Conditions for autonomous choice: a qualitative study of older adults’ experience of decision-making in TAVR

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Abstract

Background Patient autonomy is a leading principle in bioethics and a basis for shared decision making. This study explores conditions for an autonomous choice experienced by older adults who recently underwent trans-catheter aortic valve replacement (TAVR).

Methods Qualitative study entailing semi-structured interviews of a purposive sample of ten older (range 73–89, median 83.5 years) adults after TAVR (median 23 days). The study setting was a cardiac department at a university hospital performing TAVR since 2010. Analysis was by systematic text condensation.

Results Even when choice seemed hard or absent, TAVR-patients deliberated offered them by processing risk assessment, ambivalence and fate. They regarded declining the treatment to be worse than accepting the risk related to the procedure. The experience of being thoroughly advised by their physician formed the basis of an autonomous trust. The trust they felt for the physicians’ recommendations mitigated ambivalence about the procedure and risks. TAVR patients expressed feelings consistent with self-empowerment and claimed that it had to be their decision. Even so, choosing the intervention as an obligation to their family or passively accepting it was also reported.

Conclusions Older TAVR patients’ experience of an autonomous decision may encompass frank tradeoff; deliberate physician dependency as well as a resilient self-view. Physicians should be especially aware of how older adults’ subtle cognitive declines and inclinations to preserve their identities which can influence their medical decision making when obtaining informed consent. Cardiologists and other providers may also use these insights to develop new strategies that better respond to such inherent complexities.

Keywords: Aortic stenosis; Older adults; Patient-centered care; Shared decision-making; Trans-catheter aortic valve replacement

1 Introduction

From 2002, trans-catheter aortic valve replacement (TAVR) has been an option for patients with severe and symptomatic aortic stenosis and too high risk of open heart surgery. Typical TAVR patients are old and have significant comorbidities. While TAVR in general is better tolerated than surgery, it is still associated with complications,[1,2] and it is important that the patient understands risk and benefit for the procedure.

Autonomy is a core element of shared decision making (SDM), the preferred model for health care treatment decisions. The purpose of SDM is to decrease the asymmetrical power between physicians and patients, by increasing patients’ information, sense of autonomy, and that treatment choices should reflect patient’s values and preferences.[3] In medical ethics, autonomy is understood as a “capacity for independent decisions and action”.[4] Beauchamp and Childress state three conditions for autonomy: intentionality, understanding and noncontrol, meaning intentionally as opposed to accidental and noncontrol as voluntariness free of both external and internal (for instance mental illness) control.[5] However, relational understanding challenges this definition of autonomy by stating “it ignores the social circumstances and power relations that affect choice contexts”.[6] In the elderly population, where medical decisions are more complex due to comorbidity and frailty, some stu-
studies emphasize the importance of a trusting relationship with the physician.[7,8] As cognitive decline and dementia increase substantially with age, some patients have difficulties giving informed consent.

Patients’ decision to undergo TAVR assessment is multifaceted, and understanding their reasons for wanting to be treated and asking them to define their goals can enhance shared decision making.[9,10] Three patterns in TAVR patients’ decision making have been identified: the ambivalent, obedient and reconciled patient, highlighting that health care professionals should give tailored information based on patients’ values.[11] Patients’ need to discuss risks and benefits of the treatment has also been emphasized. TAVR-programs have been developed to improve communication and provide decision support, including transition to palliative care.[12] Still, little is known about how patients experience autonomy preceding TAVR.

As clinicians and researchers with extensive experience within geriatrics and cardiology, we wanted to address the special challenges for older TAVR patients examining their motivation for the procedure, risk perception, understanding of the procedure and ability of making an independent choice. The combination of advanced age and a busy hospital environment might challenge patient autonomy, and our preconception was that patients passively accepted the offered treatment. Thus, our study explores conditions for an autonomous choice experienced by older adults who recently underwent TAVR, with a special focus on relational and cognitive aspects.

2 Methods

We conducted a qualitative study based on semi-structured, individual interviews of TAVR patients.[13] This design is suitable to explore perspectives of human experiences, motives, feelings, thoughts and values of major clinical relevance.[13]

2.1 Study setting

Participants in the study were enrolled post-procedure from a large university hospital in Norway with 860 somatic beds. The hospital has advanced interventional and surgical expertise, and has performed TAVR procedures since 2010. All patients were discussed in a heart team before the decision of offering TAVR treatment. Patients received information from different physicians on the ward during the preprocedural hospital stay and from interventional cardiologists performing TAVR the day before the procedure. Some patients also got information from their private consultant cardiologists. There was no written information provided to the patient preceding TAVR at the time of this study.

2.2 Data collection

Interviews were conducted between February 2014 and April 2015. We searched for a purposive sample aiming for diversity regarding age, gender and complication rate. The inclusion criteria were patients over 70 years who underwent TAVR; the only exclusion criterion was not speaking Norwegian. Inclusion was stepwise according to analytical strategy. The interviews lasted from 30 to 60 min and were conducted 2 to 4 weeks after TAVR, except for three patients who were interviewed after 9, 41 and 52 days due to either practical reasons or the analytical process. All interviews were audiorecorded and transcribed verbatim by Skaar. Sample size was determined by the concept of information power and thus continuously evaluated as enrolment proceeded.[14] We had a narrow aim, dense specificity, applied theory and a strong dialogue. After four stepwise analyses adding two and three interviews at a time, the material was assessed sufficient to answer our research question according to the mentioned criteria of information power when ten participants had been recruited. This does not imply that other phenomena could not have been discovered by further enrolment, but that the developed categories at that point were large and rich enough for thorough description of the experiences investigated.

2.3 Participants

Ten patients over 70 years were recruited, six were women. The characteristics of participants were list in Table 1. All underwent elective TAVR due to severe symptomatic aortic stenosis and high risk for complications to SAVR, but time to procedure varied from a few weeks after activity-induced syncope to several months with less dramatic symptoms. Logistic EuroSCORE varied between 8 and 28. One patient had mean pressure gradient of 39 mmHg, maximum jet velocity of 3.9 m/s and indexed aortic valve area for body surface area (BSA) 0.4 cm²/m², the others fulfilled the echo cardiac criteria of severe aortic stenosis with mean pressure gradient over 40 mmHg, maximum jet velocity over 4.0 m/s and indexed aortic valve area for BSA below 0.6 cm²/m². All ten patients had symptoms related to their AS. One of the patients had severe complications with cardiac arrest and stroke during the procedure; another had TAVR with direct aortic approach and was re-operated with open heart surgery two days after the procedure due to profound bleeding.
Table 1. Characteristics of participants.

| Characteristic                  | Men/Women | Age 70–79 yrs | Age 80–89 yrs | Symptoms |
|---------------------------------|-----------|---------------|---------------|----------|
|                                | 4/6       | 3             | 7             | 1 NYHA I–II   |
|                                |           |               |               | 7 NYHA II    |
|                                |           |               |               | 2 NYHA III   |
|                                |           |               |               | Syncope     |
|                                |           |               |               | Angina      |
|                                |           |               |               | Logistic EuroSCORE |
|                                |           |               |               | < 10        |
|                                |           |               |               | 10–20       |
|                                |           |               |               | > 20        |
| Social status                  |           |               |               | Live alone  |
| Comorbidities                  |           |               |               | Coronary artery disease |
|                                |           |               |               | Chronic obstructive lung disease |
|                                |           |               |               | Diabetes    |
|                                |           |               |               | Stroke or transitory ischemic attack |
|                                |           |               |               | Bypass graft surgery |
|                                |           |               |               | Peripheral vascular disease |
|                                |           |               |               | Renal failure |
|                                |           |               |               | Pulmonary hypertension |
|                                |           |               |               | Low ejection fraction (below 35%) |
|                                |           |               |               | Concomitant valve disease |
| Education level                |           |               |               | Primary school |
|                                |           |               |               | High school  |
|                                |           |               |               | College and/or university |
| Cognition (prior to intervention) |         |               |               | 1 MMSE NR > 27 |
|                                |           |               |               | 4 MMSE NR 25–27 |
| Physical frailty               |           |               |               | 1 SPPB fit   |
|                                |           |               |               | 3 SPPB intermediate |
|                                |           |               |               | 1 SPPB frail |
|                                |           |               |               | Post procedure pacemaker |
|                                |           |               |               | Severe complications |
| Length of stay                 |           |               |               | 5 days      |
|                                |           |               |               | 6 or 7 days |
|                                |           |               |               | 10 and 11 days |
|                                |           |               |               | 17 days     |
| Discharged to                  |           |               |               | Home        |
|                                |           |               |               | Other hospital |
|                                |           |               |               | Rehabilitation |
|                                |           |               |               | Intermediate care |

*NYHA classification of the stages of heart failure, range from I–IV, most severe dyspnea at IV; †Logistic Euro SCORE is a model of predicting mortality in high risk cardiac surgical patients; ‡MMSE-NR measures cognitive impairment, range from 0–30, higher score means better cognition; §SPPB measures physical frailty, higher scores better function. NYHA: New York Heart Association; MMSE-NR: Mini Mental Status Examination, Norwegian Revision; SPPB: short physical performance battery.

2.4 Ethical statement

This study was approved from the Regional Committee for Medical Research Ethics 04.09.13, 2013/1310 REK. Informed consent was obtained from all participants.

2.5 Analysis

Qualitative analysis was performed in collaboration by Skaar and Schaufel following systematic text condensation,\[15\] proceeding through the following stages: (1) reading all the material to obtain an overall impression, bracketing previous preconceptions; (2) identifying units of meaning, representing different aspects of the patients’ experiences and coding for these; (3) condensing and abstracting the meaning within each of the coded groups; and (4) summarizing the contents of each code group to generalized descriptions and concepts reflecting the most important elements of autonomy reported. The interview guide consisted of questions addressing how patients experienced the process preceding TAVR, focusing why they wanted the treatment, how they coped with risk information and the challenge of making a choice. We used an editing analysis style where categories were developed from the empirical data, not in a theory-driven template analysis style from pre-defined theoretical concepts.\[16\] Still, the analysis was informed by theory of patient autonomy.\[17\] Analysis was done stepwise with new interviews supplementing the sample. A decision trail documented the choices during the analytical process.\[18\]

3 Results

Even when choice seemed hard or absent, TAVR-patients deliberately took the chance offered them by processing risk assessment, ambivalence and fate. They experienced lack of a real sense of choice based on their condition’s severity and the risks presented to them, but regarded declining the treatment to be worse than accepting the risk related to the procedure. The experience of being truthfully and thoroughly advised by their physician formed the basis of an autonomous trust. The trust they felt for the physicians’ recommendations and the copious information provided mitigated ambivalence about the procedure and risks. TAVR-patients’ striking self-determination comprised extensive mobilization of hope, lease of life and a robust sense of self. They expressed feelings consistent with self-empowerment and claimed that it had to be their decision. Even so, choosing the intervention as an obligation to their family or passively accepting it was also reported.

3.1 Deliberately taking the chance

Participants regarded declining the treatment to be worse
than accepting the risk related to the procedure. Based on
information about symptoms gradually increasing and no
hope for recovery without the procedure, the patient
perceived making a decision. None of them reported this as a
difficult choice. Facing serious complications, they ex-
pressed that they could and had to deal with risk, since this
to some extent is inherent in all medical procedures, and
distanced themselves partly by thinking that “it happens to
all others, but not me.” They regarded the intervention as
routine, despite being aware of complications, and let fate
decide. “It was not difficult at all to decide. I reckoned that
if I said no, I wouldn’t live much longer.” (Mark).

The majority experienced receiving good and well-ad-
justed amount of risk information, describing it as detailed
and first-class. Even so, participants disclosed ambivalence
regarding how much they wanted to know about complica-
tions. The importance of knowing the most dreaded com-
lications was highlighted, but simultaneously relief was
expressed not being aware of these. One patient had denied
risk information prior to an earlier procedure and still pre-
ferred it this way. Too much information regarding complica-
tions could induce anxiety and unnecessary worry, mak-
ing decision-making more difficult. One patient expressed
fear ending up as a “vegetable” in a nursing home and be-
come dependent upon others. She worried life then would
have little meaning. However, the participants imparted they
were prepared to die, viewing death as a natural part of life
and expressing an acceptance of fate. “I thought, I am 88
years old and I will not live for a long time anyway. I am
also a Christian, so I thought come what may, and then I
didn’t ponder anymore.” (Molly).

Some were afraid they would regret it if they declined
and later on experienced more symptoms. They were aware
that TAVR might not be an option later if they declined now.
During the investigation period they realized that something
had to be done, like a virtue of necessity. Thus, they barely
experienced being in a situation where they should make a
choice, and reported little doubt or anguish. One of the pa-
tients, who admitted to hospital after an exercise-triggered
syncope, outlined how he did not specifically want the pro-
cedure, but was convinced he needed it. Another patient
who had been physically active his whole life and now ex-
perienced fatigue and declining physical performance, ex-
pressed it like this: “In a way, you might say that I had a
choice, however, I was rather determined to go through
with the attempt to improve the situation with the operation.
So it was not a difficult decision. (...)You’re in a situation
where you can make little difference, and you just have to
resign and accept. (...) You never know when “fate strikes”,
as we say.” (Colin).

3.2 Autonomous trust in their doctors

Our participants chose to follow the physicians’ treat-
ment recommendation seeking symptom relief and trusting
the physicians with whom they were interacting. The par-
ticipants wished the physician to be honest and optimistic,
still not concealing risk. Physicians spending time informing
about the procedure and letting the patients take time to
think it through, were cherished, as well as physicians rec-
ommending the procedure despite the risks. Patients ex-
pressed a general and strong confidence in GPs, private
consultant cardiologists and hospital physicians. Even when
the physicians described risks before surgery, it could not
disturb the confidence and trust they also grounded in per-
sonal qualities of the physician. One patient expressed it like
this: “I had confidence in the physicians because I noticed
how they were as people. I have never been a fan of titles; I
am much more reassured by people themselves, not their
degrees or titles.” (Jennifer).

The patients experienced lack of medical competence.
When physicians recommended the treatment, patients
trusted that the benefit outweigh the risk. This was illus-
trated by a female patient who explained how she would not
have complained about the decision if she was denied
TAVR, because she then reckoned that there was a good
medical reason for not recommending her the treatment.
Even when the procedure was thoroughly explained, they
found it hard to understand and they trusted their physi-
cians’ medical competence: “Then I accept the treatment
boldly, I trust the physicians, because medicine is so ad-
vanced now, that you don’t need to worry.” (Alice).

However, the patients did not have blind trust in their
physicians, the physicians had to act trustworthy or else the
patients seek a second opinion. One patient was told by a
physician that her heart was exhausted and there was noth-
ing more one could do. Immediately she went to her GP and
asked him to send her to a cardiologist who referred her for
TAVR. Another patient described that it was difficult mak-
ing a decision about TAVR following extensive risk infor-
mation where she felt the physician advised against the pro-
cedure, and said that it all resolved when she chose to rely
on her private consultant cardiologist. This physician had
spent time thoroughly explaining why he recommended the
procedure, and she trusted him more than the risk informa-
tion of severe complications that she received at the hospital.
So I went home and thought: “Should I do this or not, am I
an idiot about to ruin my life?”, but then I considered all the
others (physicians on the ward) who had said “go through
with it” and my own physician recommending it.” (Anna).
3.3 Fundamental self-determination based on personal identity

The participants in this study explicitly outlined how they made the decision on their own, and that this was important to them. This was expressed by a fundamental go-ahead spirit and strong lease of life when TAVR treatment was to be decided. They had a positive attitude towards themselves as robust and relatively strong, still acknowledging they were older and that their strength had declined. In general, TAVR candidates described themselves as feeling independent and coping well. They did not want to be a burden to their relatives. Most did not involve the family in the decision, but informed them of their choice afterwards. A man expressed his independence in the decision making like this: ‘I told my wife that I had made the decision” … ”After the decision was made, I didn’t reconsider, I slept well and didn’t worry.

The TAVR-patients had a clear future goal of living longer and did not want to sit down waiting to die from aortic stenosis when it could be cured by an operation. They aimed for improved body function, better health and quality of life. Describing lifelong patterns of an active life and having many interests, they wished to adapt to the adversities of aging like disease and poorer functioning as well as possible. The participants were not anxious, and universally expressed convictions to make the best of the situation: "I'm the kind of person who—when I have to do something—think that I just have to deal with it, and set my heart on it." (Edna).

Even if they considered the decision to be theirs, several highlighted that they felt an obligation to their relatives to accept a treatment that was recommended. One patient expressed how she did not want to let her children down if she died suddenly one day and they knew she could have had an intervention done to avoid it. Another patient took a more passive position during the decision-making process, possibly due to mild cognitive impairment and depressive symptoms. She explained that she accepted TAVR mostly because her daughter wanted her to, and that she didn’t care too much herself: "We did not discuss it too much the physician and I either. (...) He just asked if I wanted (the treatment) and I accepted. (...) I did it for the others’ sake as well.” (Rachel).

4 Discussion

Interviewing patients about the TAVR decision-making process, we found that despite being in a situation with limited choice, they claimed the decision to be their own. Trust in their physicians and their medical expertise was an important element for the decision. Below, we discuss the strengths and limitations of this study, and the impact of our findings.

4.1 TAVR patients’ paradoxical autonomy

This study confirms the value of self-determination and autonomy in medical decisions,[13,19] and adds to previous knowledge by providing empirically based descriptions of what constitutes conditions for TAVR patients’ autonomy experienced in the decision-making process. Older TAVR patients claim to make an autonomous decision, despite admitting profound trust in their physicians and revealing lack of medical competence. Cognitive decline leaves the patient more dependent and less capable to question physicians advice. In the following, we will discuss the implications of our findings.

Arguments that the strong focus on autonomy might have underestimated the significance of trust have been made, claiming it’s not true that “doctors offer patients a smorgasbord of possible treatments and interventions, a varied menu of care and cure”. By demanding informed consent, we make it possible to make an autonomous choice, but there is no guarantee.[9] Being ill and vulnerable makes it hard to choose autonomously. Some argue that focus on free choice, patient autonomy and informed consent might conceal the power asymmetry, with an illusion that it facilitates a discussion between equals, but underestimate that the physicians’ medical expertise gives him/her power.[20] Our findings show that trusting physicians is a core element of decision making, exposing patients to physicians’ power. However, this is no blind trust and these patients may seek a second opinion if they are not reassured by physicians’ advice.

The philosopher Harald Grimien has outlined how difficult it is for the patient to challenge the authority of the physician, and “patients may be forced to trust what they get.”[20] This does not mean a return to paternalism. Patients being involved and physicians’ respect for patients’ views are essential to medical decisions, but the concepts of informed consent and shared decision-making have limitations.[4] A relational understanding of autonomy recognizes social circumstances and power relations. Autonomous decisions do not happen in isolation or fully independence,[6,21] and patients trusting their physician might still make an autonomous choice, as our findings indicate. It is highlighted that in cases with a serious condition, no support in the decision-making may impede the patients’ capacity of making a decision. “A full listing of all possible side effects, for example, may well do nothing but agitate a patient who is clear that she desires to be treated and understands that there are risks associated with achieving that goal.”[6]

There are cultural differences influencing decision-
making. In the USA where physician-patient interactions are regulated in detail by law, courts have ruled that for invasive interventions physicians “need to discuss rare but serious risks, such as death and stroke”.[19] This secures patient rights, but might come at the cost of reduced trust in the physician-patient relationship. Not all patients want to participate to the same extent.[22–24] and shared decision-making emphasize to involve “the patient in the decision-making to the extent that they desire.”[25] Securing patients’ rights might therefore be in conflict with shared decision-making. Our study illuminates the way ambivalence of knowing the most dreadful complications balances the need to feel secure. A Norwegian study of physician-patient dialogues preceding high-risk cardiac treatment demonstrated a profound confidence in the physicians’ ability to get them through the intervention or surgery they were facing, yet the responsibility making the decision was shared in an asymmetrical power relation.[26]

In our study, only one patient revealed signs of cognitive impairment that might have influenced the decision-making process. Executive cognitive impairment is subtle and prevalent among cardiac patients, and particularly impactful on the ability of the patients to make medical decisions like TAVR.[27,28] The prevalence of dementia in Western Europe increases exponentially with age, from 4.3% among 70–74 years old to 43.1% in the 90+ population,[29] even if new studies find a lower age specific incidents.[30] In a Swedish registry, the average age for TAVR patients are about 82 years.[31] Dementia will eventually diminish a patients capability of making an informed choice. TAVI frequently being provided to patients at high age ideally requires a cognitive assessment,[32] in order identify patients not capable of making an autonomous decision. TAVR being a procedure with risk of complications, family wishes alone are not sufficient for performing the intervention. Curing aortic stenosis in order for patients to survive to end stage dementia also raises ethical questions, and even if this is what the family wants, it might not be what the patient would want acting autonomously. New treatment opportunities thus initiate new ethical challenges and we need to discuss implications thoroughly in order to do no harm.

4.2 Validity and transferability

A trained geriatrician, who is used to talk to and gather information from elderly patients, performed the interviews. The interviewer was a woman and younger than the patients, and most interviews were conducted in the patients’ own home. This reduced the asymmetrical power relation. As one of the patients had a cognitive impairment possibly affecting her answers, the interviewer asked follow-up questions when in doubt. Disclosing both positive and negative aspects of the process they had been through, physicians they had met and their own reactions makes it likely they answered the questions in honest terms. On the other hand, the interviewer being employed at the department and knowing the interventional cardiologists, might have diminished exploring patients’ negative experiences.

Our focus was not how the decision-making was performed, but how patients experienced it. We therefore chose not to record and study the actual conversations between physicians and patient, but conducted an interview study. The analysis of trust focused on the participants’ general experience and did not discern differences regarding interventional cardiologists, private consultant or primary care physicians. Thus, the variability of physician types and the variability of interactions with patients have not been explored in this study, nor the complexity implicit in seeking a procedure.

Our sample includes elective TAVR patients from one hospital, and the majority had an intermediate or fit frailty score. Other patterns may have been discovered in a frail sample.

Since we only interviewed patients who were accepted for TAVR, the results may not be transferable to decision-making in older patients in general. The interventional cardiologists assess lease on life before offering treatment, and TAVR patients are probably more physiological robust. However, since there are strict selection criteria for TAVR the majority of candidates are older than 70 years, our findings may be applied to patients accepted for TAVR in other countries.

Hospital treatment in Norway is funded through the public health care system and provides no economic motives for cardiologists to perform TAVR. Studies have also shown that in the Nordic countries, people have a high level of trust towards authorities.[33] There were only white participants in our study, and most were Christians or non-religious. The results may therefore not be transferable to a different cultural and religious setting.

4.3 Conclusions

Older TAVR patients’ experience of an autonomous decision may encompass frank tradeoff; deliberate physician dependency as well as a resilient self-view. Physicians should be especially aware of how older adults’ subtle cognitive declines and inclinations to preserve their identities can influence their medical decision making when obtaining informed consent. Cardiologists and other providers may also use these insights to develop new strategies that better respond to such inherent complexities.
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References

1. Leon MB, Smith CR, Mack M, et al. Transcatheter aortic-valve implantation for aortic stenosis in patients who cannot undergo surgery. N Engl J Med 2010; 363: 1597–1607.
2. Davies WR, Thomas MR. European experience and perspectives on transcatheter aortic valve replacement. Prog Cardiovasc Dis 2014; 56: 625–634.
3. Charles C, Gafni A, Whelan T. Shared decision-making in the medical encounter: what does it mean? (or it takes at least two to tango). Soc Sci Med 1997; 44: 681–692.
4. O’Neill. In Autonomy and trust in bioethics; Cambridge University Press: New York, USA, 2002; 1–48.
5. Beauchamp T, Childress J. In Principles of Biomedical Ethics; 7th Edition; Oxford University Press: New York, USA, 2013; 104–105.
6. Mackenzie C, Stoljar N. In Relational autonomy; Dodds S, Ed; Oxford University Press: New York, USA, 2000; 213–235.
7. Bastiaens H, Van Royen P, Pavlic DR, et al. Older people’s preferences for involvement in their own care: a qualitative study in primary health care in 11 European countries. Patient Educ Couns 2007; 68: 33–42.
8. Wrede-Sach J, Voigt I, Diederichs-Egidi H, et al. Decision-making of older patients in context of the doctor-patient relationship: a typology ranging from “self-determined” to “doctor-trusting” patients. Int J Family Med 2013; 2013: 478498.
9. Lauck S, Baumbusch J, Achtém L, et al. Factors influencing the decision of older adults to be assessed for transcatheter aortic valve implantation: An exploratory study. Eur J Cardiovasc Nurs 2015; 1–9.
10. Coylewright M, Palmer R, O’Neill ES, et al. Systematic text condensation: a strategy for qualitative analysis. Scand J Public Health 2012; 40: 795–805.
11. Crabtree B, Miller W. Doing qualitative research; 2nd Edition; SAGE: London, UK, 1999.
12. Elwyn G, Frosch D, Thomson R, et al. Sharing decision making: a model for clinical practice. J Gen Intern Med 2012; 27: 1361–1367.
13. Lauck SB, Gibson JA, Baumbusch J, et al. Transition to palliative care when transcatheter aortic valve implantation is not an option: opportunities and recommendations. Curr Open Support Palliat Care 2016; 10: 18–23.
14. Malterud K, Siersma VD, Guassora AD. Sample Size in Qualitative Interview Studies: Guided by Information Power. Qual Health Res. Published Online First: Nov 27, 2015. DOI: 10.1177/1049732315617444.
15. Malterud K. Systematic text condensation: a strategy for qualitative analysis. Scand J Public Health 2012; 40: 795–805.
16. Whitehead L. Enhancing the quality of hermeneutic research: decision trail. J Adv Nurs 2004; 45: 512–518.
17. Lo B. In Resolving Ethical Dilemmas, a guide for clinicians; Lippincott Williams and Wilkins: Philadelphia, USA, 2013.
18. Grimen H. Power, trust, and risk: some reflections on an absent issue. Med Anthropol Q 2009; 23: 16–33.
19. Entwistle VA, Carter SM, Cribb A, McCaffery K. Supporting patient autonomy: the importance of clinician-patient relationships. J Gen Intern Med 2010; 25: 741–745.
20. Chewning B, Bylund CL, Shah B, et al. Patient preferences for shared decisions: a systematic review. Patient Educ Couns 2012; 86: 9–18.
21. Levinson W, Kao A, Kuby A, Thisted RA. Not all patients want to participate in decision making. A national study of public preferences. J Gen Intern Med 2005; 20: 531–535.
22. Schaufel MA, Nordrehaug JE, Malterud K. “So you think I’ll survive?”: a qualitative study about doctor-patient dialogues preceding high-risk cardiac surgery or intervention. Heart 2009; 95: 1245–1249.
23. Eggermont LH, de Boer K, Muller M, et al. Cardiac disease and cognitive impairment: a systematic review. Heart 2012; 98: 1334–1340.
24. Dickson VV, Tkacs N, Riegel B. Cognitive influences on self-care decision making in persons with heart failure. Am Heart J 2007; 154: 424–431.
25. Prince M, Bryce R, Albanese E, et al. The global prevalence of dementia: a systematic review and Meta analysis. Alzheimers Dement 2013; 9: 63–75.
26. Satizabal CL, Beiser AS, Chouraki V, et al. Incidence of dementia over three decades in the Framingham heart study. N Engl J Med 2016; 374: 523–532.
27. SWEDEHEART. Percutaneous Valve Registry, 2015. http://www.ucr.uu.se/swedeheart/67-swedeheart/english/169-swede-heat-annual-report-in-english (accessed Aug 14, 2015).
28. Kappetein AP, Head SJ, Generex P, et al. Updated standardized endpoint definitions for transcatheter aortic valve implantation: the Valve Academic Research Consortium-2 consensus document. J Thorac Cardiovasc Surg 2013; 145: 6–23.
29. Bergh A, Bjornskov C. Historical trust levels predict the current size of the welfare state. Kyklos 2011; 64: 1–19.

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