM for basic didactic training) and ABC (introduction to SDM for basic didactic training plus interactive training) (Table 1). The study design was informed by the Kirkpatrick's model which structures evaluation using four levels: reaction, learning, behaviour, and results. Our study focused on the first two levels. More specifically, the evaluation comprised (a) a post intervention questionnaire to explore comprehensibility and acceptance, (b) a post intervention focus group to explore need for revision to the training programme, and (c) a questionnaire based pre- and post-knowledge test. The study was by no means designed to compare the two modules or compare participant experience across different settings. On the contrary, the study was designed to test the training modules under as much as possible usual continuing education type conditions. The study was approved by the ethics committee at the University Hospital in Northern Norway (UNN) (2017/1461). All participant signed a written informed consent form prior to their inclusion.

2.2 | The intervention

To meet varying needs of the Norwegian target group, the intervention was presented as two modules (AB vs ABC) which differed in duration (1 vs 2 hours), objectives, and extent of interactivity (Table 1). The typical target group had a variable composition of professionals, including nurses, doctors and other HCPs, depending on the clinical environment, the professionals available to attend, and/or the invitation received for providing training. Decisions about which of the two applications to apply were made based on the particular request and available timeframe. Although there was some variation due to local contexts, each module was provided mostly unchanged and by the same trainer (SK). The trainer was a registered nurse with a master's degree in Health and Empowerment and a Ph.D. student focused on SDM.

The 1-hour module (AB) is targeted at improving attitudes and knowledge about SDM. The first component (A) provides an introduction into SDM using a didactic lecture, the second (B), is a basic SDM lecture on the concept, related measures, and steps to realize SDM. The 2-hour module (ABC) additionally focuses on improving SDM skills, particularly by the third component (C) involving interactive skills training such as, for example, role play.

Level and objectives were adjusted to the actual stage of implementation in Norway[18] and were considered responsive to HCPs current needs and a meaningful first step to approach a higher level of training using complementary modules such as doktormitSDM.

The "ready for SDM" training module follows a detailed curriculum, which is developed in line with doktormitSDM.[15] "Ready for SDM" uses didactic concept and knowledge of the German programme. In particular, all essential didactic strategies underpinning doktormitSDM (Table 2) have been adopted and translated into the new context. The doktormitSDM curriculum is founded on thorough analyses of the typical barriers health professionals meet when approaching sustainable behaviour change in compliance with SDM. Strategies used to overcome specific barriers are both theoretically grounded and empirically proven.[15]

TABLE 1 Content of "Ready for SDM" training modules

Unity/subject	Content	Form of communication	Learning objectives
Component A: Introduction	• An interactive multiple-choice test with feedback • Background and description of SDM • Relevant decisions for SDM • Documented effects when SDM is used	Lecture	• To be able to define SDM and informed choice • To be able to describe indications for SDM • To understand the importance of considering EBPI criteria
Component B: SDM basics	Six steps of an SDM-process are described: 1. To review the problem requiring a decision-making process. 2. Key message: decisions cannot be made based on evidence alone. It is the patient who needs to decide. 3. Information about pros and cons of each option. 4. Expectations, concerns and preferences of the patient. 5. Decision (progress in decision-making, deferment is a possible decision). 6. Arrangements/follow-up	Lecture	• To be able to demonstrate the six steps to SDM • To recognize barriers interfering with using SDM • To have knowledge about measures to support SDM
Component C: Interactive training	Interactive role playing followed by face-to-face feedback on core aspects of SDM using a communication analysis.	Interactive live feedback	• Acquire self-appraisal skills in using SDM • To be able to recognize quality of communication in terms of SDM

Abbreviations: EBPI, evidence-based patient information; SDM, shared decision making.

TABLE 2 Core didactic strategies in the doktormitSDM training curriculum

Barrier	Reflection	Strategy	Tangible measure
Clinicians expecting competitive evaluation in terms of good and bad	Socialization from medical training	Changing expectations and expectations of expectations Bridging the gap between the communication analyst and the clinician by establishing a cooperative communication	Invite to participate in analysis of the trainee's consultation Openly share and discuss observations of the trainee's communication Provide and demonstrate nonjudgmental and explicitly qualitative feedback
Resistance towards coaching by communication expert	Conviction of physicians can just learn from physicians understandable from the clinicians point of view (prioritization of experience and scientific foundation)	Showing respect for the clinician's expertise	Ask rather than judge Avoid psychologist stereotypical behaviour Perform highly professional and precise detailed descriptions
Work overload and extremely limited time resources	Practical restrictions are causing stress which might negatively impact on training outcome	Caring for compatibility with daily routines	Avoid conflicts with daily duties Arrange training in situ Customizing training setting to local conditions
Avoidance regarding incorporation of new knowledge; for example, use of negative comparisons	Theory of cognitive dissonance (Festinger, 1962), explains cognitive mechanisms in the service of attempts to handle new (foreign) information challenging the existing cognitive structure	Making behaviour change the most feasible alternative	Make the trainees recognize SDM skills already implemented in their routines Show easiness of small but effective variations Use the trainee's own consultations (from role play) as training material
Resistance despite open-mindedness	TPB (Ajzen, 1991) provides knowledge on the essentials of making behaviour change happen. Barriers can be related to attitudes, social norm or control beliefs	Identifying individual barriers	Exemplary in-depth analysis of individual communication behaviour using the MAPPIN' SDM
Resistance due to loss of control	Challenging infallibility is considered essential for behaviour change. Involuntary loss of control, however, such as of familiar communication habits might rise resistance. Voluntary relinquishment of control, on the other hand, might make trainees become susceptive for change	Balancing destabilization of and giving control	Delivery of own work samples (role play) to a communication analyst/ trainer Re-transfer control in terms of transparency regarding the methods of analysis, sovereignty of judgement, encouragement, suggestions and discourse = partnership
Short half-life	Achievements from a short course are likely to disappear within days and weeks. Sustainability is a challenge	Implanting an ongoing self-organized learning process	Establish the third person role: induce self-observation using the given reference framework even in the absence of the trainer
Unrealistic expectations regarding content	Although everybody's agreeing on how important communication is, a closer look at this general attitude reveals a big variety of beliefs and motivation. By that, the particular training focus can easily be misunderstood.	Awake and maintain the trainee's curiosity	Be curious with regard to the trainee's solutions: Leading question is: "What would your way to perform this skill look like?" Individualize: Adapt to the trainee's SDM level and challenges Be specific regarding the subject
Excessive demand	New subject matter and behaviour change can easily overburden the trainee	Less is more	Stop feedback before resistance rises

Note: This table presents didactic strategies underpinning the doktormitSDM training curriculum and how they were derived from reflection of the origin of specific barriers typically baring the way to sustainable behaviour change.

TABLE 3 Educational settings for SDM training

Interprofessional	Nurses	Physicians
Undergraduate programmes (Bachelor)		
	1 group × ABC: Undergraduate nursing programme (second year). Mixed medical domains * (*n* = 124/120)	
Graduate program (Master)		
1 group × ABC: Master program in Empowerment and Health promotion. Mixed medical domains, Multi-healthcare professional *(*n* = 20/16)		
Continuing education programmes (University/Collage)		
1 group × ABC: Further education in *Evidence-based* Health Care. Mixed medical domains, multihealth-care professional *(*n* = 31/21)	1 group × ABC: Continuing education in cancer nursing *(*n* = 12/11)	
In-service continuing education (Hospital)		
1 group × ABC: hospital rehabilitation unit * (*n* = 50/41)	1 group × ABC: In-service education for nurses. Mixed medical domains *(*n* = 20/10)	1 group × AB: Interest group for neonatal medicine *(*n* = 12/12)
3 groups × AB: hospital cancer unit * (*n* = 128/99)		
1 groups × AB: hospital psychiatry unit * (n = 32/27)		

Note: AB = 1 hour, ABC = 2 hours. *(*n* = number participants/number response rate). Inter/intra-professional refers to whether the target group was heterogeneous with regard to their professional background.

The curriculum was piloted in a continuing education in-service within an interprofessional workshop on psychosis treatment in September 2016 (*n* = 100). The piloting revealed technical issues, as well as the need to determine appropriate intensity of training, procedure and emphasis given to the single components (A, B, C). Findings were used to refine the curriculum and highlighted the need for further evaluating the training.

2.3 | Setting and participants

Aiming at maximizing ecologic validity, the sampling strategy allowed for gathering experiences with application of the two training modules in a variety of settings and groups, under conditions, which were, as far as possible, representative for usual education in Norwegian health-care institutions and educational institutions. Initially, a matrix structuring the scope of health professional training in Norway, comprising educational settings: undergraduate (Bachelor), graduate (Master), continuing education (University/College) and in-service education (Hospital) was created (Table 3). Additionally, groups of participants who contacted The South-Eastern Norway Regional Health Authority with any request for an SDM training were consecutively sampled into the given matrix, if eligible. Decisions regarding their eligibility were made considering the following criteria: (a) the requested lecture was supposed to address SDM and allow for conduct of the entire intervention, either module AB or ABC; (b) the organizers agreed to use the training for evaluation purpose, implying data collection before, during and after the meeting; (c) agreement was provided by the organizers to enrol participants based on signed informed consent on an individual level; and (d) the institution was fitting into the sample matrix. Requests not fitting open fields in the matrix were not rejected but handled alongside the study. Whether or not a training request was considered eligible did not affect the usual education provision.

2.4 | Data collection

Data were collected at baseline (attitudes towards SDM, previous SDM skills, knowledge) and post-training (demographics, comprehensibility, acceptance, needs for revision, knowledge).

Attitudes towards patient involvement, operationalized as a health care professional's willingness to apply SDM in clinical practice, and a subjective estimate of the participants' training level were surveyed in the context of an online quiz (5-point Likert scaled, from "to a very little extent" to "to a very great extent").

The same online quiz included questions assessing SDM knowledge with a multiple choice questions (5-items). To stimulate interest in the training module at the beginning, feedback on group level statistics was directly provided on a big screen. After the training, knowledge was re-assessed using the same five items included in the paper-pencil questionnaire. These items are a test, previously piloted, and in use for certifying participants of an SDM e-tutorial.[14] Moreover, these items were sensitive to knowledge change.[14] Questions focused on definition of SDM, indication and contra indication, prerequisites of informed choices and

reliable sources of information about effects of medical interventions. The original set of questions were provided as a supplementary file.

The post intervention questionnaire also included four items assessing demographic characteristics: years of age, sex, profession, and years of professional practice.

Comprehensibility (1-item) and relevance of the course module to clinical practice (1-item) were assessed as subjective ratings of given statements on a Likert scale ranging from "very little extent" to "very great extent"; the item was to be answered with regard to each of the three components (A, B, and C) as part of the post intervention questionnaire. Using the same answering format, acceptance was assessed by two items: one asking for willingness to recommend the training to others and the other providing a statement with an overall impression regarding the module. Two additional open questions provided free text space to indicate need for revisions using both positive and negative framing.

Needs for revision of the training modules were further elucidated during a 60-minutes focus group session with representatives of different health-care professions conducted after one of the training meetings (A, B, and C). Focus group members were selected and invited via a coordinator trying to recruit a range of health-care professionals and to obtain diverse response in accordance with the study's aim. The focus group session followed a structured interview guide. In particular, the focus group encouraged participants to identify barriers and facilitators to training HCPs as well as comprehensibility and specific suggestions for revising the ready to SDM training modules. The session was audio recorded and field notes were made.

2.5 | Data analyses

2.5.1 | Data administration

All quantitative data were entered into SPSS version 19.0 (IBM corporation, USA). The qualitative data from items using free text answering format and the focus group transcript were entered into NVivo version 11 (QSR International, Melbourne, Australia).

2.5.2 | Analysis of knowledge test

Answers from the pre-and postknowledge test were dichotomized to either "correct" or "incorrect." Paired *t*-tests were conducted for each of the five knowledge items to test knowledge gain during the training for significance (alpha <.05) Adjustment of alpha due to multiple testing was considered unnecessary since the items are theoretically independent.

2.5.3 | Analysis of quantitative data from the survey

Data from the 10-item post-training paper-pencil questionnaire were calculated using frequencies and either reported as percentages (profession, attitude, comprehensibility, clinical relevance, and acceptance) or, if continuously scaled, averaged and reported as mean values with corresponding standard deviations (SDs) (duration of clinical practice and age). Missing values were reported separately.

2.5.4 | Analysis of the qualitative data

Data collected using free text formats and data from the focus group meeting were analysed based on principles of qualitative content analysis as described by Hsieh and Shannon.[19] Data extraction and analysis were undertaken by two independent researchers using the following steps: (a) reading the transcript and listening to the recording multiple times to establish a sense of the data as a whole and to identify meaningful units; (b) categorizing units based on a priori defined main themes (main categories and subcategories); (c) considering eventual need for creation of a new category when elements did not fit into the given set of categories; and (d) resolving disagreements by discourse at each step described above.

3 | RESULTS

3.1 | Descriptive results

Eleven training sessions were held from August 2016 to January 2017 with a total of 429 health personnel: Six AB sessions (n = 296) and five ABC sessions (n = 133). Details about the participants in the different sessions are given in Table 3. Of the 429 total participants, 83% (n = 357) provided informed consent to participate in the study and 70% of the 357 participants (n = 251) delivered complete data pairs for at least one pre−/post measure. About 288 of the 357 participants provided answers for the open questions. The sample was heterogeneous with regard to previous knowledge, HCP status and the educational context: undergraduate (Bachelor), graduate (Master), continued education (University/College), and in-service education (Hospital).

The participants were registered nurses (46%), nursing students (33%), other students (5%), physiotherapists (3%), occupational therapists (1%), physicians in or with specialization (6%), and 6% other professions (psychologists, social workers, health care assistants) (see Table 3). Age was in mean 35 (SD = 13) years, 91% were female and reported duration of clinical practice was in mean 11 (SD = 11) years. The focus group included a physician, a nurse, a social worker, and an occupational therapist (age range 44-63 years).

3.2 | Quantitative results

Prior to training 262 of 357 (74%) participants provided data on attitude and 265 (74%) provided data on skills. Of these, 94% (246) reported positive attitudes regarding patient involvement, 43% (115 of 265) reported good or very good SDM skills, and 57% (150 of 265) reported being unsure or holding limited SDM skills.

Complete data pairs for at least one of the five pre-post measures were provided by 251 of 357 (70%). Percentage of correct answers for each of the 5-item knowledge tests for (n = 220-251) participants increased significantly (P-values <.001) from 25-78% (range pretest) to 85-95% (range posttest) correct answers.

Amongst the 357 participants who completed the questionnaire, 93% (n = 332) rated the training as easy to understand, 98% (n = 350) acceptable and 83% (n = 296) relevant. The majority of participants (95%; n = 338) would recommend the training to others and 98% (n = 343) rated the training as good/excellent. Further details about the content and the results of the core part of the feasibility questionnaire are presented in Table 4.

3.3 | Qualitative feedback on the training modules

An overview of a priori categories and new subcategories is given in Table 5 (presentation, content, adaptive capacity, time/scope/setting, interactive online quiz, and interactive role play). In short, the presentation was considered very understandable. This applied in particular with regard to structural issues. However, some examples were given to minimize complexity of the content. Some participants suggested the need for better clarification about the different HCPs' roles and how they could interlink to support patient involvement. This finding was mainly gained through discussions in the focus group session. Suggestions were made to provide more role-specific examples while keeping the interprofessional didactic approach. The focus group discussion showed that the participants understood SDM as an approach requiring interprofessional contribution rather than working predominantly physician centred.

4 | DISCUSSION

4.1 | Summary

The aim was to pre-test two modules of the comprehensive Norwegian SDM training curriculum “klar for samvalg” (ready for SDM). In contradiction to the majority of SDM trainings, these two modules were developed for interprofessional groups; an undervalued target group for implementation of SDM. Feasibility was considered the most reasonable evaluation focus at this stage of the modules' development, with regard to the complex intervention framework. In addition, as operationalized in terms of attitudes, comprehensibility and acceptance, feasibility is even representing a meaningful parameter with regard to the role mixed health professionals are supposed to take as facilitators of implementation of SDM.

Participants indicated the training modules as easy to understand, acceptable and relevant. Compared to baseline, participants gained knowledge of SDM relevant for improved communication and patient involvement. Qualitative feedback revealed the need to tailor the training more specifically to individual healthcare professions (eg, using videos, nurse-led SDM examples) and better clarify their respective roles within the SDM process. Additionally, interprofessional learning was clearly desired and was underscored as the best approach to optimize learning together in an interprofessional training session.

4.2 | Limitations and Strengths

The study is limited by potential selection biases. For example, only 251 of the 357 who were trained (70%) participated in the study and completed data collection for at least one premeasure/postmeasure. This may have led to an overestimation of the preimprovement/postimprovement in knowledge, since it may be possible that participants who felt unsure did not respond to the post knowledge test. However, such a selection bias seems unlikely given most of the drop-outs were due to initial technical problems or poor technical insight when trying to access the online questionnaire.

Self-selection due to high motivation towards SDM might have caused ceiling effects regarding SDM-related attitudes and overall feedback on the training.[20] The group meetings were pre-organized by the clinical leaders and largely mandatory for the staff to attend. Given that, a small number of participants refused to provide informed consent for the study, we do not consider the self-selection

TABLE 4 Quantitative results on the feasibility of the training modules

Statement	Component	N ABC (AB)	Percentage extent agreement ABC (AB)				
			Very little	Little	Neutral	Great	Very great
Relevant for clinical practice	A	212 (137)	0 (0)	3 (4)	10 (16)	60 (58)	27 (22)
	B	210 (136)	(0)	3 (2)	12 (15)	56 (61)	29 (22)
	C	219	1	3	15	54	26
Comprehensible	A	214 (138)	0 (0)	1 (1)	8 (5)	60 (66)	32 (28)
	B	212 (133)	0 (0)	1 (0)	4 (5)	64 (70)	31 (26)
	C	212	0	1	8	63	29
Good general impression		217 (135)	0 (0)	1 (0)	3 (2)	46 (54)	51 (44)
Would recommend to others		219 (138)	5 (0)		2 (4)		94 (96)

Note: The table shows results from the quantitative evaluation of subjective relevance, subjective comprehensibility and acceptance (willingness to recommend the training to others and overall impression regarding the module) administered by a postintervention questionnaire. Results were assessed separately for each of the three components (A, B, C).

TABLE 5 Qualitative findings

Category	Findings	Example quotes
Presentation		
Linguistic Presentation	The six steps structure of SDM is traceable	*The (six steps) approach was a structure that is easy to remember and the related memo-card were also very useful.*
	Need for a clear differentiation of types of user involvement	*I need a better explanation of user involvement and SDM.*
	The structure of the presentation contributes to understanding.	*The topic was described in a way I have not thought about before and I consider helpful for my own future practice.* *This was a structured presentation that has increased my understanding of the topic.*
Presentation slides	The slides (shape, graphics, diagrams) contribute to better understanding.	*Simply outlined—easy to understand* *Nice and comprehensible presentation.* *Very good presentation, technically/graphically.* *I liked the diagrams shown on the slides.*
	Size of the font is too small.	*To me the font was sometimes too small and difficult to read because of the colour (not black).*
	Too high complexity.	*I would prefer less information by slide? Difficult to hear and read at the same time.*
Content		
Completeness and acceptability	Need for more information on recourses, time, economy and positive effects.	*It was maybe too little reflection on resources needed (time and economy) for SDM in a long term perspective.* *I think it would be important to present more about positive effects of SDM, a good thing that SDM is an ethical right.*
	The module provides increased awareness on the structure of SDM.	*I became more aware of how structured SDM can be performed. The examples given were good, but I missed some simpler examples (not only big and crucial decisions).*
Structure	Variation of communication modes supports attention.	*Natural variation (of the contents) is good. For someone like me who cannot be concentrated for a very long time –you made it work. Good with different elements in the content.*
	Composition and balance of didactic elements is appreciated.	*Well-structured content, clear dissemination, questions and participation from the audience were allowed and encouraged.*
	Suggestion of small-group work to facilitate translation into clinical practice	*It might be useful to have small conversation-groups during the presentation, to get it down to a more practical level. There were no 1 on 1 conversation groups.*
Adaptive capacity		
Adaption to profession	Suggestion of using domain specific video examples	*The course would gain from presenting more subject-specific examples.* E.g. *use of videos, especially videos showing real SDM situations would make it more alive.* *Maybe video instead of the role play?—the optimal would have been a video in a recognizable environment, this would make us extra stimulated.*
	Adapt examples to professions/disciplines.	*It seemed mostly physician-focused. Little about nurse specific tasks.* *Could have been more examples from our everyday clinical settings.* *I would like, more adjusted to psychiatric health care.* *Can you adopt more relevant cases from neonatal medicine?* *The content could be more customized to different professions.*
	The module is comprehensible regardless domain and profession.	*I found that SDM was comprehensible to everyone despite that we were different health professions participating in the training.*
	The module needs more focus on interprofessional SDM.	*Could have been more interprofessional examples (too much physician/patient)—less traditional examples.* *From focus group study*: Participant: *It is somewhat even more relevant to provide specialized examples, if not, interaction (between profession groups) gets lost. Maybe use more time for examples and provide those fitting to each of the health profession groups. Do not split (trainings group by professions). Go for the inter-professional approach.* Participant: *Lett trainees work together with their clinical team and discuss relevance and challenges.* Participant: *The great value lies in getting the same information.*

(Continues)

TABLE 5 (Continued)

Category	Findings	Example quotes
Adaption to level of knowledge	Differentiation to the level of knowledge	*Your vocabulary could be more customized to different professions.* *The vocabulary wasn´t enough customized to 2nd year students.* *I guess a group of physicians will probably understand all the terms, but maybe not all in mixed group with e.g. nurses and health economists.*
Time/scope/setting		
Specific proposals for amendments regarding time	Suggestion to reduce information density	*It goes a little too fast, easy to fall off during the second half of the presentation, talk a little slower or maybe add another hour.* *Should have had some more time? A lot of material in a relatively short time.*
	Suggestion to increase time to facilitate reflection	*Perhaps more time for reflection, feedback and small conversation-groups during the training.* *Spend some more time for the first and second part, to have more time for discussion.* *More time would have been useful, and more time for reflection and discussion.*
	Suggestion to increase frequency of short brakes	*More time for reflection. A break every 40 minutes, which is the standard norm for how long a person´s attention can be kept.*
Prioritizing of components	Suggestion to increase time for interactive training	*Interactive training—there could have been more of that.*
	Suggestion to increase time for live feedback	*There could have been more time on interactive live feedback. Both for the analysis of the role-play performance and for the moderator so that the patient and the coach can share their thoughts without getting interrupted.* *Rather more role-play than examples.*
	Various comments regarding balance between component A, B and C	*The basics module (A) was very useful, somewhat as frame before going more into depth, and the six-steps to SDM including the card to look at worked very well.* *Spend some more time for the first and second part, to discuss a little more.*
Interactive online quiz		
Facilitation	Suggestion to increase time for quiz	*I experienced that the audience was in need of more time for the smartphone based interactive questionnaire and that this became a bit stressful.*
Method	Appreciation of didactic using Smartphone-based quiz	*The Smartphone-based quiz was a nice and fun interactive learning method.* *Up-to-date and inspiring with use of smartphone-based methods in the training.* *The smartphone-based questionnaire gave a nice overview of what everyone thinks SDM is about.*
Language	Need for simplification of the language	*The quiz had some difficult wording.* *Some of the questions were maybe unnecessary difficult to understand, a better description might help.* *Some concepts should be simpler and more thoroughly explained, ex. cohort studies, RCT* etc..
Specific proposals for amendments	Comments defining concrete need for revision	*The question about SDM competence must be specified. Is it about my level of knowledge, or is it about how I actually choose to meet/treat and include my patient in decisions?* *Some questions seems ambiguous, for example, only one choice. Then I think about deciding between treatment or no treatment. Treatment is a choice?*
Interactive role-play		
Facilitation	Increase time for interactive training	*I found the evaluation of the interactive training too little critical. The role-play was insensitive and unrecognizable, and I missed that this was discussed/problematized.* *There could have been spent more time on interactive live feedback. Both for the analysis of the role-play performance and for the moderator so that the patient and the coach can share their thoughts and without getting interrupted.*
Method		*A pre-rehearsed role-play with teachers might be better. It is difficult for nursing students to take this role offhand.* *I did not like that people almost were demanded up on stage for the role-play. Role-play is difficult when knowledge about the topic is limited. A video about a real situation might be better. Good to be challenged to participate in active learning* *SDM was well illustrated in the role-play towards the end of the presentation.*

Note: This table presents the qualitative findings structured in main themes/categories, findings and example quotes from the free text answers provided in the evaluation questionnaire and from the focus group.

bias to be very strong. The recruitment strategies were also used in an attempt to achieve a realistic setting, by taking into account the natural process used when organizing training.

The underrepresentation of physicians (n = 12, 6% participants) might be seen as problematic given physicians' key role in medical decisions. Due to the educational contexts, physicians were not invited to all the trainings and —because of other clinical duties— when participating more likely to attend only part of the time. However, physicians' participation in our study was consistent with the nature proportion of physicians in clinical interprofessional teams.

Furthermore, the study is limited by lacking systematic variation of possible training settings and contexts. For example, the 2-hour training applied to an intra-professional physician group was not represented in the study design (Table 3). Therefore, we might have missed some important information on feasibility. However, orienting the study within requests for training, we have likely addressed the most important settings and contexts for evaluation of this SDM training in Norway, and thus, we did not find it necessary to conduct the training within all theoretically possible settings (Table 3).

At this stage of evaluation, we did not control for trainer effects. A recent study suggested that a trainer's charisma is associated with a trainee's intention to apply the skills they learn in training.[21] In the current study, we received large amounts of positive feedback regarding the trainer (SK), for example, giving an "enthusiastic," "engaging," "motivational," and "trustworthy" impression. We understand this feedback as encouragement to seek to identify important key behaviours of the trainer that were successful in teaching others.[22]

A key strength of this study was the ability to provide the training modules to a range of health-care professionals and students. The study does not claim generalizability to any other than the target group, evaluation on generalizability will be addressed by further studies within the "Ready for SDM" framework.

4.3 | Results in context

This training has been developed as part of a more comprehensive strategy to implement SDM in the Norwegian health system. The strategy is meant to be adaptive to the current status of implementation of SDM in Norway; therefore, the study focused on feasibility rather than efficacy of the SDM training.[18]

As recently shown in a German study,[23] a programme might prove efficient, but due to lacking feasibility nevertheless fail to demonstrate effectiveness. To keep a realistic chance of making an impact on the health system, a training needs to be adaptable to various settings and timeframes. By its modular construction, the "ready for SDM" framework can meet these challenges and appears to provide a promising approach for training HCPs.

Several studies recommend training HCPs in SDM based on an interprofessional approach.[3,4] This is remarkably important as other professionals, in addition to physicians (eg, nurses), play an essential, and so far undervalued role in using SDM in clinical practice.[24] Also, patients point out the value of other HCPs' (non-physicians) participation in SDM.[25,26] However, participation of non-physician HCPs in tasks related to making health decisions, implies the need for restructuring proceedings on the patients pathway and more clearly describe the interprofessional team working with the patient.[27,28] Therefore, an interprofessional team-based SDM training is suggested to support HCPs in legitimizing and using SDM in their practice.[29] Training interprofessional groups or clinical teams in interprofessional SDM can involve mixed interactive didactics such as role-play or communication exercises.[30] Learning can also be facilitated by using domain-tailored video examples showing SDM performed by different HCPs. However, successful teamwork on the common aim to facilitate informed decisions might require additional efforts in understanding local barriers and cultures that need to be addressed.[31,32]

The findings in our study are consistent with recent reviews on programmes developed to train SDM skills in HCPs, which conclude in claiming more systematic evaluation and adaptation to interprofessional practice.[4,5] The "ready for SDM" approach complies with both recommendations. The modules investigated in the current study build upon strong evidence from studies evaluating previous corresponding modules. Beyond comprehensible, acceptable and feasible,[15] the doktormitSDM module has even proven effective with regard to communication quality.[17] Although presented as various applications and having been used in multifold medical domains, doktormitSDM is still focusing on physicians. The current module opens up for interprofessional settings, facilitating an interprofessional approach to SDM. Our results will inform further revisions of the training modules to better meet this aim.

Another recommendation for implementation of SDM is relating to the broader perspective of making use of different kinds of interventions.[3] The best results are gained by using both patient directed interventions such as patient decision aids and those addressing HCPs in combination. While political guidance in the national health-care strategy in Norway is quite supportive with regard to implementation of SDM,[7-9,18] there might still be a pronounced need to better balance emphasis between decision aids and HCP SDM trainings. The increasing number of patient decision aids both internationally and in Norway[33-35] should be complemented by a national effort to systematically implement SDM training.[18]

As we continue to develop the "Ready for SDM" training, we will consider designing further studies in accordance with the complex intervention framework and the Kirkpatrick's model.[12] This study has only evaluated the first two levels of the Kirkpatrick's model, but the intention is to make changes based on these findings and evaluate the other levels. In addition to evaluating efficacy of the SDM training modules, our findings reinforce the need to be more aware of relevant barriers towards using SDM in clinical practice,[31] develop interventions to address the barriers, and continue to monitor barriers in Norwegian health care settings.

5 | CONCLUSIONS

The two first training modules of the comprehensive Norwegian SDM curriculum are approaching implementation via mixed groups of HCPs

rather than mainly or exclusively addressing the decision makers amongst the clinicians.

The training in general, both modules and each component, were easy to understand, acceptable and relevant. Participants achieved improved knowledge of SDM. However, the training modules need further adaption to achieve an interprofessional approach to SDM. Our findings will inform revision of the two modules before they will be tested for efficacy in a randomized controlled trial.

ACKNOWLEDGEMENTS

The authors would like to acknowledge all the healthcare professionals who participated in the study. The project was funded by the Northern Norway Regional Health Authority and was undertaken as part of the project "$DA_{factory}$ - Strategies of development, evaluation and implementation of patient treatment decision aids at the University Hospital of North Norway, UNN" (HST1246-15).

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

AUTHORS CONTRIBUTIONS

All authors contributed to designing and writing the manuscript and agreed to its final version. The study was planned and designed by S.K., K.N. and J.K., S.K. provided the trainings and conducted the study. S.K., J.K., and K.N. analysed the data.

DATA AVAILABILITY

The datasets used and/or analysed during the current study are available from the corresponding author on request.

REFERENCES

1. Kienlin S, Kristiansen M, Ofstad E, et al. Validation of the Norwegian version of MAPPIN´SDM, an observation-based instrument to measure shared decision making in clinical encounters. *Patient Educ Couns*. 2016;8.
2. Couët N, Desroches S, Robitaille H, et al. Assessments of the extent to which health-care providers involve patients in decision making: a systematic review of studies using the OPTION instrument. *Health Expect*. 2015;18(4):542-561.
3. Légaré F, Stacey D, Turcotte S, et al. Interventions for improving the adoption of shared decision making by healthcare professionals. *Cochrane Database Syst Rev*. 2014;9.
4. Diouf NT, Menear M, Robitaille H, Painchaud Guerard G, Legare F. Training health professionals in shared decision making: update of an international environmental scan. *Patient Educ Couns*. 2016;99:1753-1758.
5. Legare F, Politi MC, Drolet R, Desroches S, Stacey D, Bekker H. Training health professionals in shared decision-making: an international environmental scan. *Patient Educ Counsel*. 2012;88(2):159-169.
6. Nylenna M. Om samvalg og andre sam-ord. *Tidsskr Nor Legeforen*. 2015;135(2).
7. Helse-og omsorgsdepartementet. Legemiddelmeldingen — Riktig bruk – bedre helse. 2015.
8. Helse-og omsorgsdepartementet. *Nasjonal Helse-Og Sykehusplan*. 2016–2019;2015.
9. Helse-og omsorgsdepartementet. Kvalitet og pasientsikkerhet. Oslo; 2015.
10. Helse-og omsorgsdepartementet. Kvalitet og pasientsikkerhet. Oslo; 2017.
11. Helsedirektoratet. Nasjonale kvalitetskrav til samvalgsverktøy som skal publiseres på helsenorge.no 2017. https://helsedirektoratet.no/nasjonale-kvalitetskrav-til-samvalgsverktoy-som-skal-publiseres-pa-helsenorgeno. Last Accessed February 21, 2020.
12. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions: the new Medical Research Council guidance. *Br Med J*. 2008;337:a1655.
13. Campbell M, Fitzpatrick R, Haines A, et al. Framework for design and evaluation of complex interventions to improve health. *BMJ*. 2000;321(7262):694-696.
14. Geiger F, Liethmann K, Scholz KN, Grafe A, Kienlin S, Kasper J. Efficacy of a web-based training module for physicians to facilitate shared decision making – a randomized controlled trial. Poster at the 9th International Shared Decision Making Cconference, Lyon, France, 2017.
15. Kasper J, Liethmann K, Heesen C, Reissmann D, Geiger F. Training doctors briefly and in situ to involve their patients in making medical decisions—preliminary testing of a newly developed module. *Health Expect*. 2017;1(10).
16. Kasper J, Liethmann K, Klemperer D, Rumpsfeld M, Geiger F. Development of doktormitSDM, an approach to shared decision making (SDM) – continuously increasing the evidence. Conference poster at the 23rd Cochrane Colloquium; 3–7 October Vienna, Austria 2015.
17. Geiger F, Liethmann K, Reitz D, Galalae R, Kasper J. Efficacy of the doktormitSDM training module in supporting shared decision making – Results from a multicenter double-blind randomized controlled trial Patient Education and Counseling. *Patient Educ Counsel*. 2017;100(12).
18. Kasper J, Lager AR, Rumpsfeld M, et al. Status report from Norway: implementation of patient involvement in Norwegian health care. *Z. Evidenz Fortbild. Qual. Gesundheitswes*. 2017.
19. Hsieh H-F, Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res*. 2005;15(9):1277-1288.
20. Elder NC, Miller WL. Reading and evaluating qualitative research studies. *J Fam Pract*. 1995;41(3):279-285.
21. Boyd MR, Lewis CC, Scott K, Krendl A, Lyon AR. The creation and validation of the measure of effective attributes of trainers (MEAT). *Implement Sci*. 2017;12(1):73.
22. Ajzen I. The theory of planned behavior. *Organ Behav Hum Decis Process*. 1991;50(2):179-211.
23. Härter M, Buchholz A, Nicolai J, et al. Shared decision making and the use of decision aids: a cluster-randomized study on the efficacy of a training in an oncology setting. *Dtsch Arztebl Int*. 2015;112(40):672-679.
24. Stacey D, Kryworuchko J, Bennett C, Murray MA, Mullan S, Legare F. Decision coaching to prepare patients for making health decisions: a systematic review of decision coaching in trials of patient decision aids. *Med Decision Making*. 2012;32(3):E22-E33.
25. Doherty C, Doherty W. Patients' preferences for involvement in clinical decision-making within secondary care and the factors that influence their preferences. *J Nurs Manag*. 2005;13(2):119-127.
26. Joseph-Williams N, Edwards A, Elwyn G. Power imbalance prevents shared decision making. *BMJ*. 2014;348:g3178.
27. Boland L, Lawson ML, Graham ID, et al. Post-training shared decision-making barriers and facilitators for pediatric healthcare providers: a mixed methods study. *Acad Pediatr*. 2018.
28. Grimshaw JM, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care*. 2001;39(8 Suppl 2):Ii2-Ii45.
29. Lloyd A, Joseph-Williams N, Edwards A, Rix A, Elwyn G. Patchy 'coherence': using normalization process theory to evaluate a multi-faceted shared decision making implementation program (MAGIC). *Implement Sci*. 2013;8:102.

30. Forsetlund L, Bjrndal A, Rashidian A, et al. Continuing education meetings and workshops: effects on professional practice and health care outcomes. *Cochrane Effect Pract Organ Care Group*. 2009;2.
31. Rahn AC, Köpke S, Backhus I, et al. Nurse-led immunotreatment DEcision coaching in people with multiple sclerosis (DECIMS) - feasibility testing, pilot randomised controlled trial and mixed methods process evaluation. *Int J Nurs Stud*. 2017.
32. Legare F, Ratte S, Gravel K, Graham ID. Barriers and facilitators to implementing shared decision-making in clinical practice: update of a systematic review of health professionals' perceptions. *Patient Educ Couns*. 2008;73(3):526-535.
33. Stacey D, Légaré F, Lewis K, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev*. 2017;4.
34. Eiring Ø, Nytroen K, Kienlin S, Khodambashi S, Nylenna M. The development and feasibility of an evidence-based treatment optimization support system in bipolar disorder. *BMC Med Inform Decision Mak*. 2017.
35. Direktoratet for ehelse. Prostatakreft lav risiko Helsenorge.no 2016. https://helsenorge.no/samvalg/verktoy/prostatakreft-lavrisiko/mitt-valg? Last Accessed February 21, 2020.

SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

How to cite this article: Kienlin S, Nytrøen K, Stacey D, Kasper J. Ready for shared decision making: Pretesting a training module for health professionals on sharing decisions with their patients. *J Eval Clin Pract*. 2020;26:610–621. https://doi.org/10.1111/jep.13380