

25-6-2018

## ***Bachelorthesis***

*Satisfaction of the basic psychological needs  
of autonomy, relatedness and competence in  
relation to subjective well-being of  
professional caregivers in nursing homes*

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Academic year: 2017/2018

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## ABSTRACT

Based on the self-determination theory, it was proposed that the satisfaction of the basic psychological needs of autonomy, relatedness and competence is positively related to well-being. This study has looked at the role of the three basic needs at work in relation to the subjective well-being of professional caregivers working in nursing homes. It was hypothesized that the satisfaction of each basic psychological need would have an equally strong and unique positive relation to subjective well-being. This was tested at 121 professional caregivers (mean age 42) that work on units for physically frail older adults at four Dutch nursing homes. A questionnaire survey design was used, measuring the satisfaction of the basic needs at work and subjective well-being, which consist of a cognitive (satisfaction with life) and affective part (positive and negative emotions). Results showed that all three needs were positively related to subjective well-being, with each need having an equally strong relation. Relatedness was uniquely associated with satisfaction with life, autonomy with negative emotions and competence with positive emotions. These results showed that the satisfaction of all three basic psychological needs is important for the subjective well-being of professional caregivers in nursing homes. The three basic needs were associated with different parts of subjective well-being. Supporting the needs for autonomy, relatedness and competence is positively related to both the well-being of the professional caregivers and the organizational success of the nursing homes and should therefore be considered carefully.

**Keywords:** self-determination theory, basic psychological needs, autonomy, relatedness, competence, subjective well-being, professional caregivers, nursing home

## INTRODUCTION

The proportion of older people is increasing every year and therefore their place of residence is becoming more important (Penders, Van den Block, Donker, Deliëns, & Onwuteaka-Philipsen, 2015). In the Netherlands, older people who need a lot of care, most often live in nursing homes, where professional caregivers take care of them (Penders et al., 2015). In these nursing homes, it is known that caregivers can help to optimize the quality of life of older adults living in nursing homes (Gerritsen, Steverink, Ooms, & Ribbe, 2004). This caring relationship is important because the quality of life of nursing home residents depends for a large part on support from the staff (Custers, Westerhof, Kuin, Gerritsen, & Riksen-Walraven, 2012). However, in a caring relationship there are always two sides, so it is also important to look at the well-being of the professional caregivers, who take care of the older adults every day.

Professional caregivers play an important role in the daily life of older adults living in nursing homes. These workers are responsible for helping frail and disabled older adults to carry out the most basic activities of daily life, such as bathing, dressing, toileting, and eating. In the caring relationship, they must deal with stressors resulting from complications in dementia care, high workload, interpersonal conflicts, or lack of management support (Barbosa, Nolan, Sousa, Marques, & Figueiredo, 2015). Such stressors put the caregivers at high risk of experiencing stress, burnout and job dissatisfaction (Barbosa et al., 2011). These stressors can be related to the well-being of the caregivers. This study will look at the subjective well-being of professional caregivers. Subjective well-being is a concept that has been defined as “a person’s cognitive and affective evaluations of his or her life” (Diener, 1984). The cognitive evaluation is about the satisfaction with life and the affective evaluation is about the presence of positive and negative emotions.

Factors that could be related to subjective well-being, are the basic psychological needs of the self-determination theory (SDT). Since Deci and Ryan (2000) developed the self-determination theory, it has been used to explore many aspects of human motivation and well-being. This theory states that the basic psychological needs for autonomy, competence, and relatedness have unique additive effects on well-being. Autonomy is about the feeling that

someone has to choose activities, make decisions and regulate their behavior in accordance with their goals. People want to feel like they do what they actually want and they got control over it. SDT is a very broad theory which can be applied to many situations, including work. Rather than suffering from stress and burn-out, autonomous workers find their work important and want to make the best out of it. Competence refers to the perception that someone's behavior results in the intended outcomes and effects. People want to feel that their job offers space for development and it helps to reach their goals. It is the basic need to feel capable of doing the job well and being able to succeed at daily tasks. Relatedness refers to feeling connected to others or having a sense of belongingness. It is our basic need to feel that we are part of a group of people and that we matter to them and they matter to us (Rigby & Ryan, 2018). The SDT suggests that each of these three need makes a unique contribution to well-being (Deci & Ryan, 2000). When these needs are satisfied, employees show both their highest quality efforts and their highest well-being (Ryan, Bernstein, & Brown, 2010).

Much of the SDT research conducted in health care settings has focused on explaining patient behavior, while little research has used SDT to examine the well-being of health care providers, such as nurses. However, there is some research conducted about the psychological need satisfaction of nurses working in hospitals. Research based on this theory, conducted in hospitals, supported the importance of the basic psychological needs in relation to well-being (mindfulness and subjective vitality) of nurses. Competence was found to be the most important basic need compared to autonomy and relatedness (Bernard, Martin, & Kulik, 2014). A study by Mohamed, Newton, & Mckenna, (2014), stressed the importance of relatedness for nurses working in hospitals. Although these studies are about nurses, it is different since it concerns another sample. The nurses in hospitals are working in a different environment and they have to deal with other problems and other people than nurses working in nursing homes.

There has already been some research about the nurses working in hospitals and the nursing home residents concerning their subjective well-being (Custers et al., 2012). This study aims to contribute to a complete view of self-determination in the caring relationship of nursing homes, by focusing on the perspective of the caregivers. More specifically, the aim of this study is to investigate the satisfaction of relatedness, autonomy and competence and their relation to the subjective well-being of professional caregivers. Based on the self-determination theory, it was hypothesized that:

1. The satisfaction of the basic psychological needs is positively related to subjective well-being.
2. The satisfaction of each basic psychological need has an equally strong positive relation to subjective well-being.
3. The satisfaction of each basic psychological need has a unique positive relation to subjective well-being.

## **METHOD**

### **Sample and procedure**

For this study, professional caregivers that work on units for physically frail older adults were asked to participate. The total number of participants was 121 and they had a mean age of 41.98 years (range 16-65, SD = 12.11). The vast majority of them were female (95.9%) and born in the Netherlands (99.2%). Most of the participants are married or have a registered partnership (62.8%), a small part has never been married (28.1%), a minority is divorced (8.3%) and a very small part is widowed (0.8%).

The questionnaires were completed at four residential care centers, that belong to one care organization. The participants were invited through e-mail. A questionnaire survey design was used. The participants filled out an online questionnaire that took about half an hour and in reward for this, they received payment for half an hour work. An informed consent was also filled in online. Prior to the data collection, the study was approved by the ethical commission of the University of Twente.

### **Measures**

The questionnaires used in this study were part of a bigger research, from which three questionnaires were used for this study. Also, some items about demographics were included, for example about age, gender and years of working experience in a nursing home.

The fulfillment of the basic needs at work were measured with the Dutch Work Related Basic Needs Satisfaction Scale (W-BNS) (Van den Broeck, Vansteenkiste, Witte, Soenens, & Lens, 2010). This questionnaire consists of 18 items measuring satisfaction of the need for autonomy (six items, e.g., ‘I feel free to do my work in a way that I think is good’), relatedness (six items, e.g., ‘I feel part of a group at work’) and competence (six items, e.g., ‘I am good at my job’) on a Likert scale from 1 (totally disagree) to 5 (totally agree). Subscale means were calculated, with higher scores indicating greater satisfaction of the basic needs. The W-BNS is validated and reliable for the three need satisfaction subscales (Van den Broeck et al., 2010). In this study the subscales were found to be reliable with a Chronbach’s  $\alpha$  of .77 for autonomy, .74 for competence and .73 for relatedness. Deleting items would not increase reliability.

Subjective well-being was measured with two questionnaires. The affective part was measured with a Dutch version of the modified Differential Emotions Scale (mDes) (Schaefer, Nils, Sanchez, & Philippot, 2010). This scale consists of 16 items measuring both positive (e.g. ‘I feel joyful, happy, amused’) and negative emotions (‘I feel sad, downhearted, blue’) ranging from 1 (not at all) to 7 (very strong). Five items make up the subscale for positive emotions (happy, gleeful, loving, moved and satisfied). Another eight items make up the subscale for negative emotions (sad, angry, fearful, anxious, disgusted, disdainful, guilty and ashamed). A mean score was calculated for both scales separately, with higher scores indicating greater positive and negative emotions (Dibbets, Lemmens, & Voncken, 2018). Together, these thirteen items make up the scale for affective well-being. Three items of the mDes were not used for further analysis, because these items neither measure only positive or negative emotions. The mDes is validated and has a good reliability (Schaefer et al., 2010). In this study the Chronbach’s  $\alpha$  was .65 for positive emotions. Deleting the item ‘I feel moved’ would increase reliability with a Chronbach’s  $\alpha$  of .84. However, the item was not deleted, since an internal consistency of .65 is still reliable and the scale already consists of a small number of items. If the item was deleted, the subscale for positive emotions would consist of only four items. Therefore, this item was kept and used for further analysis, following Schaefer et al., (2010). Chronbach’s  $\alpha$  for negative emotions was found to be .84 and deleting items would not increase reliability.

The cognitive-evaluative part of subjective well-being, life satisfaction, was measured using a Dutch version of the Satisfaction with life scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985). This scale consists of 5 items (for example ‘All together, my life is almost

perfect') ranging from 1 (totally disagree) till 7 (totally agree). The items belong to one scale, all measuring satisfaction with life. A mean score was calculated, with higher scores indicating greater satisfaction with life. The SWLS is shown to have favorable psychometric properties, including high internal consistency and high temporal reliability (Diener et al., 1985). In this study Chronbach's  $\alpha$  of the life satisfaction scale was .90. Deleting the item 'If I could do my life again, I would change almost nothing' would increase reliability with a Chronbach's  $\alpha$  of .92. Since this is a small difference, the item was not deleted.

### **Analysis plan**

There were three independent variables, the satisfaction of the basic needs for relatedness, autonomy and competence at work. The dependent variable was the well-being of the professional caregivers at work. In order to examine the characteristics of the data, descriptive analyses were conducted. The data of 1 participant was not fully completed (some demographic items were not filled in). However, the most important information, the data about the dependent and independent variables, was present and therefore the data of this participant could be used for further analysis.

Analysis were carried out using the statistical program SPSS (23). To test whether the satisfaction of the basic psychological needs is positively related to subjective well-being, correlations between the subscales of need satisfaction and subjective well-being were analyzed, with  $r=.10$  to  $.29$  indicating weak,  $r=.30$  to  $.49$  moderate and  $r=.50$  to  $1.0$  strong correlations (Cohen, 1988). Correlational analysis were needed to answer this first hypothesis. First, the correlations between the subscales of need satisfaction and satisfaction with life were analyzed. Subsequently, the correlations between the subscales of need satisfaction and positive and negative emotions (mDes) were analyzed.

In order to compare the strength of each psychological need in relation to subjective well-being (hypothesis 2), the correlations were transformed into z-scores, using the computer software of Lee and Preacher (2013). In this way, there could be examined whether there are significant differences between the correlations of the three basic needs and subjective well-being. Furthermore, the satisfaction of each basic psychological need and its unique relation to subjective well-being (hypothesis 3) was tested using multiple regression analysis, with positive and negative emotions and satisfaction with life as dependent variables and the three basic psychological needs entered as independent variables.

## RESULTS

Mean scale scores of the basic needs satisfaction at work were analyzed (Table 1). The highest score was on competence ( $M = 4.08$ ,  $SD = 0.43$ ) and the lowest on relatedness ( $M = 3.76$ ,  $SD = 0.51$ ). On a scale from 1-5, this means that the satisfaction of the basic needs was relatively high. Autonomy and competence seemed to be the strongest related with a correlation of 0.55 (Table 1). Mean score of the satisfaction with life was 5.50 ( $SD = 1.00$ ), with a minimum of 2.00 and a maximum of 7.00. This means that the lowest score for satisfaction with life was 2.00 and the highest 7.00, on a scale from 1 to 7. For positive emotions the mean score was 5.42 ( $SD = 0.75$ ), with a minimum of 3.40 and a maximum of 7.00. This means that the lowest score for positive emotions was 3.40 and the highest 7.00, so the maximum. The mean score is high, on a scale from 1 to 7. The mean score of negative emotions was 2.53 ( $SD = 0.91$ ), with a minimum of 1.00 and a maximum of 5.75. This means that the lowest score for negative emotions was 1.00 and the highest 5.75. The mean score is relatively low, on a scale from 1 to 7.

To test the first hypothesis, Pearson correlations were conducted between the satisfaction of the basic needs and the components of subjective well-being. The results indicate that there is a weak to moderate positive relation between the satisfaction of the three basic needs and satisfaction with life ( $p < 0.01$ ). Additionally, a moderate positive correlation between the satisfaction of the three basic psychological needs and positive emotions has been found and a weak to moderate negative correlation has been found between the satisfaction of the basic needs and negative emotions (Table 1). These results support the first hypothesis: The satisfaction of the basic psychological needs is positively related to subjective well-being. This means that the satisfaction of the three basic needs, has a positive relation to the evaluation of both parts of subjective well-being.

Table 1. *Descriptive statistics and correlations of need satisfaction and well-being (N=121).*

|                           | Scale | Mean | SD   | 1.      | 2.     | 3.     | 4.      | 5.    |
|---------------------------|-------|------|------|---------|--------|--------|---------|-------|
| T0 Need satisfaction      |       |      |      |         |        |        |         |       |
| 1. Autonomy               | 1-5   | 3.86 | 0.51 | -       |        |        |         |       |
| 2. Relatedness            | 1-5   | 3.76 | 0.51 | 0.41**  | -      |        |         |       |
| 3. Competence             | 1-5   | 4.08 | 0.43 | 0.55**  | 0.44** | -      |         |       |
| T1 Well-being             |       |      |      |         |        |        |         |       |
| 4. Satisfaction with life | 1-7   | 5.49 | 1.00 | 0.29**  | 0.34** | 0.34** | -       |       |
| - mDes                    | 1-7   |      |      |         |        |        |         |       |
| 5. Positive Emotions      |       | 5.42 | 0.75 | 0.30**  | 0.30** | 0.38** | 0.41**  |       |
| 6. Negative Emotions      |       | 2.53 | 0.91 | -0.31** | -0.22* | -0.21* | -0.33** | -0.18 |

\*  $p < .05$ . \*\*  $p < .01$  (two tailed).

It was also hypothesized that each basic psychological need would have an equally strong positive relation to subjective well-being, when comparing the correlations. Results showed that there were no significant differences between the three basic needs in relation to satisfaction with life and positive and negative emotions. Although not significant, the biggest difference was found between the correlations of competence and negative emotions compared to autonomy with negative emotions ( $z=1.2$ ,  $p=0.23$ ). The smallest difference was found between relatedness with satisfaction with life and competence with satisfaction with life ( $z=0$ ,  $p=1$ ) and autonomy with positive emotions compared to relatedness with positive emotions ( $z=0$ ,  $p=1$ ), the correlations between these scales were equally strong. All the found  $z$ -scores were insignificant and therefore these results support the second hypothesis: the satisfaction of each basic psychological need has an equally strong positive relation to subjective well-being.

Besides the total satisfaction of the three basic needs and the equally strong positive relation of each need, it was also hypothesized that each basic need would have a unique positive contribution to subjective well-being. Multiple regression analysis with satisfaction with life as dependent variable and the three basic needs as independent variables, showed that only relatedness seemed to have a significant unique contribution to satisfaction with life ( $\beta=.22$ ,  $p=.023$ ) (Table 2). Only competence seemed to have a significant positive relation to positive emotions ( $\beta=.26$ ,  $p=.014$ ). For negative emotions, only autonomy seemed to have a significant negative relation ( $\beta=-.26$ ,  $p=.018$ ). The results from the multiple regression analysis showed that the three basic needs have a significant unique contribution to different parts of subjective well-being (Table 2). However, the three basic needs do not have a significant unique relation to all parts of subjective well-being and therefore these results do not support the third hypothesis: the satisfaction of each basic psychological need has a unique positive relation to subjective well-being. Relatedness has a significant relation to the cognitive part of subjective well-being and autonomy and competence to the affective part of subjective well-being.

Table 2. *Standardized Coefficients Beta resulting from the multiple regression analysis Subjective Well-being (N=121).*

|             | Satisfaction with Life |      | Positive emotions |      | Negative emotions |      |
|-------------|------------------------|------|-------------------|------|-------------------|------|
|             | Beta                   | Sig. | Beta              | Sig. | Beta              | Sig. |
| Autonomy    | .09                    | .388 | .09               | .364 | -.26*             | .018 |
| Relatedness | .22*                   | .023 | .15               | .118 | -.11              | .266 |
| Competence  | .19                    | .068 | .26*              | .014 | -.02              | .875 |

\* $p < .05$ .

## DISCUSSION

This study looked at the role of the three basic psychological needs in relation to subjective well-being of professional caregivers working in nursing homes. The findings from this study suggest that the satisfaction of the basic psychological needs of relatedness, autonomy and competence is positively related to the subjective well-being of professional caregivers at work. There is little research done about the role of the three basic psychological needs in relation to the well-being of nurses, and the research that has been done, is conducted in hospitals or nursing home residents (Bernerd, Martin and Kulik (2014); Mohamed, Newton, & Mckenna (2014); Custers et al., (2010). This study differs since it aims to contribute to a complete view of self-determination in the caring relationship of nursing homes, by focusing on the perspective of the caregivers, instead of nursing homes residents. As expected from the first hypothesis, satisfaction of the basic needs was positively related to subjective well-being. Furthermore, the satisfaction of each basic psychological need appeared to have an equally strong positive relation to subjective well-being (hypothesis 2). Resulting from the conducted analysis, there were no significant differences between the three basic psychological needs and their relation to subjective well-being. This is also in line with the self-determination theory (Ryan & Deci, 2000).

When taking the interrelations between the needs into account (hypothesis 3), only autonomy and competence seemed to make a significant unique contribution to the evaluation of positive and negative emotions. This is partly in line with research done by Bernerd, Martin and Kulik (2014), who found that the basic need satisfaction of competence was more important than the need satisfaction of autonomy and relatedness for healthcare professionals. Furthermore, relatedness turned out to be the only significant predictor of satisfaction with life. This is supported by earlier research done in hospitals, which found relatedness to be the most basic need for psychological well-being of nurses (Mohamed, Newton, & Mckenna, 2014). This is also in line with earlier research that found relatedness to be the most important aspect of the caring relationship for residents in nursing homes (Custers et al., 2012). Relatedness seems to be important for the subjective well-being of both the residents and caregivers of nursing homes.

Relatedness was found to be the most important need for the evaluation of satisfaction with life, but not for the evaluation of positive and negative emotions. It seems that the three

basic needs are related to different parts of subjective well-being. This could be because the connections that people have with others give them a lot of satisfaction, rather than emotions. The fact that competence seemed to make the only significant unique contribution to positive emotions, could be explained by the will that people have to be good at what they do. For example, if people have the feeling to be good at their job, it can make them feel happy and satisfied. Autonomy was the only significant contributor to negative emotions. Apparently, the feeling to do what you want to do, is important for the evaluation of negative emotions. For example, if people feel forced to do things that they do not want to do in their job, it can make them feel sad and disdainful. The divided pattern resulting from the third hypothesis, stresses the importance to divide and measure the different parts of subjective well-being.

There are some limitations to this study. First, the items about the satisfaction of the basic psychological needs were work related, but the well-being that was measured was not work related. There might be a gap between well-being at work and well-being in general. Further research could investigate whether the basic needs at work have a stronger relation to work engagement and job satisfaction, than satisfaction with life in general, because the results might be different for domain-specific well-being. Future research could also look at the role of intrinsic motivation in relation to subjective well-being of professional caregivers, because behavior resulting from intrinsic motivation is usually autonomous. At work, tasks are intrinsically motivating when interesting and optimally challenging (Ryan & Deci, 2017).

Second, the SDT states that the fulfillment of the three basic needs is related to the social context (Ryan & Deci, 2017). In this situation, the caregivers are influenced by both the colleagues and nursing home residents. SDT is a broad theory and the work related basic needs satisfaction scale is not specified to nursing homes. So, relatedness with the nursing home residents is not measured in the used questionnaires, although this connection concerns the main part of the work that professional caregivers do.

Furthermore, the reliability of the positive emotions scale was relatively low. Deleting the item 'I feel moved' would increase the reliability substantially. However, this was not done, since this scale already consisted of a small number of items and removing the item would make the scale even smaller. It can be questioned whether it was better to remove the item or include more items that measure positive emotions, increasing the reliability.

Despite the limitations, the used questionnaires were validated and reliable, conducted at a stable and large sample. The results of this study show a clear pattern of positive relations

between the basic psychological needs and subjective well-being, with autonomy, relatedness and competence having a significant contribution to different parts of subjective well-being. Despite some insignificant relations concerning the third hypothesis, these results largely support the SDT (Ryan & Deci, 2000). SDT is not only appropriate for measurement, but it also provides a well-validated model for taking action to improve and sustain motivation and engagement (Hardré & Reeve, 2009).

The outcome of this study can be used in practice of professional caregivers, by giving attention to the importance of autonomy, relatedness and competence in relation to subjective well-being. Autonomy can be supported when supervisors help everyday work tasks feel meaningful and important. Subsequently, relatedness needs can be fulfilled when employees feel respected, concerned and included throughout the organization. Competence can be fulfilled when the workplace offers new challenges and responsibilities, allowing employees to grow in their work (Rigby & Ryan, 2018). Satisfaction of the three basic needs is directly positively related to factors at work, like trust in the organization, belief in opportunities, satisfaction with pay and benefits, and overall job satisfaction (Ryan et al., 2010). In addition to these direct benefits, need support also diminishes physical illness and absenteeism (Williams et al., 2014), and increase organizational commitment (Collie, Shapka, Perry, & Martin, 2015). Most importantly, satisfaction of the three basic needs is positively related to the subjective well-being of professional caregivers and besides that, the positive effects benefit the organizations.

This study has shown that the satisfaction of all three basic psychological needs is important for the subjective well-being of professional caregivers in nursing homes. The satisfaction of the three needs appeared to be positively related to subjective well-being, with each need having an equally strong positive relation. Furthermore, the needs appeared to have a significant unique relation to different parts of subjective well-being, with relatedness being the most important need for satisfaction with life, competence for positive emotions and autonomy for negative emotions. Supporting the needs for autonomy, relatedness and competence is positively related to both the well-being of the professional caregivers and the organizational success of the nursing homes and should therefore be considered carefully.

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