

Use of the Model of Inner Strength for analysing reflective interviews in a group of healthy middle-aged adults

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Abstract

Objective: Inner Strength has been described as a human resource that promotes well-being linked to health. The aim of this study was to explore how Inner Strength and its four dimensions are manifested in interviews in a group of middle-aged healthy women and men.

Methods: Retrospective reflective interviews with middle-aged healthy women (n=5) and men (n=4) selected from a population study were content analysed deductively.

Results: The following themes and their constituents were found in the respective dimensions of the Model of Inner Strength. Firmness: having a drive to act, being purposeful, having trust in one's competence, and having a positive view of life. Connectedness: being in community, receiving and giving support, and, receiving and giving care. Creativity: changing unsatisfactory life situations, seeing new opportunities, and realizing dreams. Stretchability: balancing between options, and extending oneself.

Conclusions: Expressions that were interpreted as belonging to Inner Strength could be referred the different dimensions of Inner Strength. The Model of Inner Strength is suitable for analysing Inner Strength among middle-aged men and women. The findings indicate that Inner Strength can be identified in human beings' narratives if asked for.

Keywords

Nursing, mental health/psychiatry, Inner Strength, content analysis, deductive

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In this article we use the Model of Inner Strength (MIS)¹ for the interpretation of retrospective reflective semi-structured interviews about health, and we apply a salutogenetic perspective to personal resources for maintaining health.² The focus is on Inner Strength (IS).

Background

IS has been described as a human resource that promotes well-being and is connected to health. The term has been used to describe several human phenomena such as accepting support from others,³ having a positive view of life and drawing strength from negative experiences,⁴ feeling connectedness,⁵ and enhanced quality of life.⁶ Experiences of IS have been shown to be related to opportunities to influence one's life, to live in close relation to others, to have a vivid imagination, and to see things from various perspectives.⁷ There are articles about positive relationships between IS and health among middle-aged women with chronic diseases.³ In a few articles

studying healthy middle-aged women,^{8–10} IS occurred as a theme, or part of a theme. None of these articles developed IS any further or had it as a key finding. Gustafsson and Strandberg¹¹ identified IS among caregivers who stayed healthy in wards where other caregivers became burned out. Referring to previous research about IS, they described IS as, for example, perceiving the many-sidedness of life, and looking on the bright side of life while being aware that life also has its dark sides.

Quantitative studies have shown that a higher degree of IS was associated with better health among older individuals, and that IS partly mediated the relationship between having a disease and self-rated health.^{12,13} IS was positively

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related to physical and mental health,¹⁴ to lack of signs of depression among older women,¹⁵ and to physical and mental health among older individuals with chronic illnesses.¹⁶

There are mainly two research groups that have studied IS: a North American group, the Roux group, and a European group, the Lundman group.¹⁷ The Roux group focuses on women's health, and their research has been used as a theoretical basis for studies^{6,18} and they have developed a questionnaire about IS.¹⁹ In this study, we used the MIS constructed by the Lundman group,¹ which is based on a meta-theoretical analysis of salutogenic concepts.²⁰

The MIS describes IS as composed of interrelated dimensions: *firmness*, *connectedness*, *creativity*, and *flexibility*.¹ *Firmness* is about stability, that is, standing solidly on the ground, having self-discipline, self-knowledge and integrity, and being aware of one's limits. *Connectedness* is about relationships, that is, having an ability to make and keep friends, being a good communicator and finding meaning in being involved with individuals, things, and surroundings. *Creativity* is about imaginative power, that is, being open and viewing challenges as something that can be overcome, struggling to influence what happens, and learning rather than sinking into passivity. *Flexibility* is about plasticity, that is, enduring, being able to extend oneself beyond the immediate and constricted view of self and the world, and being willing to change attitudes to be more accepting, tolerant and humble without losing one's foothold. In this article, we rename the dimension Flexibility in the original model as Stretchability, to emphasize the component of retaining one's footing while extending beyond a limited view of oneself and one's possibilities.

These dimensions reflect the basis for IS. The overarching understanding of IS was formulated thus:

To have IS is to be connected, to shoulder responsibility for oneself and others, to be creative, which is to believe in one's own possibilities to act and to make choices and influence life's trajectory in what is perceived as a meaningful direction. Being open to life circumstances is as essential as perceiving its challenges and believing that life is worthy of engagement. (p. 256)¹

IS also means being firm and flexible (now changed to stretchable), enduring and dealing with difficulties and adversities, and having the courage to continue striving to find life meaningful.¹

Based on the MIS, we developed the Inner Strength Scale (ISS),²¹ which has hitherto been used in studies among older adults.^{12–15} The model has also been used as a theoretical framework in studies with a qualitative design.^{7,22} In a study with a deductive approach among older women, IS was described as 'It is all up to you', 'Strive to be in communion', 'Make the best of the situation', and 'A balancing act'.⁷ In a study with an inductive approach among older individuals with deteriorating health, expressions of IS were formulated as 'Focus on possibilities instead of brooding', 'Face

and take an active part in care and treatment', and 'Be able to confront reality and pick up yourself again'.⁷ Both studies indicated that IS among older individuals is important for experiencing health and well-being.

Qualitative studies where middle-aged healthy women and men look back on their lives in a life-story perspective, that is, individuals talking about their lives in retrospect, are lacking. So are also studies that apply the MIS when analysing interviews that did not focus on IS. Therefore, the aim of this study was to explore how IS and its four dimensions are manifested in retrospective reflective semi-structured interviews in a group of middle-aged healthy women and men.

Method

Design

The methodological approach was qualitative deductive content analysis,²³ which implies the applicability of collected data to theories or models. Themes or categories are organized based on a theory or model (cf. Maine et al.²⁴). It is a move from theory to data or from a more abstract and general to a more concrete and specific level. The main strength is that the theory or model used can be further developed and to some extent validated.

Participant recruitment

The participants in this secondary analysis were a subsample of participants in the Northern Swedish Cohort – a prospective longitudinal cohort study. The cohort consists of all pupils (n=1083) in their last year of compulsory school (age 16) in all nine schools in a medium-sized town in Northern Sweden.²⁵ The cohort has been followed over time, mainly with questionnaires about health status and life circumstances. The principal investigator (A.H.) of the cohort study had had long-term contact as a researcher with all cohort members. All participants had received long-standing oral and written information about who she is and her research interests in relation to all earlier data collections. In addition, all cohort members had received popular-science reports from each follow-up. For this qualitative study, a subsample was selected in a purposeful way, in order to get as much variation as possible in relation to health status. The sample of this qualitative study consists of 5 women and 4 men around the age of 50 years.

Interviews

Semi-structured reflective interviews were performed by three senior researchers with long experience of qualitative interviews. The interviews were conducted in a calm and undisturbed environment. The principal investigator of the cohort study (A.H.) conducted six interviews. Two senior researchers performed two interviews each. The interviews, which lasted for 1–3 h each, focused on health. The participants were

Table 1. Descriptions of the characteristics of the four dimensions of Inner Strength in the Model of Inner Strength.¹

Firmness	Connectedness	Creativity	Stretchability
Having self-discipline, self-esteem, ego-strength, self-knowledge, and integrity	Being a good communicator and having an ability to make and keep friends	Being open and accepting events in life as experiences and challenges that are possible to overcome	Having an enduring, though dynamic, feeling to meet challenges and continue to strive when life is hard and demanding
Being aware of boundaries and viewing the world as predictable, structured and lawful	Having commitment, finding meaning in and being involved with people, things, and context	Having the ability to think and act in various adaptive ways	Having an ability to transform a personal tragedy into a meaningful experience
Having existential courage and ability to cope with stressful situations	Experiencing unity, peace, and being conscious about others and society	Having a predisposition to struggle to influence outcomes and to learn, rather than to sink into passivity and avoid chances	Having an ability to extend beyond the immediate or constricted views of self and the world

encouraged to reflect on important topics in relation to experiences of health. We were interested in highlighting whether IS could be identified in narratives, although it was not directly elicited. The interviews were tape-recorded and transcribed verbatim by a professional transcriber. As this is a secondary analysis, no participant checking was done for the current study. However, participant checking was an important part of the actual interviews.

Analysis

The dimensions of the MIS were used as the basis for the analysis, that is, firmness, connectedness, creativity, and stretchability. The characteristics of the dimensions are shown in Table 1.

First, we independently read the interviews to get a sense of the whole. Second, we extracted parts of the text that were interpreted as related to the MIS, that is, we identified meaning units, and placed them in a new document (about 23,000 words or 17.4% of all interviews). Parts of the text talking about, for example, the weather or current events in society were not included, as it was seen as small talk, and not related to the topic of the interview. Third, two of the authors (B.L., A.N.) separately coded the meaning units and brought the codes together. Thereafter, they were abstracted and merged into categories. When the category structure was completed, the contents were compared and reformulated into themes. The themes were thereafter allocated to one of the four dimensions of the MIS. When a theme could be referred to two dimensions, we referred it to the dimension which seemed most appropriate. To address the trustworthiness, particularly the dependability, we discussed the formulations of themes and their allocation to the different dimensions until consensus was achieved (cf. Graneheim and Lundman²⁶).

Ethical considerations

The participants were informed about the study both verbally and by letter, and gave their informed consent. They were ensured of their right to terminate participation in the study until data were analysed.²⁷

Findings

The themes in the MIS dimensions are described with illuminating quotations from all the interviewees. The quotations are italicized. The dimensions and the themes are shown in Table 2. The numbers after the quotations refer to the interviewees.

Firmness

The interpretation of Firmness in the interviews was formulated in four themes: Having drive to act, Being purposeful, Having trust in one's own competence, and Having a positive view of life.

The most prominent theme was Having drive to act, that is, tackling problems when they arise, problems in the family, for example, a child's drug problem, *We dealt quite firmly with it, I made sure it came to an end* (7), ending relationships that did not feel good, *It was my initiative to get a divorce, I decided it was time for that* (2), establishing a plan to avoid anticipated problems and difficulties, *Then we came up with a really good plan of action* (4), fighting for oneself, for others and for fairness, fighting to compensate for adversities in childhood, *I struggled through that and got on with my life* (1), fighting for others, *I had to battle (for my son)* (4) and *When it comes to the children, ... you fight till you drop and then a bit more* (9).

Another aspect of firmness was Being purposeful, that is, planning well and wholeheartedly carrying out what one has decided to do. This could mean continuing an education, entering the business world or completing a rehabilitation programme. Purposefulness included perseverance, that is, not giving up, *I didn't give up until I got a job* (2), will power, *I must do this, I must manage this otherwise I'll get nowhere, and I forced myself and it worked out fine* (7).

Trusting in one's own competence, that is, having self-esteem despite occasional fear, *I feel that I have strength somewhere, but at the same time I also have a lot of fears* (5), *I am so strong in myself, ... it's OK, I'll manage this* (9), not regretting what one has done, but instead seeing mistakes as a lesson, *I have nothing in life that I regret – of course I could*

Table 2. Overview of the dimensions and themes.

Firmness	Connectedness	Creativity	Stretchability
Having drive to act	Being in community	Changing unsatisfactory life situations	Balancing between various options
Being purposeful	Giving and receiving support	Seeing new opportunities	Extending oneself
Having trust in one's own competence	Giving and receiving care	Realizing dreams	
Having a positive view of life			

have done this or that differently – but I regret nothing. I am satisfied with life (2), having a sense of control over what happens and over one's life, and feeling proud of what one has accomplished, *I don't want to boast ... but I find it very easy to do things and I'm very good at doing things* (8). Being independent and self-sufficient, which could be self-selected or enforced, *I regard myself as rather independent* (9), *I ... was forced to make my own decisions ... I can look after myself* (2).

Having a positive view of life, that is, seeing challenges and opportunities instead of obstacles, *I feel that, when things happen, I want to see possibilities, not impossibilities* (9), making the best of every day, and finding something positive in every situation, *I try to find something positive in every situation* (2), seizing all glimmers of light, and not regretting, feeling guilt or pondering too much, *My rucksack has holes in the bottom* (9), and being realistic and thoughtful, *it didn't feel right and I sort of sat down and thought, do I want to be this person the rest of my life?* (2).

Connectedness

Connectedness is about sharing life with others, having the ability to receive and give support and care. This dimension was built up of three themes: Being in community, Giving and receiving informal social support, and Giving and receiving care.

One aspect of connectedness was Being in community, which was based on good contacts with significant others, such as spouses, children, parents, siblings and friends. It is about being happy with the one you live with, having similar values, sharing responsibilities, *like my wife, we have something in common that we went through* (7), and doing things together, *what I think is nice is that my partner's children and my children ... we do a lot together* (9), maintaining contacts with siblings, from childhood to adulthood, *we were always very close when we were growing up, we have had a really good relationship, always* (9), spending time with friends, *I have a best friend, I'll be meeting her at the weekend* (5), with neighbours, *I like meeting individuals and I think I'm quite good at that too* (6), with the intergenerational community, *Yes, her family are wonderful too, her mother and father, and her grandmother and grandfather* (1).

Another aspect of connectedness was Giving and receiving informal social support, which concerned support from and to the immediate family, *Yes, she's more of a support ... mother is secure too, she's very secure* (5), spouses and

children, *if you look back ... that you've been able to get support from ... Well, it's above all my husband* (4), friends and co-workers, *Very very good workmates who supported me when things were worst* (4). The third aspect of connectedness was Giving and receiving care to and from family members, others, oneself, and health professionals, protecting children and give them a good upbringing, *the children are by far the most important for me, they are the future because they will exist on this earth after us* (1), preparing well for children's future, *yes, you have a responsibility for the family you live with too* (8), caring about others than the family, *we are neighbours now so he has no children and no wife and nothing, so I go and visit him once a week* (1), and protecting oneself was another aspect of protecting important relations, saying no or breaking with conditions that do not feel good, or restricting the circle of friends, *they're nice people, we're not enemies, but we're not in touch ... 'Oh you never get in touch!' No, I've had a puncture socially* (9), taking care of oneself, *and then you have to learn how to say no, seeking help from health professionals, So I have felt confidence in doctors, yes I have. He has become like a father to me. He has understood my social handicap and all this* (5).

Creativity

Creativity is about taking initiatives to improve quality of life and being open to changing unsatisfactory situations for oneself and/or for others (in particular children). It means seeing new opportunities in the present and in the future, and taking action. This dimension was built up of the following themes: Changing unsatisfactory life situations, Seeing new opportunities, and Realizing dreams.

Changes in the current life situation could be: breaking up from unsatisfactory marital relationships, *it didn't feel right and I sort of sat down and thought, do I want to be this person the rest of my life? ... we just made the decision* (2), initiating new education, *I liked studying and learning new things, all the time you were learning new things and it was interesting* (5), changing jobs, *so it was a job to have, yes, you could get out into the world and see other places through your work* (1), finding new values in life, *it was as if a new world opened* (5).

Seeing new opportunities for oneself, *sort of roll up my sleeves and ask myself this question – now I have a choice, should I do this or not?* (9), finding new goals all the time, *then I try to find new goals all the time* (1), taking action,

sometimes despite uncertainty and fear, *maybe it's that excitement that attracts me ... do you dare look down the precipice?* (7). It was also a way to create opportunities for others, *take charge of activities and arrange bus excursions, all the kinds of things that older individuals enjoy, you know* (2), for the future: *precisely to be present as much as possible for her (the daughter) ... so I want to try to optimize her time, if I can, as much as possible* (7).

An important aspect of creativity was to try to realize dreams, for oneself, *for I've always wanted ... I like vehicles ... so I got a lorry licence and then the year after I got a bus licence ... and so I started to drive a bus* (3), and for children, *but then when it's time to go to a higher-level school, I'm not afraid to move abroad and get him into international schools* (1), *I can teach her quite a lot too, things she doesn't know, and show her* (8).

Stretchability

Stretchability is about plasticity and is described as endurance and the ability to extend oneself beyond the immediate and constricted view of self and the world, and willingness to change attitudes to be more accepting, tolerant and humble without losing one's foothold. It is about standing solidly on the ground, and at the same time opening up for new possibilities. It is also about enduring. This dimension was built on the following themes: Balancing between options and Extending oneself.

A balancing act could be to choose between various alternatives, to carefully consider the implications of various options, *for all the choices, when you make a choice in life, does life go in one direction? If you make a new choice then ... the whole time it's a balancing act. New doors open every time a door closes* (1), to turn negative experiences into something positive, *if things are difficult I try to make it positive, there's always something positive* (2).

To have safety lines that make it possible to go beyond oneself and do things sometimes despite fears, *There are so many lifelines so I intend to stretch them ... go as far as I can ... I believe, the more we dare, the more we can do* (7).

Discussion

We performed deductive content analysis of retrospective, reflective, and semi-structured interviews with middle-aged healthy women and men. The themes were mapped onto the dimensions of the MIS: Firmness, Connectedness, Creativity, and Stretchability (cf. Maine et al.²⁴). We discuss the dimensions, compare with other studies, make some theoretical connections, and discuss the relation to health.

The Firmness dimension was described in the MIS as being aware of boundaries, having self-discipline and existential courage. In our analysis, the most prominent expression of firmness was having a drive to act, that is, being purposeful, setting up, and striving to accomplish goals, and

trusting in one's own competence. This can be understood in the light of the fact that in the middle-age period, there are still opportunities to change unsatisfactory living conditions, for example work. In an article by Boman et al.,⁷ setting one's own goals and carrying out what one has planned also appeared in the Firmness dimension. Being self-aware has also been noticed as a component of IS among middle-aged women.²⁸ 'Having a positive view of life' together with 'Being thoughtful' was another theme in the Firmness dimension in our study. This optimistic aspect was also found by Viglund et al.,²² who formulated the theme: 'Focus on possibilities instead of brooding'. In a previous study about IS, the theme of 'Looking on the bright side of life without hiding from the dark' was formulated as an aspect of IS among very old women and men.²⁹ A positive view of life seems to be an ingredient in IS that is independent of age.

The Connectedness dimension described in the MIS included having commitment, finding life meaningful, and being involved with others. In our analysis, concern about children's well-being was the most prominent expression. This resembles the Erikson³⁰ theory of stages of life where middle-aged individuals are described as struggling with the basic strength of generativity versus stagnation. In our study, the participants were keen to promote their children's well-being. There were also expressions of being in community and belonging among extended family members and friends and between generations. Another aspect of Connectedness was the ability and wish to care for others and for oneself, and to accept help. Caring for oneself was often described as a prerequisite for being able to support others. In a study among older women, 'Striving to be in communion' was formulated as a theme, with subthemes such as 'Sharing everyday life with someone' and 'Doing well for others and being appreciated'.⁷ Connectedness thus seems to be an age-independent dimension of IS.

The Creativity dimension as described in the MIS included having a predisposition to struggle to influence life events and a belief in opportunities for growth. In our findings, this dimension was built up of 'Seeing new opportunities'; 'Realizing dreams'; and 'Changing unsatisfactory life situations'. During middle-age, when life has stabilized in many ways, and there are still opportunities for change. In our study, positive experiences such as seeing new opportunities, breaking up from unsatisfactory marital relationships, and realizing dreams were interpreted as being linked to the Creativity dimension. Creativity theorists like Kaufman³¹ also emphasize the potential positive outcomes of creativity across one's life span. He also discusses the reciprocal relationships between creativity and experiences of meaning in life.

Boman et al.⁷ described creativity among old women as 'Ability to make the best of the situation', which might mean overcoming one's reluctant body. This can be seen as an age-related aspect, since a weakening bodily function is common in old age.³² To keep going despite a failing body has also

been described as an aspect of IS in women suffering from chronic diseases.³³

In the MIS, the Stretchability dimension was described as a balancing act and extending oneself beyond constricted views of the self and the world. In our study, a balancing act was described as turning negative life events into something positive. To extend, oneself was facilitated by good relationships and rootedness in oneself and in one's family. The Stretchability dimension, to our knowledge, has not previously been described in the literature on IS.

In the MIS, it is emphasized that the dimensions are interrelated.¹ Although it was possible to identify and separate the dimensions and their themes in our analysis, there were also examples of interrelatedness between the dimensions. Belief in oneself and in one's opportunities in the firmness dimension may be based on good relationships between generations, which in turn creates room for openness to new opportunities in the form of creativity. To be stretchable can be seen as an aspect of firmness, and also, to stand with one's feet on the ground and to be open towards new life circumstances. These examples of interrelatedness resemble the linkage between identity and intimacy that is described in analyses of the Erikson theory of stages of life and interpreted as consistent with the assumption that earlier psychosocial stage resolutions play roles in later stages and ego strengths.³³ The interconnections identified between the dimensions of IS need to be further studied.

The way in which experiences expressed in the analysed interviews are referred to the dimensions of IS seems context dependent, which implies that IS takes different forms in different stages in life, and in different situations; in other words, it can be seen as age and situation dependent. In an interpretation of older women's narrated experiences of IS, 'overcoming a reluctant body', 'being humble about what life has to offer', 'having someone to share everyday life with', and 'being related despite living alone' were prominent themes.⁷ These context-dependent experiences can reasonably be related to the interviewees' old age, life situation, and health status.

Positive relationships between IS and health have been shown in studies among women with chronic diseases, where IS has been described as promoting personal growth and quality of life.^{3,4} A large cross-sectional study found IS to be a mediating factor between experiences of crises related to diseases and experiences of health,¹³ and that those with a higher degree of IS also had better self-rated health than those with a low degree of IS.

In addition to the importance of IS for experience of health in connection with diseases and everyday life problems, IS seems important for the prevention of ill health and for health promotion.^{34,35} In comparison with the earlier studies on IS, in our analysis aspects of firmness such as drive to act, willingness to change current life situation and preparedness to fight hard to achieve set goals were more prominent. Connectedness with others has been described as

an important aspect of IS in several studies, and in our findings, the importance of intergenerational relations was prominent. The participants in this study also had, naturally, more long-term plans for their future, compared to older individuals and those living with severe chronic illness.

Methodological considerations

To achieve credibility, it is crucial to find participants who have experiences of the phenomenon under study and are able and willing to talk about them.²⁵ The interviews focused on the participants' experiences of health in relation to important life events. No questions about IS were asked, which can be seen as an advantage, as it shows that it is possible to find expressions of IS in individuals' narratives even when this was not elicited. It can also be a disadvantage. If the interviewees had been put on the track about IS, they might have had more to tell about their experiences of having IS.

Some limitations need to be addressed. The participants in our study were recruited from a population-based cohort study. They all grew up and went to school in a middle-sized industrial residential town in Northern Sweden that was characterized by heavy industries and a high unemployment rate. Although participants moved to other parts of Sweden or abroad, this can make transference to other types of communities difficult.

Another limitation when using deductive analysis is a risk of finding expressions that fit the model to a greater extent, rather than data non-supportive for the model. To avoid threatening the dependability of the findings, we tried to bridle our pre-understanding, which is necessary for understanding the interviews,³⁶ by conducting a dialogue between the authors during the analysis. Another challenge in qualitative research is to make clear whose voice is heard particularly in the findings, the participants' voice, or the researchers' interpretation.²⁶ The authors' voice is above all evident in the thematizations within the dimensions and the participants' voice is put forward in the form of many pregnant quotations, which can strengthen the credibility of the findings. All participants are represented in the quotations, and all meaning units were covered in the themes, which strengthened the trustworthiness.

Conclusion

This study shows that findings from the retrospective, reflective, and semi-structured interviews about health with middle-aged individuals could be mapped onto the dimensions in MIS. It was possible to find expressions of IS in individuals' narratives, even in interviews that did not focus on or even mention IS. Furthermore, we found that the dimensions seem to be context independent as all dimensions could be identified in the interviews, while expressions of IS in the dimensions seem to be context dependent, that is, the healthy middle-aged individuals talked about other topics in a different way than older

individuals do. This indicates that IS can be identified in human beings' narratives if it is elicited in interviews.

Authors' Note

Anne Hammarström is also affiliated from Institute of Environmental Medicine, Karolinska Institutet, and The Stress Research Institute, Stockholm University, Stockholm, Sweden.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval

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