Basic Psychological Needs Satisfaction in Dutch Nursing Homes

Current Satisfaction of the Basic Psychological Needs of People in Somatic Departments:
A Multi-Perspective Qualitative Study in Dutch Nursing Homes

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Abstract

Background: Older adults who have reached the stage where they cannot take normal care of themselves will experience reduction in getting their needs and wishes satisfied. This raises the question of how being in a nursing home makes this better or worse. Based on the Basic Psychological Needs Theory, this research aims to explore present-day's fulfilment of autonomy, relatedness and competence according to perspectives of residents and their informal caregivers in somatic departments.

Method: A qualitative research was conducted with nine residents and their informal caregivers. Semi-structured interviews explored perceptions on current satisfaction, fulfilment, barriers and support of the three basic psychological needs in somatic departments.

Results: Contrary to expectations, results indicated that residents and their informal caregivers were generally positive about need fulfilment. Opportunities for basic psychological need fulfilment occured during care moments, eating moments and spare time. The results of this study present a detailed overview of the perspectives of residents and their informal caregivers on how, when and who fulfils the three basic psychological needs in somatic departments. Informal caregivers were also able to identify barriers of need fulfilment and made suggestions on how to support these needs.

Discussion: According to residents and their informal caregivers, the three basic psychological needs are intertwined in nursing homes and influence each other. Acces to nature was thought to be another important addition to the three needs. Current findings can be used in future research, intervention development and for updating measurement tools.

Keywords: *Basic Psychological Needs, Fulfilment, Satisfaction, Barriers, Support, Somatic Departments, Residents, Informal Caregivers.*

Samenvatting

Achtergrond: Ouderen die de fase hebben bereikt waarin ze niet meer voor zichzelf kunnen zorgen zullen minder voorzien worden van hun behoeftes en wensen. De vraag ontstaat hoe leven in een woonzorgcentrum dit beter of slechter maakt. Gebaseerd op de Basic Psychological Needs Theory wordt de huidige vervulling van autonomie, verbondenheid en competentie onderzocht aan de hand van perspectieven van bewoners en hun mantelzorgers op somatische afdelingen

Methode: Een kwalitatief onderzoek is uitgevoerd met negen bewoners en hun mantelzorgers. Semigestructureerde interviews hebben percepties in kaart gebracht over de tevredenheid, vervulling, hinderende factoren en bevorderende factoren per basisbehoefte in somatische afdelingen.

Resultaten: Tegen verwachtingen in lieten resultaten zien dat bewoners en hun mantelzorgers over het algemeen positief waren over de vervulling van de basisbehoeften. Mogelijkheden voor vervulling deden zich voor tijdens vrijetijd, zorg- en eetmomenten. De resultaten van dit onderzoek geven een gedetailleerd overzicht van de perspectieven van bewoners en hun mantelzorgers over hoe, wanneer en wie de drie basisbehoeften vervult in somatische afdelingen van woonzorgcentra. Mantelzorgers konden hinderende factoren identificeren en maakten suggesties ter bevordering van de basisbehoeften.

Discussie: Volgens bewoners en hun mantelzorgers zijn de drie basis psychologische behoeften met elkaar verstrengeld en beïnvloeden ze elkaar. Toegang tot natuur werd als een belangrijke toevoeging aan de drie behoeften bevonden. Huidige bevindingen kunnen gebruikt worden voor toekomstig onderzoek, de ontwikkeling van interventies en voor het bijwerken van huidige meetinstrumenten.

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An older woman not being able to make herself a cup of tea in the afternoon like she did when she was home. Sadness in knowing she would never go back to sit on the back verandah looking out over her garden. From the perspective of a resident in a nursing home, one is often faced with difficult changes. Decisions about personal care are taken over by staff, significant physical limitations arise, separation from one's partner occurs and a subsequent dependence on their social environment is experienced (Verbeek-Oudijk & Campen, 2017). Older adults who have reached the stage where they cannot take normal care of themselves will experience reduction in getting their needs and wishes satisfied. This raises the question of how being in a nursing home makes this better or worse.

The Basic Psychological Needs Theory by Ryan and Deci (2000) provides a framework describing that there are three needs important for a persons' well-being. The theory defines the need for autonomy as a sense of choice and volition in the regulation of behaviour. The need for relatedness is defined as feeling connected to and cared for by others. And finally, the need for competence is defined as the sense of efficacy one has with respect to both internal and external environments (Ryan & Deci, 2000; Niemiec, Ryan & Deci, 2010). These concepts apply to us all. However, how these fit into the context of nursing homes remains unknown. The example of the older woman possibly indicates a deficit in autonomy and competence as described by the Basic Psychological Needs Theory. She cannot decide when to have a cup of tea, she cannot provide it herself and she simply misses her old life. This example seems to illustrate that being in a nursing home reduces satisfaction of the basic psychological needs, but is this really the case?

Dutch nursing homes

Current life in Dutch nursing homes is experiencing a culture change. Not only do older adults wish to remain in the safety of their own home for as long as possible, Dutch policy ensures this culture (Verbeek-Oudijk & Campen, 2017). The main reason for admission to a nursing home is when someone requires permanent supervision (CIZ, 2017). This results in increased complexity and frailty in the cases that are committed (Verbeek-Oudijk & Campen, 2017). Simultaneously, more and more nursing homes are focusing on the well-being and overall functioning of their residents. Multidisciplinary work is becoming central, where nursing staff works together with physicians, psychologists, physiotherapists and even social workers (Custers et al, 2013). It appears that attention for the well-being of residents in Dutch nursing homes is increasing.

The Basic Psychological Needs Theory has already provided a promising framework for exploring well-being in nursing homes. Kasser and Ryan (1999) predicted overall greater well-being through support of autonomy and relatedness. Research by Custers et al. (2012) showed that the focus of caregiving in nursing homes should be on actual support of autonomy, relatedness and competence while also highlighting the individual differences in the needs of residents. Ferrand et al. (2014) found a relation between higher satisfaction of the basic psychological needs in nursing homes and higher levels of purpose in life and personal growth. These studies indicate that the three basic psychological needs are unecquivocaly important in the context of nursing homes.

Needs in somatic departments

Definitions provided by the Self-Determination Theory on the three basic psychological needs are general, and may not apply directly to nursing home environments, let alone somatic departments. These concepts do, however, form the basis of several researches. Custers et al. (2013) summarize that that residents are generally optimistic and satisfied. On the other hand, emphasis is put on the three to four times higher depression compared to those living in the community (Jongenelis, 2004). These findings illustrate the great deal of discrepancy found in the literature on somatic departments (Guse & Masesar, 1999; Mozley, 2017; Westerhof & Tulle, 2007). Additional research should therefore be considered essential.

Measuring these needs has, however, already been attempted in somatic departments with various questionnaires, such as subscales of the Intrinsic Motivation Inventory (1989), the Need for Relatedness Scale (1998), the General Need Satisfaction Scale (2003) and more. An important sidenote is that these scales have not actually been properly tailored to this specific group. Consequently, inferences made by such studies using these questionnaires might have to be disregarded. It appears, for various reasons, necessary to expand and discuss these concepts for the nursing home situation, specifically for the somatic department.

Aim of the study

By exploring the experiences of residents and their informal caregivers, the present study aims to close the gap between scientific assumptions and the current perceived satisfaction of the basic psychological needs. To crystallize these concepts in the context of somatic departments, the current study focuses on investigating the perspectives of older adults residing in somatic departments and the perspectives of their informal caregivers. Inclusion of perspectives of informal caregivers is due to their key role in the lives of residents in nursing homes. According

to Church et al. (2015), informal caregivers play an increasingly essential role in the life of older adults. They help with all matters concerning day tot day life in nursing homes and are often confided in by the resident. This broad viewpoint, however, often goes by unnoticed. Furthermore, several researches have have found catergorization of daily life in nursing homes to fall into three possible categories; during care moments, during eating moments and during spare time (Taft Lois, 1985; Foti & Koketsu, 2013). Finally, in line with suggestions made by Custers et al. (2013), concrete situations in daily life provide excellent examples for exploring need fulfilment. Summerizing results into formulation of the following research question:

How do residents of somatic departments in nursing homes and their informal caregivers perceive the fulfilment of autonomy, relatedness and competence during care moments, eating moments and spare time, in terms of concrete daily situations?

Method

The research question was answered by conducting qualitative research in somatic departments of Carint Reggeland, an organisation with multiple nursing homes in the Netherlands. Semi-structured interviews were held with nine residents and nine of their informal caregivers about the fulfilment of autonomy, relatedness and competence outlined by the Basic Psychological Needs Theory by Ryan and Deci (2000)

Participants and procedure

Permission for data collection was granted by the management of Carint Reggeland. In total, nine residents from somatic departments of a Dutch nursing home and nine informal caregivers took part in the current study. The criteria for exclusion were communication-problems due to hearing loss or apraxia, mild to extreme cognitive disability and absence of a cooperative informal caregiver. The eligible participants were initially approached by nursing staff. After verbal consent was given by the resident and their informal caregiver, the researcher received contact details. Participants received an informational letter and were visited by the researcher for acquaintance. This also helped create a safe environment for participants. A written consent was signed and the interview was held individually. Before each interview, an identification code was assigned to each participant, group R indicating residents and group I indicating informal caregivers, followed by a number linking the resident to his or her informal caregiver. Average duration of an interview was 60 minutes, with a possible deviation of twenty minutes. Datacollection ranged from October 2017 till January 2018. All interviews were transcribed.

Approval for the present study was granted by the faculty committee of Ethics of the University of Twente.

Interview schedule

The semi-structured interview was guided by a thematic protocol tailored to the specific group. The interviews took a directive approach towards concrete daily situations. The interview began with a general, yet overall informing question of how residents experienced living in their department. The protocol was then divided into three topics; autonomy, relatedness and competence. For each topic, a definition of the terminology was provided on a paper card. All topics were thereafter subdivided into six main questions. First, the participant was asked to discuss the definition. They were then asked to provide an everyday example where the need was fulfilled. An example was also asked of situations without fulfilment of the need. The researcher tried to elaborate on the fulfilment by asking the participant to recall specific situations. The researcher tried to extract as many examples on fulfilment as possible using post-it's. The three most important examples, as chosen by the participant, were elaborated. Once this exercise was finished, the informal caregivers were asked to provide more ideas on supporting the topic. Finally, both groups were asked about their personal satisfaction of the current discussed basic psychological need, by means of a grade ranging from one until ten. These questions were repeated for all three basic psychological needs. Concluding the interview, demographics were discussed.

Analysis

The transcriptions were deductively explored case by case, followed by an inductive analysis on the entire dataset. First, utterences were identified and organized into three main categories: autonomy, relatedness and competence. This was followed by the assembly of coding sheets which subsequently grouped the coded utterances into three subcategories: during care moments, during eating moments and during spare time. After categorization, the results were reported into overviews with concrete descriptions of the fulfilment per basic psychological need. Data management and coding was performed using Atlas.ti, version 8.1.2. Regarding demographics, an independent samples t-test was performed with SPSS, version 21.

Results

The purpose of the interviews was to investigate how each of the three basic psychological needs is currently satisfied in somatic departments with perspectives of residents and their informal caregivers. Data was collected from 28 individuals, eighteen of whom were used in the present study. The demographics of the participants are shown in Table 1.

Table 1

Participants' demographics

	M ± SD	Median (min-max)	n
Residents			9
Age in years	89.1 ± 3.1	88.0 (86.0 – 95.0)	
Gender			
Male			2
Female			7
Length of institutionalization in months	37.0 ± 31.6	30.0 (4.0 – 84.0)	
Family			
Children	2.2 ± 2.4	2.0 (0.0 – 8.0)	
Informal caregivers			9
Age in years	61.1 ± 3.5	61.0 (56.0 – 68.0)	
Gender			
Male			2
Female			7
Duration of caregiving in months	133.0 ± 118.6	96.0 (110 – 396.0)	

For each of the three basic psychological needs, general satisfaction is initially discussed by use of grades, ranging from one to ten. An overview of daily situations is then presented concerning the fulfilment of the regarding need followed by an overview of situations without fulfilment. Next, perceptions of residents are compared to perceptions of informal caregivers. Finally, barriers to the fulfilment of the regarding need are discussed followed by suggestions for improvement. Autonomy is discussed first.

Autonomy

In general, participants seemed content with the amount of autonomy present in nursing homes. Residents awarded autonomy need fulfilment with an average of 8,1 (SD = 0,8) and informal caregivers awarded autonomy need fulfilment with an average of 7,9 (SD = 0,8). For each of the three daily moments, residents and their informal caregivers could identify several ways in which autonomy is respected or enhanced, shown in Table 2a, and several ways in which autonomy is hindered or obstructed, shown in Table 2b.

Table 2a

Situations with autonomy need fulfilment in somatic departments

	Residents can	R (n)	I (n)	Exemplary quotes
During care moments	Make their own day schedule	3	4	R: She was a little late, she came in at two pm, but I had an interview. That wasn't convenient, so she's coming back tomorrow.
	Receive flexibility in options from caregivers	1	2	I: At first, they said we're going to help wash you, and he said no, I'm going to do that myself.
	Choose whether to undergo treatment	2	1	R: Well, then the doctor asked me if I still wanted to receive therapy
During eating moments	Choose what to eat	4	7	R: Well you can choose, but they write it down. Ham, or chicken, or apple purée, or beets with potatoes, whatever.
	Choose where to eat	1	5	I: He has that choice, which is important, to not only be able to eat in the hall. He eats at home. He has that choice, which is important.
	Choose when to eat	1	3	R: I got the choice; would you like to have dinner in the evening or earlier, would you like to have it in the afternoon?
During spare time	Decide their own participation in activities	7	9	I: if she doesn't want to go, she'll choose not to go (..) with Easter activities, she likes those and she decides for herself to go
	Make their own day schedule	5	8	I: she's independent timewise, that's very important for her I think, that she can decide whether she wants visitors to leave.

Note. R = number of residents who mentioned the specific subject; I = number of informal caregivers who mentioned the specific subject

Table 2a answers the question of when autonomy need fulfilment occurs in somatic departments of nursing homes, according to residents and their informal caregivers. A common view amongst participants was that autonomy need fulfilment in somatic departments is definetly satisfied. Informal caregivers were able to think of more situations than residents themselves. Table 2a shows that these situations mainly revolve around residents making choices about their lives or daily schedules. Interestingly, most participants mentioned autonomy to occur during spare time of the resident. What else stands out is that all examples given by residents were also mentioned by informal caregivers and vice versa, the largest difference beging residents choosing where to eat. Another broad theme that emerged is that the fulfilment of this need can mainly be attributed to the participation of the resident. It seems nursing staff currently provides residents with various opportunities in which they are expected to actively participate, i.e. make their own choices or decisions.

Table 2b

Situations without autonomy need fulfilment in somatic departments

	Residents cannot	R (n)	I (n)	Exemplary quotes
During care moments	Deviate from the set schedules	5	7	I: with showering, that's on Thursdays in her case. It's not easy to change, because there are other people too.
	Reschedule medical appointments	2	4	R: well the doctor will be here at twelve or one pm, you just have to wait for him.
During eating moments	Choose when to have dinner at the restaurant	1	4	I: I think dinner, that's at a set time, she doesn't seem to have any issues with that though.
During spare time	Go unsupervised during risky activities	3	1	R: the nurses don't want me to walk by myself, they're too afraid that I will fall.
	Exceed the curfew of eleven pm.	0	3	I: the only restriction I can think of is at eleven pm, then they close the main doors and shut the building.

Note. R = number of residents who mentioned the specific subject; I = number of informal caregivers who mentioned the specific subject

Table 2b answers the question of when autonomy need fulfilment does not occur in somatic departments of nursing homes, according to residents and their informal caregivers. Informal caregivers could, again, think of more situations than residents themselves. Autonomy was mentioned to be absent during care moments most frequently by both residents and their informal caregivers. More specifically, not being able to deviate from care schedules was mentioned most frequently. Regarding spare time, experiences differed between residents and their informal caregivers. Residents mentioned supervision during risky activities to hinder their sense of autonomy most, whereas more informal caregivers mentioned the nursing homes' end time as a limitation. A broad theme throughout all situations is that obstruction of fulfiling autonomy can mainly be attributed to safety precautions of the nursing home.

Comparing perspectives on autonomy

When comparing perspectives, Table 2a and Table 2b reveal that both residents and their informal caregivers frequently mentioned autonomy during spare time to be present in their departments and mentioned noticing less autonomy during care moments. What else stands out is the difference in priorities of autonomy need fulfilment which seems to exist. Informal caregivers seem to perceive more autonomy during eating moments than residents but also perceive less autonomy during eating moments under circumstances such as dining in the restaurant. Table 2a and Table 2b also clearly show that only two situations were mentioned more frequently by residents than informal caregivers. The first being given the choice whether to undergo treatment and the second of not being allowed to participate in activities without supervision. Finally, there is only one situation where informal caregivers perceived autonomy

need fulfilment to be absent which was not mentioned by the residents. As can be seen in Table 2b, exceeding the end time of eleven pm during spare time was not mentioned by residents.

Barriers to autonomy

Perspectives of informal caregivers were also explored for possible barriers hindering autonomy need fulfilment. Suggestions were combined and subdivided into three categories: factors related to the resident self, factors related to the nursing staff and factors related to nursing home regulations or technologies. Regarding residents, they were mentioned to not want to be difficult or rude in their requests, not to be able to have constructive discussions about their dislikes and for having high standards whilst not wanting to compromise to the possibilities of the nursing home. In the case of nursing staff, harming factors were mentioned to be feeling a high sense of responsibility in accidents, having a heavy workload, having only one night nurse after eleven pm and persuading residents despite a decline. Other reported limitations to the fulfilment of autonomy were not having an informal caregiver, sharing a living room or terrace, having to abide to a set schedule for daily care and general regulations for hygiene narrowing down choices in, for instance, meals.

Suggestions for improving autonomy

Informal caregivers also shared suggestions for improving the fulfilment of autonomy in somatic departments. These suggestions were also combined and subdivided into three categories: factors related to the resident self, factors related to the nursing staff and factors related to nursing home regulations or technologies. Concerning what residents could do or keep in mind, they could stick up for themselves, clearly communicate their preferences and try to reach a state of comfort. Nursing staff was mentioned to be able to improve autonomy by sympathizing with the residents, convincing them that they are in no way a burden, respecting a clear 'no' yet stimulating them to try new things, asking questions despite knowing the answer and finally, radiating a sense of calmness and ease. Other suggestions regarded certain appliances or arrangements, such as the dingdong[1] which makes it possible for residents to time their own dinner. Informal caregivers also suggested that the elderly taxi provides a larger range for residents to travel, a spacious apartment accommodates different types of activities or privacy, scheduled care gives a structured representation of one's wishes or expectations and finally, a menu provides residents with a choice of what to eat.

[1]Nursing home service which provides delivery of easily warmed-up meals

Relatedness

A variety of perspectives were expressed but overall contentment of perceived relatedness in somatic departments of nursing homes seemed decisively positive. Residents awarded relatedness need fulfilment with an average of 8,3 (SD = 1,3) and informal caregivers awarded relatedness need fulfilment with an average of 8,2 (SD = 0,4). For each of the different moments, residents and informal caregivers could identify several ways in which relatedness is respected or enhanced, shown in Table 3a, and several ways in which relatedness is hindered or obstructed, shown in Table 3b.

Table 3a

Situations with relatedness need fulfilment in somatic departments

	Residents are	R (n)	I (n)	Exemplary quotes
During care moments	The centre of attention	4	6	R: they will do anything you ask, if they can they willl do it (..) I would gladly become 100 years old here.
	At home in their living department	3	5	I: yes, she feels at home here in her department.
	Trusting towards the caregivers	3	2	R: they look after me here, I don't have to worry or be afraid of burglars or thunderstorms. I'm not afraid.
	In contact with their caregivers on special occasions	2	2	I: a great example is New Year's Eve, where she watched the fireworks with a caregiver. She had such a wonderful night, she still talks about it.
During eating moments	In contact with fellow residents	5	5	I: It's a hall filled with people with this and that, but we saw that he immediately became part of the group.
	In contact with caregivers	3	1	I: then they bring coffee, that's a moment with contact, around half past seven or eight am.
During spare time	In contact with his/her family	8	9	I: We [family] never let a day go by where she would feel alone.
	In contact with fellow residents	9	6	R: well, I have great contact with the people I'm with here.
	Part of one-on-one contact	4	5	R: I can't see anymore, so she helps me with all sorts of things, she sits down, reads to me, sits next to me, together.

Note. R = number of residents who mentioned the specific subject; I = number of informal caregivers who mentioned the specific subject

Table 3a answers the question of when relatedness need fulfilment occurs in somatic departments of nursing homes, according to residents and their informal caregivers. Participants were able to identify multiple situations in which they experienced relatedness. Strikingly, almost half of all the examples were during care moments with the nursing staff. Another interesting pattern is that all participants, both residents and their informal caregivers, mentioned experiencing relatedness during spare time. The results show that all residents experience having contact with fellow residents and all informal caregivers experience residents having contact with family during spare time. What else stands out is that residents and informal caregivers provided the same situations of relatedness fulfilment. Almost all situations are mentioned by roughly the same number of residents as informal caregivers. An unecquivocal theme in the results is that relatedness need fulfilment can mainly be attributed to a residents'

active participation in seeking contact with others such as the nursing staff but also with family or fellow residents.

Table 3b

Situations without relatedness need fulfilment in somatic departments

	Residents are not	R(n)	I(n)	Exemplary quotes
During care moments	Accompanied while waiting for care	1	2	I: she hates having to wait in a queue to be brought to her table by the nurses, they have to wait lined up.
	Closely connected to the nurses	0	3	I: she's free to be herself with me, but she afraid to ask anybody else about those things.
	Approached in a clientcentred manner	0	2	I: usually it's come on, let's go, done, hurry up, on to the next one.
During eating moments	Accompanied in their own room	0	3	I: She prefers to eat by herself, she knows it's possible to eat together, but she enjoys being alone in her room.
During spare time	Visited by anyone	6	7	R: yes, whenever a day goes by when nobody visits, it's a bit quiet, but you get used to it though.
	In contact with their family	5	5	R: I've been alone for seventeen years, my husband passed away, so sure, but in my other apartment I was also alone.

Note. R = number of residents who mentioned the specific subject; I = number of informal caregivers who mentioned the specific subject

Table 3b answers the question of when relatedness need fulfilment does not occur in somatic departments of nursing homes, according to residents and their informal caregivers. Residents were not able to provide many situations in which they did not feel their need for relatedness was satisfied. Informal caregivers were able to describe more situations without relatedness. The few situations given by residents mainly take place during their spare time. The same was true for informal residents. They did however, give several examples where they experienced relatedness to be absent during care- and eating moments. It seems nursing staff and fellow residents play a large role in the fulfilment of relatedness. Furthermore, Table 3b also shows that the situations described by the participants mainly occur when the resident is alone with no one around. Concerns regarding dissatisfaction of relatedness can mainly be attributed to external parties, such as a lack of visitors, being left alone and a task oriented approach.

Comparing perspective on relatedness

What is striking about Table 3a and Table 3b is that residents and their informal caregivers both mention situations during spare time more in comparison to other moments, residents being in contact with fellow residents during spare time most frequently. In addition, the number of residents mentioning situations regarding absence of relatedness during care and eating moments is dramatically lower. The situations in which an absence of relatedness is detected in care moments and eating moments, are mainly limited to observations by the informal

caregivers. Furthermore, the results show that residents feel a sense of relatedness when in contact with people but when left alone they report feeling alone. A strong interpretation could imply that they want both meaningful relationships and someone in their physical vicinity.

Barriers to relatedness

As formerly described in the section on autonomy, perspectives of informal caregivers were explored for possible barriers hindering relatedness need fulfilment. Suggestions were combined and subdivided into three categories: factors related to the resident self, factors related to the nursing staff and factors related to nursing home regulations or technologies. Regarding residents, they were mentioned to be ashamed in company, express themselves negatively towards others, have outlived their generation, have superficial contact with fellow residents due to physical and mental limitations and finally, to be too modest to want to share their burdens. In the case of nursing staff, harming factors were mentioned to be keeping their distance from family matters, having many administrative obligations, not being able to speak in the same dialect as the resident and preferring to spend quality time in larger companies instead of one-on-one. Other reported limitations to the fulfilment of relatedness were having a small family, other residents dying and being replaced with new residents, sharing a small living area, the distance to the nursing home being too large for visitors and the distance to the restaurant being too large for residents.

Suggestions for improving relatedness

Informal caregivers also shared suggestions for improving the fulfilment of relatedness in somatic departments. These suggestions were combined and subdivided into three categories: factors related to the resident self, factors related to the nursing staff and factors related to nursing home regulations or technologies. Concerning what residents themselves could do or keep in mind, they could try showing interest in one's surroundings, expressing oneself in a positive manner, be willing to try and do things, being compassionate and attempt having genuine and deep connections with others. Nursing staff was mentioned to be able to improve relatedness by approachability through jokes, helping the resident express negativity, communicating while at the same physical height, stimulating residents to meet each other whilst helping them with something to talk about, speaking in the same dialect and finally, by using touch as body language. Other suggestions included poetry which could function as support in difficult times, television and books which would prevent loneliness and making agreements which would prevent misconceptions and resentment between parties.

Competence

In general, participants seemed reasonably content with the amount of competence present in nursing homes. Residents awarded competence need fulfilment with an average of 7,3 (SD = 1,9) and informal caregivers awarded competence need fulfilment with an average of 7,0 (SD = 2,6). For each of the different moments, residents and informal caregivers could identify several ways in which competence is respected or enhanced, shown in Table 4a, and several ways in which competence is hindered or obstructed, shown in Table 4b.

Table 4a

Situations with competence need fulfilment in somatic departments

	Residents can	R(n)	I(n)	Exemplary quotes
During care moments	Assist in their own (light) care	5	4	R: they give me a washcloth so I can wash myself
	Call for help when necessary	2	4	R: it's good, because I can simply press a button, and the nurses will come.
During eating moments	Eat independently	7	2	R: I can eat it by myself if the nurses have mashed it.
During spare time	Mentally participate in activities	5	9	I: twice a week she goes to the brain gymnastics activity, she's really good at it.
	Physically participate in activities	4	6	R: Walking is important yes. Now more than ever, since I'm still able to.
	Host visitors in their own space	2	4	I: She says it's like dusting, it's more about having control and staying active (..) for as long as she's able to.

Note. R = number of residents who mentioned the specific subject; I = number of informal caregivers who mentioned the specific subject

Table 4a answers the question of when competence need fulfilment occurs in somatic departments of nursing homes, according to residents and their informal caregivers. Residents seemed to generally experience competence when taking part in activities or trying to do things with the help of others. Interestingly, most situations where competence need fulfilment was said to be present in the lives of residents, were during spare time. In fact, all informal caregivers mentioned residents mentally participating in activities as an example. Residents themselves seemed to emphasize being able to eat independently as situation in which they felt competent. However, each of the situations in Table 4a were mentioned by at least two residents and two informal caregivers, illustrating the overall agreement on al given situations. A theme which can be detected, is the general emphasis on the physical aspect. Only one non-physical situation was mentioned.

Table 4b

Situations without competence need fulfilment in somatic departments

	Residents cannot	R(n)	I(n)	Exemplary quotes
During care moments	Assist in their own (heavy) care	4	3	I: She can't do anything, she has help for everything (..) she always needs someone around her, because she can't do it on her own
During eating moments	Prepare their own meal	3	3	I: he used to always cook, I think he's accepted it now, but he's disappointed that he can't do it anymore.
	Eat independently	1	3	R: I can't eat by myself any more
During spare time	Physically participate in activities	6	6	R: I would like to be able to do everything, vacuum and what not, but I can't anymore
	Mentally participate in activities	5	6	I: she confuses dates and things like finances aren't possible for her anymore.
	Host visitors in their own home	2	1	R: I hate the fact that, when there are visitors, I can't make them coffee. I just can't do it, it's very disappointing.

Note. R = number of residents who mentioned the specific subject; I = number of informal caregivers who mentioned the specific subject

Table 4b answers the question of when competence need fulfilment does not occur in somatic departments of nursing homes, according to residents and their informal caregivers. Most concerns regarding the absence of competence need fulfilment were about the decreasing physical capabilities of older adults. However, only one example was given during care moments. Residents and their informal caregivers only experience an absence of competence when residents cannot help during their daily care. It also appears participants lacked a feeling of competence during eating moments, when they are not able to cook or eat independently. Furthermore, the emphasis was on the sparetime activities of the residents. During this daily moment, residents and their informal caregivers were able to think of the most situations in which they did not experience competence. Most participants agreed upon the absence of feeling compent during physical and mental activities.

Comparing perspectives on competence

What becomes clear from Table 4a and Table 4b is that the focus of residents and their informal caregivers lies on what the residents can or cannot do physically. The results show that mental abilities are mentioned but in a smaller frequency. What else stands out in Table 4a and Table 4b is that there is more disagreement between groups. The frequency differs in which residents and informal caregivers mention certain subjects. Most residents mention being able to eat independently as a situation in which they experience competence, whereas in Table 4b can be seen that some informal caregivers disagree. What else is interesting, is that most notions of experienced competence are similar to those mentioned being absent in somatic departments.

Barriers to competence

As formerly described in the section on autonomy, perspectives of informal caregivers were also explored for possible barriers hindering relatedness need fulfilment. Suggestions were combined and subdivided into three categories: factors related to the resident self, factors related to the nursing staff and factors related to nursing home regulations or technologies. Regarding residents, they were mentioned to be ashamed of their incompetence, have a negative self-image, be afraid of falling, have decreasing mental and physical health with increasing dependence and to be too eager and pass one's own limits. In the case of caregivers, harming factors were mentioned to be taking over actions due to overprotection and eagerness to please. Other reported limitations of the fulfilment of relatedness were nervousness in the presence of spectators, furniture not suited to one's capabilities, the outside temperature being too hot and having a small and incomplete kitchen.

Suggestions for improving competence

Informal caregivers also shared suggestions for improving the fulfilment of relatedness in somatic departments. These suggestions were combined and subdivided into three categories: factors related to the resident self, factors related to the nursing staff and factors related to nursing home regulations or technologies. Concerning what residents themselves could do or keep in mind, they could try accepting the loss of functionality and be willing to receive help, be proud of oneself, think of new ways to achieve things, stay realistic about goals, not give up when the going gets tough and eat healthy with plenty of exercise. Nursing staff was also mentioned to be able to improve competence by rationalizing one's shortcomings, asking the resident to perform as much of his or her own care as possible and near to forcing residents to try difficult actions on their own during waiting moments. Other suggestions regarded certain appliances or arrangements to have a stimulating effect on competence need fulfilment. An elevated plate side makes it easier to eat, a phone provides a means for staying in contact with others, privacy makes trial and error less scary, walking aids make moving and exercise easier, drinking cups prevent spilling, ergonomic chairs help residents get up from sitting position and glasses make reading possible.

Discussion

The results show that residents are generally positive about the fulfilment of their basic psychological needs. They grade their need fulfilment with respectively 8.1, 8.3 and 7.3 for autonomy, relatedness and competence. These positive grades, however, are not in line with previous research. Contrary to expectations, these results imply that residents of somatic departments in nursing homes do, in fact, feel a sense of choice and volition, feel connected to and cared for by others and feel a sense of efficacy with respect to both internal and external environments. These results differ from those of, for instance, de Klerk (2005), who found lower levels of satisfaction in residents of somatic departments. They held a nationwide questionnaire asking residents of Dutch nursing homes on a general level how satisfied they were with their life, their choices, their relationships and more. It was expected that adapting the questions to more specific and concrete situations would result into even lower levels of satisfaction (de Klerk, 2005). This however, was not the case in the current findings. A possible explanation for this difference in outcome could be the timeframe of the two researches. The nationwide research was held over ten years ago. Since then, Dutch policies have changed, demanding a more multidisciplinary and clientcentred approach from nursing homes, possibly improving current levels of satisfaction (Verbeek-Oudijk & Campen, 2017).

The results also show that informal caregivers generally are slightly less positive about the fulfilment of residents' basic psychological needs. They grade need fulfilment in somatic departments with respectively 7.9, 8.2 and 7.0 for autonomy, relatedness and competence. This is consistent with findings of Custers et al. (2013) who also found residents to rate their own need fulfilment higher than observers do. They describe this differing perspective as a difference in the residents' needs and wishes according to the resident versus the observer (Custers et al, 2013). Current results show that this difference mainly occurs in situations where need fulfullment is not experienced. More specifically, where residents do not generally mention the same situations as their informal caregivers. However, when describing situations where residents are satisfied with their need fulfilment, there seems to be more agreement. This supports another notion of Custers et al. (2013) that observers seem to be more critical than residents about satisfaction of their basic psychological needs.

Fulfilment of the basic psychological needs

Concerning the current fulfilment of the basic psychological needs in somatic departments of nursing homes, residents and their informal caregivers were able to provide concrete daily situations in which they did and did not experience autonomy, relatedness and competence. As

expected, these opportunities for need fulfilment were found to be during care moments, eating moments and spare time. This study found that most participants perceived being given the choice to participate in activities and being able to plan their own day as the most positive experiences of autonomy. For relatedness, this was being in contact with family and fellow residents during spare time and participants finally mentioned positive feelings of competence during mental activities most. The situation mentioned most in which residents were said to experience little autonomy, was receiving care to a set schedule. For relatedness, this was during days with no visitors. Finally, for competence this was not being able to physically participate in activities. These are merely situations mentioned most frequently in this study and are already more detailed and concrete than other researches on need fulfilment in nursing homes. For instance, findings of Schenk et al. (2013) state that self-determination and autonomy are important aspects for quality of life in older adults. However, they did not further investigate these factors, as did the present study.

Furthermore, participants made an important sidenote that they believed the basic psychological needs to be mutually dependant on each other. The informal caregivers especially mentioned them to be related. Several participants in this research mentioned situations in which one need was related to another. For instance, residents seemed to have more choices when they were physically able to do more. They also mentioned that being given choices was beneficial for residents' sense of relatedness with the person providing the choices. As discussed by Ryan and Deci (1991), autonomy, relatedness and competence can be considered complementary, but how the needs are related exactly, should be taken into consideration in future research.

Room for improvement

Besides exploring the current satisfaction of the basic psychological needs in somatic departments of nursing homes, informal caregivers were also asked about barriers or obstructions they noticed in the basic psychological need fulfilment. A broad theme that emerged over all three needs was that residents remained passive, in the sense that they did not communicate, or want to communicate, their wishes or needs well enough for their environment to act upon. Furthermore, the heavy workload of nursing staff and their tendency to overprotect the resident was regarded an obstacle too. Rules and regulations from the nursing home, such as a careschedule and hygiene precautions also seemed to hinder need fulfilment. Suggestions for improving residents' need fulfilment were subsequently made by the informal caregivers. They generally stated that residents could try adopting a more active attitude towards people,

activities and their own care. Nursing staff was said to improve general need fulfilment through clear communication and stimulation in their interaction with residents. Finally, different technologies and ideas were provided which were thought to improve needfulfilment. Many possibilities were suggested, all of which can be used for different wishes of different individuals.

These possibilities should be integrated in activity lists used in nursing homes which try to figure out what would suit a specific resident. An example is the Pleasant Activities List (Roozen et al, 2008). This questionnaire uses 139 concrete examples of activities to cluster the preferences of the resident into categories, such as 'social activities' or 'passive, relaxing activities'. Categorization of preferences into seven scales is where the questionnaire ends. It could, however, extend it's use by providing suggestions on how to realize these individual preferences per subscale, as illustrated in Table 5.

Table 5

Suggestions for somatic residents per subscale of the PAL (Roozen et al, 2008)

Subscale PAL	Suggestions	Basic psychological need
Social activities	1.Make jokes	Relatedness
	2.Help with discussion topics between residents	Relatedness
Sensation seeking activities	1.Stimulate trying difficult things when having to wait for help	Competence
Domestic activities	1.Set up a Dingdong[a]	Autonomy
	2.Arrange the appartment spaciously	Autonomy
	3.Provide a menu of the day/week	Autonomy
	4.Use an elevated plate to facilitate independent eating	Competence
	5.Arrange drinking cups to facilitate independent drinking	Competence
Culture, science and travel	1.Arrange easy acces to an elderly taxi	Autonomy
	2.Find suitable glasses or magnifying glasses for reading	Competence
Passive, relaxing activities	1.Switch on the tv or radio	Relatedness
	2.Arrange ergonomic chairs to help relax	Competence
Sportrelated activities	1.Let them perform as much of their own daily care as possible	Competence
	2.Arrange walking aids to help them get around	Competence
Intimite, personal attention	1.Speak in the same dialect	Relatedness
	2.Help express negativity	Relatedness
	3.Communicate at the same (physical) height	Relatedness
	4.Use touch as bodylanguage	Relatedness
	5.Read poetry (together)	Relatedness
	6.Convince them that are not a burden	Autonomy

[a] Nursing home service which provides delivery of easily warmed-up meals

As can be seen in Table 5, many of the suggestions made by informal caregivers can be used as tools by nursing staff to help residents with their preferred activities. Whichever preference the PAL would indicate for an individual, nursing staff could focus their approach according to the suggestions. This is merely an example of the possible additions current results could add to existing scales, lists, tests and interventions.

Furthermore, the current study suggests that other practical implications could commence with focusing early interventions on the aspects of dissatisfaction of the basic psychological needs for reaching quick results. It is, however, recommended focusing

interventions on all situations for long term improvement of experienced well-being. In general, the results show an overall necessity of residents having an active attitude. Interventions could be developed towards guiding residents in adopting a mentality where they learn to actively seek fulfilment of their needs.

Fixing the tools

Findings of the present study support the conceptual premises that the Basic Psychological Needs Theory can be used for measurement and intervention development in nursing homes. However, current measurement tools of psychological needs in nursing homes should be adapted to this context by implementing the aspect of concrete daily situations. Many nursing homes use different measurement tools in assessing a residents' quality of life, or well-being (Teresi et al, 2017). However, very little was found in the literature about assessing the three basic psychological needs for older adults without dementia. The Mental Health Continuum-Short Form is most commonly used in Dutch research, measuring emotional, social and psychological well-being. It consists of fourteen general questions regarding the components of well-being according to Westerhof & Keyes (2008). This questionnaire, for instance, could benefit by incorporating the findings of this study into specific and concrete questions for older adults and the incorporation of the three basic psychological needs in their daily life. Another scale based on need fulfilment is the 21-item Basic Need Satisfaction in Life Scale[2]. This scale has been adjusted to several contexts, including work, relationship, physical education, general domain and it even includes a diary version. However, to date, no version exists for use in nursing homes. For example, a resident can be asked to answer the following general autonomy based question on a seven-point Likert scale: 'I feel like I am free to decide for myself how to live my life'. This is a broad question but with current results it could be modified to tailor the specific group. An example of the complete modified questionnaire is given in Table 6.

[2] The Basic Need Satisfaction in Life is retrievable from the following website maintained by E. Deci and R. Ryan, University of Rochester. http://selfdeterminationtheory.org/basic-psychological-needs-scale/

Table 6

Modification of the 21-item Basic Need Satisfaction in Life Scale for use in somatic departments

	Items		Modified items
1a	I feel like I am free to decide for myself how to live my life	1b	I can choose whether or not to undergo treatment suggested by doctors
2a	I really like the people I interact with	2b	I enjoy spending time with my fellow residents
3a	Often, I do not feel very competent	3b	I am afraid to try difficult things around others
4a	I feel pressured in my life	4b	Others decide what activities I should or shouldn't do
5a	People I know tell me I am good at what I do	5b	People tell me I am good at the nursing home activities
6a	I get along with people I come into contact with	6b	I enjoy spending time with the nurses
7a	I pretty much keep to myself and don't have a lot of social contacts	7b	I am often alone in my room
8a	I generally feel free to express my ideas and opinions	8b	-
9a	I consider the people I regularly interact with to be my best friends	9b	I have one-on-one contact on a daily basis
10a	I have been able to learn interesting new skills recently	10b	-
11a	In my daily life, I frequently have to do what I am told	11b	Others make my day schedule
12a	People in my life care about me	12b	My friends and family visit me often
13a	Most days I feel a sense of accomplishment from what I do	13b	I can assist in my own daily care
14a	People I interact with on a daily basis tend to take my feelings into consideration	14b	I trust the nurses with my personal issues
15a	In my daily life I do not get much of a chance to show how capable I am	15b	I am very dependant of the nurses.
16a	There are not many people that I am close to	16b	I don't feel at home in this department
17a	I feel like I can pretty much be myself in my daily situations	17b	-
18a	The people I interact with regularly do not seem to like me much	18b	I eat in the common area with fellow residents
19a	I often do not feel very capable	19b	I cannot take care of my guests when they visit
20a	There is not much opportunity for me to decide for myself how to do things in my daily life	20b	I feel like I do not have options in the care I receive
21a	People are generally pretty friendly towards me	21b	I am the centre of attention during care moments

In Table 6, a directive approach is taken towards daily situations of residents using examples given by residents themselves and their informal caregivers. Item 8a, 10a and 17a are, however, considered suitable for use in somatic departments. Researching the validity and reliability of the modified items is recommended.

Research recommendations

New routes for research could be aimed at investigating if the basic psychological needs are all-encompassing. Ryan and Deci (2000) make no such claim that the basic psychological needs are complete and crystallized. Current findings tell us that residents and their informal caregivers perceive these three basic psychological needs to be extremely important, and only mentioned a few other subjects which they found equally as important for life in somatic departments: being in good health and enjoying nature. The subject of being in good health could be considered a facilitating factor for competence, leaving nature as the only addition to the three basic psychological needs found in the present study. Numerous participants believed enjoying nature to be at least as important as autonomy, relatedness or competence.

These results are in line with multiple other researches, like that of Juvani (2005) who also state the significance of natural environment for well-being of older adults. Physical acces

to nature for institutionalized older adults has been an ongoing question for over 40 years. In 1977, Robert Hobsen found indications of improving older adults' quality of life through gardening (Hobsen, 1977). Since then, several nursing homes, mainly in Asia, have also proven gardening activities to have positive effects on life satisfaction. It would improve the social network of older adults and even decrease feelings of loneliness (Allison & Geiger, 1993; Tse, 2010). Current discovery that acces to nature is important for nursing home residents, possibly on the same level of importance as autonomy, relatedness and competence, forms the basis of the following hypothesis: 'Physical acces to nature improves the psychological well-being of nursing home residents.' A possible research question could be formulated as: 'What is the effect on the residents' psychological well-being of having acces to a little garden plot, maybe shared with other residents?' The effect this would have on the basic psychological needs could subsequently be explored; autonomy (outside the room), relatedness (a team effort by several residents) and competence (what could be more empowering than watching your own plants bear fruit).

Strengths and limitations

Although this study has found meaningful results, these findings cannot be extrapolated to all departments of nursing homes. The focus of this study, however, was specifically on somatic departments and residents with mainly physical limitations but with little cognitive deficiencies. It could also be argued that there is no empirical basis available. To provide as much empirical basis as possible, publicity criterion was used in the analysis and interpretation. Besides this, all transcripts are made available on demand guaranteeing objectivity by methodological rigor. The processes of analysis in this study are described in excess, demonstrating the link between the results and the data. By doing so, inferences are made defensible and therefore more reliable while facilitating the reproducibility of this study (Weber, 1990; Dey, 2003). An important side note must be made that generalization was not an objective of this study.

Besides qualitative analysis being challenging, the researcher and participants might have been subjected to bias. For a researcher, interpretation of qualitative data is generally subjective. Content validation was therefore performed through dialogue among co-researchers and supervisors. Conformity and congruence of the interpretations was therefore ensured by having multiple researchers discuss the results to avoid confirmation bias. Regarding bias in participants, subjects can generally be reluctant in giving socially unacceptable answers. Participants were therefore repeatedly ensured of anonymous data handling to overcome this bias. Regarding the linguistic transcription and its textual interpretation, it must be mentioned

that transcription is a form of translation, which can always be considered betrayal. It is close to impossible to produce a text fully congruent with the original. The transcription was also done by one researcher, enabling this potential bias. Finally, when conducting interviews, the interviewer almost always influences the collected data. Questions easily become directive and providing examples even steers towards certain answers. To overcome this issue, the interviewer practiced the procedure three times, all the while receiving feedback.

It is also important to bear in mind the possible biases in the responses of participants. The first bias concerns possible overrepresentation of the social situation. To overcome this, sampling was terminated after saturation was reached. Judgmental sampling was used to provide diverse properties in the sample, such as gender ratio according to latest statistics, somatic residents without cognitive impairments and residents with different opinions on the topic to ensure positive and negative responses. However, participants were selected for their social situations and willingness to participate. A possible influence of this might be an increased positivity of the responses. However, this is merely based on speculations.

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