The integration of social accountability in the medical curriculum: a qualitative study to the change process as perceived by educational staff and students

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Abstract

Background. In addition to (pre)clinical skills and knowledge there is more and more attention for social accountability within the medical curriculum. The integration of social accountability into the medical curriculum requires an organizational change process, which is affected by many factors. This study aims to investigate; the reaction of educational staff and students to this change; the perceived consequences resulting from this potential change; and the change antecedents that affect the reaction to change and change outcomes.

Methods. This study used a qualitative design in which semi-structured individual interviews were conducted with 28 educational staff members and 16 students at a medical school in the Netherlands, in 2021. The grounded theory method was used to qualitatively analyze the interviews.

Results. Most participants were in favour of more attention for social accountability within the medical curriculum but their reaction depended on their career stage, perceived autonomy, level of focus on either solutions or problems, their degree of participation in the change process, and their perceived expertise. Participants perceived several potential consequences of the change, such as a higher workload, reduction of organizational commitment, and withdrawal from the change. Examples of important antecedents of change were resources such as finances and time, a common vision, and principal support.

Conclusions. The reaction of educational staff and students to the integration of social accountability in the medical curriculum and their perceived consequences resulting from this change can be positively stimulated by taking the involved antecedents into account during the organizational change process.

Background

In addition to (pre)clinical skills and knowledge there is more and more attention for social accountability within the medical curriculum. The rising inequality in health and the altered prevalence of diseases as a result of an ageing population, an unhealthy lifestyle and climate change are just three of the many issues that the medical field is dealing with at the moment. To address these issues, medical schools are starting to focus parts of their education on the structural determinants of health, health equity, sustainability and biopsychosocial factors (Fitzgerald, Shoemaker, Ponka, Walker, & Kendall, 2021). Social accountability education addresses these issues and is defined, in the context of medical education, as follows: A reciprocal relationship between the institution of medical schools and society. This relationship involves the obligation of medical schools to direct their education, research and service activities towards current and significant societal factors such as diversity, sustainability, and moral issues. The community and the patient are central (Oudbier, Boerboom, Peerdeman, & Suurmond, 2022). By integrating social accountability into the medical curriculum, future professionals will be well equipped with the knowledge and skills needed to be a socially accountable health professional.
However, when integrating social accountability into curricula, the current structure and culture of the medical institution itself should be challenged (Manca et al., 2020). Social accountability is a construct that includes many sub aspects, such as diversity, sustainability, and moral issues. Therefore, it requires integration of different sub aspects of social accountability into the general medical curriculum, which is difficult. To integrate social accountability into a medical curriculum, an organizational change process is needed, which is affected by many factors.

Previous literature on organizational change is not specifically focused on medical education, but has shown several factors which affect the way professionals in an organization react to change, for instance the career stage (Hargreaves, 2005). Teachers in earlier stages of their career show more flexibility and adaptability in dealing with change and have a higher degree of acceptance towards change than teachers in later stages of their career (Hargreaves, 2005). Other factors that affect recipients reactions to the change are their level of on-the-job autonomy (Hornung, 2007), the beliefs they have regarding the change (Armenakis, 2007), participation in the change initiative, which is mediated by sense making and affect (Bartunek, 2006), and the extent of the change and the impact on the individual’s job (Fedor, 2006). The readiness for change is affected by change-specific efficacy, appropriateness, personal valence, management support, the content, context, and process of organizational change, and individual attributes of the people involved in the change (Holt, 2007). Resistance to change could be caused by several reasons as described by Yilmaz and Baydas (2017), such as limited resources, interference with needs fulfillment, and knowledge and skill obsolescence.

The literature gives insight into the factors that affect organizational change and which make people reject or accept it. However, the organizational change relating the integration of social accountability into a medical curriculum, in a European context, has not yet been explored. Insights regarding the factors that affect the integration of social accountability are essential to effectively implement this multi-factor construct by promoting characteristics that facilitate this change and altering the characteristics that obstruct it. Therefore, this qualitative study investigates the organizational change process during the integration of social accountability as experienced by educational staff and students. This way, more insight will be provided into the experience of this organizational process.

The aim of this study is to investigate the explicit reaction of educational staff and students to the potential integration of social accountability into the medical curriculum, the perceived consequences, and the change antecedents that affect the explicit reaction and change outcomes. To achieve the aim of the study, the following research questions will be answered: 1) How do educational staff and students react to the integration of social accountability in the medical curriculum? 2) Which change consequences do educational staff and students expect as a result of the integration of social accountability in the medical curriculum? 3) Which antecedents affect the explicit reaction and the expected outcomes?

Methods
Design

We conducted a study with a qualitative design to investigate the explicit reaction, expected outcomes and the change antecedents of the integration of social accountability into a medical curriculum as perceived by educational staff and students. We used a qualitative design because this enables a more in-depth analysis of these perceptions. These perceptions are investigated by means of semi-structured individual interviews with educational staff and students of a medical university in the Netherlands. We used semi-structured individual interviews and conducted interviews till saturation was reached. This enabled a more in-depth investigation of the participants’ perceptions and their reflections on the integration of social accountability and ensured reliability. We distinguished two subgroups in the study population: 1) educational staff and 2) bachelor and master students. Educational staff members are teachers, coordinators, policy advisors, board members, educational designers, and principal educators (excellent teachers who are tasked to improve the quality of the faculty by developing new courses and strengthening faculty development).

Sampling And Recruitment

We used the recruitment methods purposeful sampling and snowballing and invited the educational staff and students for participation in this study in March 2021. We approached the educational staff via e-mail and to approach the students we posted a message on the electronic learning platform and placed an announcement in the faculty’s newsletter. Participants were included when they were an enrolled student in the bachelor or master program of the faculty of medicine or when they were a teacher, a coordinator, principal educator, medical educator or policy advisor working at the faculty of medicine. After educational staff and students agreed to participate, we arranged convenient dates to interview them, between March and June 2021, by email.

Participant Demographics

In total, 44 participants participated in this study (28 educational staff members and 16 students). The distribution of functions amongst the educational staff members was as follows: six principal educators, four members of the board, fifteen coordinators, four policy advisors, and two teachers. The difference between number of participants and number of functions can be explained by the fact that several participants had more than one function. Six master students and ten bachelor students participated. Based on the distribution of age, years of experience/year of study, and whether or not they were a first-generation student, we can conclude that the participants were a heterogeneous group. The study population was thus highly representative of the general population in terms of these characteristics. Table 1 presents the participant demographics.
Table 1
Participant Demographics

<table>
<thead>
<tr>
<th></th>
<th>Educational Staff (N=20)</th>
<th>Students (N=11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male/female</td>
<td>12/16</td>
<td>10/6</td>
</tr>
<tr>
<td>Age</td>
<td>52.6 (33–66)</td>
<td>23 (17–26)</td>
</tr>
<tr>
<td>Years of experience</td>
<td>15.5 (1–40)</td>
<td></td>
</tr>
<tr>
<td>Year of study</td>
<td></td>
<td>3.7 (2–6)</td>
</tr>
<tr>
<td>First-generation student</td>
<td>Yes 10</td>
<td>Yes 5</td>
</tr>
<tr>
<td></td>
<td>No 10</td>
<td>No 6</td>
</tr>
</tbody>
</table>

Data Collection

Materials. We created an interview guide, based on the literature, to ensure consistency amongst the interviews. The interview guide consisted of several questions: (1) To which degree do you think that integrating social accountability into the medical curriculum is of value for medical education? (2) To which degree are you positive or negative about the integration of social accountability into the medical curriculum? (3) What do you think is needed to change the current situation to the ideal situation regarding the integration of social accountability into the curriculum? (4) Who should be responsible for and contribute to the integration of social accountability into the medical curriculum? (5) Which factors do you consider as stimulating for the integration of social accountability into the medical curriculum? (6) Which factors do you think are inhibiting the integration of social accountability into the medical curriculum? (7) Which positive or negative consequences do you expect resulting from the change? (8) To which degree do you think there is support amongst educational staff and students for the integration of social accountability into the medical curriculum?

Procedure. We decided to conduct the interviews online because of COVID-19 measures at that time, which is considered as a good alternative for face-to-face interviews in the literature (Archibald, Ambagtsheer, Casey, & Lawless, 2019; Lobe, Morgan, & Hoffman, 2020). The time span of the interviews was between half an hour and an hour and the interviews were conducted by the main researcher (JO). Several interviews were attended by a second researcher (JS) to increase consistency. We audio recorded the interviews and transcribed the interviews verbatim. To ensure objectivity, we reflected on the effect our background might have on the research and discussed our findings with the research team, which consists of two educational scientists, a principal educator, and a dean of the faculty.

Data analysis. We used a framework approach to analyze the data and conducted the five stages of a framework analysis, as described by Pope, Ziebland, & Mays (2000). First, familiarization with the data occurred by listening to the audio recordings and reading the transcripts. Then, a thematic framework was identified, which is the framework as described by Oreg et al. (2011). After the identification of the
framework, indexing took place by applying the framework to the data. Then, charting took place by organizing the data according to the framework. Finally, mapping and interpretation took place by searching associations between the themes and finding explanations for the findings (Pope, Ziebland, & Mays, 2000). This is a deductive process of analyzing. However, when new themes emerged during analysis which were not included in the framework, we added these themes to the framework. Therefore, we used a combination of deductive and inductive analysis.

For this framework analysis we used the framework of organizational change as developed by Oreg et al. (2011) as our starting point. This framework describes a model of change recipient reactions to organizational change (Fig. 1).

We have chosen this model, because this is an elaborate model that can be used to effectively investigate an organizational change process. This framework distinguishes three components of change: explicit reaction, change antecedents, and change consequences. The explicit reaction is described as follows: the reaction pertains directly to how change recipients feel (affect), what they think (cognition), or what they intend to do (behavior) in response to the change (p. 477). Three types of explicit reactions are distinguished: behavioral, cognitive, and affective. The change antecedents are described as follows: variables that predict either change recipients’ explicit reactions (as reviewed above), or the indirect, and often longer-term change consequences (p. 479). Two types of change antecedents are distinguished: pre-change and change. The change consequences are described as follows: change recipient orientation toward the organization following the change (p. 496). Two types of change consequences are distinguished: work-related and personal. This framework assumes that the antecedents affect both, the explicit reactions and the change consequences, and that the explicit reactions affect the change consequences.

**Results**

The findings will be presented with the three main themes and sub themes of organizational change as distinguished by the framework by Oreg et al. (2011): explicit reactions (behavioral reaction, cognitive reaction, and affective reaction), perceived consequences (work-related consequences, and personal consequences), and change antecedents (pre-change antecedents and change antecedents). We used ES as an abbreviation of educational staff and S as an abbreviation of students, when we used excerpts from their interviews. Table 2 presents the main themes, subthemes and main findings.
Table 2
Main themes, subthemes and main findings

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subthemes</th>
<th>Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit reaction</td>
<td>Behavioral reaction</td>
<td>-Some educational staff members think that the integration is out of their reach, whereas others think that it is within their reach.</td>
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<tr>
<td></td>
<td></td>
<td>-Students state that they should unite their forces and advocate for the integration.</td>
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<tr>
<td></td>
<td></td>
<td>-Educational staff and students would like to be actively involved in the integration.</td>
</tr>
<tr>
<td>Cognitive reaction</td>
<td></td>
<td>-Several education staff members and students focus on problems, whereas others focus on solutions.</td>
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<tr>
<td></td>
<td></td>
<td>-Important questions to consider: When are you ready as a student to learn about social accountability?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What is of more value, (pre)clinical skills and knowledge or social accountability skills and knowledge?</td>
</tr>
<tr>
<td>Affective reaction</td>
<td></td>
<td>-Some educational staff members experience positive emotions such as joy, whereas others experience negative emotions such as insecurity.</td>
</tr>
<tr>
<td>Change consequences</td>
<td>Work-related</td>
<td>-A higher workload and reduction of organizational commitment are anticipated negative consequences.</td>
</tr>
<tr>
<td></td>
<td>consequences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Personal</td>
<td>-Withdrawal from the change and becoming overworked are anticipated negative consequences.</td>
</tr>
<tr>
<td></td>
<td>consequences</td>
<td></td>
</tr>
<tr>
<td>Change antecedents</td>
<td>Pre-change</td>
<td>-Educational staff and students often have a high socioeconomic status.</td>
</tr>
<tr>
<td></td>
<td>antecedents</td>
<td>- The specialization of the physician, the culture of the medical institution, accreditation of the institution, perceptions that exist in society regarding a physician are mentioned as affecting factors by educational staff and students.</td>
</tr>
<tr>
<td></td>
<td>Change antecedents</td>
<td>-Anticipated change outcomes, shift of schedule, resources, leadership, reciprocity between the institution and society, the implementation strategy and needs of the educational staff and students.</td>
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</tbody>
</table>

Explicit Reactions

**Behavioral reaction.** When the educational staff and students were asked how they would react to the integration of social accountability into the medical curriculum, several types of behavior could be distinguished.

Some educational staff members expressed that the integration was out of their reach and stated that the management board should give a mandate. Several of them were in the later stages of their careers.
and mentioned explicitly that the next generation should advocate social accountability and that it is up to them. *I notice that intrinsic motivation is for the younger employees* (ES12). However, other educational staff members mentioned that the integration is within their reach, because they can take the lead to integrate a certain aspect of social accountability such as planetary health into the curriculum, due to their autonomy to include this aspect in the classes they coordinate. In contrast to the diverse types of behaviors amongst educational staff, most students mentioned that they feel the urge to integrate social accountability into the medical curriculum and stated that they should unite their forces and advocate together for the integration of social accountability into the medical curriculum. According to the students, student representatives are already taking the lead by talking to the management board to ask for attention to be paid to topics that are considered as important by many of the students, and student unions advocate for social accountability in their organized activities. *I think almost every student is part of a student organization and these organizations advocate for charities, either on a local or a global level* (S33).

Both, students and educational staff, would like to be involved as active participants in the change. Coordinators, for instance, would like to think along with the curriculum developers and educational designers about ways to integrate social accountability into existing curriculum elements from the beginning. Educational staff and students themselves value the involvement of students in the change, because they are the recipients of education. Another step in the integration process in which they, students and educational staff, would like to be actively involved is the creation of a vision on social accountability. The participants expressed that a high degree of involvement is important for them, because this stimulates a positive attitude towards the change. *From the beginning of the integration of a new curriculum, you need to create a group of people who have expert knowledge and with whom you design and implement the new curriculum, instead of having designers first and assigning the implementers afterwards* (ES15).

**Cognitive reaction.** In addition to the several types of behavior that constitute the participants’ reaction, several different evaluations and beliefs could be distinguished.

Several of the educational staff members and students focused on the problems that might arise during the integration, such as limited resources, overworked teachers, and lack of curriculum time. Whereas others focused more on solutions, such as integrating social accountability as much as possible in the existing curriculum elements. Most of the participants also underlined the importance of the integration of social accountability into the curriculum. However, an important question that is asked by both students and educational staff and is related to the change content is the following: When are you ready as a student to learn about social accountability? Several educational staff mentioned that it can have an opposite effect when you integrate social accountability in an explicit way too early in the educational career. They experienced that students in the early stages of their educational career do not yet have an awareness of their social impact and the fact that social accountability is a part of their role as a physician. This awareness is created at a later stage of their educational career when social accountability becomes a more tangible subject for the students. However, most students expressed that
they would like to learn more about social accountability in earlier stages, because this improves their patient contact later on. *They sometimes say that the doctor's office is like a smaller form of the society. We only learn the doctor's office, but I would also like to be taught about the whole society* (S28). Furthermore, participants stated that it is important to offer a variety of ways to achieve social accountability objectives, so that students can choose to advocate social accountability in a way that fits them best. *They should be allowed to create their own flavor of the lemonade* (ES10). These educational staff members mentioned that they do not consider it necessary that a student is a specialist in every aspect of social accountability.

According to the educational staff and students, another important question to consider, which is related to personal valence, is the following: What is of more value, (pre)clinical skills and knowledge or social accountability skills and knowledge? There is no consensus amongst the participants on this question. Some educational staff members and students are hesitant towards the change when the integration of social accountability into the medical curriculum means that there will be less time for (pre) clinical knowledge and skills, while others consider it as a good shift of focus in the curriculum and see it as an advantage if the ivory tower model of the university which is primarily knowledge driven will be rejected. *We tend to like to live in our own tower and think that we know more, but actually the communities know a lot more than we do and that means that you need to consult them* (ES16). Another related question which is proposed by the participants and is related to the appropriateness of the change is the following: *Will education on social accountability really equip future professionals to conduct their work better?* (ES5).

**Affective reaction.** In addition to the types of behavior, evaluations and beliefs regarding change reaction, several types of negative and positive affect can be distinguished.

Educational staff members and students experienced different emotions regarding the integration of social accountability into the medical curriculum. Some educational staff members are passionate about the integration of social accountability into the medical curriculum and experienced joy when they talked about this change and when they integrated aspects of social accountability into their education. *I was also a teacher and for me it was a sport to integrate something I read in today's or yesterday's newspaper in each lesson. There is always something you can use and at the same time you make students aware that there is a newspaper, that there is news, and that things happen* (ES3). They perceived linking current issues that arise in, for instance, newspapers to the (pre)clinical skills and knowledge that they teach as an enjoyable challenge. Most students were also passionate about the integration. However, several educational staff members felt insecure, because they don't feel like an expert in this area. *I am not a social accountability expert. This is not the construct in which I consider myself an expert, on which I have received the patent, what I know all about, or what my education is only focused on* (ES1).

Furthermore, some educational staff members were shocked that students perceived so little diversity in the used casuistry and that it contains many stereotypes, and they are willing to improve this. Many participants also mentioned that there is a high level of sensibility when it comes to diversity related topics.
Change Consequences

Work-related consequences. Participants mentioned two major work-related consequences as the potential consequences they expect resulting the integration of social accountability.

Both, students and educational staff, expressed that teachers already have a high workload level and that the integration will even cause a higher workload for them. So as a consequence, they expected more teachers to become overworked, resulting in lower job satisfaction. *Everyone always says that things are important and that we need to add these things. However, nobody ever says that some things are less important and that we can skip these things* (ES18). Furthermore, they perceive a reduction of organizational commitment as a potential consequence, if employees do not accept the change. None of the participants mentioned that they experienced these consequences themselves.

Personal consequences. In addition to the different work-related consequences, several types of personal consequences can be distinguished as consequences of change.

Educational staff and students mentioned withdrawal from the change as possible consequences of the integration of social accountability into the medical curriculum. They stated that there will always be people who maintain rejecting the change and who will not support the change even in a later stage of integration, because they are (pre)clinical oriented educated and believed that a mainly pathophysiological oriented curriculum is the right way of providing medical education rather than a more integral curriculum with learning goals in the domain of social accountability. *The moment you would like to change something, there will always be people who do not want the change and then there will be friction, but it is good that this change takes place* (S28). Becoming overworked resulting from the higher workload as discussed in the previous section will also reduce the wellbeing of the employees. None of the participants mentioned that they experienced these consequences themselves.

Change Antecedents

Pre-change antecedents. When students and educational staff were asked about the factors they anticipated as affecting the integration, several types of pre-change antecedents can be distinguished.

Students and educational staff mentioned that they consider a high socio-economic status, born in the Netherlands, and being highly educated as general characteristics of the educational staff and students at the medical institution. Therefore, they mentioned that educational staff and students often have a specific living environment and see the world from their own perspective. Furthermore, participants mentioned that many teachers are schooled via the old medical curriculum in which the focus was on (pre)clinical knowledge and skills and are therefore (pre)clinically oriented. *That is caused by the way we are educated ourselves by stockpiling knowledge. Very cognitive, whereas education nowadays is much more focused on transformative learning and constructivism* (ES32). Social accountability is therefore often not a self-evident part of the schooling and living environment of educational staff and students.
According to educational staff and students, another affecting factor is the specialism. Participants stated that the degree to which social accountability is important depends on the specialism, because social accountability is more important for specialisms with a lot of patient contact, such as general practitioner and internal medicine, than for specialisms with fewer patient contact, such as surgery and laboratory. However, they also thought that all specialisms need a question-based approach in which the patient is central. The participants proposed a related question which is related to the job characteristics of a physician: What is a good physician? Is a good physician someone who knows all the medical facts or is a good physician someone who is competent in the competences regarding social accountability? Participants thought that the job characteristics of a physician shift from medical expert and treating diseases to health promotion staff and preventing diseases and the job characteristics of a teacher shift from information provider to coach.

In addition, the participants mentioned the culture of the medical institution as a factor that is anticipated as negatively affecting the integration. According to them, a multiple-level hierarchical system exists within the medical field and in the medical school there are many isolated working groups who work separately from each other. At the moment, the integration of social accountability depends on the effort of individuals within the organization. It is like a mill in which you put some rice or corn. I am just a little part of the mill. On my own I cannot do anything, so if we all come together and do it we have a much bigger impact (ES16). Within this system, diversity, for instance ethnic diversity, is experienced as a sensitive topic and the educational staff often experience boundaries. However, participants perceived the culture also as supporting students to learn how to think critically and in which teachers are role models in the domain of social accountability. Furthermore, their institution offers a lot of space to teachers to pilot certain types of education. Nevertheless, within their institution there are not many activist groups advocating for cultural change regarding social accountability.

An additional affecting factor is the accreditation. Participants mentioned that the Dutch Framework Medical Education, the intended learning outcomes students should master after graduation, is a guidance for medical educational institutions. The first priority of their institution is to meet these criteria. When social accountability is included in this framework in a more explicit way and when these learning outcomes are better integrated into the curriculum, this will be a mandate for medical institutions to integrate social accountability into their curriculum.

Furthermore, the perceptions that consist in society are considered as an affecting factor. According to many participants, society has a certain image of a physician which is focused on (pre)clinical knowledge and skills, the treatment of diseases and intramural medicine, instead of preventive medicine, social medicine, and extramural medicine. However, participants noticed a shift in the perception of society regarding the role of physician. Not only the perceptions in society shift, but also the characteristics of patients. Patients are more and more assertive; they search for information about their disease on the internet and they do not take anything the doctor says for granted anymore. To ensure social accountability work, there must be a certain level of trust in medical healthcare. Our job requires a
certain amount of freedom. You need this freedom for research, you need this for education, and we certainly need this for patient care. You can only maintain this freedom if the society trusts you (ES21).

Change antecedents.

Not only the pre-change antecedents affect the integration, the change antecedents also affect the integration and several types of these can be distinguished.

One of the affecting factors mentioned by the participants is the anticipated change outcomes. Examples of anticipated outcomes of the integration of social accountability in the curriculum as expected by educational staff and students are more awareness of the broad diversity of the patient population, increase of students’ empathy skills, and a higher awareness amongst students of social accountability issues such as climate change and inequality. Other anticipated outcomes expected by educational staff and students are more extramural learning experiences, being better prepared for the changing health care field, and being able to understand and take other perspectives. Furthermore, formulating research questions that are considered as important by society and a better coping style with a diverse patient population are anticipated outcomes of the integration of social accountability in the medical curriculum.

Another affecting factor is a shift of schedule. Participants mentioned that the integration means a shift of schedule, because some curriculum elements will be removed or transformed. With the integration of social accountability, the focus will be more on social competences, including person-centered care, preventive medicine, and extramural care. The voices of the public and patients will be included and research will be conducted on topics that are considered as important by society.

Furthermore, participants mentioned resources as an affecting factor. Participants mentioned finance to set up and sustain projects, time that needs to be invested by educational staff to get knowledge and expertise regarding social accountability and to develop and teach social accountability education, support from medical educators and administration services, and curriculum time as requisites for the integration.

Another affecting factor is leadership. Participants stated that the integration should be driven by leaders of the management board who have a high level of communicative capacity, can express their ideas clearly and who underline the importance of the different aspects of social accountability. If you would like to teach people to build a boat, you should make them love the sea and do not tell them how to build the boat (ES11). This means that if leaders want educational staff to integrate social accountability, they have to show them the value of social accountability. These leaders should give mandate to the integration and they should keep track of the integration. According to the participants, a clear vision on social accountability including tangible points of focus, which is supported and communicated, should be formulated. What is the initial competence and what do students need to learn to achieve this competence and why would we like to teach them this competence? It’s about the why (ES8). The leaders should initiate the creation of a working group with innovators who advocate this change and the monitoring and evaluation of the integration.
In addition, participants mentioned reciprocity as a facilitating factor. Participants stated that the integration of social accountability should be a reciprocal relationship between the educational institution and the society, which means that students contribute to society and the society teaches students skills and knowledge. Participants, both students and educational staff, also considered the involvement of public and patients, societal organizations, and experts in certain aspects of social accountability of high value to contribute to the existing knowledge and skills within the organization. *Come to us, explain issues to us and start the conversation. I think that does people more justice than showing the same video for ten years, because the video can give us a dangerously distorted picture* (S33).

Furthermore, participants mentioned the implementation strategy as a facilitating factor. Both, students and educational staff, considered it a good strategy to start with the educational staff members and students who have affinity with social accountability and then gradually expand the target population. However, the participants stated that the integration should not be the effort of only certain individuals within the organization but should be a shared effort of the whole organization. Participants mentioned that it would be good to bundle their forces, instead of working separately. Another strategy mentioned by the participants and considered as effective is bottom-up implementation, which means that stakeholders should be involved in all phases of integration. In addition, participants thought that social accountability should be included in the learning goals and the assessment criteria, because this underlines the importance of social accountability, gives mandate to the integration of social accountability, and supports the students’ learning process. *You should look for a way to make it structural and this means that you should include it in the learning goals* (ES18).

The participants also mentioned several needs that need be met in order to facilitate the integration. Participants would like to receive an overview of the curriculum elements in which social accountability is implicitly integrated and the relationship between specific curriculum elements and social accountability. They also considered it important to get insight into the diversity of the student and employee population by seeing the factual numbers, because they think analysis is the beginning of improvement. Many participants perceived that teachers are often willing to integrate social accountability, but that they need training and active help with the integration, because they lack the expertise. The central question mentioned by the participants is as follows: What do we want students to know and be able to do regarding social accountability and which skills do teachers need to teach students these knowledge and skills?

**Discussion**

Educational staff and students reacted in different ways to the integration of social accountability in the medical curriculum and this difference can be explained by career stage, the degree to which they perceive autonomy, whether they have a problem-focused or a solution-focused approach, and the degree to which they are involved in the whole process of change. Previous literature also found that the career stage, the level of on-the-job autonomy, and participation in the change are important factors affecting change (Hargreaves, 2005; Hornung, 2007; Bartunek, 2007). Educational staff and students showed a mix
of passive and active behaviors to this change (Bovey & Hede, 2001). Most participants of our study were in favour of the change, but they proposed essential questions to consider such as in which stage of the educational career the integration should take place, whether (pre)clinical or social accountability skills and knowledge are of more importance and whether social accountability really equips future professionals to better conduct their work. These questions relate to the appropriateness of the change, the content of the change, and the personal valence and affect the readiness for change (Holt, 2007). On the one hand, educational staff and students were passionate about the integration, but on the other hand educational staff felt insecure sometimes because they did not consider themselves an expert in this area and they experienced a high level of sensibility towards diversity related topics. This low level of change-specific efficacy can also affect the readiness for change (Holt, 2007).

Participants perceived many positive consequences resulting from the change, for instance, being passionate about the integration and experiencing joy relating (pre)clinical skills and knowledge to social accountability. However, participants also mentioned potential negative consequences, such as a higher workload level and withdrawal from the change and even from the organization.

Participants mentioned several types of pre-change and change antecedents that affect the integration: characteristics of educational staff and students, specialism, culture of the medical institution, accreditation, perceptions in society regarding healthcare, anticipated change outcomes, shift of schedule, resources, leadership, reciprocity between society and medical institution, implementation strategy, needs of educational staff and students.

The context is characterized by employees and students of which most of them have a high socio-economic status, are highly educated, and are born in the Netherlands. These individual attributes of the people involved in the change can affect readiness for change (Holt, 2007). Within the medical field a multiple-level hierarchical system exists and the Framework Medical Education is a guidance for medical institutions. Participants perceived the culture of the institution as supporting critical thinking and teachers as role models. The perception of society regarding the role of a physician and the COVID-19 pandemic are factors outside of the organization that affected the integration. The integration means a shift of schedule, the focus will be more on social competences, more on extramural care instead of intramural care, including voices of public and patients, and conducting research on topics that are considered as important by society. Fedor (2006) has shown that the perceived extent of change and the impact on the individual's job affects the way people react to change. Participants state that social accountability is the most important for specialisms with a lot of patient contact, but the patient-centered approach and the shift from medical expert and treating diseases to health promotion staff and preventing diseases is essential for each specialism. Important resources and needs of educational staff and students mentioned by the participants are finances and time, a common vision, principal support, creating a group of champions, bottom-up implementation, an overview of the curriculum elements and the relation to social accountability, and teacher training and support. The importance of top-down support and a common vision for effective change is shown by Warwick (2016) Warwick (2016) and
Bens et al. (2020). Yilmaz and Baydas (2017) have shown that limited resources and a lack of knowledge and skills can lead to resistance to change.

**Strengths Of The Study**

This study is supported by several strengths. The research team consists of a board member, an educational scientist, a policy advisor, a principal educator, and a care provider (neurosurgeon). This interdisciplinary team brings various perspectives together and interprets the qualitative data in a multiperspective way. Another advantage is that this study has great theoretical and practical relevance because there has not yet been conducted research on the integration of social accountability in a medical curriculum in a European context. Another strength of this study is the systematical approach of analysis, because social accountability is a multi-factorial construct. This analysis enables an in-depth investigation of the organizational change process as perceived by educational staff and students, enables a holistic approach of social accountability, and enables the focus on individuals and systems.

**Limitations Of The Study**

This study also has several limitations which should be mentioned. The framework as developed by Oreg et al. (2011) is not only based on the context of higher education, but also includes primary and secondary education. However, in this study with a context of higher education the same change aspects seemed to be relevant. Furthermore, it is not only based on health sciences education, but includes all kinds of domains. This could impact the validity of the framework as used in this study. Furthermore, we asked the educational staff and students about their reaction, the expected change consequences, and the antecedents without using these specific terms. We have decided to ask this more implicitly because of the abstractness of these terms. This could have affected the answers of the participants. Another limitation of this study is that the results are based on interviews with educational staff and students aligned to one medical educational institution.

**Recommendations For Future Research**

The current study has given more insight into the reaction of educational staff and students to the integration of social accountability into the medical curriculum, the perceived consequences, and the antecedents that affect this reaction and the perceived consequences. Future research can dive deeper into the current and the ideal integration of social accountability in the medical curriculum. Furthermore, a future study can investigate which aspects of social accountability are considered as more or less important than other aspects of social accountability. In addition, our approach of analysis could also be used to investigate the integration of other subjects in the medical curriculum.

**Conclusions**
We can conclude that the explicit reaction of educational staff and students to the integration of social accountability in the medical curriculum and their perceived consequences resulting from this change can be positively stimulated by taking account of the involved antecedents during the organizational change process. The findings showed several practical tips for the organizational change process during the integration of social accountability in the medical curriculum. To effectively integrate social accountability into the medical curriculum, it is of utmost importance to use all of these practical tips in the integration process. First of all, it is important to involve educational staff members and students in the whole change process of the integration, from the initiation to the evaluation. Secondly, a clear vision on social accountability should be formulated, e.g. What do you as a medical educational institution mean by social accountability? Which competencies must a student master after graduation? Thirdly, a group of champions should be created consisting of representatives from the different stakeholder groups, such as students and educational staff. In addition, it is important to provide enough support, such as teacher training, curriculum time, teacher time, administration support, and finances. Furthermore, educational staff members should take the lead in integrating several aspects of social accountability into their own course. Lastly, course material should be related to social accountability. We believe that, in contrast to previous recommendations by Fung and Ying (2022) which focused on how to integrate the topic social accountability in the medical curriculum, integration of social accountability can only be achieved by focusing on organizational change process during the integration.

This study can be used as a guidance for educational designers, management boards, and teachers to effectively integrate social accountability into the medical curriculum. By integrating social accountability into the medical curriculum the critical consciousness of students will be enhanced, students will be better equipped with the knowledge and skills they need to work towards a more socially accountable healthcare system, better respond to the changes in healthcare, and be a future socially accountable healthcare professional.

**Abbreviations**

ES: Educational Staff

S: Students

**Declarations**

**Ethics approval and consent to participate**

The Ethics Committee of the Dutch Society for Medical Education (NVMO) gave us ethical approval for this study (case number 2020.8.6). All methods were carried out in accordance with relevant guidelines and regulations. Informed consent was obtained from all subjects. Pseudonymisation of the data ensured the guarantee of privacy.

**Consent for publication**
Availability of data and materials

Authors can confirm that all relevant data are included in the article and/or its additional files.

Competing interests

The authors declare that they do not have competing interests.

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Authors’ contributions

All authors defined the research theme and designed the study. JO and JS were responsible for the acquisition data and the analysis of data. All authors drafted the manuscript, helped to revise the manuscript critically, and approved the final manuscript.

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Figures

Figure 1

Antecedents, explicit reactions, and change consequences of organizational change