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Need fulfillment in caring relationships: Its relation with well-being of residents in somatic nursing homes

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Objectives: Quality of life and well-being in nursing homes are becoming more important in research and practice. Based on self-determination theory, the objective of this study is to examine the contribution of need fulfillment in the caring relationship to residents' subjective well-being. It was expected that the relation of need fulfillment in the caring relationship with well-being is mediated by need fulfillment in general.

Method: During interviews with 88 residents of somatic nursing homes (age 50–97, mean age 78.6), perceptions of need fulfillment in the caring relationship, need fulfillment in general, and two components of subjective well-being, i.e., depressive feelings and life satisfaction, were measured. The hypotheses were tested using hierarchical multiple regression analyses and mediational analysis.

Results: As expected, the results indicated that need fulfillment in the caring relationship was related to lower levels of depressive feelings and more life satisfaction. Need fulfillment in general mediated the relation of need fulfillment in the caring relationship with depressive feelings.

Conclusion: As suggested by the results, it can be concluded that high-quality caring relationships contribute to the need fulfillment of residents and their well-being. The quality of caring relationships is thus an important topic for further research. The field may especially benefit from longitudinal studies and studies that use observations of the caring relationship in addition to self-reports.

Keywords: nursing home; resident–staff relationship; self-determination theory; subjective well-being; depression

Introduction

Quality of life and well-being in nursing homes are becoming more important in both research and practice. Recently, a change can be noticed from a focus on good quality of care to a focus on good quality of life in long-term care (Actiz et al., 2007; Gerritsen, Steverink, Ooms, & Ribbe, 2004; Kane, 2001, 2003). Although this change in nursing home practice concerns all care receivers, research in nursing homes focuses mostly on people with dementia (Ballard et al., 2001; Dröes et al., 2006). Research on quality of life in somatic nursing homes (nursing homes for physical illness) is still scarce. The term quality of life embraces different components, for example, safety and security (Faulk, 1988), quality of environment, and physical well-being (Hughes, 1990). However, the focus of this article is on subjective well-being as the outcome for residents.

A recent study by O'Rourke et al. (2009) compared the psychological well-being of nursing home residents with and without significant cognitive loss. The study showed that depressive symptoms increased, whereas life satisfaction decreased over time among those without significant cognitive loss. As regards the Netherlands, research showed alarming figures: the incidence of depressive symptoms in Dutch nursing home residents is three to four times higher than in the older population at large (Jongenelis et al., 2004). This

is in contrast with gerontological studies that show older adults, in general, to adapt to changes in their lives and with that maintain high levels of well-being (Westerhof, Dittmann-Kohli, & Bode, 2003). The frail physical condition of somatic nursing home residents might partly explain the high depression rates (Borglin, Jakobsson, Edberg, & Hallberg, 2005). However, it is still unclear what causes individual variations in the well-being of this population. In this article, we will study the possible contribution of the relationship with the nursing staff to the well-being of nursing home residents. Before describing the empirical study, we will first summarize the results of earlier studies on the importance of interactions between residents and nursing staff. Next, we will highlight how self-determination theory (Ryan & Deci, 2001, 2002) – that serves as the theoretical foundation for our study – can be used to improve our understanding of well-being in nursing homes.

Caregiving relationships in nursing homes

Due to the frail situation of the population of somatic nursing homes, the living environment is a possible key factor in contributing to the well-being of residents (Lawton, 1983). Within the physical and architectural characteristics of the nursing home, daily interactions with other people contribute to the individual

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development of residents (Bronfenbrenner & Morris, 1998; Peace, Wahl, Mollenkopf, & Oswald, 2007). In addition to the relationship with family and other residents, the relationship with nursing staff seems crucial because of its positive relation with the residents' well-being (Bitzan & Kruzich, 1990). This makes the quality of the caring relationship of great potential importance in the satisfaction of residents' individual needs (Umoren, 1992).

A number of studies on daily care giving interactions with residents suffering from dementia have been conducted (Hertogh, The, Miesen, & Eefsting, 2004; Kitwood, 1997; van Weert, van Dulmen, Spreeuwenberg, Ribbe, & Bensing, 2005; Ward, Vass, Aggarwal, Garfield, & Cybyk, 2008), but there is a lack of such research in somatic nursing homes (Westerhof & Tulle, 2007). The main exceptions are the studies of Baltes (1996), the work of sociolinguists (Williams & Nussbaum, 2001), and studies on interactions in nursing care (Caris-Verhallen, Kerkstra, van der Heijden, & Bensing, 1998; Gubrium & Holstein, 1999).

Baltes (1996) identified a behavioral system which might be responsible for dependent behavior in residents. The 'independence-ignore' and 'dependency-support' scripts were found to characterize the interaction between staff and residents: residents' displays of independence in personal care and social behavior were largely ignored, whereas the need for assistance with personal care was rewarded with high levels of interaction.

Williams and Nussbaum (2001) gave an overview of sociolinguistic studies that focused on 'overaccommodation', i.e., the overplaying of communicative styles relative to the needs of the other person. A type of overaccommodation that is often used by nursing staff is 'secondary baby talk,' which is characterized by little eye contact, a high pitch and exaggerated intonation, and a directive or childish way of speaking (Caporael, 1981; Caporael, Lucaszewski, & Culbertson, 1983). A study by Sachweh (1998) in German nursing homes showed that nurses, mainly the middle-aged female staff, frequently use secondary baby talk. For example, a high pitch was present in more than 50% of the conversations and exaggerated intonation in 46%. Other strategies of secondary baby talk were even more often used: in over 70% of the conversations, nurses repeated residents' words and in over 75% of the conversations, they repeated their own words. The use of 'we,' referring either to the nurse or the resident alone, was found in more than 65% of the conversations. In general, recipients of secondary baby talk were very dependent, female, and either very well or very little liked by the nurses. About 84% of the recipients seemed to tolerate or even like secondary baby talk.

Gubrium and Holstein (1999) also analyzed conversations in nursing homes. They found that most conversations include so-called 'body talk.' The content of the interactions is often task or body related, whereas social interactions are mostly absent.

The authors conclude that residents are often seen as 'a body' instead of the person behind it. In contrast, a Dutch study on verbal communication between staff and somatic patients found a high amount of socio-emotional communication concerning personal talk, jokes, and other affective behavior (Caris-Verhallen et al., 1998). The authors reported this result to be inconsistent with the findings from previous international studies in nursing care for the elderly, which showed most of the nurse-patient interactions to be task related and the amount of social interaction to be limited. The authors explain their findings by the fact that most residents had been receiving care for more than a year, and that task-oriented communication was probably replaced by socioemotional communication in the course of time.

The reported studies show diverse findings with respect to the quality of interactions between residents and nursing staff. Therefore, more research into the quality of interactions in the caring relationship is needed. The focus of previous studies was on the content of the communication, whereas we would also like to focus on the outcome for the residents. The observational studies demonstrate great variation in the quality of caring interactions, but their effect on the well-being of residents remains unclear. In this article, we aim to enhance the understanding of the relation between the caring relationship and well-being of residents using subjective ratings based on a social-psychological model of self-determination.

Self-determination theory

Self-determination theory (Ryan & Deci, 2001, 2002) is a theory on motivation that considers human beings as actively engaged, growth-oriented organisms in their social contexts. In this theory, three universal basic psychological needs are distinguished, which are important for psychological growth and well-being. *Competence* refers to the perception that one's behavior results in the intended outcomes and effects. *Relatedness* refers to feeling connected to others or having a sense of belongingness. *Autonomy* refers to the experience that one can choose activities, make decisions, and regulate behavior in accordance with one's goals. The perceived fulfillment of the three basic needs is thought to provide the background for further individual development. Research concerning the three basic needs has been conducted in different social settings and shows fulfillment of these needs to be related to higher levels of well-being (Ryan & Deci, 2002).

In a somatic nursing home, need fulfillment is difficult to achieve. Residents have been confronted with often sudden physical limitations and a consequent dependency on others, which may influence their feeling of *competence*. The fulfillment of the need for *relatedness* is also under strain, due to the changed social situation: married people are often separated from their partner and visiting friends and family

becomes more difficult. Research showed 38.5% of residents of Dutch somatic nursing homes to be unsatisfied with the frequency of meeting friends and family, and almost half of the residents to perceive their social contacts as superficial (de Klerck, 2005). The need for *autonomy* is also under pressure in an institutionalized environment: only 55% of the residents of Dutch somatic nursing homes can decide for themselves at what moment to use the toilet and only 27% when to receive personal care (de Klerck, 2005). An important question remains whether these low levels of need fulfillment are related to low levels of well-being. Although some aspects of need fulfillment have been found to be related to well-being in nursing homes before (Kasser & Ryan, 1999; O'Connor & Vallerand, 1994; Vallerand, O'Connor, & Blais, 1989), no systematic research including all of the three basic needs has been conducted yet. In the present study, we investigate the fulfillment of the three basic psychological needs in nursing home residents.

The present study

According to self-determination theory, the fulfillment of the three basic needs is highly influenced by the social context (Ryan & Deci, 2002). We argue that nursing staff forms a crucial social-contextual factor in the daily life of residents and therefore in the fulfillment of residents' needs. The aim of this study was to investigate the association of need fulfillment in the caring relationship to residents' subjective well-being. The first hypothesis was that need fulfillment in the caring relationship contributes to nursing home residents' subjective well-being. In addition, we hypothesized this relation to be mediated by need fulfillment in general. In other words, we expected greater need fulfillment in the caring relationship to contribute to the residents' need fulfillment in general which, in turn, would be associated with higher levels of well-being as reflected in less depressive feelings and more life satisfaction.

Method

Procedure

In the Netherlands, three types of nursing homes exist: those for somatic patients, those for psychogeriatric patients, and combined types with separate wards for both groups (Ribbe, 1993). In this study, only combined homes participated; therefore, we refer to the somatic care wards within these homes. Possible respondents of this study included residents living in seven long-term care wards for somatic patients. Nursing home wards for specific disease categories and rehabilitation were excluded. Inclusion criteria were based on the procedures from the Amsterdam Groningen Elderly Depression Study (Smalbrugge et al., 2006): participants had to be aged 50 years and over, speakers of Dutch, without communication

problems due to severe aphasia or hearing loss, and without severe cognitive impairment (mini mental state examination score >15). After receiving permission from the management of the nursing homes, the inclusion of individual residents was discussed with the involved psychologist or ward manager. The residents who fitted the inclusion criteria received written information concerning the research. One or two weeks later, research assistants visited the residents to explain the aim of the project and answer possible questions. Written informed consent was received from the participating residents.

During a visit of a trained research assistant to the nursing homes, data were collected using questionnaires for the residents. The questionnaires were presented verbally and the answers to the questions were written down by the research assistant during the interview with the residents. Filling in the questionnaires with the residents took on average 45 min.

Participants

Eighty-eight residents participated in this study (age 50–97, mean 78.6 years) and 63% of the residents in the sample were female. Concerning marital status, 31.8% of the residents had a partner, 45.5% were widowed, 10.2% were unmarried, and 12.5% were divorced. Furthermore, 85% of the residents had one or more children. In terms of education level, most residents had 10 years of education or less (77.2%).

As regards the health condition of the sample, almost 20% of the residents rated their health to be 'bad' or 'very bad,' 50% rated their health to be 'moderate,' and about 30% rated it 'well' or 'very well.' Concerning activities of daily living (ADL) restrictions, almost 80% of the residents needed help with getting in and out bed, 75% needed help with getting on and off the toilet, and 83% needed help with dressing. Close to 60% needed help with standing up and sitting down, 25% needed help with washing their face and hands, and almost 7% needed help with eating and drinking.

The sample characteristics generally correspond with those reported in a representative study of the situation of residents living in Dutch somatic care institutions (de Klerck, 2005). With the exception that, in our sample, more participants were able to independently eat and drink (93.2% vs. 83.9%), wash their face and hands (75.0% vs. 60.4%), and stand up and sit down (40.9% vs. 31.4%) as compared to the representative sample.

Measures (1): Need fulfillment and well-being

Subjective well-being was measured using an affective and a cognitive-evaluative component, in line with prior work on this topic (Diener, Suh, Lucas, & Smith, 1999). The first was the Dutch eight-item version of the Geriatric Depression Scale (GDS; Jongenelis et al., 2007). This nursing home version mainly contains items formulated in terms of positive and negative feelings

rather than cognitions. Items were answered with 'yes' or 'no' and a sum score between 0 and 8 was computed with higher values indicating more *depressive feelings*. The cognitive component, the Dutch version of the five-item Satisfaction With Life Scale (SWLS; Pavot & Diener, 1993; Steverink, Westerhof, Bode, & Dittmann-Kohli, 2001), was answered on a five-point Likert scale from strongly disagree to strongly agree. The mean across the five items was computed with higher scores indicating higher *life satisfaction*. In the study sample, alpha reliability coefficients for the scales were 0.75 and 0.69, respectively.

Residents' perceptions of *need fulfillment in the caring relationship* were measured with the nine-item basic need satisfaction in relationships questionnaire (LaGuardia, Ryan, Couchman, & Deci, 2000). The scale was translated into the Dutch language and back into English to ensure equivalence. This scale measures fulfillment of the needs of autonomy, relatedness, and competence with three items each. Items were answered on a seven-point Likert scale from 'not at all true' to 'very true.' Examples of items are, 'When I am with someone of the nursing staff, I have a say in what happens, and I can voice my opinion' (autonomy), 'When I am with someone of the nursing staff, I feel loved and cared about' (relatedness), and 'When I am with someone of the nursing staff, I feel very capable and effective' (competence). Factor analyses showed a one-factor solution for this scale, explaining 36.8% of the variance, with all items loading higher than 0.35. The alpha coefficient for this scale was 0.75; leaving out items did not result in a higher reliability coefficient. The mean was therefore computed across all nine items: higher scores indicate more need fulfillment in the caring relationship.

Residents' perceptions of *need fulfillment in general* were measured with the 21-item Basic Need Satisfaction in Life Scale (Gagné, 2003), translated into Dutch and translated backward into English. Items were answered on a seven-point Likert scale from 'not at all true' to 'very true.' Examples of items are: 'I feel like I am free to decide for myself how to live my life' (autonomy), 'I really like the people I interact with' (relatedness), and 'People I know tell me I am good at what I do' (competence). The one-factor solution for this scale, with all items loading higher than 0.35, explained 21.9% of the variance. The alpha coefficient for the total scale was 0.80; leaving out items did not result in a higher reliability coefficient. The average need fulfillment across all items was computed with higher scores indicating more need fulfillment in general.

Measures (2): Control variables

Subjective health was assessed by asking the participants to rate their overall health on a five-point scale from 'very poor' to 'very good.'

Functional impairment was measured using six items of a scale measuring limitations in ADL (Groningen

Activity Restriction Scale; Kempen, Doeglas, & Suurmeijer, 1993), which were also used by de Klerck (2005). Participants rated items on eating/drinking, dressing, washing, and mobility on a four-point scale from 'yes, I can do it fully independently without any difficulty' to 'no, I cannot do it fully independently, I can only do it with someone's help.' Alpha reliability coefficient for this scale was 0.80. The average score was computed across the items with a higher score indicating more limitations.

Personality traits were measured using the subscales 'neuroticism' (six items) and 'extraversion' (six items) of the Quick Big Five (Goldberg, 1992; Vermulst & Gerris, 2006). Only these two traits were measured because they are more often found to be related to well-being than the other traits (DeNeve & Cooper, 1998; Steel, Schmidt, & Shultz, 2008). Alpha reliability coefficients for the subscales were 0.77 and 0.62, respectively. The mean was computed for each trait, with higher scores indicating more neuroticism or extraversion.

Sociodemographic variables included age, gender, ethnicity, level of education, marital status, number of children, religion, length of stay in nursing home, reason for moving into the nursing home, and stressful life events in the past 12 months.

Plan of analysis

The analysis proceeded in several steps. Before testing the hypotheses, we first identified possible confounders, i.e., those control variables that correlated significantly with need fulfillment (in the caring relation or in general) as well as with subjective well-being (depressive feelings or satisfaction with life).

Next, we tested our first hypothesis – that need fulfillment in the caring relationship contributes to subjective well-being – in two hierarchical regression analyses: one for depressive feelings and one for satisfaction with life as the dependent variable. In both analyses, the possible confounders were entered as control variables in the first block, and need fulfillment in the caring relationship was entered as predictor in the second block.

The second hypothesis – that need fulfillment in general mediates the relation between need fulfillment in the caring relationship and well-being – was tested using mediational analysis following Baron and Kenny (1986). According to their procedure, three conditions have to be met in a series of regression models in order to establish mediation: (1) the predictor is significantly associated with the outcome, (2) the predictor is significantly associated with the mediator, and (3) the mediator is significantly associated with the outcome when controlling for the predictor. Mediation exists when – in multiple regression analysis – the effect of the predictor on the outcome is shown to decrease when the mediator is also entered as a predictor in the regression equation. In addition to Baron and Kenny's procedure, we conducted an extra step in the

Table 1. Descriptive statistics and correlations between the main study variables.

Variables	Mean	SD	Range	1	2	3	4
Need fulfillment							
Relationship	5.70	0.95	2.22–7.00				
General	5.00	0.83	2.74–6.79	0.57**			
Well-being							
Depressive feelings	2.40	2.14	0.00–8.00	–0.40**	–0.53**		
Satisfaction with life	3.47	0.88	1.40–5.00	0.30**	0.31**	–0.51**	

Note: ** $p < 0.01$.

mediational analysis, using bootstrapping procedures ($n = 5000$ bootstrap resamples) in order to assess the indirect effect of the mediational pattern, outlined by Preacher and Hayes (2004). As prescribed, mediation exists when the 95% confidence interval of the estimated indirect effect does not include zero.

Results

Preliminary analyses

Table 1 presents descriptive statistics and intercorrelations for the main study variables. As shown in the table, the average scores for need fulfillment in the caring relationship and for need fulfillment in general were 5.7 and 5.0, respectively, which is relatively high given that both were rated on a scale from 1 to 7. The mean score for depressive feelings was 2.4 on a scale from 0 to 8. Based on a GDS cut-off score of 2/3 (Jongeneelis et al. 2007), 39.8% of the residents had an indication for depression. The mean score for satisfaction with life, measured on a scale from 1 to 5, was 3.5, indicating that the residents were moderately satisfied with their lives. The correlations between need fulfillment and well-being presented in Table 1 were in line with our hypotheses.

Three of the control variables described in the Method section were possible confounders in the relation between need fulfillment and depressive feelings: neuroticism, extraversion, and subjective health. More neuroticism was related to less need fulfillment in the caring relationship ($r = -0.34$, $p < 0.01$) and to need fulfillment in general ($r = -0.48$, $p < 0.01$) as well as to more depressive feelings ($r = 0.42$, $p < 0.01$). More extraversion was related to more need fulfillment in the caring relationship ($r = 0.35$, $p < 0.01$) and to need fulfillment in general ($r = 0.56$, $p < 0.01$) as well as to less depressive feelings ($r = -0.28$, $p < 0.01$). Moreover, a better subjective health was related to more need fulfillment in the caring relationship ($r = 0.20$, $p < 0.05$) as well as to less depressive feelings ($r = -0.30$, $p < 0.01$). For the relation between need fulfillment and satisfaction with life, no confounders were detected.

Answering the research questions

Our first research question was whether residents' need fulfillment in the caring relationship contributes to

Table 2. Regression results for the prediction of depressive feelings (final model).

Variable	<i>B</i>	SE <i>B</i>	β
Block 1			
Subjective health	0.49	0.24	0.20*
Neuroticism	0.38	0.17	0.26*
Extraversion	–0.10	0.15	–0.08
Block 2			
Needs in relationship	–0.55	0.23	–0.24*

Notes: Adjusted R^2 final model = 0.26.

* $p < 0.05$.

their subjective well-being as reflected in depressive feelings and life satisfaction. Table 2 presents the results of the first hierarchical regression analysis, with depressive feelings as the dependent variable and the three potential confounders entered in the first step as control variables. The final model – depicted in Table 2 – was significant ($F(4,86) = 28.83$, $p < 0.001$; the adjusted R^2 for the first step is 0.21; need fulfillment in relations adds a significant increase in adjusted R^2 of 0.05). As shown in Table 2, need fulfillment in the relationship contributed significantly to the prediction of depressive feelings, over and above the contribution of subjective health and neuroticism.

The contribution of need fulfillment in the relationship to the second measure of well-being, i.e., life satisfaction, was examined using simple linear regression because no potential confounders were detected. The results of the regression analysis show that need fulfillment in the relationship significantly predicted satisfaction with life ($\beta = 0.27$, $p < 0.01$). Taken together, the results of the two regression analyses support our first hypothesis.

Our second research question was whether the relation of need fulfillment in the caring relationship with subjective well-being was mediated by need fulfillment in general. Following the described mediation analysis procedure with depressive feelings as the outcome, the three conditions for mediation were met. Need fulfillment in the caring relationship significantly predicts depressive feelings (condition 1), the mediator need fulfillment in general is significantly associated with need fulfillment in the caring relationship (condition 2), and the mediator need fulfillment in general

significantly affects depressive feelings (condition 3). When need fulfillment in general was controlled for in the regression equation for the prediction of depressive feelings from need fulfillment in the relationship, the contribution of need fulfillment in the relationship to depressive feelings dropped to a nonsignificant level ($\beta = -0.10$, $p = 0.38$). The contribution of need fulfillment in general to depressive feelings was significant ($\beta = -0.39$, $p < 0.01$). The bootstrapping analyses showed that the indirect effect is significant (with a 95% confidence interval between -0.6759 and -0.1154). Thus, need fulfillment in general mediates the relation between need fulfillment in the caring relationship and depressive feelings. This mediation effect is illustrated in Figure 1.

When the same procedure was followed for the second measure of well-being, i.e., life satisfaction, conditions 1 and 2 were met. Need fulfillment in the caring relationship significantly predicts satisfaction with life (condition 1) and the mediator need fulfillment in general is significantly associated with need fulfillment in the caring relationship (condition 2). The third condition was not met, as need fulfillment in general was not significantly related to life satisfaction when controlling for need fulfillment in the caring relationship ($\beta = 0.23$, $p = 0.11$). Thus, need fulfillment in general did not mediate the relation between need fulfillment in the caring relationship and life satisfaction, indicating that need fulfillment in the caring relationship is independently related to life satisfaction.

Discussion

The purpose of this study was to examine the contribution of need fulfillment in the caring relationship to residents' subjective well-being and to investigate the mediating role of need fulfillment in general. The results show that need fulfillment in the caring relationship is related to both aspects of well-being, i.e., depressive feelings and life satisfaction. Need fulfillment in general mediates the relation of need fulfillment in the caring relationship with depressive feelings.

The well-being ratings show that a considerable proportion of the participants had an indication for depression (39.8%). This proportion is comparable to the proportion found in a large-scale study in Dutch nursing homes with the 30-item version of the GDS, where 44.3% of the participants had an indication for depression (Jongenelis et al., 2004) and a study in Great Britain by Mozley et al. (2004) with the GDS-15, where just under 45% were depressed. As regards life satisfaction, we compared the ratings from our participants to those in a sample of independently living elderly (75–85 years) from the Dutch Aging Survey (Steverink et al., 2001). The comparison demonstrated that the residents in our sample rated their life satisfaction significantly lower than the elderly from the Dutch Aging Survey ($M_{\text{present sample}} = 3.47$, $SD = 0.89$; $M_{\text{Dutch Aging Survey}} = 3.94$, $SD = 0.69$; $t(376) = 4.86$, $p < 0.001$). We can thus conclude that the well-being of the participants of our study is impaired.

It is a remarkable finding that the subjective ratings of the residents concerning need fulfillment were relatively high, especially for need fulfillment in the caring relationship. This finding is in apparent contrast to the results of observational studies that showed that staff largely ignored the socioemotional needs and independency of the residents (Baltes, 1996; Gubrium & Holstein, 1999; Sachweh, 1998; Williams & Nussbaum, 2001).

There are three possible explanations for the relatively high level of self-reported need fulfillment that we found in the present study. The first explanation is that older residents are hesitant to criticize their caregivers, possibly due to the dependent position they are in. This is in line with a previous study by Mozley et al. (2004), where many residents were reluctant to complain or criticize their care (p. 84) as well as previous population studies reporting that elderly are more likely to express satisfaction with their healthcare than other age groups (Pope & Mays, 1993). Similarly, older persons have been found to be reluctant to voice their dissatisfaction concerning unmet needs to their general practitioner (Owens & Batchelor, 1996).

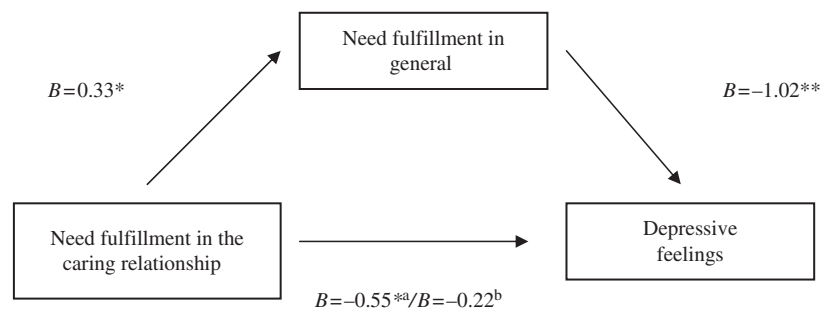


Figure 1. The mediation effect of need fulfillment in general in the relation between need fulfillment in the caring relationship and depressive feelings.

Notes: The figure shows the B -values after controlling for confounders. ^aBefore including mediator; ^bafter including mediator; * $p < 0.05$; ** $p < 0.01$.

However, de Klerck (2005) found rather low levels of satisfaction, asking residents of somatic nursing homes about daily situations like whether or not they can decide for themselves when to use care. Whereas on a more general level, individuals might be more satisfied with the caring relationship ('they are so sweet'), they might be less satisfied with specific aspects. Therefore, we would suggest an adaptation of the questionnaires to concrete daily situations of the residents.

A second explanation might be that the residents lived for a longer time in the nursing home (36 months on average). As suggested by Caris-Verhallen et al. (1998), this might have influenced the communication with the nursing staff in a positive way. Furthermore, residents might have lowered their expectations over time. Older people in residential homes have been found to have low expectations concerning independency, freedom of choice, and personal life style (Kardol, 2004). This might be an accommodative strategy to maintain well-being in situations where individuals experience low levels of control (Brandtstädter & Rothermund, 2002). However, we did not find a relation of length of stay in the nursing home with need fulfillment in the caring relationship ($r=0.01$, $p=0.90$) and need fulfillment in general ($r=0.07$, $p=0.52$).

The third explanation is that need fulfillment is possibly higher in Dutch nursing homes, compared to other countries. Ribbe et al. (1997) compared nursing home care in 10 nations and reported that the Netherlands show high institutionalization rates. Admission to a nursing home requires approval of the Regional Central Indication Committee for Care and all nursing home expenses are paid under the Capital Act AWBZ (Exceptional Medical Expenses Act). This act regulates care standards, monitored by regional health inspectors, resulting in a relatively high quality of care in nursing homes (Ribbe, 1993). Also, nursing homes are not primarily disease oriented, but focus on the residents' total functioning and well-being (Ribbe, 1993). This becomes visible in the holistic vision on care of most nursing homes, in which multidisciplinary working is central. The care-giving staff works together with, among others, nursing home physicians, psychologists, physiotherapists, and social workers. Due to these aspects there might be more attention for residents' psychological needs for relatedness, autonomy, and competence in Dutch nursing homes.

Although more and more nursing homes point out that they focus on the quality of life and well-being of residents, it remains difficult to support need fulfillment of individual residents due to the variety of factors that influence this need fulfillment. The caring relationship is a crucial factor in the support of residents' needs, but can only be seen in a broader context (see, e.g., Bronfenbrenner, 1979). A lot of factors, including characteristics of the residents and the staff members, the culture of the nursing home,

and, as mentioned before, the care system of a country might play a role in the need fulfillment of residents. In this study, we took a number of resident characteristics into account; however, we did not have information concerning caregiver characteristics like education or workload, and about the culture of the different homes that participated. Future research should also address these factors.

Because the caring relationship is embedded in the organization of a nursing home, homes should provide a framework for nursing staff which facilitates them in supporting the needs of residents. Staff should be educated to invest in constructing a good and responsive relationship with residents. Furthermore, the organization of the nursing home should pay attention to autonomy on a broader level. Fixed toilet and care routines, for example, could hinder the fulfillment of autonomy, while involving the residents in conversations about organizational aspects supports this need. Concerning the need for competence, it is important to stimulate what residents are still able to do, instead of focusing on their disabilities. A study of Mozley et al. (2004) shows occupation to be related to quality of life and depression. A whole range of activities such as playing cards, helping with meal preparation, and participating in discussion groups seem to improve the well-being and mood of older people in care (Mozley, 2001). The activities should suit residents' expectations, preferences, and capacities (Mozley et al., 2004, p. 205). This preferable match between individual preferences and their environment (Lawton, 1983) should hold true for all of the three needs discussed in this study.

Given the cross-sectional design of the study, the results do not permit to infer a causal relation between need fulfillment and well-being. The possibility remains that residents who are more depressed or less satisfied report lower degrees of need fulfillment. Longitudinal studies can help disentangle these causal relations. Besides, they could shed light on individual fluctuations of need fulfillment and well-being, and factors that explain these fluctuations over time, like changes in communication patterns or in expectations concerning need fulfillment. Also, the focus of future research should be on both self-reports and observational studies in order to investigate possible discrepancies between subjective and objective ratings of need fulfillment and well-being.

Despite the limitations, the present study contributes to our understanding of need fulfillment in relation to the well-being of elderly nursing home residents. The results suggest that the caring relationship contributes to the need fulfillment of residents and their well-being. Because of the influence of nursing staff on residents' well-being, further research on the relationship between resident and nurse is important, in particular when combining observations and self-reports in a longitudinal design. Such a study is currently being carried out at our department.

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