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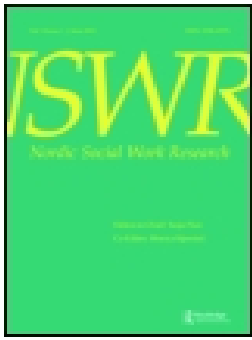
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Body. Grade. Relation. Understanding children's needs through interprofessional learning

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ABSTRACT

The aim of the study was to explore interprofessional learning among students from nursing, education, and social work programmes in Sweden. Four or five students from each programme participated in focus group interviews. Students were asked in homogenous and mixed groups to judge a fictitious case of a young schoolboy with multiple needs. Interviews were recorded, transcribed, and analysed with content analysis. We found that nursing students focused on nutrition and physical well-being, education students on grades and course, and social work students on context, collaboration, and coordinating activities. Students in the mixed groups described the concept of interprofessional learning as opening their eyes to the need for later collaboration as professionals. To conclude, the study shows that students adopt a narrow professional way of thinking when socialized only within their own discipline as illustrated by the theme: Body, Grade, Relation, with a risk of not taking full responsibility in a complex case such as a child in need. When exposed to other professions, students expand their perspectives and learn from each other to the benefit of their mutual clients.

KEYWORDS

Interprofessional learning; collaboration; nursing; education; social work

In many human service fields, different professions need to collaborate to achieve the desired results. To support service users such as patients, clients, and pupils, professionals need to know about, respect, and consider other professions' contributions and scope. Interprofessional work requires different professions to cooperate and solve tasks in a process that includes mutual learning important.

There seem to be comparatively well-developed routines or even teamwork among healthcare professionals (Abrandt Dahlgren 2015; World Health Organization 2010). For example, a stroke care team may include a doctor, a nurse, a physiotherapist, an occupational therapist, and a speech therapist, all using their individual competencies but working together in support of the patient. Research also shows that access to such a team can improve recovery in stroke patients (Clarke 2013; Stroke Unit Trialists' Collaboration 2013).

One advantage of teamwork among healthcare professionals is their common professional language and legal jurisdiction that allows them to develop the work beyond their immediate regions. For example, the Global Confederation for Interprofessional Education and Collaborative Practice (<https://interprofessional.global>) connects a number of health-related regional networks across the globe. Among its members are the American Interprofessional Health Collaborative, the

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Nordic Interprofessional Network, and the UK-based Centre for the Advancement of Interprofessional Education (CAIPE 2020).

Although interprofessional education and work collaboration are heavily dominated by health professions, there are several attempts to involve social work in interprofessional education (Nimmagadda and Murphy 2014; Rubin et al., 2018) and practice work (de Saxe Zerden et al. 2018). The de Saxe Zerden study suggests that integrating social workers into interprofessional teams requires educating all members of the healthcare team on the roles and functions of social workers. However, there are many fields where collaboration is desirable, but the preconditions are less natural or obvious than in healthcare. One important such example is in elementary school, particularly in services for children with complex needs that could be associated with their learning, the school itself, their family situation, and the social environment. The individual child may need assistance from many different actors including teachers, nurses, school counsellors, the social services, and perhaps others. D'Agostino (2013) discusses collaboration as an essential social skill, which includes interaction through micro, mezzo and macro levels in school settings. Cross-system teamwork with community partners is necessary to meet the needs of all pupils.

Collaborative opportunities are often limited by organizational conditions, legal restrictions, and different actors' perceptions of their mission. As suggested by Wiles et al. (2016), tension might particularly arise from the different premises such as laws and regulations, for the professional ethics of various occupations. Better understanding of the different layers such as conflicts between profession code of ethics and laws and regulations may lead to better teamwork. The way we look at the needs of children is also a question of professional ethics, not the least in social work (Frost, Robinson, and Anning 2005). Another barrier may simply be that various professions do not know the work tasks or capabilities of other professions that could contribute to their achieving their own. There may therefore be a reason to find out how professions with different goals think in various emerging situations.

Student learning

CAIPE (2020), which is most concerned with healthcare, describes interprofessional education as 'occasions when members or students of two or more professions learn with, from and about each other to improve collaboration and the quality of care and services'. But could educational programs also prepare social work and teaching students for collaboration in their future professional work? Many programs train future care and service professions such as nurses, teachers, and social workers. However, students who attend any of these programs rarely meet students from programs outside their professional fields during the training (Rubin et al. 2018). So, what do students know about other programs and their students and, after completing their education, about other professions in related fields? A working hypothesis is that students become socialized to a rather narrow professional school of thought during their training.

One way to create preconditions and facilitate collaboration between different professions is for students to learn about each other's different perspectives and ways of thinking. Were students to gain insight into different skills and potential professional collaborators during their training, it would probably help them to become even better acquainted with their own professional role and more able to collaborate across professional boundaries. It could also help them to better support individuals with complex needs.

Because a school could be setting where many professions are needed, we invited students from different educational programs to participate in a two-step discussion of a written case of a schoolboy in need of multiple supports (further described in the Methods section).

Theories of interprofessional learning

This approach focuses on what factors facilitate efficient collaboration in practice. Knowledge about organizations and legislation could be one of those factors; knowledge about children could be particularly important. Knowledge of how to implement interprofessional strategies seems particularly relevant as neither health personnel nor social workers are directly employed by the school organization, working under different administrative bodies and guided by different professional missions thereby making interprofessional/collaborative practice more difficult. Widmark et al. (2016) interviewed professionals from social and mental health services about when collaboration was needed to meet children's and adolescents' psychosocial needs. Although there is a mandate, in schools at least, to develop collaborative strategies in both research and practice, it appears that staff continue to be influenced by organizational socialization and affiliation rather than by collaborative problem solving on behalf of children's psychosocial needs. The prerequisites of care can also be limited by the different statuses of different professions, and status hierarchies can make it difficult to create interprofessional meetings on equal terms.

Theories of problem-solving

This perspective focuses on results. The goal is the outcome, and interprofessional work is a means to reach that goal rather than an end in itself. This holistic approach goes beyond seeing any one profession as essential for good client support, but recognizes the need for a chain of interconnected efforts. Within the intuitive-humanistic approach, Benner (1987; 1996) shows how clinical decision-making is based on clinical experience, knowledge and intuition. Problem-solving and decision-making are, according to Benner (1987:1996), promoted by long clinical experience as we solve problems based on our previous experience. Novice clinicians need clear guidelines and support as they lack previous problem-solving skills and knowledge. Moore (2011 p.p., 521) suggests an interprofessional approach might add an extra 'edge of consciousness' of students' critical thinking, and hence contribute to develop an empathic view of students' knowledge.

Theories of socialization in education

Socialization, in this article, refers to the secondary socialization which takes place later in life (primary socialization occurs in childhood). Education, peer groups, for example students in the same program or workplace become socializing areas for individuals (Giddens 2001). Incorporating interprofessional perspectives in the study programs might provide opportunities for students to socialize not just into their own professional discourse but also into a culture of mutual learning. Collaborative learning supports students to be clearer about their individual potential in relation to other professions. Studies indicate that syllabi promote students' socialization to their profession; how they are written may narrow students' perspectives and influence their perceptions, and motivation (Wheeler, Palmer, and Aneece 2019). One way to study the socialization into the profession is to study the specific syllabi for each education/program.

Methods

Aim

The aim of the study was to explore how students from across professions understand their roles and responsibilities and those of others when working with children in a school setting. The study addressed the following research questions:

- How do students in different programs understand the difficulties and needs of the schoolboy?
- How do students in different programs reason about their own and other professionals' roles in relation to the case?
- How do students view the need for professional collaboration/interprofessional learning?

Recruitment

Graduating students from nursing, teaching and social work were recruited for the study through in-class announcements. We chose these programs mainly because professionals in these areas often collaborate in a range of settings. Our pre-understanding was that since students tend not to meet students in other programs during their education, they are most likely socialized into their own discipline's way of thinking. The study and the questions asked in the interviews were not guided by theory; rather, we hoped that by analysing how students in each program reasoned about the case and their own professional role it would be possible to inductively identify theoretical perspectives for further development.

Although the professions label these individuals differently (patients, students, clients) they should share a common understanding in order to assist the client as effectively as possible. These three professions were also chosen because from a student's perspective they may be viewed as relatively equal in power, which should limit the risk of status hierarchies that might affect medical teams in which doctor may outrank other members. For a discussion on power in interprofessional research see Cohen Konrad et al. (2019)

The study was conducted by an interprofessional research team including lecturers in each of the selected study programs. To avoid influencing the discussions, each homogenous group interview (i.e., with all students in the same program) was conducted by a researcher with another educational background: the education researcher interviewed the nursing students, the nursing researcher interviewed the social work students, and the social work researcher interviewed the teaching students. To better understand the results, we also took part in the syllabi from the introductory courses in all three educational programs. (This is further elaborated in the discussion section.)

Design

The study used an explorative and descriptive design (Polit and Beck 2012). First, the learning outcomes in respective program syllabi were analysed to identify similarities and differences with a focus on socialization into the upcoming profession, identity in upcoming professions and collaboration with other professions. The syllabi we reviewed clearly indicated how students are socialized into each upcoming professional role. The first learning outcome of the first course of each program (from documents valid in 2018 when we did the interviews) illustrates this point, see Table 1.

A fictive but realistic case study was constructed and piloted by the research team first with single-discipline focus groups and then with interprofessional focus groups with graduating students from the three professions. The reason for using mixed groups was to observe if there

Table 1. Comparison of Learning objectives in respective programme.

Program	Nursing program, Course 1, Learning Objectives	Primary school teacher program, Course 1, Learning Objectives	Social work program, Course 1, Learning Objectives
The first learning outcome of the first course of each program	describe nursing as an academic subject in relation to the nursing profession	outline a selection of scientific theories on learning and be able to reflect on these from a historical and contemporary perspective	describe and critically reflect on and analyse different theoretical perspectives in social work in relation to social problems from an ideological, ethical, cultural, historical and social policy context

were any changes in the discussion when students from different disciplines viewed the same case. Case development further provided a basis for adding questions to the study interviews. The focus group method is a means of generating data from unique combinations of people (Krueger and Casey 2015; Wibeck 2010). Knowledge produced is dependent on who participates, what they know; contributions to the discussion, and how participants interact as a group. Focus group interviews were further selected for data collection as they facilitate participants' different opinions enriching discussions (Krueger and Casey 2015; Wibeck 2010). A total of 13 students, both male and female, all nearing the end of their educational programs, participated; four or five in each group.

In the groups, students were introduced to 'Adam' (age 9), who is not feeling or doing well in school. He seems pale and tired; fights with schoolmates and has limited support from a relatively unstable family. Both single-discipline and interprofessional groups were asked the following questions:

1. Who is responsible for acting in this case?
2. What do you regard as your professional role and task?
3. What do you think other professions can contribute?

Analysis

All conversations were recorded, transcribed, and analysed using qualitative content analysis, a common method for analysing interview data in studies aiming to explore and describe a certain phenomenon (Patton 2014). The analysis, guided by Patton (2014) and Kvale and Brinkman (2014), was conducted in several steps, beginning with the researchers familiarizing themselves with a naïve reading and further re-readings of the transcripts, looking for patterns of meaning and issues of interest based on the aim of the study. During this step, the researchers marked the transcribed interviews to enable potential coding schemes. Each researcher coded one homogenous and one heterogeneous focus group interview. Later, the entire data set was jointly (by the three researchers) systematically coded into relevant codes that were then collated into preliminary themes. After identifying these primary themes, the results were discussed within the research team in relation to the coded extracts and the entire data set. The analysis moved constantly back and forward between the entire data set, the coded extracts of data, and the abstracted themes. Themes identified during the analysis were repeatedly discussed among all three members of the research team and identified sentences from the students' responses were condensed to better understand how students viewed their core role in the case. Answers from the homogeneous and mixed groups were then compared to find out whether participants' views and assessments changed when participants were placed in an interprofessional group. This approach illustrates the possible added value of having mixed groups.

How do students reflect on the case in homogenous groups?

- (a) What is Adam's problem?
- (b) What do you regard as your role and task?
- (c) What do you think other professions can contribute?

Ethical considerations

We sought and received permission from the regional ethical committee in Uppsala (DNR 2018/096) to conduct the study. The study was voluntary and there was no undue pressure on students to participate. Participants received an information letter and provided their written consent. All materials were handled with care. Only the research team had access to the interview transcripts.

Participants were paid a small compensation for their travel and time. We were clear to participating students that there would be no examination related to the focus groups or other dependency between teacher-students. The information requested from respondents was not particularly sensitive as it concerned a fictitious case and participants were not asked about their personal circumstances.

Results

We start with an overview and then present results from all three education groups separately. Students from all disciplines were generally able to understand Adam's situation from a number of perspectives such as home relations, school situation, and Adam's own behaviour. They also speculated about medical explanations including neuro-psychiatric diagnoses such as attention-deficit/hyperactivity disorder. However, when asked about what could be done about Adam's situation, they seemed uncertain. They discussed filing a formal notification of concern (expected of professionals with reason to worry about a child), but were also vaguely aware of confidentiality legislation and unable to predict what might happen and where to file such a notification.

When asked specifically about their own role, students' responses differed markedly according to their chosen profession. Socialization in all education programs includes norms, values, and professional language. The student discussions seemed to reflect a high degree of socialization into their own educational and professional contexts. Our findings are summarized in [Table 2](#).

Nursing students

The nursing students said their mission and duty were both to promote health. If notified of a concern, they believed an interprofessional approach to be necessary. They also believed that all professions at a school should work together to ensure a correct decision be made. This was especially important to those new to the profession. Everyone in the nursing group agreed that working together and interprofessional collaboration in schools was in the best interest of children. Therefore, joint courses with other programs were perceived as important.

What is Adam's problem?

The nursing students thought Adam's problem was the lack of security in his environment: 'He is not in the care of either his mother or his father'. 'Neglect. ... he is just nine years old and needs the care of his mother'.

They discussed the lack of communication among Adam's parents and the various professionals and the fact that he had become very introverted. They also considered whether child psychiatry would be helpful in this case. 'It is that he is pale and tired ... so is he pale?' 'Is he tired? If he sleeps

Table 2. Students' core understandings of their own roles in relation to the case.

	What they say	concentration	Key word
Nursing students	'... he is pale and tired, and he sort of talks about this, about the situation at home, and he seldom eats breakfast ...'	Pale, tired, nutrition	Body
Teacher students	'[Adam's problem] may not have been recognized if he had passed math. ... [This shows] how knowledge-focused the whole school is.'	Knowledge-focused Passing maths	Grade
Social work students	'We are not pen-pushers.' '... to be seen and be available ... in the schools.' '[I am the] spider in the web.'	Meet children Active approach Co-ordination	Relation

during a lesson ... because it is something that we can catch up and measure, we can say that. Mm. I think ... that is where we actually have our, well, competence’.

What do you regard as your role and task?

The nursing students described their role and task in cases like Adam, as, ‘we have a duty to report when we think a child is in danger’. During the discussion, it became clear that an investigation of Adam’s *state of health* was quickly required. According to the students, the duty to report is an important tool for helping Adam. They argued that an investigation is necessary in this case. Gathering all around Adam for a review of different strategies/measures is the task of the nurse. The school nurse has the opportunity to see and follow up the individual student in a different way than the teacher who has many students to consider. That is also why the school nurses have a special responsibility to make an alarm when a student obviously does not feel good.

What do you think other professions can contribute?

Everyone in the nursing group agreed that the interprofessional collaboration at a school should work together for the best of the child. Concerns were expressed about working in isolation from other professions in the school’s framework, rather than in interprofessional teams such as those in healthcare, where natural collaboration takes place daily. It was suggested that each professional who meets a pupil could ask them to allow other professionals such as teachers or social workers to join the conversation for increased collaboration. It was important for this group to have inter-professional collaboration because school nurses are not in place five days a week. ‘*As a new nurse, make a notification of concern. Even though I feel this may be the right thing ... maybe it’s wrong, how will it affect me, how will it affect others?*’ ‘*You can also check what the other professionals think if you are unsure*’. ‘*Mm. It feels safe that you can get support from others, what they think, so that you do not only do something by yourself. Especially when you are new [in the profession].*’

Teaching students

The teaching students included those studying to be regular teachers and those aiming to be recreational instructors (RIs), who supervise and work with children before or after class. Regular teacher students seemed more concerned that children pass their courses and RI students seemed more interested in the students’ social situations.

What is Adam’s problem?

Teacher students recognized Adam’s multiple problems both at home and at school and his general lack of well-being: ‘He has no safe point in everyday life’. However, teaching students did not feel that because Adam is sad and fights, that is enough indication of his feeling unwell. These examples clearly show how the school children’s learning and development is in focus for the teacher students: ‘So ... it may not have been recognized if he had passed math. ... [It shows] how knowledge-focused the whole school is’. ‘[I]t is quite striking in this case that ... Adam’s well-being is only important in proportion to his performance in school’. ‘If he is taking many subjects// then it is not noticed in the same way by each teacher’.

What do you regard as your role and task?

Although school is knowledge-focused, RI students highlighted pupils’ social needs and needs for protective teams and collaboration. The regular teacher students saw their role as being involved in student-caring teams, trying to ensure that Adam reaches knowledge goals and to identify possible problems, such as dyslexia, that prevent him from achieving those goals: ‘Then there are clear links between social well-being and the fulfilment of the knowledge goals’. ‘I think it is necessary that other educators in the school should be included in the student welfare team in order to be able to discuss the individual case’.

Teacher students discussed whether some neuropsychiatric diagnoses (not mentioned in the case) might also be involved and his possibly poor breakfast habits. One teacher student said ‘Sometimes they try to feed away some neuro[logical problem]; it usually works quite well’.

What do you think other professions can contribute?

Interestingly, regular teaching students said they had not previously reflected on working with RIs in their upcoming work: ‘Well, I did not have any idea really from the beginning that we would cooperate with recreation educators . . . [It] is nothing we even talked about in school’.

The teaching students said the school nurses should notice if Adam is pale and tired. They also believed that the social worker (school counsellor) could help Adam to open up, but school counsellors were described as very scarce and not readily available, with each counsellor working at several schools. They also noted that other participating students had mentioned the possible need for child psychiatric assistance.

The teaching students do not seem to know what to do. They do considered the problem, but turned the responsibility over to someone else:

Then Eva [school nurse], she is worried about Adam. I do not know, she must decide how worried she is about Adam, but if she is worried, she is obliged to report. Or she should in any case. She can go to the headmaster . . . and make a notification of concern so maybe the social worker may take over then.

Another student suggested that ‘the school nurse . . . I mean she measures and weighs, so she may well//discover such things if you are sort of anaemic and Oliver-Twist–miserable’.

Social work students

The social work students’ main concerns were Adam’s social relations, both in his family and at school. They thought their role was not to solve problems for Adam, but to help find support structures around him. These support structures could be older relatives, extended family, or school assistants with whom Adam felt confident. They emphasized the importance of this support person being someone who Adam trusted and felt safe with. The support person’s competence was described as less important, the most important thing being that Adam had confidence in this person.

What is Adam’s problem?

The social work students considered that Adam’s main problem was his home situation, with a lack of attentive, active, and responsible parents. ‘Um, the situation. He doesn’t seem to have a parent in any of the places, it feels like, eh, because the mother just seems to lie down and sleep or be tired the most the time’.

They believed that Adam had been ‘lost’ in the new family, especially with the new baby. They also suspected that Adam’s mother had signs of psychiatric illness perhaps connected to bad economy, no work, and alienation. They discussed the relationship between his biological mother and father and the negative effect their relational problems may have had on him. Lack of an extended network (no grandmother) or other protective environment was identified as problematic. Adam was perceived to be getting no attention or opportunity to express himself. ‘In some way he may not get space and speak up about what he wants to say. [He] doesn’t know what to do with his feelings, so they come out in other ways’.

Adam was described as lacking protective factors, which they described as needing further investigation. They reflected on how Adam’s problem could be related to his alternating between two homes where he felt unwanted. The stepmother’s potential language problems (as an immigrant from Thailand) were also mentioned.

What do you regard as your role and task?

The social work students mainly described their role and task as ‘the spider in the web’, the one who provides the client with a safety net and both coordinates and supports other professions. However, they never reflected on their own needs for support. They described their role as extremely challenging and often lonely. One problem was their not being a natural part of the pupil’s day; they wished to be part of the work at an earlier stage. They thought they would often be called in by others (usually teachers) and then perceived negatively by the family, and they discussed how school counsellors could more easily become a natural part of the pupils’ daily life by being present on school breaks and visiting classrooms to facilitate natural contacts.

Social work students felt that their main responsibility would be to represent and speak for the child in need, but they felt they would be held back and their role would not be prioritized. They reflected on how school social work needs to be upgraded and more valued. They described there being central rules and regulations about their role, but also noted major differences between different school units. It was important to them to leave the office to be where the children were: ‘We are not pen-pushers’.

What do you think other professions can contribute?

Social work students felt teachers should confirm and address Adam and be there for him in his daily life. The school nurse should be contacted as a possible adult support as well as a provider of healthcare. The teachers’ role was described as being responsible for pupils’ relationships with friends, the climate in the class, and how the students treat each other. ‘And that you act at school, that you may need someone, some support person who joins the group and works with the group’. ‘But the teacher’s job will be very much to get together and maybe look a little more at [his] relationships and why he is acting out’.

Have you modified the view of your own role and profession? Student reflections across disciplines

The interprofessional discussion about how student care teams might work in practice ended in everyone agreeing that meetings are necessary for interprofessional collaboration. ‘So, we, me as a social worker, should be in the schools sometimes. To be seen and be available to teachers, school counselors, and school nurses’ (Social work student). ‘[It’s] much better to meet’ (Nursing student).

If we just can meet and have a cup of coffee ... without lots of cases and things like that ... getting to know each other. Then it will be easier to pick up the phone and call. I know there are confidentiality rules, but I just don’t know what they are. (Teaching student)

The students highlighted the need for informal meetings between different professions in the school context. Interpersonal meetings were described as a way to bridge the gap between different professions and facilitate contacts in real life. Fears about acting and practical difficulties were mentioned as roadblocks to cooperation, and the participants reflected on how informal meetings could be a way to overcome these obstacles.

The students had a long discussion about how to deal with confidentiality requirements, concluding that it is important to coordinate certain parts of the training in the three programs, not to lift the confidentiality requirements of social workers, but to increase understanding among the three professions. Suggestions for common course content, social education, and additional training for nursing students were ethics, confidentiality, and joint field studies. These additions could help students become aware of the necessity of contact and ‘moreover, [how] invaluable [it is] to understand that everyone’s professions are really needed, as well get some insight: Oh well, oh well, so it works’.

The social work students reflected on how much they had learned and broadened their view-points and how the discussions had deepened their understanding and insight. Talking with

students from other professions gave them added value, a sense of safety, and enabled them to support each other. Laws and regulations that were perceived before the joint discussions as barriers against other professions were no longer seen as limitations. The joint discussions were viewed to contribute to interactions, knowledge transfer, and all groups' increased understanding of the importance of the RI role. The students also reflected on why RIs were seldom included in student welfare teams and appreciated how increased interaction between professions could reduce the risk of exposed children 'falling between chairs'. One social work student said, '... I have still learned a lot, and in some cases more in-depth things I had not even thought of'.

In the joint discussions, the nursing students reflected on how their focus had been on Adam's health issues in the nursing group and they had not considered collaborating with other professions. 'We focus a lot on health, on Adam, but we do not think so much about the network... One sees an overall picture and really thinks about it and can let in others' ideas and thoughts' (Nursing Student).

Social work students expressed a will and need to cooperate with other aspiring professionals, especially nursing students. The students described how their future role was strictly directed by law and their assumption that the nursing role was also. They believed this cooperation would provide insight into other professions' laws and regulations. They expressed a wish to have joint courses with the other professions that work with children. Social work students regarded their training as mainly theoretical and they desired more practical education, preferably in areas shared with other professions.

Discussion

The study shows that students adopt a rather narrow professional way of thinking during their discipline-specific education, which was supported by the content of syllabi. Students from nursing, education, and social work who participated in the interviews seemed to interpret Adam's problem differently and they put different emphases on how to help him. The results from interviews indicate that nursing students focus on the physical body, teacher students on the role of knowledge and passing grades, and social work students on the role of social relations. However, all three student groups discovered they could help, be helped, and learn from each other. Even though the participating students were in the later part (year 3) of their education, and hence had extensive field placements experience, their discussions revealed they had limited knowledge regarding other professions roles and responsibilities concerning exposed children. According to the Swedish National Board of Health and Welfare (Socialstyrelsen, 2016), health efforts for pupils should support their development towards meeting educational goals. Every profession has a special responsibility to contribute its specific competence and to cooperate with other professions towards pupils' health, both at school and out of it (Socialstyrelsen 2016). So, there is a mandate, in schools at least, to develop collaborative strategies in both research and practice. As showed by the students' reflections, the different laws and regulations e.g. confidentiality requirements that were perceived as limitations for interprofessional collaborations were after the joint discussions no longer seen as limitations. Perhaps interprofessional ethical discussions is one way forward, since the way we look at the needs of children is also a question of professional ethics (c.f. Juujärvi, 2003).

Although the aim of the study is quite clear, the study results may be interpreted through different theoretical filters. The study was not constructed according to any one theory; rather, we tried to be wise after the event. At least three perspectives emerged, although they may be intertwined.

Theories of interprofessional learning and its implementation tend to focus on what factors facilitate efficient collaboration in practice. Knowledge about organizations and legislation could be one of those factors, and in case of Adam, knowledge about child development could be particularly important. Knowledge of how to implement interprofessional strategies seems particularly relevant as neither health personnel nor social workers (at least in the Swedish school system) belong to the school

organization, but have different missions and work under administration other than the school itself. They act in someone else's arena, which may make interprofessional work more difficult in practice. Mc Mahon et al. (2012) focus on children in high-risk situations. They propose a full-service school which includes inter-agency collaboratives that integrate school and human service systems. Widmark et al. (2016) interviewed professionals from social and mental health services about when the collaboration was needed to meet children's and adolescents' psychosocial needs. The authors suggest that organizational affiliation has a stronger influence than education on professionals' views of children's needs. The prerequisites of care can also be limited by the different statuses of different professions, and status hierarchies can make it difficult to create interprofessional meetings on equal terms.

Theories of problem-solving focus on results; and, to solve complex problems multiple perspectives are needed to prompt a faster response and to prevent people from falling through the cracks. Pilhchers and Soden (2000) suggest that problem-based learning (PBL) facilitates students' critical thinking. In our study, we used a problem-based case to facilitate the development of critical thinking skills through group discussions. We observed that students' understanding of Adam's needs expanded during the interprofessional case discussions and concluded that if more educators offered interprofessional PBL within curriculum critical thinking would be advanced. Incorporating interprofessional perspectives in the study programs might provide opportunities for students to socialize not just into their own professional discourse but also into a culture of mutual learning. These students may also be clearer about their own potential professional contribution in relation to other professions. Because students seem to be quickly socialized in their single-discipline training to a rather narrow professional view, introducing interprofessional perspectives earlier and more systematically in syllabi is recommended. There are obvious practical obstacles to coordinating different student programs and there may be legal and other barriers to professional collaborations. But one way to make a change would be to introduce interprofessional perspectives more systematically in syllabi. It is important that the education reflects a vision of the future professional's individual competence in relating to those they serve, but at the same time encourages their vision of the whole, including collaboration with professionals in other areas. If students meet students from other programs early, the chances of their developing a multi-faceted view will increase. The students in our study said they would be comfortable if they were to do this from the start; collaboration is easier if it is introduced during training. This way of working would most likely influence students to reflect more critically on what they learn.

In pedagogical literature, the debate continues about whether critical thinking is related to good knowledge in a specific academic discipline or is a more general or generic skill (Moore 2011; Davies 2013). Moore suggests that students' critical thinking might be facilitated if teachers adopt a transdisciplinary approach and encourage them to reflect on the variety of educational processes they might experience in their upcoming specialist domain. A transdisciplinary approach might add 'an extra edge of consciousness' to students' critical thinking (Moore 2011, p.p., 521). Without resolving the debate formulated by Davies and Moore, we could at least conclude that interprofessional educational experiences could make students more aware of other professions and give them tools to think critically about their own educational program and demand more collaboration with other educational programs.

Limitations

The study was limited by the use of a small sample of 13 participants. A second limitation is that we used just one hypothetical case study. The methodology is basically sound however its generalizability is limited. Another limitation is the student selection. Since we actively asked for student participation, we do not know whether the views given represent most student voices. To avoid a pre-understanding bias, the interviews in the homogenous groups were each conducted by a researcher with a different background, thus not 'knowing' what the specific educational program wants to emphasize. This collaboration of students added a second layer of interprofessional

learning parallel to the student learning under study here, but discussion of that dimension is beyond the scope of this article.

Conclusion

The study suggests that students adopt a narrow professional way of thinking during their education as illustrated by the theme: Body, Grade, Relation, leading to no one wanting to take full responsibility of the case of Adam. However, Bronstein (2003) highlights important key-concepts for increased interprofessional collaborations. These key-concepts are; *interdependence, newly created professional activities, flexibility, collective ownership of goals, and reflection on process* (Bronstein 2003). Our study indicates how interprofessional collaboration among students can facilitate these key-concepts. This approach could also be useful not only in schools but in many other settings in which people have complex needs. Sharing each other's knowledge and understanding of corresponding roles could enhance students' decision-making capacity. The gains of such an approach could include better professional support for individuals in need to prevent the vulnerable from falling between chairs.

Suggestions for further research

Results suggest that joint student activities considering a shared case could broaden students' understanding of collaborative practices in different human service organizations, not just in health-care professions, but more studies are needed. By comparing how students in different programs and stages of their education reason, their socialization into various professions and their changes in approach during their training might also be scrutinized. We could also compare students' views with the views and interpretations of working professionals in the corresponding occupational groups, perhaps staff who have worked for at least 3 years or so.

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