

Clinical experiments for Huntington's disease Recommendations to medical researchers regarding how to inform potential participants

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Huntington's disease (HD) is a severe, genetic brain disorder that causes great suffering and leads to an early death. The medical research team in the project *Treatments of the Future* at Lund University aims to develop a new molecular gene therapeutic method that will give the possibility to cure the disease. The authors', social- and cultural scientists, mission is to develop recommendations for how information should be designed to potential research subjects in an experimental gene therapy study regarding HD. More specifically, to find and recommend a model that makes it possible for individuals who are affected by HD to decide if they want to participate as research subjects in the clinical trials within *Treatments of the Future*.

Keywords: Huntington's disease, participation, clinical experiments, recommendations

Kliniska experiment för Huntingtons sjukdom. Rekommendationer till medicinska forskare angående information till potentiella deltagare: Huntingtons sjukdom är en allvarlig genetisk störning i hjärnan som orsakar stort lidande och leder till en förtidig död. Det medicinska teamet i *Treatments of the Future* vid Lunds universitet vill utveckla en ny genterapeutisk metod som ska ge möjlighet att bota sjukdomen. Det kultur- och samhällsvetenskaplig teamets uppdrag utvecklar rekommendationer för hur information ska utformas åt potentiella forskningspersoner i en klinisk studie avseende Huntingtons sjukdom. Närmare bestämt är uppdraget att hitta och rekommendera en modell som gör det möjligt för personer som berörs av Huntingtons sjukdom att avgöra om de vill delta som forskningspersoner eller inte.

Nyckelord: Huntingtons sjukdom, deltagande, kliniska experiment, rekommendationer

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1. Introduction

Huntington's disease is a severe, genetic brain disorder that causes great suffering, and leads to an early death. Huntington's disease is caused by a mutation in the gene that codes for the Huntingtin protein, which means that in theory, the disease can be cured through repairing the mutated gene. The medical research team in Treatments of the Future aims to develop a new molecular gene therapeutic method that will give the possibility to cure the disease. The method will first be tested in human cells and then in a mouse model. Thereafter, the method is ready for clinical trials with humans. Professor Deniz Kirik (coordinator) and Associate Professor Åsa Petersen at the Department of Experimental Medical Science, Skåne University Hospital/Lund University are responsible for the medical study in Treatments of the Future. Professor Susanne Lundin at the Department of Arts and Cultural Sciences at Lund University leads the cultural and social group of the project: the Cultural and Social Science Research Team (CSSRT). CSSRT's scientific mission within the Treatments of the Future project is to develop recommendations for how information should be designed to potential research subjects in an experimental gene therapy study regarding Huntington's disease. More specifically, the scientific mission of CSSRT is to find and recommend a model that makes it possible for individuals who are affected by Huntington's disease to decide if they want to participate as research subjects in the clinical trials within Treatments of the Future. If the information given to potential participants in the clinical trials leads to a decision to participate, an informed consent is to be signed by the individuals.

To accomplish the scientific mission, the CSSRT conducted a focus group study as well as sent questionnaires to individuals who were affected by Huntington's disease (study approved by EPN Ethics: H15 2013/794). With affected individuals, we mean people who in various ways are affected by Huntington's disease, such as patients, gene-carriers of the mutation, or relatives. In addition we performed, in a comparative approach, two studies with individuals that were not affected by Huntington's disease. These two comparative studies were made as a student project within the master's program Master in Applied Cultural Analysis (MACA), Department of Arts and Cultural Sciences at Lund University (Petersen 2013, 2014). The purpose of the focus group study and the two comparative studies was to investigate how people with different experiences - affected or unaffected – deliberated on participation as research subjects in experimental medical research, such as those gene therapeutic studies that are to be performed within Treatments of the Future yet have not been tested on humans. One way to fulfil the assignment has been to not only address the issue of participation in experimental medical research, but also to address such issues as patient influence. The CSSRT's recommendations for how affected individuals are to be informed about participation in the clinical trials constitute important

knowledge for the medical researchers within Treatments of the Future, and will give them tools to proceed with their clinical trials.

The recommendations are:

- That individuals who participate as research subjects are to be considered in terms of a particular vulnerable group, and should receive specifically considered protection in line with article 19 in the WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects.
- To emphasize the requirement of informing potential research subjects in experimental medical research on fatal neurodegenerative diseases through oral information and dialogue processes.
- Oral information is given in such a manner that potential research subjects are given both time and opportunity to engage in a dialogue with the principal investigators of the project in question. The procedure can be carried out partly in accordance with the method used when the individuals being investigated as volunteers of living donors.

1.1 Methods and materials

Study I) Focus group and questionnaires by letter, affected individuals (Treatments of the Future)

Study II) Online focus group, non-affected individuals (MACA, student work)

Study III) Quantitative online survey, the public (MACA, student work)

All studies were conducted in Swedish. Questions and answers were then translated into English.

2. Study I) Focus groups and questionnaires sent by letter

In order to investigate the viewpoints of individuals affected by Huntington's disease (patients, carriers of the mutated gene or relatives) on the issues of influence and participation in medical research, we performed focus groups.

Central themes that were explored in the focus groups were participants' views regarding taking part in a medical study that previously had not been tested on humans. We wanted to know the views of the affected individuals upon the prospect of participating in an experimental medical study on gene therapy that involved patients who were affected by Huntington's disease, as well as why they could consider to participate in such an experimental study. We also wanted to know their viewpoints upon having an influence when participating in such an experimental study.

2.1 Aims of the study

1. We wanted to know the views of the affected individuals upon participating or not participating in an experimental gene therapeutic study that involved patients with Huntington's disease (1a). We also wanted to know their reasons for participation in such a study (1b).
2. We wanted to know their viewpoints in relation to having an influence when participating in a medical study (2a) and ways to influence (2b).

2.2 Participants

Participants of the focus groups were recruited through the national association for Huntington's disease and the neurological clinic at Lund University Hospital. Letters about the study as well as an invitation to participate in the focus groups were sent to affected individuals through these two channels. Those who wanted to participate in the focus groups contacted the CSSRT in order to give a notice of interest. We conducted two focus groups with a total of nine participants. The focus groups were conducted in Gothenburg and Lund and since several participants who lived far from these two cities wanted to participate, some of these people received the questions from the focus groups by mail and in total seven people responded by mail. A total of 16 (9 women and 7 men) participants took part in the study. Their mean age was 51.8 (SD = 12.2). The youngest participant was 30 and the oldest was 69 years old.

The participants who took part in the focus group interviews were affected by Huntington's disease in this way:

- Two participants were diagnosed with the disease.
- One participant was tested positive for the mutated gene.
- One participant was at risk for carrying the mutated gene.
- Four participants were relatives.

One participant did not declare in what way s/he was affected.

The participants who responded by questionnaires were affected by Huntington's disease in this way:

One participant was diagnosed with the disease.

Two participants were tested positive for mutated gene.

One participant was at risk for the disease.

Two participants were relatives.

One participant did not declare how he/she was affected.

2.3 Analytical method

The focus groups interviews were transcribed verbatim and uploaded, together with the answers from the questionnaires, in the qualitative analysis program Nvivo. The material from the focus groups and questionnaires were analysed separately by two of CSSRT's researchers. After this stage, they compared their individual analyses and arranged the material in the form of central themes by means of Nvivo.

2.4 Results

2.4.1 The views of participating or not in medical research about Huntington's disease (aim 1a)

The focus groups and the answers on the questionnaires showed that participants affected by Huntington expressed a great will for taking part in an experimental medical study such as the gene therapeutic study planned in Treatments of the Future. One person who had Huntington answered the question like this:

More invitations, I want to participate (questionnaire)

The answer above illustrates an inclination towards participation in scientific studies on Huntington's disease, and the request for "more invitations" also illustrates this urge to participate. Due to the nature of the disease, as well as the lack of effective medical treatments that halts the progression of the disease, there was also an element of precariousness and sometimes also desperation among the affected individuals that particularly became striking in the discussion on purchase of stem cell treatments. Although treatments with stem cells were not scientifically proven and therefore not available in Sweden, all focus groups participants except one expressed that if they had the money and the opportunity showed up, they would travel abroad and buy stem cell treatments in order to be treated or cured from Huntington. One participant, however, was strongly against this idea as s/he found it unfair to be forced to pay in order to get treated. The rest

of the focus groups participants agreed on this, but still argued that if they had the money, they probably would still go. Purchase of stem cell treatments was one of the topics in the focus groups that engaged the participants the most. The discussion on this became emotional and harsh as it triggered a clash between the idea of equal rights to treatment that the national health care system in Sweden rests on, and the vulnerable and precarious situation of Huntington affected for possibilities for treatment. As researchers we also were confronted with this precariousness, but also with a willingness to remedy a difficult medical situation when one focus group participant asked us if s/he in private could come in contact with medical researchers in order to participate in medical research. In the focus groups we therefore clearly witnessed that Huntington affected were looking for possibilities to participate.

It was particularly among those who had been diagnosed with Huntington and those who were at genetic risk that the urge to participate was most striking. For relatives the issue of participation was a more complicated matter:

Now, it's not me who is sick, I'm a relative but in relation to this, I think that it's really a risk when you'll do this [a gene therapeutic intervention like those that are planned as part of the experimental research in Treatments of the Future] at a stage when the person still can live an active and, so to speak, a dignified life. But if the disease has gone to those stages when the individuals are really sick, then I'll feel that it's less risk, then you'll more inclined to take chances. But now it is not I who has the disease (focus group).

Although the relatives were also convinced of the importance of participating, they expressed also some uncertainties that concerned primarily the appropriate time for participation. They considered factors regarding how far the disease had progressed and were more likely than those who knew they had the disease, and those who were at genetic risk, to postpone the date of participation in a clinical experiment.

2.4.2 Reasons for participation (aim 1b): Participation as the “only chance”

There was no single reason for why those who were affected by the disease wanted to participate in medical research on the disease. One focus group participant explained though, that his/her decision for participating in medical research was related to the lack of treatments against Huntington:

Had it been some other disease, where you could say that there is some medication that could alleviate then it would have been different, but

with this disease, there's nothing and therefore you take the chances there are (focus group).

Due to the lack of treatments, the affected individuals found it difficult to mention any specific pros and cons for participation. Rather they were in a precarious situation with no other real possibilities for improving their situation than to participate in research projects on the disease, which therefore became a rather natural thing to be engaged in. Some of the participants in the focus group also mentioned that Huntington's disease was the worst disease that you could be affected by, as the progression of the disease meant a degeneration of the physical and mental abilities of the affected individual. The extensive will to participate in medical research was therefore clearly related to a hope for treatments and cure of the disease. One participant in the focus group explained that the decision of participation to him/her was a choice between life and death, and therefore a rather simple decision to make.

2.4.3 Reasons for participation (aim 1b): Participation gives a sense of hope for finding a cure

The affected individuals expressed that they were not offered many options to change their life situation, thus participation in medical research emerged as a way to improve their chances for a slightly better life. Their situation can therefore be characterized in terms of powerlessness and hopelessness where they, in order to cope, search for possibilities. In relation to this situation, medical research on Huntington and research news had striking influence on the participants in the focus group:

I can feel some sort of safety...that something is happening, you get that information...you see that there's coming a new line of approaches, so to speak, that actually speaks in favor for that something is happening./.../Then, sure...that's just words, it's text...it's not something tangible./.../But even though, but, I can feel like./.../I can be glad because then I know...Somebody thinks about us...Look there, now something has happened, and look there /.../ all of a sudden the world becomes much bigger./.../and...you, know that gives me hope (focus group)

Apart from giving hope, news about research also creates a sense "that something is going on", and therefore gives those who are affected by the disease a feeling of ongoing activity that counteracts their experience of passivity. This was particularly evident in one case, when a participant diagnosed with Huntington explained how s/he for a long time had heard that a treatment was within reach of medical science. Despite the current situation of no available cure or treatment

that halts the progression of the disease, this person still held hope for a cure, and explained that research kept her/him alive. This individual did not refer to any specific treatment or any particular line of research on Huntington's disease, but rather to a general idea of hope that was generated by information and news about research on the disease. Moreover, this participant was convinced that Huntington, because of scientific progress, eventually would be possible to be cured and even eradicated in the same way as for example polio has been eradicated in many parts of the developed world by the way of effective vaccines. The high belief in research was connected to a view that contemporary research was of a higher standard than earlier research, since the use of advanced technology within contemporary research brought increased scientific possibilities:

So, it's a good thing if there's something coming out now because it's a better situation researchwise...with computers, scanning, and so on...than how it used to be earlier (focus group)

Technological development thus gives the affected individuals hope in medical research, which they also have high belief in. Medical research therefore has a positive influence and helps the affected individuals to cope with their difficult and precarious situation. This positive influence upon the well-being of the affected individuals constitutes a strong motivation for their extensive will to participate in medical research.

2.4.4 Reasons for participation (aim 1b): Participation as a way to act against frustration and gain empowerment

However, even if medical research and news of research progress are of great importance, there also contains an element of frustration because of the slow pace that is an intrinsic feature of scientific research. Some of the participants in the focus groups mentioned that during 30-40 years of research on the disease nothing had actually happened that radically changed the situation for those who were affected by the disease. News of research was therefore insufficient for some individuals, who longed for a treatment that would enable them to act upon their situation:

I think that's a bit hard, because it's on two levels. On one hand, you can see that something happens; you can see that Karolinska is doing something, and so on. But, on the other hand...[sighs]...if I should be more practical, I would like to see ...SOMETHING... that I could do something with, I would like to see possibilities that enables me to act...And, and...that's good, that they're making progress up at Karolinska, and in Lund, and that the Swedish state, and whatever stuff

that might come out, but I'm interested of those cases where there can be an early form of medication, where there's something that I can do...an early form of medication, that you can try (focus group).¹

The steady stream of both news and information about research that did not lead to any concrete results in the form of an effective treatment gave rise to a feeling of both resignation and frustration among the participants in the focus group. An ambivalent opinion about research could thus be discerned, where the affected individuals on the one hand sensed that a lot of research on Huntington's disease was being conducted all around the world, while they on the other hand felt that nothing actually had happened. This aspect of passivity was also a reason why the prospect of participation as research subjects was seen as an activity where the individual actually could take part in something concrete in terms of finding a cure. A similar explanation came forward in the questionnaire sent out by mail:

I'll rather do something than just sit down waiting for something to happen (questionnaire).

Thus in both the questionnaires as well as in focus groups, the idea of participation comes forward as something that counteracts experiences of passivity among the affected individuals. Participation in medical research on Huntington's disease can therefore also be seen as a form of an empowerment on behalf of the affected individuals, who felt that participation constituted a possibility for them to act and do something about their situation.

2.4.5 Reasons for participation (aim 1b): Participation as a way to “take a chance”

When it comes to the uncertainty of participating in a complex medical study such as the gene therapeutic intervention planned in Treatments of the Future, the affected individuals were aware that it was impossible to predict the effectiveness and potential side-effects that might result from taking part in the study as research subjects. Although affected individuals were aware of uncertainties and that this kind of gene therapeutic intervention had not been tested on humans before, they nevertheless did not view participation in terms of risk:

P1: There's risk whatever

P2: There's more risk in not participating

P3: Yes!

¹ Karolinska Institutet is one of the world's leading medical universities and research institutions. <http://ki.se/en/startpage>

P1: It's not like that you're going from something that doesn't entail risks to something that are filled with risks...It's not...you're always in some sort of zone that contains risks. (focus group)

As these individuals' lives were already filled with various notions of risk, for example being at risk for inheriting the mutated gene that caused the disease, participation in medical research was not seen as something that entailed a vast amount of risk. One participant explained that it would be different if experimental research were conducted on individuals who were not ill or had a disease for which there existed effective medication. If this were the case, it would be wise to discuss risks. But since Huntington patients are seriously ill and there is no effective medication that halts the progression of the disease, experimental research on such persons is different in terms of risks. It also was evident that some of the affected individuals viewed Swedish legislation about when experimental treatments are to be made available in the clinical setting as not appropriate for such cases as Huntington's disease, and requests were made among some of those who participated in the focus group on a more flexible legislation with regards to when treatments were made available for patients:

So, it's somewhat a problem that the regulation is written in such a way with regards to this case if you...does not take the treatment, you'll continue to be as you were before [laughs somewhat ironic and despairingly], and that's not the case here...(focus group)

It is clear that the affected individuals themselves did not consider participation in medical research on the disease as containing particular risks. On the contrary, they pointed out that if the project in question turned out to be a success in terms of producing an effective treatment, non-participation might entail a certain risk because you might not benefit from what the medical research yielded unless you participated. There was also one participant, who argued that even if the project in question did not yield novel treatments, participation as a research subject would enable you to gather useful information that you otherwise would be without. A pragmatic attitude towards uncertainties that in many cases are intrinsic features in experimental medical research was thus evident among the affected individuals. This pragmatic attitude also was evident in statements made of contemporary research as more secure than earlier:

You'll have to be more certain nowadays than earlier...just in relation to research.../.../ that's how I think /.../ You'll have to be /.../ It has to be more secure these days to participate in this research group (focus group).

When making statements about contemporary research as being safer than previous research, the affected individuals mentioned the development of more advanced and “better” technology, as well as ethical legislation that impeded researchers from conducting research that contained risks for the research subjects. The participants in the focus group expressed a high degree of trust in experimental medical research. Instead of using the word risk in relation to uncertainties, these individuals talked about chances and taking chances, which captured how the prospect of participation in experimental medical research was viewed in terms of a chance for treatment and possible cure. This view of participation as taking chances can also be related to the precarious situation discussed above. The affected individuals argued that they had nothing to lose as a participant in medical research on the disease.

2.4.6 Reasons for participation (aim 1b): Participation as a way to help others (researchers, present and next generations of the affected)

Although the affected individuals in general expressed both trust and faith in medical research, they were very much aware that researchers were not able to develop novel treatments for Huntington’s disease on their own. At certain stages of their research, they will depend upon human research subjects that are willing to participate in clinical trials of novel treatments. Frequently, the affected individuals who took part in the focus groups spoke of themselves as being united with medical researchers in the battle against Huntington’s disease. They also talked about themselves as important actors in the research, and that they should help the researchers. Although these affected individuals are in a precarious and very powerless situation, they also seem to experience empowerment and capability in relation to the aspect that they fulfill an important role in the research on the disease. The importance of taking part in pushing medical research on the disease forward did also entail a more collective understanding that was directed towards other affected individuals, as well as in relation to patients affected in the future. A spouse explained why he/she, despite of the uncertainties that came with participation as a research subject, still wanted to take part:

Partly of selfish reasons, I want do to everything I can to help my spouse, partly because I want to do something for all of those that are affected. Today, and in the future (questionnaire)

Another affected participant also discussed participation in terms of something that would help future generations.

We do this for our children and grandchildren. – We do it for the Future!
(focus group)

To participate in medical research is a way for affected individuals to enhance the individual capability to cope with the devastating effects of the disease, but also to take responsibility to stop the disease from affecting further generations. This also seems to be a reason why the affected individuals more or less felt obliged to participate in medical research. The idea of a possibility as well as a responsibility to act in relation to the disease was evident when the affected individuals in the focus groups talked about participation as a way to put an end to the disease.

2.4.7 Viewpoints in relation to having influence in a medical study (aim 2a): Influence as acknowledgement of individual capability of choice-making

For those individuals who took part in the focus groups, it was obvious that they, if they would be given opportunities to participate in a medical study as research subjects, should be entitled to have influence. Yet, it was difficult for them to specify what this influence would involve, but medical decisions were not an aspect they wanted to interfere with:

We can help with certain aspects, for example what we think about going in and turning off something, or changing a gene etc...but on a deeper level, I feel that it sort of is NOT my area/.../In some way...or my expertise...you know, I feel that they have a different kind of [expertise]/.../That you have to trust (focus group)

The affected individuals did not consider themselves to have the kind of expertise that would legitimate them to interfere with medical issues. However, since they have experience of living with Huntington, they nevertheless felt they had a different kind of knowledge and capability than the medical researchers. In line with this emphasis of their lived experience of the disease, they also argued that they knew the disease, which made them capable to make well-considered choices in relation to participation. Although the symptoms of Huntington's disease vary between individuals who therefore - before they get the disease - cannot know exactly in what way they will be affected; they still know that Huntington is a very difficult and devastating disease. All affected individuals had seen and experienced the devastating progression of the disease process in other individuals, which was one underlying reason of why they saw themselves as being capable of making well-considered choices in relation to participation.

And I think that almost all individuals, you know...that these is rather well-considered choices [about participation in research], because they have seen, they have lived with this with relatives, and have seen...the whole phase, this progressive degradation...that's how it is ...so it's like just said, it's our children /.../ they have seen their grandfather, you

know...*I don't want to experience something like that...no way! I don't want live* (like that, through that progressive degradation that comes with Huntington's disease] (focus group)

Although the affected individuals were in a precarious situation, they still argued that they, on the basis of their lived experience with Huntington's disease, were fully capable of making well-considered choices. An acknowledgement of affected individuals' capability to make decisions is therefore important, so they actually can experience that their choice of participation is solely theirs. Self-determination in a medical experiment, consequently seems to be what influence for the affected individuals is all about.

2.4.8 Viewpoints in relation to ways to influence in medical studies (aim 2b): Dialogue – a strategy to gather information for a “correct choice”

During the focus groups, the affected individuals also spoke of the importance to make a correct choice. This choice clearly is not about choosing to participate in a project that leads to treatment, but is rather about a step that has been taken on what is perceived as a thought-out and well-informed decision. In order to make a correct choice, the affected individuals made clear the importance of information. Although they expressed positive views when asked if they would consider participating as research subjects in the clinical trials of Treatments of the Future, they nevertheless felt that more information about the project could result in a change of mind. In general, it became quite clear that a written document was not seen as adequate for the purpose of receiving information about medical research. Some focus group participants considered written information, that are part of the process of signing an informed consent and which must precede all clinical trials, as something that complicated the understanding of what the project involved. Therefore they did not view the signing of a document as particularly important, but rather something they wanted to get over with quickly. Some participants viewed the document as a formal and meaningless routine. This aspect of the informed consent as a mere formality was expressed in one of the answers in the questionnaire, which also contained an idea of a different informed consent:

Formal procedure, yes. But not anything that has any bigger implication for me. But I do think that it could attain a greater importance if the consent mediated a more positive experience about the participation (questionnaire).

This individual did not specify the nature of such a positive experience or how it could be practiced or realized. Yet, in the focus groups ideas were expressed, as well as requests, of a close and open dialogue between potential research subjects,

medical doctors and scientists. The aim with the dialogues should be to give information adapted to individual requirements and make it possible for potential participants to pose questions. These focus group participants also felt that it would be possible for them, through dialogues, to express their views and opinions and thus achieve an influence. The dialogue was described as a reciprocal communication through which the affected individuals wished to establish an open and trusting relationship with the researchers. Another purpose with such a dialogue was to make them comfortable enough to, at any time during their participation, change their mind and leave the project.

P1: It's what were said before, what I think is very important...it's... on a individual basis, of course /.../ maybe there are people who doesn't want...you, know I want that security, more clinical trials, and that maybe, that they [medical researchers] show their cards...this is how much we have done, and this are the results that we have, so that I can take an individual decision, you know.

P2: I feel that's intrinsic to the trust [for the scientists]

P1: Absolutely, absolutely

P2: As said before, you really must hope that they really...as said, show their cards, so that everyone can say.... I mean that's the case with everything, that some dare to take the step, and some doesn't... (focus group)

Participants felt that the overall objective of a dialogue would be to provide opportunities for them to make informed decisions about participation as a research subject. In what form this kind of dialogue could take was also discussed in the focus groups, where most participants wanted a mix of group-discussions as well as individual-based conversations. One participant in the focus group interviews argued that the main rationale for attending such group discussions was the prospect of an extended contact with the researchers. For this participant knowledge and discussion about what was going to happen in the medical project was important. Other participants in the focus groups pointed to the need to reflect on and to discuss participation in experimental trials with other affected individuals.

During the focus groups it became clear that individuals who are affected by Huntington's disease felt both alone and different than individuals who were not affected by the disease, which caused difficulties for them to discuss their situation and their experiences with others who were not affected. Therefore some participants requested a group discussion with other affected individuals on issues related to Huntington as well as issues related to decision of participation:

It will be enabling...of course...it's very useful, to have a discussion, like we have right now, in this group, before you participate. Because then you have gained additional experience and knowledge, I think. What do others think or do I have an different opinion... (focus group)

According to the quotation above, a group discussion could help the individual to relate to others and their experiences. Therefore group discussions can be served as psychological ventilation where people in the same situation can inspire and support each other. However, it can also attain a function in relation to participation in medical research, where the viewpoints of other individuals might make you more aware of your own standpoints, and thus help you in making a decision. As already emphasized, a dialogue with doctors and medical researchers was considered important and even necessary in order for the affected individuals to decide about participation and also to experience the experiments that took place as a joint project, a project between themselves and the medical researchers. However, the request for a dialogue was also mentioned in relation to problems in the national healthcare system. Here, the participants stressed that they were confronted with medical professionals with limited experience of the rare disease because of its relative rarity. The participants felt this was a great problem. According to some participants, they often knew more about the disease than their treating physicians and therefore easily ended up being the experts themselves. Therefore a dialogue with medical Huntington experts was expressed as important for affected individuals. In summary, it is clear that the idea of participating in a medical study was appealing to them not only because it could lead to a cure but also because it might lead to a contact with actual experts on the disease.

3. Study II) Online Facebook focus group with non-affected individuals

Within the framework of the *Master in Applied Cultural Analysis* an online Facebook focus group was conducted with participants that were not affected by Huntington's disease (Petersen 2013; 2014). The aim was to explore the views of non-affected individuals concerning patient influence and participation in experimental medical research, such as the gene therapy that is planned within Treatments of the Future. Another aim was to explore the views of non-affected individuals concerning what kind of information that should be presented to individuals with Huntington's disease in order to provide possibilities for them to decide whether to participate or not, and whether to sign an informed consent document or not.

3.1 Measures and participants

A "closed group" from the network of the administrator (the master student) was constructed on Facebook so that only persons who were members of the group were able to view the content and make comments. After an invitation to participate in the online focus group, the administrator of the group added the names of participants who had accepted to participate. After the research questions were presented on the group's "wall", which was the open web-forum of the group, the participants responded, read the responses of the other participants, as well as commented on the responses of the other participants. The focus group discussion lasted for five weeks and a new main issue was presented on "the group wall" every week.

A total of 11 (7 women and 4 men) participants took part in the study. They were all accustomed Facebook users and their mean age was 34.9 (SD = 5.5). The youngest participant was 25 and the oldest 46 years old.

3.2 Analytical method

The material from the online focus group was uploaded in the qualitative analysis programme Nvivo.

3.3 Results

3.3.1 Participation and influence

When the participants discussed what participation in gene therapy would mean for patients with Huntington's disease, they stressed the risks. Especially they discussed that individuals with life-threatening diseases were in a very vulnerable situation, which could make them prone to accept participating in a study that they would not accept if they were not in such a vulnerable situation. They also considered that the patient could not be competent to make decisions about participation. Instead they emphasized the responsibility of the physician. One

person expressed that the doctor should assess whether the patient sufficiently understood what the project required and, based on that, decide whether the patient would be recommended to participate or not. It was clearly expressed in the discussions between the participants that it was primarily the physicians who should make decisions about a patient's potential participation.

The views of the risks associated with clinical experiments and untested treatments changed when the participants were asked to imagine themselves in a disease scenario. They were asked if they would accept to buy clinically unproven treatments such as stem cell therapies if they had a life threatening disease. Most of the participants disliked the idea of buying and paying for treatments, but did however state that they would likely do so if they had a life-threatening disorder for which there was no cure. One participant expressed it like this:

If in a tight spot (of being affected) I would clutch at the last straw. I would be rational and take what would be available. I would have said no, if you asked me right now... but well...in the situation of being affected it would have been quite likely that I had done anything (in the world) that might work. After all, what stem cells are and their impact has been stated. In the best case it (Stem cell therapy) helps, or perhaps not at all, and if there will be side effects, it perhaps is so late (refers to that if s/he is going to die) that it does not matter..

In the quote above, it is clear that when this non-affected individual reflected upon being affected by a life-threatening disease, the previous viewpoint about risks and uncertainties underwent a renegotiation and a more pragmatic position was taken and favoured.

3.3.2 Participation and information

When discussing the information given prior to decision about participation in an experimental gene therapeutic study, the participants underlined the importance of being informed. They expressed that a document with written information and a document that the participants signed were not enough. Instead, a more proactive approach to an informed consent was discussed. Some participants advocated a long process that involved several stages before the decision to participate was made. Moreover, it was also proposed that a model that combined images with text could be used at various stages in order to enhance the information given to potential research subjects. An online forum where people could communicate with physicians and experts and ask questions was also discussed. Moreover, meetings with doctors and scientists were stressed, and one participant advocated meetings with external experts who were not involved in the project as a way to gain more objective opinions. Another participant proposed that the process of

informing potential research subjects should not be standardized but instead should be based on what each individual required and requested from the researchers. Several participants argued that a thorough process would necessarily precede the signing of an informed consent document.

4. Study III) Online survey with non-affected individuals

Within the framework of the *Master in Applied Cultural Analysis* an online survey was collected to explore opinions concerning who should decide which medical research that should be funded (Petersen 2013, 2014). Another aim was to explore opinions concerning willingness to participate in experimental medical research, and issues related to their faith in treatments with stem cells that had not been scientifically proven.

4.1 Measures and participants

An invitation to participate in the survey was spread through email to informal contacts of the researchers and through social media on Facebook. The researcher's personal contacts on Facebook were encouraged to answer the survey and to spread it further to their own contacts on Facebook. Respondents thus were recruited with the so-called network-based snowball method. In total, 156 participants responded. The participants were between 18 and 76 years old, however a majority (77.5%) of respondents aged 26-55. 63.5% of the respondents were female and 36.5% were male, 1.9% had primary school as their highest education, while 9.0 % had secondary school education and 89.1% had university education. Of the respondents, 65.3% lived in the southern Sweden while the rest lived across the country.

4.2 Results

4.2.1 Influence on decisions on the prioritization of research funding

The results show that when it comes to influence on governmental decisions concerning prioritization of research funding the respondents tend to rely on medical researchers and scientists. Of the respondents 78.6% reported that medical researchers and scientists should have the influence on decisions about the prioritization of medical research in Sweden and 63.4% found medical research to be too complicated for the public to decide upon. Only 21% agreed on the statement that the public can more easily remain neutral when it comes to decisions concerning funding for medical research than, for example doctors and medical researchers, while 46.2% did not agree. 85.5% thought people would prioritize research of diseases that they themselves or someone in their family were at risk of. The results clearly indicate that the respondents have the greatest confidence in medical researchers and scientists concerning decisions about the prioritization of funding for medical research.

4.2.2 The willingness to participate in research

One question in the survey explored respondents' willingness to participate as a subject in research to test new therapies. Of the participants 41.2% reported they

would like to participate to help others even if they themselves or someone they knew was not affected by the disease. 33.6% said they would participate if they themselves or someone they knew had the disease. 11.2% would like to participate if they got paid well, and 14.0% would not consider participation.

The results show that less than half of respondents (about 45%) believed that the treatments with stem cells can be effective, although not scientifically proven. When asked if they would go abroad and buy the treatments with stem cells, even if it were not scientifically proven and if they suffered a life-threatening disease, a majority (71.2%) answered that they did not know. Of the participants 16.5% replied that they would definitely go while 12.2% answered they would definitely not go. The answers showed that many respondents did not reject the belief that stem cell treatment might have an effect and only a minority reported that they would definitely not go abroad and buy stem cell treatment treatments while the majority did not know.

5. Discussion: study I, II and III

The results from the focus group study showed that persons who were affected by Huntington's disease had an extensive willingness to participate as research subjects in medical studies. Rather than seeing participation as a risk, they saw it as a chance - a chance to find a cure. In, contrast, non-affected individuals emphasized risks and uncertainties in relation to participation, as well as the vulnerable situation that made individuals who were affected by Huntington's disease likely to participate in clinical experiments. Moreover, the non-affected individuals also stressed that the individual should not solely make decisions about participation. Expert assessments, for example made by physicians, should also be part of deciding which individuals that should participate in medical research as research subjects. Both affected and non-affected individuals emphasized the importance of communication and dialogue. Those who were not affected by Huntington's disease argued for a multi-stage process that involved several different elements of information. The reason for having a multi-stage process was, according to arguments made in the online focus group, to fulfil a demand for information on behalf of the affected individuals, a demand that was seen as related to the vulnerable situation of individuals affected by Huntington's disease. Participants in the focus group, as well as those who participated in the online focus group, emphasized the importance of a personalized dialogue, which took into account different individual requirements for information about participation. With regards to the issue of signing an informed consent prior to participation in medical research, requests were made in the focus group of a procedure that should involve more active communication between potential participants and researchers. The individuals affected by Huntington's disease did not request influence on the medical issues, but did however request information to reach a decision about participation that felt right for them. Our results therefore indicate that there are potential improvements to be made in relation to such issues as information and communication with regards to participation in medical research as a research subject. CSSRT's objective is to find a model that improves the information and communication process in the Treatments of the Future.

5.1 Conclusion and recommendations

The results from the focus group study and the questionnaires that were sent out by letter point upon several important aspects. These results should be acknowledged in relation to the sort of experimental clinical studies that are to be performed within Treatments of the Future. As the summary of the results above highlights, the willingness among individuals who are affected by Huntington's disease to participate in medical research on the disease is extensive, which is not surprising due to the current lack of effective treatments that cures or halts the

progression of the disease. In line with this strong inclination to participate, various forms of risks that participation might bring about are seen in terms of chances for finding a cure or a treatment that stops the progression of the disease. Yet, this extensive willingness to participate, as well as the trust expressed by the affected individuals towards medical research and medical researchers, should be seen in light of the situation that the affected individuals are facing with regards to participation in experimental medical research. Due to the nature of the disease and the current lack of effective treatments, they are situated in a highly precarious situation, which also involves features that are not directly tied to medical research, such as social exclusion. One such feature is the social exclusion that many feel that they are exposed to. CSSRT's task is to make recommendations to medical researchers on how to inform patients who may be involved as participants in experimental clinical studies. In the design of these recommendations, it is crucial to take into account all aspects of potential participants' problematic situation. These aspects have to be acknowledged when developing recommendations to be given to researchers in the project *Treatments of the Future*, as well as to other social- or medical studies that involve individuals who are affected by fatal neurodegenerative diseases in general.

The previous sections of this report that present the results of the focus group study give at hand that participation can be seen as a way to act, and to achieve a sense of hope with regards to the difficult situation that the affected individuals face due to the current lack of effective treatments. Participation in medical research gives a sense of hope of finding a cure. Further it gives a sense that something is "going on", that measures actually are being taken for this group of individuals who, in many ways, constitute an exposed group (see Brekke and Sirnes 2011; Brown 2003). The precarious situation is, as shown in previous sections, not only limited to existential aspects of life and death. The situation also entails risks of social exclusion (see Wexler 2010; Bombard et. al. 2008; 2007; Etchegary 2007), as well as a perceived lack of knowledge about Huntington's disease among health care professionals within the Swedish health care system. Moreover, participation in medical research as a way to take action can, as shown in the results, be seen as a strategy to counteract feelings of being passive and helplessness, as well as to achieve a sense of empowerment among the affected individuals. This sense of being empowered includes not only the individuals who are affected by the disease, but also future generations, as participation in medical research in order to find effective treatments not only bears the hope for oneself, but also for future generations of individuals who are at risk for inheriting the mutated gene, and falling ill with Huntington's disease.

Understanding participation as a way to take action and a way to empower also affects the views taken upon various uncertainties that in many cases are intrinsic aspect of experimental medical research. The affected individuals took on a

pragmatic stance towards these uncertainties associated with the medical trials and defined them primarily as opportunities (cf. Lundin 2002). Here, participation is seen in terms of taking a chance, rather than taking a risk. In summary, the results from the focus group study and the questionnaires that were sent out as letter give at hand that patients' participation in experimental medical research constitutes a way to take concrete action, as well as a way to reach empowerment. Similar aspects can also be seen in the material that was collected in the online focus group with non-affected individuals. Here, a significant shift in reasoning and viewpoints could be discerned when the participants were requested to put themselves in a scenario of being affected by a serious and potential life threatening disease. They were asked if they would consider travelling abroad in order to purchase unproven treatment options (in this case they were asked if they would consider to travel abroad to purchase unproven treatments with stem cells). Their previous answers and reasoning stressed the vulnerability of the affected individuals in relation to participation in medical research as research subjects, as well as the various risks that such a participation entailed for those who participated. Yet, when requested to put themselves in a situation that resembled the situation of those who were affected by Huntington's disease, they adopted the pragmatic standpoints towards uncertainties and risks that could be discerned among those who were affected by Huntington's disease. Whereas issues of risk and uncertainties were prominent aspects in previous answers, in the light of themselves facing a serious life-threatening disease, the notions of risk and uncertainties were renegotiated and lost their prominence in favour for a reasoning that emphasized that you would do anything that might have an effect if you became affected by a serious life-threatening disease.

On another level though, this means that participation can be understood in terms of coping. Participation in medical research becomes a strategy to counteract feelings of being passive and powerlessness, as well as increasing the well-being of the affected individuals. Previous research on the psychological well-being among Huntington patients supports this linkage between coping and psychological well-being (Kaptein et. al. 20006; see Etchegary 2009 for other examples of coping strategies in relation to Huntington's disease). The renegotiation that could be discerned among the individuals who took part in the online focus group study, can be seen as another example of this coping mechanism, in which taking action becomes a strategy to cope, to do something rather than staying passive. This finding attains significance as it points upon and places participation in experimental clinical research in a different context than much of previous research that has investigated participation in medical studies. Much of the previous research has examined the participation in terms of democratic implications and analyses have primarily involved to considering patients' participation and decision-making as a way to counteract the dominance

of experts (Hagen 2013). Focus is mainly on developing and implementing a framework of participatory or deliberative democracy in general (Brown 2009; Fischer 2009; Rogers 2008; Irwin 1995). It is worth noting that the participants in our study did not highlight these democratic aspects, but instead spoke of participation as a way to cope with a difficult and precarious situation. This aspect comprises an important finding that needs to be acknowledged with regards to the recruitment of research subjects to experimental clinical studies. Subsequently, concerning research on fatal neurodegenerative diseases for which there is currently no effective treatment we recommend that:

1. In order to acknowledge that participation in experimental medical research can be a coping strategy on behalf of the individuals who agree to participate as research subjects in experimental research, we recommend that individuals who participate as research subjects are to be considered in terms of a particular vulnerable group. As such they should receive specifically considered protection in line with article 19 in the WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects. This article specifies that: 'some groups of individuals are particularly vulnerable and may have an increased likelihood of being wronged or of incurring additional harm. All vulnerable groups and individuals should receive specifically considered protection.

The results of our studies show that coping seems to be a reason for individuals affected by Huntington's disease to participate in medical experiments. That in turn points to the importance of considering these individuals as a vulnerable group and to receive specifically considered protection. These factors are necessary to be taken account of; additionally they raise questions as how this protection is to be designed and implemented. Moreover, the design and implementation have to be in accordance with current frameworks of ethical and scientific quality requirements, which researchers must adhere to in designing, conducting, recording and reporting clinical trials that involve the participation of human subjects.

The translation of novel treatments into the clinical setting is currently guided by what is called good clinical practice, which is a set of internationally recognised ethical and scientific quality requirements which must be observed for designing, conducting, recording and reporting clinical trials that involve the participation of human subjects. Compliance with this good practice provides assurance that the rights, safety and well-being of trial subjects are protected, and that the results of the clinical trials are credible (http://ec.europa.eu/health/files/eudralex/vol-1/dir_2001_20/dir_2001_20_en.pdf). The current framework that guides good clinical practice in Sweden is currently

guided by directives and laws at both the European (Directive 2001/20/EC of the European parliament and of the council of 4 April 2001 relating to the implementation of good clinical practice in the conduct of clinical trials on medicinal products for human use) and the Swedish national level (The Act concerning the Ethical Review of Research Involving Humans (2003:460). In Sweden, the Act concerning the Ethical Review of Research Involving Humans from 2003, which was formulated as a response to directives on behalf of the European Union, made it mandatory for research that conducted research on human beings to go through an ethical review, as well as that informed consent had to be requested from the research subjects, prior to the initiation of research. Informed consent is the ‘decision, which must be written, dated and signed, to take part in a clinical trial, taken freely after being duly informed of its nature, significance, implications and risks and appropriately documented, by any person capable of giving consent or, where the person is not capable of giving consent, by his or her legal representative; if the person concerned is unable to write, oral consent in the presence of at least one witness may be given in exceptional cases, as provided for in national legislation’ (http://ec.europa.eu/health/files/eudralex/vol-1/dir_2001_20/dir_2001_20_en.pdf).

The Swedish Act concerning the ethical review of research involving humans specifies that the ‘subject of the research is to be informed about the overall plan for the research, the purpose of the research, the methods that will be used, the consequences and risks that the research might entail, the identity of the responsible research body, the fact that participation in the research is voluntary, and the right of the research subject to cease participating at any time’. Moreover the research ‘may only be carried out if the subject of the research has consented to the research that concerns him or her. Consent is only valid if the subject of the research has previously been given information concerning the research in accordance with section 16. The consent is to be voluntary, explicit and specific to particular research. The consent is to be documented’ (http://www.epn.se/media/1205/the_ethical_review_act.pdf)

The current framework that directs the designing, conducting, recording and reporting clinical trials that involve human subjects gives at hand that research subjects are to sign an informed consent, as well as being informed about various aspects of the research (see above), prior to his/her participation. These features within the current framework can be connected with those parts of the focus group study that investigated the notion of influence on behalf of the research subjects. Here, the affected individuals stated their ability to make an informed choice and decision regarding participation as research subjects, and the opportunity to practice this ability and come to an independent and individual decision was seen as an important aspect of having influence. To make choice regarding participation as a research subject was seen as a decision that required that the

individual in question felt both content and secure about his/her decision. In relation to this choice, those who took part in the focus group study stressed the importance of receiving information about the project in question, as information was seen as an essential aspect of their decision-making whether participate or not. Moreover, receiving information only through text documents was seen as inadequate, for example in relation to being fully aware of all aspects of what the project in question entails, as these documents could be difficult to be understood. Instead, the notion of having a reciprocal dialogue between potential research subjects, health professionals and medical researchers was raised as an option that would enable the affected individuals to receive adequate information, pose questions and, ultimately, as a way for potential research subjects to reach an individual and independent decision about participation.

The importance of information and the request for a reciprocal dialogue made by the affected individuals offer itself as an option to design and to implement a protection in alignment with our first recommendation above. As the current framework that guides medical research that involves human subjects is based upon international declarations and national laws, the recommendations given regarding how to design and implement a specifically considered protection need to be accommodated within the current framework, as any change in this framework involves wide ranging changes that implicate both national and transnational actors (such as the European Union and the state of Sweden) and international regimes (such as the WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects). In line with this, recommendations that implicate any changes to existing framework would be impossible to implement and thus not feasible. However, as the current framework states that information to research subjects is to be given in both an oral and a written form (see for example <http://codex.vr.se/manniska2.shtml> and <http://www.epn.se/start/bakgrundbestaemmelser/>, vägledning till forskningspersoninformation), one possibility to implement the affected individuals' request for a reciprocal dialogue would be to put a further emphasis on the oral informational part when recruiting research subjects for experimental medical research. Our second recommendation is thus:

2. To emphasize the requirement of informing potential research subjects in experimental medical research on fatal neurodegenerative diseases through oral informational processes. This means that the recruitment of potential research subjects should include at least one occasion where information about the project in question is given orally by the researchers who are primary investigators of the project, as well as that written information is to be regarded as a complement to oral information. Written information is not to be regarded

as a replacement for information given through oral means by the primary investigators of the project in question.

In order to uphold the requirement that information is to be given orally to potential research subjects, we also recommend that:

3. Oral information is given in such a manner that potential research subjects are given both time and opportunity to engage in a dialogue with the principal investigators of the project in question. Possible ways to organize such a recurrent dialogue is through focus group meetings between health professionals, researchers and potential research subjects. The procedure can further take advantage of or obtain inspiration from the method used when the individuals are being investigated as volunteers of living donors. (SOSFS 2009: 30 and <http://njurstiftelsen.se/organdonation/levande-donation/>)²

We believe that these recommendations will provide measures, which on one hand acknowledge the vulnerability of individuals who are affected by Huntington's disease but, on the other hand, also recognize their ability to form an independent decision with regards to participation in medical research. Moreover, we also believe that these recommendations will provide measures through which researchers and potential research subjects can meet in an open dialogue, which subsequently will enhance the possibility for affected individuals to gain influence with regards to their participation in medical research as research subjects.

² Researchers will have to specify in their application for ethical vetting to the regional ethical review boards, how and when they intend to engage with potential research subjects in a dialogue. The regional ethical review boards will review that this engagement complies with current legal and ethical frameworks.

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APPENDIX

Interview-guide for focus group study on experimental medical research

Huntington's disease is severe disease to which there currently does not exist any cure. All around world there is on-going research that aims for understanding the causes of the disease, and to develop different treatment options in order to cure the disease. Currently, there only exist treatments that alleviate the symptoms of the disease, which is inadequate, and it does not exist any treatment that cures or halts the progression of the disease in the affected individual. Huntington's disease is characterized by the death of nerve cells in specific parts of the brain, which leads to psychiatric, motoric and cognitive problems for the affected individual and his/hers family.

A multidisciplinary collaboration between researchers within cultural and medical sciences was initiated during 2013 under the name *Treatments for the Future*. The medical scientists within the project will conduct research on new methods of treatment for Huntington's disease (see below). In order to develop new treatments for Huntington's disease, medical research depends on that individuals who are affected by the disease are willing to participate as research subjects. The purpose of ethnological research within the project is to develop new possibilities for participation in research on Huntington's disease for patients and relatives. The ethnological research intends to, through knowledge about the views held by affected individuals on medical research, improve current procedures of attaining informed consent, which mirrors the needs and motives among affected individuals for participating as research subjects in project like *Treatments for the Future*. The informed consent is the document that you signs as part of participating in research projects. In order to improve the attainment of the informed consent, the researchers must get a deeper knowledge from the affected individuals on their views on various aspects that concern the kind of experimental research that is conducted in *Treatments for the future*.

The medical segment of *Treatments for the Future* has, as its goal, to develop a new method for curing Huntington's disease. The cause for many diseases of the brain is completely unknown, whereas Huntington's disease is always caused by one known mutation in the Huntington gene (which directs how the body constructs the huntingtin protein). This means that "repairing" the mutated Huntington gene through various so-called molecular gene-technological tools can cure the disease, in theory.

This alternative of “repairing” the mutated Huntington gene is very appealing possibility that demands a major developmental effort through, as advanced gene-technology must be optimised and evaluated by researchers. The idea is to change the translation of the genetic code so that instead of erroneous (mutated) Huntington, the correct version of Huntington protein is produced. The correct version of the Huntington protein is very important for the function of nerve cells, and this procedure has a greater chance of success than a gene-therapy that only aims for shutting down the production of mutated Huntington. The technique will first be tried out on cells (from human) that have the mutated Huntington gene in their genetic “make-up”. The treatment will thereafter be tested on mice, in a so-called clinical relevant mouse model. The effect of the treatment will be evaluated through sophisticated methods of brain imaging and biochemical analysis. If everything works in accordance to plans, the method of treatment is planned to be ready for clinical trials on humans at the end of the projects time frame. One group of individuals who have the mutated Huntington gene will be investigated yearly in order to evaluate the effect of the treatment.

On the next page, you will find a number of questions that relate to the kind of experimental research that *Treatments for the Future* is one example of. The questions is divided into three areas that address (1) broad and general issues concerning medical research, such as your views about potential risks, trust of the researchers and the research, and the knowledge that affected individuals have about the research upon the disease. After this area, follows (2) some questions on issues related to patient influence and patient power, which has been brought forward on the political agenda through public evaluations and legal bills. The last area (3) address if you could consider participating in research like that conducted in *Treatments for the Future* as a research person. Here, we are asking questions about how you as an individual who are affected by Huntington’s disease reason about participating on a research project like *Treatments for the Future*. We also have a number of questions if you, as affected by Huntington’s disease, would consider looking for alternative treatments outside the Swedish healthcare system. For example, exhaustive research is currently conducted all over the world on stem cells, and there are great expectations that this research will yield novel possibilities to cure many severe diseases. Presently, there is through an uncertainty if this research will be able to deliver, and most treatments with stem cells is not scientifically proven, which is the reason that these treatments are not offered in Sweden. In some countries though, doctors and companies that states the effect of the treatments offer these treatments. We are wondering if you, as affected by Huntington’s disease, think about trying treatments that are not scientifically proven, which might not have any effect on the disease. We end our

list of questions with a number of questions that address your views on the attainment of informed consent, as well as alternative ways to attain the informed consent.

Below, you will find the questions, which are marked with letters (a,b,c...). There are follow-up questions attached to some of these questions, these placed directly below the main questions, and are marked by numbers (I, II, III...).

List of questions:

1. Medical research (General questions on possible risks, knowledge about research and research development, as well as trust on researchers and for research)

- a) Do you have trust for the research and the on the medical experts?
- b) Are there situations when you feel uncertainties about medical research and treatments?
 - I) Why? Have some of you experienced such situation?
- c) Do you follow the research development, for example new results etc, about Huntington's disease?
- d) Where do you get information about research on Huntington's disease?
- e) What are your views on the research on Huntington's disease that aims to develop new possible treatments?
- f) What are your views on that kind of advanced research, like for example gene therapy, that aims for developing new treatments?
- g) Do you see any risks or downside effects with this kind of research?

2. Influence of patients and patient power

Influence of patients and patient power is current theme within the health-care sector, A public inquiry has for example been at work in over two years to advance legal bills that strengthens patients rights to participation, their influence and their right to integrity. In the beginning of 2013, a legal proposition was delivered to the parliament that will enable a strengthened the patients position within the health-care system.

- a) What are your views on the influence of patients and patient power? – What do these two concepts mean to you?

b) Which areas do you see as the most important for you to be able to influence? What would you like to or not like to have more influence upon?

In order to cure severe diseases, medical research is necessary. What diseases that can be cured in the future might depend on what kind of medical research that are prioritized.

c) Who do you think should have influence on what kind of research that are prioritised in Sweden?

d) Why should this or these groups have influence on what kind of research that should be prioritised?

3. Participation as research person in medical research, access to treatments, and the importance of the informed consent.

a) Would you consider participating in medical research on Huntington's disease, in projects of similar type as *Treatments for the Future* (see above)?

I) Why would you participate /not participate as research person?

II) Under which circumstances would you like to participate (For your own sake or for affected individuals as a group)?

b) Do you see any risks with participating?

c) What are your views upon participating in a research project where you cannot predict if its research will lead to a treatment?

All medical treatments offered in Sweden are legally complied to be scientifically proven. This means that treatments that are offered must be proven by science before they are offered to the public. This secures that medical treatments that are offered by the Swedish health-care system has an effect on those disease towards which they are administered against, as well as that their side-effects does not pose any risks for the health of the patients.

d) What are your views on that only medical treatment that are scientific proven are offered in Sweden?

Intensive research is currently conducted all over the world on stem cells, and there is great expectations that this research will result in possibilities to cure many severe diseases. There is however uncertainties as to whether this research will be able to fulfil these expectations, and most treatments with stem cells are

not scientifically proven, and in Sweden many of these treatments are not offered because they are not proven scientifically. Doctors and companies who claim that the treatments have an effect offer them in some countries. Individuals who have taken these treatments have claimed their effects officially.

e) Would you consider to search outside the Swedish health-care system in order to gain access to medical treatments against Huntington's disease that are not offered in Sweden?

- I) What kind of treatment would that be?
- II) Would you pay for such a treatment?
- III) Do you think that you should be able to obtain funding from the state for purchasing stem cell treatments even if these are not scientifically proven?
- IV)

f) What are your thoughts on going abroad for obtaining a treatment that you do not know if it works or helps?

Since the middle of the twentieth century, all research that is directed towards humans is required to undergo an ethical examination and obtain an approval before it can be conducted. Moreover, are each individual who participates in research as a research person required to sign a so called informed consent in which the individual gives his/hers consent to participate in the research, as well as that the individual understand and agrees with the conditions of the research.

g) What importance does the informed consent have for you as affected individuals?

- I) Do you see it in terms of a formal procedure, or does it have a greater importance?
- II) How would you like the informed consent to be designed if you were to participate in an experimental medical research project like Treatments for the Future
- III) If changes were to be made to the informed consent in accordance to your wishes, would it have any importance with regards to your participation

h) What are your thoughts about coming together in a group such as this in order to discuss these questions?