



Piloting a Research-Oriented Teaching Model in a Bachelor Program for Social Educators – A Way to Increase Competence in Research Methodology and Sexual Health?

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Abstract

Background: Sexual health is a new and important area for social educator students, relevant for research and pedagogical development.

Integration of ongoing research projects when teaching scientific theory can improve students' subject-related skills, expertise in research methodology, and assessment of research results.

Problem: The triple aim of this pilot project was to test research-oriented teaching, enhance learning about sexual health, and to explore the validity of the SA-SH-Ext questionnaire.

Theoretical Approach: Using research-oriented teaching when teaching novel topics such as sexual health presents opportunities to deepen reflections on both research methodology and social educator students' attitudes towards addressing sexual health with users.

Method: Integration with theoretical education of the research project was carried out alongside testing of face validity and content validity, as well as group discussions with social educator students. A teaching session on sexual health was also conducted. The results from the survey were presented to the students afterwards.

Results: The students appreciated the research-oriented teaching, the results showed educational needs concerning sexual health, and were useful for the psychometric development of SA-SH-Ext.

Conclusion: The pilot project shows promising findings both regarding the students' learning outcome, and the validation of SA-SH-Ext, but must be followed up by additional research.

Keywords

Social education, research-oriented teaching, psychometrics, sexual health, sexuality

Introduction

Including research in higher education programs is essential for delivering high quality education. In addition to improving students' learning, it can enhance the teacher's research

development. However, there is often criticism of the level of involvement of research and new research findings in higher education, as well as of the level of involvement of senior researchers in basic education (Harland, 2016). Ensuring knowledge transfer and the incorporation of new research in higher education requires not only the involvement of senior researchers; in addition, there should be a focus on the important collaboration between researchers and lecturers on various levels and topics (Harland, 2016). It can be challenging to create meaningful relationships between different forms of knowledge, and to connect theoretical knowledge with practical occupational skills. Integration of theoretical learning with practical skills, through inclusion of real research projects in education, can present an opportunity for the students to connect and understand research theory and practical research methodology, as well as the value of this competence for their future professional role. This pilot project explores research-integrated teaching, where collaboration between researchers and teachers aims at improving students' understanding research. In understanding the relevance of research in practice and connecting this knowledge to the students' profession, this pilot project also aims to develop the students' competence within a sensitive and often insufficiently covered topic: sexual health. Despite research showing the importance of knowledge concerning sexual health to promote health and well-being, education is often lacking in this field (Areskoug Josefsson, Schindele, Deogan, & Lindroth, 2019). Health care professionals have a shared responsibility for promoting sexual health as part of general well-being and quality of life, but the topic is insufficiently addressed and health care professionals' education is lacking in this field (Ford, Barnes, Rompalo, & Hook, 2013; Parish & Rubio-Aurioles, 2010). All professionals involved in promoting a person's well-being share a responsibility to promote sexual health (Diamond & Huebner, 2012). Personal factors are associated with sexual health care competence (West et al., 2012), indicating the importance of creating a reflective educational practice.

Students and professionals in nursing, occupational therapy, physiotherapy and social work have reported inadequate training in the field, and clients/patients have presented their experiences of meeting professionals in different situations, where a lack of competence in sexual and reproductive health and rights (SRHRs) has been shown (Aaberg, 2016; Areskoug-Josefsson & Fristedt, 2017; Areskoug-Josefsson & Gard, 2015; Areskoug-Josefsson, Juuso, Gard, Rolander, & Larsson, 2016; Blakey & Aveyard, 2017; Dunk, 2007; Logie, Bogo, & Katz, 2015; Papaharitou et al., 2008; Saunamaki, Andersson, & Engstrom, 2010; Saunamaki & Engstrom, 2014; Schaub, Willis, & Dunk-West, 2017; Winter, O'Neill, Begun, Kattari, & McKay, 2016). Sexual health is included in programs for social educators, but there is lack of research regarding the level of students' comfort and competence in addressing sexual health with clients and how their education increases their ability to address sexual health in a professional way in their future work.

Health professionals often find it difficult to address sexual health without having formal education and training in this field. Thus, there is a risk that the availability of advice and information from professionals is person-dependent, and a general level of competence does not exist. There are professionals who have avoided the topic even if they consider it to have been relevant to them in clinical practice and important for the persons that they care for, due to various barriers (Dune, 2012; Dyer & das Nair, 2013; Ferreira, Gozzo Tde, Panobianco, dos Santos, & de Almeida, 2015; McGrath & Lynch, 2014). Taboos and a down-playing of sexual health for persons with intellectual disabilities have been barriers to inclusion of sexual health in programs for social educators. Sexual health and issues related to promoting sexual health are important for social educators because of the holistic perspective of the profession, which includes what a human being is and can be from the

perspectives of philosophy, psychology, pedagogy, sociology, political science, medicine and jurisprudence. The social educator profession focuses on ensuring life quality through providing services and care to people with different kinds of intellectual, physical and mental disabilities. The social educator program is evidence-based, and social educators are trained to do behavioral therapy, health and rehabilitation work with people with physical, mental and/or social disabilities, with a basis on the individual's resources by facilitating development, preventing functional impairment and promoting increased quality of life. The municipalities are often responsible for the services given by social educators, and the services are typically given in the clients' homes. In Norway, a registered social educator has a bachelor's degree for social educators and authorization from the health authorities. The bachelor programs for registered social educators in Norway are governed by national regulations to ensure the special competence in behavioral therapy, rehabilitation, health promotion and health assistance. In the program the social educator students should gain competence in understanding quantitative and qualitative research methods. The curriculum aims at presenting research connected to the professional development and developing students' understanding of methodologies and processes. Continuous development and improvement of the curricula necessitate measuring outcomes of teaching models and the knowledge areas. To engage students actively in research and expose them to empirical research activities is valuable for creating interest in reflecting on research practices and outcomes, and helping students to understand research in their future professional field (Harland, 2016; Pfeffer & Rogalin, 2012).

The rights of everyone are important to the social educator profession, including sexual rights. The program for social educators includes teaching and reflections of what influences a person's actions and how to increase each person's quality of life. Themes such as the body, identity and sexuality are therefore important and should be present in the syllabus and education (Landmark et al., 2012). To work with persons with intellectual disabilities concerning the themes of body, identity and sexuality can be demanding, more demanding than for fully abled persons. Social educators are not only involved in questions and concerns regarding sexual issues, but also in practical correction of sexual actions and activities. This can include sensitive situations that demand both broad and deep ethical reflection concerning sexual health, for example to avoid staff being falsely accused of sexual abuse. There is a need not only to understand the topic of sexual health and how it is related to one's future profession, but also to be aware of one's own beliefs and attitudes towards addressing sexual health in one's professional role. Sexual health is a broad topic and in this context the latest WHO working definition is used, which describes sexual health as:

a state of physical, emotional, mental, and social well-being in relation to sexuality and not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination or violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled. (WHO, 2006).

The WHO definition is a result of changes in the conception of sexual health from that of procreation within marriage towards a more holistic, context-dependent model of sexual health (Giarni, 2002). The discourse on human rights has affected the definition of sexual health and sexual rights (Giarni 2015), since sexual rights are a prerequisite for sexual health (Wagner, Bondil et al. 2005).

There is an existing questionnaire, the Students' Attitudes towards Sexual Health questionnaire (SA-SH), which addresses attitudes and knowledge concerning sexual health

among health care professionals, and which could be useful for exploring students' attitudes and the outcome of educational interventions (Areskoug-Josefsson, Juuso, et al., 2016; Areskoug-Josefsson, Larsson, Gard, Rolander, & Juuso, 2016; Areskoug-Josefsson & Rolander, 2018). The SA-SH is valid for students from several professions: occupational therapy, nursing, physiotherapy, social work, orthotics and prosthetics (Areskoug-Josefsson, Juuso, et al., 2016; Areskoug-Josefsson, Sjökvist, Rolander, & Bülow, 2019; Areskoug-Josefsson, Thidell, Rolander, & Ramstrand, 2018; Gerbild, Larsen, Rolander, & Areskoug-Josefsson, 2017). However, the SA-SH has not been validated for social educators. The SA-SH also lacks items addressing self-efficacy and communication about sexual health with persons experiencing intellectual or physical disability, which are important issues for social educators. Therefore, there is a need to adapt the SA-SH to ensure the usefulness of the questionnaire for social education students and to explore the validity of the adapted version. To assess the usefulness of a questionnaire there are several methods that can be used, such as face validity, which is the extent to which a measure appears to be measuring what it is intended to measure, and content validity, which is defined as the extent to which a measure consists of a comprehensive sample of items that completely assess the domain of interest (Finch, Brooks, & Stratford, 2002). The need for further psychometric development of the SA-SH for social education students provides an opportunity to combine real life research activities in teaching, and at the same time enhance reflections regarding addressing sexual health in the practice of social educators. To involve real research in teaching can directly and positively influence the researcher's endeavors and enhance the student experience and learning of the topic (Harland, 2016). Thus, this initiative created an opportunity to further develop teaching of research methodology and sexual health, while performing useful research.

Aim

The triple aim of this pilot project was to test a novel teaching model that involved creating an opportunity for students to learn research methodology through an authentic research experience; to enhance learning about sexual health in the program for social education; and to explore the validity of the SA-SH-Ext among social educator students in Norway.

Methods

To enable testing a research-oriented teaching model the program director and a teacher at the social education program contacted a researcher working with psychometric testing of questionnaires aimed at students in health and welfare education to explore possibilities for collaboration. They formed the research group responsible for and facilitating the pilot project. The planning phase took four months prior to the research-oriented teaching model being used in the social educator program in the course "Professional development", which is placed in the first year of the three-year program. This course includes the history and future development of the social educator profession. The course focuses on the core of the social educator profession, ethics, ethical dilemmas in practice and central ideologies, including research methodology and evaluation. To enable testing of the research-oriented teaching model, the researchers planned it together with the teacher responsible for the course "Professional development". The research-oriented teaching activity gave the students the option to participate interactively in an ongoing research project, an experience which was assessed through a group discussion. The planned activity concerned

questionnaire development. The chosen questionnaire concerned student attitudes towards addressing sexual health issues in their future profession; thus, working with further development of this questionnaire presented an opportunity for deeper reflections on this topic. The model for research-oriented teaching follows suggested procedures for mutual symbiotic activity of research and teaching (Harland, 2016).

To enhance learning about sexual health in the program for social education, three lectures (2.5 h) related to sexual health were conducted two weeks after the validation activity. These lectures covered various aspects of sexual health (WHO's definition of sexual health, sexual health as a client conversation topic, role and authority as a professional, culture for debating sexual health in the services, an environment with a positive attitude towards sexuality, vulnerable clients, proximity and boundaries [for employees, clients, children], PLISSIT (Permission, Limited Information, Special Suggestions, Intensive Therapy) and national strategies. The students were also presented with various cases and ethical dilemmas that were discussed in groups.

To include authentic research activities, validity testing of the extended and translated version of the SA-SH-Ext was performed. To ensure face validity, i.e., the degree to which the items reflect the construct of the assessment tool, there was a session discussion of face validity of the SA-SH-Ext with the students. Content validity testing, which is the degree to which the content reflects the constructs to be measured (McKenna, 2011), was performed with a content validity index.

Questionnaire

The original SA-SH questionnaire concerns student attitudes towards addressing sexual health issues in their future profession. The original SA-SH comprises 22 items distributed across four domains; *present feelings of comfortableness*, *future working environment*, *fear of negative influence on future patient relations*, and *educational needs* (Areskoug-Josefsson, Juuso, et al., 2016). Descriptive questions related to gender, age, and educational level within the program are also included. The items are measured using a five-step Likert scale (disagree, partly disagree, partly agree, agree, strongly agree). The responses 'strongly agree/partly agree' are considered positive for positively loaded items, and for negatively loaded items the responses 'disagree/partly disagree' are considered as showing a negative attitude. Items 9–14, and 16–18 are reversed for analysis as these items are phrased in a negative way compared to all other items (Areskoug-Josefsson, Juuso, et al., 2016).

The researchers translated the SA-SH-Ext into Norwegian and adapted the SA-SH-Ext to suit students in the program for social education. The adaption that was made was to change the word 'patient' to 'client' for all items. For the new extended version of the SA-SH (SA-SH-Ext), five items were added: *I feel comfortable addressing sexual health with clients with physical disability*, *I feel comfortable addressing sexual health with clients with physical disease*, *I feel comfortable addressing sexual health with clients with intellectual/cognitive disability*, *I feel comfortable addressing sexual health with clients with mental illness* and *I am confident in my own ability to promote sexual health in my future occupation*. The SA-SH-Ext comprises 27 items and the new items are answered in the same way as the original items. The first four new items are included in the domain 'Present feelings of comfortableness' and the last item in the domain 'Educational needs.' The development of SA-SH-Ext was performed to meet the focus of social educators' working fields and to address self-efficacy in instructing on sexual health as a future professional. The new items

were developed by the researchers and from prior research in sexual health rehabilitation and social education.

Data collection

The data collection was performed during two lectures focusing on teaching scientific methods and questionnaire development in health and welfare research, in a class of social educator students. The students were informed that the SA-SH had been psychometrically tested and was used by several professions. Prior to the data collection the original SA-SH and its use, and the SA-SH-Ext was introduced, together with an explanation of why additional psychometric testing was needed. The students were informed about how the translation and back-translation of the SA-SH had been performed and why this procedure was used. In addition, the students were informed about how this had been done when translating the original SA-SH in Denmark, and about the results of that study (Gerbild et al., 2017). The information concerning the SA-SH was given by one of the researchers, who was also teaching at the social education program. The data collection process consisted of four steps:

1. Content validity test of SA-SH-Ext through a questionnaire.
2. Face validity discussion of the SA-SH-Ext (the participants were asked to comment on overall relevance, literacy, possible benefits and usability, number of items, response alternatives, wording, items to delete, missing items, or any additional matters).
3. Discussion of the pedagogical value of integrating real research in theoretical teaching (presenting the students' experiences of being actively engaged in a research project during their theoretical lecture in the same topic).
4. Summary of the results presented to students, with the option to add further comments on the face validity of the SA-SH-Ext.

The content validity testing of the SA-SH-Ext was conducted by computing the content validity index (CVI) of items in the SA-SH-Ext in an online questionnaire. The CVI was used to assess the relevance of each item on a four-point scale (1 = extremely relevant, 2 = quite relevant, 3 = slightly relevant, 4 = not relevant). The face validity discussion was performed to reveal the students' understanding of the items in the questionnaire and deepen the knowledge of how they perceived the items to be relevant for their future professional role. The face validity discussion was performed immediately after the CVI test and the pedagogical discussion a week later.

The two discussions were summarized with the students and facilitated by one of the researchers who is also teaching at the social education program.

One week after the CVI test, the students were informed of the results on a group level for the domains of the SA-SH-Ext. In addition, detailed results for two items (chosen by the students) were presented to enhance understanding of the psychometric test. The lecturer gave the students the option of bringing up additional issues concerning the SA-SH-Ext that they might have thought of after the first session and that could add to the face validity test.

Data analysis

The answers of the CVI scale were dichotomized by combining extremely relevant/quite relevant (1 and 2) in one group, and slightly relevant/not relevant (3 and 4) in the other

group. Relevance recommendations are item-level CVI (I-CVI) >0.78 per item and the sum of the CVI (S-CVI) for each item >0.90 (Polit & Beck, 2006; Polit, Beck, & Owen, 2007).

The written summary of the face validity and pedagogical discussions were analyzed by the research group to gain consensus about the interpretation of the summaries. The research group consisted of both researchers teaching in the social education program and a researcher not involved in the social education program.

Ethics

Ethical issues have been considered and informed consent to participate in the pilot project was obtained from the participants after they had been given verbal and written information regarding the purpose and procedures of the project. The principles of confidentiality and voluntariness were explained again before the data collection started. The data collected were anonymous to the researcher analyzing the results, and no form of identification, such as name, descriptive data or student identification, was used on the questionnaires. This project does not fall under Norwegian law for ethical approval but was approved by the head of the department where the pilot project was performed.

Results

The results of the pilot project are described in the following order: results of the face validity testing, results of the content validity testing, summary of the discussions concerning the results of the face validity and content validity testing, and finally summary of the discussions of the pedagogical value of integrating real research in theoretical teaching.

Forty-eight social educator students participated in the data collection. The face validity test led to reflections among the students concerning the topic of sexual health, for example about feelings of lack of safety concerning the topic in practice, and uncertainty about what managers and colleagues think of addressing and promoting sexual health in their future professional role, even though there was a strong consensus among the students about the importance of sexual health and sexual rights for all. The lectures on sexual health gave a first introduction to the topic, but through the research-oriented activity it became evident that additional education and training in practice concerning sexual health was necessary for social educator students. During the lecture on sexual health the students presented stories of their own that demonstrated the need for additional education, acknowledgement of sexual rights, heteronormativity and sexual consent, but also the lack of competence of social educators that they had met in practice.

For the CVI testing, five students (of the total of 48 respondents) responded using a paper-based questionnaire. All the others responded anonymously online. The five students who answered using paper-based questionnaires gave their answered questionnaire to a fellow student, who returned them all at the same time to the lecturer in order to increase confidentiality. Among the students taking part in the learning activity, three students declined to participate in the project. The response rate for each item varied between 94–100%.

The CVI-I showed a variance of I-CVI between 0.48–0.96, indicating that the students valued the relevance of the items very differently (Table 1). Items 12–14, 16–18, 20–22 and 25 were scored the lowest.

Table 1. I-CVI for each item and S-CVI for each domain.

	Item	I-CVI
1	I feel comfortable about informing future clients about sexual health.	0.91
2	I feel comfortable about initiating a conversation regarding sexual health with future clients.	0.83
3	I feel comfortable about discussing sexual health with future clients.	0.91
4	I feel comfortable about discussing sexual health issues with future clients with physical disability.	0.88
5	I feel comfortable about discussing sexual health issues with future clients with physical disease.	0.85
6	I feel comfortable about discussing sexual health issues with future clients with intellectual/cognitive disability.	0.87
7	I feel comfortable about discussing sexual health issues with future clients with mental illness.	0.85
8	I feel comfortable about discussing sexual health issues with future clients, regardless of their sex.	0.91
9	I feel comfortable about discussing sexual health issues with future clients, regardless of their age.	0.71
10	I feel comfortable about discussing sexual health issues with future clients, regardless of their cultural background.	0.87
11	I feel comfortable about discussing sexual health issues with future clients, regardless of their sexual orientation.	0.96
12	I feel comfortable about discussing specific sexual activities with future clients.	0.52
13	I am unprepared to talk about sexual health with future clients.	0.66
14	I believe that I might feel embarrassed if future clients talk about sexual issues.	0.56
15	I believe that future clients might feel embarrassed if I bring up sexual issues.	0.78
16	I am afraid that future clients might feel uneasy if I talk about sexual issues.	0.62
17	I am afraid that conversations regarding sexual health might create a distance between me and the clients.	0.48
18	I believe that I will have too much to do in my future profession to have time to handle sexual issues.	0.49
19	I will take time to deal with clients' sexual issues in my future profession.	0.76
20	I am afraid that my future colleagues would feel uneasy if I brought up sexual issues with clients.	0.50
21	I am afraid that my future colleagues would feel uncomfortable dealing with questions regarding clients' sexual health.	0.52
22	I believe that my future colleagues will be reluctant to talk about sexual issues.	0.47
23	In my education I have been educated about sexual health.	0.70
24	I think that I, as a student, need to get basic knowledge about sexual health in my education.	0.96
25	I have sufficient competence to talk about sexual health with my future clients.	0.57
26	I believe in my own ability to promote sexual health in my future profession.	0.73
27	I think that I need to be trained in my education to talk about sexual health.	0.89

The CVI-S was 0.73 for the SA-SH-Ext, which is lower than recommended for relevance. The CVI-S varied for each domain, where present feelings of comfortableness and educational needs had the highest relevance (Table 2).

Table 2. S-CVI for each domain.

Domain	S-CVI
Present feelings of comfortableness (items 1–13)	0.83
Future working environment (items 14–19)	0.61
Fear of negative influence on future patient relations (items 20–22)	0.50
Educational needs (items 23–27)	0.77

The CVI-S for the original SA-SH (not including items 4–7 and 26) was 0.71. The CVI-S for the new items was 0.84, indicating that those questions were relevant to add to the SA-SH, especially for items 4–7 in the domain present feelings of comfortableness, which had a CVI-S of 0.86.

The results from the face validity discussions were that items 16, 17, 20, 21 used the phrasing “*I am not afraid that . . .*”, should be rephrased. The students’ suggestion was to change the phrasing to “*I think that . . .*” since the original phrasing was considered to be leading and negative by the students. Items 16, 17, 20, 21 also had low I-CVI, further indicating that these items might need to be rephrased to suit social education students.

In the session summarizing the results, some students commented on the novelty of the theme (sexual health) which made it difficult for them to rate some of the items as to relevance for them as future social educators. This is an important sharing of knowledge which can assist in planning educational activities when teaching the theme of sexual health at an appropriate level, considering the students’ minor pre-understanding of the topic. As for face validity, in the results summary session, the students did not bring up any additional suggestions regarding the number of items in the SA-SH-Ext, the need for additional items, or regarding difficulty in answering the questionnaire.

The results from the interactive research-oriented teaching experience need to be further explored in future educational interventions, since this was a new way of teaching research methodology in this context. In this first test there were positive responses from students and the teacher noticed valuable and deepened reflections on the topic of sexual health. However, the students had few comments on how they judged the value to them of participating in real research activities as part of the course, which may be due to this being the first time the students had experienced this educational intervention. To ensure learning value for students, additional tests of research-oriented teaching are suggested, preferably including both data collection and analysis of results of the performed research activity. During the course (in which the research-oriented teaching intervention was included), it became evident to the participating teachers that the students had gained knowledge of the complexity of developing questionnaires and their usefulness, but also of the work process behind creating a psychometrically sound questionnaire. This knowledge may lead to better use of questionnaires and improved development of professional questionnaires, thus leading to professional development of social educators. In addition, the research-oriented teaching also led to ethical discussions with the students concerning the use of insufficiently tested or psychometrically unsound questionnaires in research and practice.

The results show that the planned research-oriented teaching activity worked well, was appreciated by the students and led to useful added knowledge to the included research project.

Discussion

This pilot project presents an illustration of how teaching and research can be practiced as a mutualistic symbiotic activity, which may enhance both research and students' learning. The discussion presents perspectives of the results connected to the triple aim of the pilot project, together with strengths and limitations of the performed pilot project. The research-oriented teaching provides an opportunity for quality learning experiences for both student and teacher, because the curriculum includes an obligation to share the result of research as knowledge is co-constructed, both in the subject being taught (in this case sexual health) and with respect to practical knowledge of research (Harland, 2016). The shared learning through co-constructed knowledge mainly occurred when the students were given the opportunity to discuss the CVI results and could be seen in their reflections regarding those results. In this session the students' views, previous knowledge and current reflections upon the topic of sexual health as a field for social educators presented the teacher with additional knowledge of how to improve teaching in this field, but also knowledge of how the students reflected over the psychometric testing that they had participated in.

For students at the bachelor's level, where the goal of the education is to learn how practically to assist clients with diverse needs, it might be challenging to comprehend how research is an important and central issue in knowledge creation for their future profession. The more the research is practical and experienced as relevant, the greater the possibility to enhance the students' understanding of the importance of the research for their future professional work. Through the practical components of testing face validity and CVI, there was an opportunity to give the students a better general understanding of the research process and the need for accuracy in the process. Previous social educator student work and essays in the included social educator program have shown a need for a greater understanding of problems related to the generalization of research results, presenting a demand for an improved way of teaching research methodology and critical thinking in connection to research. Therefore, it was considered valuable to explore research-oriented teaching as a tool, to enhance the students' integration with research activities. The chosen activities worked well in practice; however additional evaluation of the learning outcomes would have been beneficial. In practical social educator work, patient-reported outcome measures are often used, as well as patient-reported evaluation measures. Thus, it is essential that the students understand when the instruments are suitable to use and when there is a lack of research considering the usefulness for a specific group or setting. Through the face validity and CVI testing, the students were given the opportunity to reflect and gain knowledge of the prerequisites and limitations which needed to be considered before using an instrument. These activities thereby increased the students' understanding of the concept of validity. This may increase the students' capability when using questionnaires in their future professional practice.

The research methodology included in the testing of the SA-SH-Ext gave the teacher an introduction and context for the education concerning sexual health, which enriched and deepened the discussion of the topic during the following lectures in the course. The face validity discussions concerning SA-SH-Ext was experienced by the students to have expanded their understanding of the theme of sexual health, the importance of SRHRs in relation to quality of life, and special challenges concerning safeguarding SRHRs for vulnerable clients. SRHR is an important topic to be able to address as social educators in relation to clients' quality of life. Therefore, the use of face validity testing in research-oriented teaching added to the students' learning experience but also to the teacher's research experience.

Regarding the psychometric results, the CVI-S for the SA-SH-Ext and for the SA-SH original version were higher than in a previous study of students of prosthetics and orthotics (Areskoug-Josefsson et al., 2018), but lower than in a study of the Danish version of the SA-SH (Gerbild et al., 2017). The CVI results indicate the importance of psychometric testing of the SA-SH for each new professional group and in each national context to ensure the usefulness of the questionnaire. The lowest scored items 12–14, 16–18, 20–22 and 25 need to be explored further. There is a possibility that items 13 and 14, reporting being unprepared and embarrassed, are seen as less relevant, since the students rated the previous items regarding being prepared as highly relevant. The students may think that items relating to feeling embarrassed when addressing sexual health issues, are irrelevant in their future profession, if they think it is a professional demand to be able to address sexual health issues. Item 12 is troublesome since it is known that addressing specific sexual activities is included in the professional work of social educators, thus this might be a sign the students do not truly regard their future clients as being sexually active or having the right to be so. The low relevance of item 18 can be seen as positive since if the students do not consider this item as relevant, perhaps they will not use lack of time as a barrier to address sexual health, a barrier mentioned by health care professionals in previous research (Bdair & Constantino, 2017). Items 20–22 have been shown in previous research of the SA-SH to be difficult to rate by the students, since they concern the future working environment. However, the culture of the workplace and how other health care professionals address sexual health in the workplace can affect how well the topic will be addressed by newly educated social educators. Item 25 needs to be explored further, but a possible reason for the low relevance is that the students feel that they lack the ability to assess whether their competence is enough prior to having working experience.

The research-oriented teaching method was challenging due to it being the first time it was used in this program. There are few researchers in the field of social education in this program at the university where the pilot project was conducted, which created additional challenges in finding effective collaboration processes among researchers and teachers. In this case the main researcher and creator of the SA-SH was presenting the research case (the need for additional psychometric knowledge of the SA-SH-Ext) and the program director of social educators was positive towards testing of research-oriented teaching, and the main lecturer of the selected course developed the pedagogical setting and planning. The combination of various forms of competence in the research team and the strong joint focus on finding new ways to integrate research in teaching was a strength of this project as was the trust between the collaborating researchers.

The pilot project's potential to increase reflection on how to address sexual health and one's own attitudes regarding addressing sexual health in one's future profession seem to have been met, from the summaries of the discussions among the students. However, a more formal measurement of this outcome was lacking, which can be considered as a limitation of the study. It may be argued that a change in attitudes and deeper reflection occurs over time, thus this would have needed to be followed up later in the education. Further research is needed to explore if and how additional reflection and learning regarding sexual health can be found through research activities such as those tested in this pilot project.

The strong points of the study are the inclusion of a real research project where the student's opinions were a valuable contribution to it, while at the same time providing an opportunity to combine theoretical knowledge with practice. The added value of this process is that it is inspirational for both teachers and students to be part of the real research process (Harland, 2016; Pfeffer & Rogalin, 2012). The strength of involving both the quantitative

(CVI data collection) and qualitative (face validity discussion) research experiences in one teaching session is that it presents, in an easy way, the possibility of exploring and experiencing different methodologies and thus increases both understanding and interest in them. The teaching combination of using research methodology articles and on-hand practical research experience, was considered by the involved teachers as both creating new and useful knowledge, and as being a useful pedagogical way of teaching in social education programs. However, the close collaboration between the teachers and the researchers may have influenced the teachers' experiences of the pilot project. The close collaboration was on the other hand beneficial in creating a closer connection between researchers and teachers in the social education program, which was a positive side-effect of the project. A close relation between researchers and teachers in educational programs, can present opportunities for research-integrated teaching which may be less time-consuming and thus easier to administer in regular teaching activities.

The use of a previously psychometrically tested questionnaire as the SA-SH, ensured that all the original items were valid from various perspectives. In addition, the original main researcher of the SA-SH was included in developing the added items in the SA-SH-Ext. Face validity concerns what the questionnaire superficially appears to measure and can be used as a complement to using a quantitative measure, such as CVI, to address the validity of a questionnaire. However, only using face validity to measure validity is insufficient (Royal, 2016). Content validity tests whether the items assess the defined content, and its use requires subject matter experts. In this study, students were considered experts on being social educator students, and thereby able to assess the content validity of the SA-SH-Ext. However, there are items in the SA-SH-Ext that might be viewed differently if the expert group were instead a group of social educators with work experience or a group of lecturers on a program for social educators. Prior to performing the project, the teachers in the program were invited to comment on the SA-SH-Ext and found it highly relevant. It is possible that the level of relevance of items rated by students reflects their knowledge of the profession. The low ratings of relevance for some of the items should be discussed among teachers on social education programs to explore if there are knowledge gaps that need to be addressed in these programs and how these results can be used to further develop students' reflections on their professional role in relation to promotion of sexual health for future clients, a field where there is need for improvement (Landmark et al., 2012).

A limitation of the psychometric part of the study was that it only included one class of students, and additional psychometric testing is therefore recommended to evaluate the psychometrics of SA-SH/SA-SH-Ext. Therefore, it is essential to see this study as the start of psychometric evaluation on the SA-SH-Ext for social educators as profession. Psychometric testing may take longer when being planned to fit into the pedagogical plan of an educational program, which needs to be taken into consideration. However, the combination of research and teaching may lead to further knowledge not only of instrument development, but of the instrument itself, thus leading to its better use once it is developed. The SA-SH-Ext needs to be tested for other professions also working with clients with physical and psychological disabilities and illness, to ensure usefulness in various contexts.

Conclusion

Research-oriented teaching can enhance teachers' research development and collaboration between teachers and researchers and thereby increase competence regarding specific topics.

Including real research projects concerning sexual health in education at the bachelor level seems to be beneficial both for developing the students' knowledge of research methodology and for deepening their reflections concerning their attitudes, knowledge and needs for competence in sexual health related to their future profession. In addition, involving students in a research project can add valuable knowledge to the research project as well. The content validity of the SA-SH-Ext suggests the SA-SH-Ext should be further explored psychometrically as regards reliability and validity with a larger sample of social educator students.

Acknowledgements

The authors would like to thank the participants for sharing their knowledge and experience.

Conflicts of interest

The authors report no conflicts of interest.

Funding

This project did not receive any specific funding.

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