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Vulnerability and stressors for burnout within a population of hospital nurses : a qualitative descriptive study

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**Vulnerability and Stressors for Burnout within a Population of Hospital Nurses:**  
**A Qualitative Descriptive Study**

Abstract

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**Background**

The multitude of negative consequences of nurse burnout calls for interventions to protect the wellbeing of the individual nurses, patients and hospital organizations. However, much is still to be discovered about the development of this complex psychological syndrome.

**Purpose**

This study aimed to describe the development of nurse burnout for a population of Flemish hospital nurses while considering the whole of vulnerability and situational stressors as indicated by the vulnerability-stress model.

**Methods**

Ten registered nurses were enlisted for semi-structured interviews through purposive sampling. All selected nurses were currently suffering from burnout, showed a burnout risk, or had gone through a burnout in the past. A descriptive thematic analysis was performed with themes inductively emerging from the data.

**Results**

Four main themes emerged: 'being passionate about doing well or being good', 'teamwork', 'manager', and 'work and personal circumstances'. More specifically, it was the discrepancy between the first individual vulnerability factor and the three situational stressors that led to feelings of stress and burnout.

## **Conclusions**

The essence of the development of nurse burnout was found in the discrepancy between the vulnerability factor and the situational stressors. Therefore, we recommend burnout prevention to target both factors.

## **Keywords**

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burnout; nurse; stressor; vulnerability; qualitative research

## Background and Purpose

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Burnout is a burning issue. The body of evidence on this psychological syndrome in the nursing population is extensive and still growing at a steady pace (Geuens, Van Bogaert, & Franck, 2018). Knowledge concerning this phenomenon is welcomed by Belgian hospitals as they have to cope with 2% to 5% of nurses scoring above the diagnostic cut-off for burnout and an additional 7% to 17% of nurses displaying a high risk for the development of burnout (Geuens, Van Bogaert, & Franck, 2017; Godderis, Vandebroek, Van Gerven, De Witte, & Vanhaecht, 2017). The consequences are significant for the individual nurse and impact patients, nursing teams, and the organization as a whole. Individual nurses suffering burnout experience psychological distress, somatic complaints, substance use or abuse and lower job satisfaction (Aiken, Clarke, Sloane, Sochaliski, & Silber, 2002; Birkmeyer, Dimick, & Birkmeyer, 2004; Jackson, 1982; Vahey, Aiken, Sloane, Clarke, & Vargas, 2004). In addition, patient satisfaction, adverse events and patient safety are affected by the symptoms of burnout, which entail emotional exhaustion, depersonalization, and reduced personal accomplishment (Gravlin, 1994; Laschinger, Heather, & Leiter, 2006; Leiter, Harvie, & Frizzell, 1998; Vahey et al., 2004). Firth-Cozens and Cornwell (2009) confirmed that burnout was associated with a reduction in compassion and caring. Furthermore, nurses with symptoms of burnout report a lower perceived quality of care (Van Bogaert, Clarke, Roelant, Meulemans, & Van de Heyning, 2010). The effect that this may have on patient loyalty is only one of the financial threats that nurse burnout poses to the organization. Additionally, it reduces engagement, increases absenteeism, and inflates nurse turnover (Leiter & Maslach, 2009; Van Bogaert, Clarke, Vermeyen, Meulemans, & Van de Heyning, 2009; Vandebroek et al., 2012). This multitude of negative consequences calls for interventions to protect the wellbeing

of the individual nurses, patients and hospital organizations. However, much is still to be discovered about the development of this complex psychological syndrome.

One of many models to describe the development of burnout is the vulnerability-stress model. This model states that all people have some level of predisposing factors (vulnerability or diathesis) for any given mental disorder. However, each individual has his own point at which a given disorder is developed - a point that depends on the interaction between the degree of vulnerability and the degree of stressors experienced by the individual. As this model addresses the interactions between individual vulnerability factors and situational stressors, it is useful to describe who might develop a disorder and who might not (Ingram & Luxton, 2005; Monroe & Hadjiyannakis, 2002; Monroe & Simons, 1991). This model implies an inverse relationship between factors. The greater the presence of one factor, the less of the other factor is needed to bring about the disorder. Consequently, the number of stressors that instigate the development of the disorder can be counterbalanced or compensated by the degree of vulnerability and vice versa (Ingram & Luxton, 2005).

This vulnerability-stress model has been studied in relation to depression, suicidal behavior, schizophrenia, and disorders such as substance-use, personality, anxiety, and eating disorders (Hankin & Abela, 2005). However, it can also be applied to burnout. This psychological syndrome shows similarities with the aforementioned psychopathologies as not all individuals who are exposed to the same significant stressors will develop burnout. As such, vulnerability plays an important role alongside stressors and predisposes some individuals to burnout when stressors are encountered (Ingram & Luxton, 2005).

Vulnerability has a trait like nature and resides within the person, in contradiction to stressors which can be viewed as life events (major or minor) that disrupt those

mechanisms that maintain the stability of individuals' physiology, emotion, and cognition (Ingram & Luxton, 2005). In addition, even though stressors are frequently conceptualized as the occurrence of 'external' processes, vulnerable individuals may also play a role in creating their own stressors (Depue & Monroe, 1986; Hammen, 1991, 1992; Ingram, Miranda, & Segal, 1998; Monroe & Simons, 1991). That is, the diathesis may influence the manner in which a person deals with life and thus the nature of the stressors to which he or she is exposed (Ingram & Luxton, 2005). For example, people with neurotic personality traits are more likely to perceive their work environment or work related events as negative, while other co-workers might not perceive those same circumstances as disruptive. As such, the vulnerability of a neurotic personality plays a role in creating their own stressors, which may then activate the diathesis and precipitate burnout (Alarcon, Eschleman, & Bowling, 2009; Cañadas-De la Fuente et al., 2015; Geuens et al., 2017; Swider & Zimmerman, 2010). Numerous quantitative studies have described vulnerability or situational risk factors for burnout independently (Alarcon et al., 2009; Armon, Shirom, & Melamed, 2012; Geuens, Franck, Vlerick, Verheyen, & Van Bogaert, 2018; Geuens et al., 2017; Swider & Zimmerman, 2010; Van Bogaert et al., 2010; Van Bogaert, Clarke, Willems, & Mondelaers, 2013; Vandebroek et al., 2012). However, even though vulnerability and stressors can be considered to be conceptually distinct constructs, separately, their relevance to describe key aspects of burnout is limited (Ingram & Luxton, 2005). In addition, vulnerability is often latent and not easily recognizable (Ingram & Luxton, 2005). Therefore, with this qualitative study we wish to uncover the development of burnout within the nursing population even further while considering the whole of vulnerability and stressors as indicated by the vulnerability-stress model. Consequently, we explore which vulnerability factors and stressors Flemish hospital

nurses experience and perceive as contributing to burnout. This qualitative research approach may yield both rich and descriptive data, and give deeper insight into the lifeworld of participants (Holloway & Wheeler, 2010).

## Methods and Procedures

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### *Design*

This qualitative study applied a descriptive research approach.

### *Sampling and participants*

Data from a preceding quantitative study (February-March 2014) were used to obtain a purposive sample for the current qualitative study (*literature reference removed for blinding*). The aim of the previous cross-sectional study was to explore the relationship between core self-evaluations, situational factors, coping and burnout within the nursing population. The applied questionnaire consisted of five validated self-report instruments, including burnout (Utrecht Burnout Scale). It also requested the name and telephone number of the participants if they agreed to be contacted for an interview. To assure confidentiality an envelope was provided to seal up the completed questionnaire. It was distributed over 3 large general hospital groups in the Dutch speaking part of Belgium. As such a broad spectrum of the nursing staff within different hospitals and nursing specialties could be acquired. Two hundred nineteen of the 250 questionnaires were returned, resulting in a response rate of 88%.

For the current qualitative study ten registered nurses were selected by purposive sampling from the pool of 219 nurses by stratifying hospital setting, nursing specialty area, gender, age, and burnout status. Inclusion criteria entailed the willingness to participate in this research, working as a Registered Nurse, mastering the Dutch language, currently suffering from burnout, having a risk for burnout, or having gone

through a burnout in the past. The current burnout status was determined based on cut-off scores from the Utrecht Burnout Scale (Schaufeli & Van Dierendonck, 2000). Concerning the past burnout experience, an additional question inquired if they thought they had suffered from burnout in the past. Nurse Managers were excluded from the study as they might experience and perceive different vulnerability factors and stressors as contributing to burnout compared to nurses.

The remaining data from the preceding quantitative study were not taken into account during the sampling. The characteristics of the participants within this sample are described in Table 1. No nurses refused to participate as they had already indicated in the questionnaire that they were willing to be interviewed. The number of participants was congruent with the assumptions of qualitative research, and data sufficiency was reached after seven interviews, when no new topics emerged. An additional three interviews were conducted to confirm this status.

#### *Data collection*

Data collection was conducted through semi-structured interviews. The participants were informed that the study aimed to identify sources for the development of burnout. Each interview began with an open and broad question asking about the experience of burnout risk or burnout within its context. For nurses who had suffered burnout in the past, this question was: "Would you like to tell me about the time you felt burned out?". For nurses who were burned out or were at risk according to the preliminary assessment (see further) – and were often still oblivious to this fact – the opening question sounded: "Would you like to tell me how you feel about your job at the moment?". During the interview the researcher posed probing questions in order to uncover the individual risk factors and stressors which were common to all participants, such as "What causes you stress in your work environment?". As stressors were often



more easily identified than vulnerabilities, more probing questions were posed concerning individual factors. For instance, “Why do you think you are vulnerable to develop burnout?”, “Do you have characteristics you wished you did not have in order to make your life less stressful?”. Additionally, the researcher focused on clarifying the experiences by asking the participants to provide examples (Holloway & Wheeler, 2010). During the interview, the researcher carried out necessary revisions applying summarizing and repeating to recognize the participants’ data.

The interviews were conducted in May 2014 by a female researcher/PhD student who had previous experience in undertaking sensitive content interviews. The credentials of the interviewer were not shared with the participants prior to the interview in order not to bias the findings. The practical arrangements for the interviews were made via telephone. The location of the interview was chosen by the participant to make them feel comfortable; in a private place in the ward, in their home or at the office of the researcher. No one else was present besides the participant and the researcher. The interviews were audiotaped. No field notes were made. The interviews lasted between 60 and 90 minutes, to allow sufficient time to identify the individual factors and stressors contributing to nurse burnout and confirm these findings.

### *Ethical considerations*

Ethics committee approval was obtained from a university hospital designated as central committee (B300201318842) as well as approval from the local ethics committees of each participating hospital. The researchers insisted on the confidentiality of all information presented by participants throughout the entire research process. Informed consents were agreed upon by every nurse prior to the start of the interview. Pseudonyms were used in order to protect the participant’s identity.

### *Strategy of analysis*

The interviews were transcribed verbatim and data collection and analysis occurred simultaneously. Two study investigators performed a descriptive thematic analysis with themes inductively emerging from the data during the analysis. The software program NVIVO 10 was used during data analysis. For dependability focusing on the research objectives, trying to explore the same areas for all the participants and self-reflection were important issues. The researchers considered their thoughts, beliefs and previous assumptions critically regarding nurse burnout and the associated vulnerabilities and stressors and attempted to keep this self-critical position in the whole process of the study. To assure credibility, the codebook was presented to the co-researchers and common themes were agreed upon.

## Results

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Four main themes emerged: 'being passionate about doing well or being good', 'teamwork', 'manager', and 'work and personal circumstances'. As shown in Figure 1, the essence of the development of nurse burnout was found in the discrepancy between 'being passionate about doing well or being good' and the themes of 'teamwork', 'manager', and 'work and personal circumstances'.

All participants described in some way that they were **passionate about doing well or being good**. They were proud and satisfied with this characteristic but also labelled it as a source of negative emotions.

*Being passionate about being good* was mentioned by the majority of participants. They described that they liked to help other people and as a consequence felt intrinsically rewarded and felt good about themselves.

“Something that has really lifted my spirit was coming into contact with children and their parents again. Just the fact that you can be of meaning to them, directly, caring for them, trying to provide as much quality as possible.”

(Interviewee 8)

Some even described “wanting to help others” as the reason for choosing nursing as a profession. Additionally, participants felt compelled to stand up for and protect others as they attached importance to justice.

*Being passionate about doing well* was portrayed by participants stating that they wanted to do their job well or even perfect. Almost all participants were highly motivated and ambitious. Three nurses had been unit nurse manager in the past, one was a reference nurse and three nurses had followed additional schooling on top of their required diploma.

“I like this kind of work. And when you like your work and you feel good, you will go to extremes ... // I am eager to learn and I always want more and I always want... and I don't regret that, certainly not.” (Interviewee 1)

A lot of value was attached to tidiness and organization and they gained satisfaction from being able to complete a task perfectly and swift. To make sure that everything went well, participants mentioned that they tried to gain control over their environment.

“... I was compulsively trying to control everything, like “ did I open that IV line?” and then going back a few times to check it again... it is the way I was made I guess, that I want to do everything well, perfectly even ... “ (Interviewee 5)

Although they found occasional satisfaction in being passionate about doing well or being good, it often caused a wide array of negative emotions as well. As they attached a lot of importance to doing things well or even perfect, respondents doubted their own

capacities when they were not able to reach these high standards. This occurred in young as well as more experienced nurses and both when they started at a new unit as when they had been working there for a long time.

“Sometimes I feel like I ... like I am not the right person for this job. That other people are better at it than me... and that’s probably the case... I think.”  
(Interviewee 9)

As a consequence, the majority of participants relied on the appreciation of others to confirm that they were doing well.

“Gratefulness of patients, that’s why I do it! Absolutely.” (Interviewee 2)

Respondents were also hard on themselves when they were unable to meet their high standards. They saw this as failing in general. They stated that they had to be tough because admitting that they need help felt like failing.

“I think that sometimes you have to be able to admit that you are not okay, that you are stuck. // but I don’t want to give in to that feeling. I’m like ‘I will push through to the bitter end and if I die trying, so be it’ but I do not want to give in to it // and I don’t accept that.” (Interviewee 2)

In addition, they felt that making mistakes was not tolerated and was perceived as not having done a good job. As a consequence, almost all respondents struggled with letting go and took the job home with them, which often resulted in brooding and sleeping difficulties.

“About my job it is often more like brooding. Or I can wake up in the middle of the night and think ‘Oh, I forgot to brief that to my colleagues’. // And then I come in early the next morning to get it off my chest.” (Interviewee 10)

Furthermore, some found it unacceptable to leave work to be done by their colleagues even because of time constraints or illness. They saw this as failing to organize and burdening their colleagues. As a consequence they felt guilty for being ill, which often resulted in coming to work ill.

“... and then I always call with a lot of apprehension because I know that I am abandoning my colleagues and I know I am failing my unit manager and ... that's genuine fear. And we all come to work ill because we think 'I don't want to do this to my colleagues'.” (Interviewee 10)

These feelings of guilt were also a primary reason why half of the participants did not stand up for themselves. They were afraid that they would hurt others by doing so. Therefore, they often forgot about their own needs in order to care for others. In line with this, they experienced difficulty with setting boundaries, protecting themselves and fencing off. They were afraid to come across as selfish.

“People often think 'oh she will do it', I just let people walk all over me, I don't know why. // I wish that I was more assertive... but I quickly get the idea that I would become selfish and that is something that I absolutely do not want ... (Interviewee 6)

Although they had no difficulty standing up for and protecting others, all nurses found it hard to speak their mind. They suppressed their own opinions and feelings, kept everything bottled up and avoided confrontation not only because they were afraid to hurt others but also out of insecurity of how to express their concerns and out of fear to be hurt themselves.

“No I never talked to her about that. I thought pfff I am not going to reopen old wounds. // perhaps to protect myself, because I also thought ‘what else is she going to say about me?’.” (Interviewee 4)

Although the theme of ‘being passionate about doing well or being good’ may have caused negative emotions, on its own it did not cause substantial stress or burnout. It was the discrepancy between this theme and the themes of ‘teamwork’, ‘manager’, and ‘work and personal circumstances’ that led to feelings of stress and burnout. Therefore the following three themes will be described in relation to the characteristic of ‘being passionate about doing well or being good’.

With regard to **teamwork**, the majority of participants experienced stress due to having to work with a large group of people as this complicated the fulfillment of their personal goal to get along and please for everyone. Additionally, the participants felt stressed when their colleagues were not as passionate about doing well or being good as they were and thus did not strive to achieve the same high standards. Respondents described being frustrated by colleagues who worked slow, left work to be done by the next shift, did not help each other, were not as precise and neat, were too assertive, or behaved inappropriately towards patients. Some respondents even described feeling responsible for monitoring the work of their colleagues to make sure that the patients received a high standard of care.

“I always have to rectify everything around here, but if I don’t, the patient would not get the correct medication for instance. Then he would be the victim of it, so... “(Interviewee 4)

Half of the participants attached importance to social support, being able to talk to their colleagues, help each other with difficult cases and lend support during conflicts. After

all, they strived to stand up and help others themselves. As a consequence, frustrations arose when they did not receive the same support.

“That is the problem. There are not enough people that have your back and support you and then ... pffff ... You often feel like you are all alone and then, then,... there is no point.” (Interviewee 10)

As participants perceived honesty, treating others fairly, and a sense of justice as vital characteristics, study participants experienced stress when being faced directly or indirectly with inappropriate behavior such as gossip, bullying, undeserved remarks, and rudeness of colleagues and physicians. This also triggered their insecurity as they valued the opinion and reactions of others.

“In three years’ time - it has only been three years - I have seen and heard and experienced so many things and was scolded and was called all kinds of things, that I think ‘pffff ... do I have to do this for 20 more years?’.” (Interviewee 10)

Physicians were mentioned by almost all respondents as being difficult to work with and a source of stress. They felt that physicians did not acknowledge that they also did a good job and had experience. They stated that physicians were disrespectful, impatient, acted as if they knew everything better, and felt almighty. Some participants even said that they had abandoned all efforts to reason with them.

“The medical student said ‘I would give *that* medication’, I said ‘I would not do that because she is going to collapse’. She replied ‘who is the doctor? You or me?’. // She gave the medication and the patient coded. // I would like to be more assertive because now I feel like pffff ... whether I say it or not, it makes no difference anyway.” (Interviewee 7)

A lot of participants stated that they put up a mask while at work and hid their true feelings and opinions even more in order to maintain the fragile balance of pleasant teamwork or because they had grown suspicious of their surroundings.

"I pay attention to what doctors say and how I react to it. // I work and I know 'this is your job' and your personality kind of stops. You try to be less vulnerable to ... so they cannot get you. // especially do not let them look inside you."

(Interviewee 1)

A final stressor deriving from teamwork was the infectious negativity in their surroundings. Additionally, the majority described that they had colleagues or friends who had suffered from burnout. Some had trouble understanding why their colleagues or friends got burned out and others were astounded by the negative and ignorant reactions from the environment.

"I have that on a regular basis. I can get caught up in a conversation with someone and then stay completely negative. And if I run into a colleague who is the same, I get drawn into a downward spiral." (Interviewee 3)

The third theme concerns the **manager**. All nurses stated that the unit manager and/or higher management were some of the most important stressors as they felt hindered by them to do their job well because of insufficient support, incapability, inappropriate behavior, injustice, and not focusing on the essence of caring.

"Those people are ill, you want to help them, but that you get hindered... that is the core business of everything isn't it? From higher up you don't get the impression that they feel the same. They just want a healthy business and the patient isn't the center of attention, the profit margin is. // I feel like they are bullying the employees and the patients are the victim." (Interviewee 7)



This often caused them to feel like they were not being heard and were powerless. Due to the fact that they relied heavily on feeling valued, almost all nurses were frustrated by the lack of appreciation, rewards, and caring for the employees deriving from the managers.

The fourth and final theme included **work and personal circumstances**. The nurses experienced that several job demands made it difficult for them to provide a high standard of care. The most hindering job demand was time pressure. They attributed this time pressure to factors such as unforeseen tasks, administrative tasks, lacking logistical support, demanding physicians, training student nurses or new colleagues, but most importantly staff shortages. Additionally, some nurses found that working with interim nurses did not provide an answer to these shortages as they were not able to provide the same quality of care. These job demands often led to moral distress and abandoning all hope.

“We are all struggling with the fact that we cannot provide that quality of care... that we are often only able to give half the care the patient needs ... pfff... you cannot keep taking it all in, because where does it end? After all, there is no one who is willing to do something about it.” (Interviewee 7)

Furthermore, long series and irregular work shifts, demanding patients, filling in for absent colleagues, responsibility, and job insecurity due to organizational changes caused additional pressure and exhaustion.

Concerning personal circumstances the majority stated that family and relationship issues aggravated work related stress as they wanted to do well for both parties and often felt torn. Some female nurses found that hormonal changes contributed to their stress. Finally, others mentioned a hereditary factor and unprocessed past traumas.

“The signal when I first fell ill was waking up in the middle of the night. And night terrors. Everything resurged from the past, even from when I was young.”

(Interviewee 8)

## Discussion

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In this study we explored which vulnerability factors and stressors Flemish hospital nurses experienced and perceived as contributing to burnout. The essence of the development of nurse burnout was found in the discrepancy between ‘being passionate about doing well or being good’ and ‘teamwork’, ‘manager’, and ‘work and personal circumstances’.

As far as we know, this is one of few qualitative studies which describe nurse burnout while considering the whole of vulnerability and stressors as indicated by the vulnerability-stress model. International research which aims to identify sources of burnout in the nursing population often focusses on the situational stressors such as organizational and job related factors. As a consequence, the individual vulnerability is not taken into consideration. Taylor & Barling (2004) for instance applied a qualitative approach to identify work-related problems to assist Australian mental health nurses to locate the sources of carer fatigue and burnout. Although they set out to explore work-related factors, several of their themes clearly depicted the discrepancy between individual vulnerability factors and situational stressors. For instance, within the theme of ‘difficulties with the nature of the work’ the theme of ‘being passionate about being good and doing well’ was reflected. Furthermore, the majority of the situational factors or stressors that were identified by Taylor and Barling (2004) were also found in the current study. As such, their themes of ‘problems with doctors’ and ‘nurse-nurse relationships and horizontal violence’ were mirrored in the current theme of ‘teamwork’.

Additionally, the themes of 'difficulties with the nature of the work', 'inadequate resources and services', and 'aggressive and criminal consumers' were summarized within the theme of 'work and personal circumstances' in the study at hand. Finally, the theme of 'issues with management and the system' of Taylor and Barling (2004) corresponded to the theme of 'manager'. As a consequence, the stressors identified by Taylor and Barling (2004) agreed largely with the stressors in the current study and the vulnerability factors could be found to some degree within their themes.

Zhao et al. (2015) identified 5 themes in their research on influential factors for the occupational well-being of experienced Chinese nurses. Although not specified as such, one of these themes ('Internal career expectation and occupational value') represented the individual vulnerability of the nurses. This theme shows a strong resemblance to the vulnerability factor in the current study of 'being passionate about doing well or being good'. Zhao et al. (2015) stated that occupational well-being was affected by the nurses' expectations of their work and that this expectation varied depending on what each participant valued. Concerning the situational stressors, Zhao et al. (2015) encountered more positive reports due to their positive approach of well-being. Nonetheless, resemblances could be found between the themes of 'external occupational recognition', 'a harmonious and friendly work environment', 'support and understanding from family', and 'occupational planning and payment' of Zhao et al. and the themes of 'teamwork', 'manager', and 'work and personal circumstances' of the study at hand. It is interesting to find that the results of the current study in a population of Flemish nurses largely resemble the results of qualitative studies in Australia and China (Taylor & Barling, 2004; Zhao, Liu, & Chen, 2015). Therefore, we presume that the findings of this study might be transferable to similar settings. However, due to the

qualitative research approach we are unable to assume that the findings are generalizable cross-culturally.

Additionally, similarities were found between the findings of the current study and the research of Leiter and Maslach (2009) on areas of work life (Leiter & Maslach, 2009). In line with our findings, Maslach and colleagues propose on the notion that burnout results from a misfit between the individual and the job. The greater the perceived mismatch is within the six areas of work life, the greater the likelihood of burnout. These areas of work life encompass the extent to which someone experiences workload, control, reward, community, fairness and values congruence (Leiter & Maslach, 2004; Maslach, Jackson, & Leiter, 1996; Van Bogaert & Clarke, 2018). In their study areas of work life such as the extent to which nurses experience limited values congruence predicted all three burnout dimensions, while perceived workload and lack of fairness just emotional exhaustion and depersonalization, respectively. Furthermore, lack of fairness such as favoritism, unjustified inequities or cheating turned out to be the critical incongruity or tipping point to develop into burnout over time (Leiter & Maslach, 2009). This coincides with the finding in the study at hand that the essence of the development of nurse burnout was found in the discrepancy between 'being passionate about doing well or being good' and 'teamwork', 'manager', and 'work and personal circumstances'.

#### *Study limitations and further research*

Because only nurses currently suffering from burnout, having a risk for burnout, or having gone through a burnout in the past were recruited for this study, the causality between the identified themes and burnout cannot be assured. A possibility exists that the themes that are assumed to cause burnout might in fact be symptoms of burnout. Therefore, further research is warranted to confirm the causal relationship between the discrepancy of 'being passionate about doing well or being good' and 'teamwork',

'manager', 'work and personal circumstances' and nurse burnout. By selecting a population of nurses without burnout symptoms it can be affirmed that the vulnerability factors and perceived stressors are in fact causes for burnout. Additionally, the manner of determining the current and past burnout status could cause some discussion as a self-report instrument (UBOS) was used to define the current burnout status and the past burnout status was based on self-diagnosis. However, because there is no generally accepted definition of burnout, no clear diagnosis instruments for burnout currently exist. Burnout is not even mentioned in DSM-V, and in ICD-10 it is listed in the residual category "Z 73, problems related to life management difficulty" as "burnout: state of vital exhaustion." (Kaschka, Korczak, & Broich, 2011). The most common questionnaire is the Maslach Burnout Inventory (MBI), which is the original English version of the translated Utrecht Burnout Inventory, which was used in the study at hand. A future qualitative study exploring the meaning and definition of burnout from the position of 1) nurses who are currently being faced with burnout, 2) nurses with a past burnout, and 3) newly graduated nurses without any burnout symptoms, might fuel the current discussion on the conceptualization of burnout even further.

Additionally, in future research the participants should be screened for personality disorders or other psychopathologies. This was a limitation of the current study which might have influenced the findings. On the other hand, the purposive sampling method based on stratification by hospital setting, nursing specialty area, gender, age, and burnout status provided a representative sample of the Flemish nursing population sensitive to burnout.

Further research should also be conducted to develop a measure for burnout risk based on the individual vulnerabilities and situational stressors. This could allow

healthcare organizations to effectively aim prevention at a population at risk for burnout and nurture the psychological well-being of those employees who need it most.

*Implications for practice*

Based on the findings of the current study we might recommend that prevention should target both the individual vulnerabilities as well as the situational stressors. Due to the pivotal role of individual vulnerabilities in the development of burnout, situational changes alone might not reduce burnout incidence and vice versa. In line with this hypothesis, Awa et al. (2010) advocate for better implemented programs including both person- and organization-directed measures in order to increase the effectiveness of burnout prevention (Awa, Plaumann, & Walter, 2010). Where programs aimed at the individual have clear short term effects, they need to be repeated in order to maintain the predefined results. Programs on an organisational level in contrary will not result in any short term effects but are more aimed at long term stress reduction. Based on our results, we might suggest to address the different causes for burnout in order to prevent burnout. Therefore, preventive measures should be aimed at the individual nurse, as well as the team, the manager and the organization with special focus on the discrepancy between the individual vulnerabilities and the situational stressors. For instance, the hierarchical structure in Belgian hospitals often hinders open communication between nurses, nurse managers, and physicians. In combination with a large representation of introvert personality types in the nursing population, such as Type D personality (Geuens, Braspenning, Van Bogaert, & Franck, 2015), this might result in underlying tension in interpersonal interactions. Training team members on how to be transparent (e.g. effectively communicate their needs and expectations) concerning energy loss might facilitate more open communication,

collective problem solving, mutual understanding, setting common goals and thus a reduction of stress and burnout.

MacArthur et al (2017) attributed to this hypothesis in their development of a conceptual model for embedding compassionate care. They stated that in high adopting wards of Leadership in Compassionate Care (LCC) staff were working in environments where they had shared values, were reflective, respected each other's contribution, were open in their exploration of ways to enhance care, were encouraged to give feedback, supported each other and in turn were supported by their managers (MacArthur, Wilkinson, Gray, & Matthews-Smith, 2017; Van Bogaert, 2017). Van Bogaert (2017) added that this conclusion covers the necessary agenda for all stakeholders to create and support nursing practice and psychosocial work environments that are focused and adaptive for the best care and patient needs based on aligned goals between organizational and management levels (Van Bogaert, 2017). However, to prevent burnout these goals of the organization and management should also be aligned with the goals of the individual nurses.

Ruotsalainen et al. (2015) confirm our theory on the essential role of individual measures in burnout prevention as they found evidence - although of low quality - that cognitive behavioral therapy and mental and physical relaxation reduce stress more than no intervention (Ruotsalainen, Verbeek, Mariné, & Serra, 2015). Therefore, it is important not to lose sight of these individual factors when developing organization wide preventive measures. In addition, nurses will probably be willing to participate in individual preventive measures as their willingness to participate in the current and similar international studies attests to their intentions to acknowledge their stress and attempts to do something about it (Taylor & Barling, 2004).

## Conclusion

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This study described the development of nurse burnout while considering the whole of vulnerability and stressors as indicated by the vulnerability-stress model. The essence of the development of nurse burnout was found in the discrepancy between 'being passionate about doing well or being good' and 'teamwork', 'manager', and 'work and personal circumstances'. These results largely resemble the results of similar international research. However, further research is necessary to confirm the causal relationship between these themes and nurse burnout. Based on the findings of the current study we recommend burnout prevention to target the individual nurse, as well as the team, the manager and the organization with special focus on the discrepancy between the individual vulnerabilities and the situational stressors.

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**TABLES**

**Table 1**  
 Participants' characteristics (N=10)

	Number
<b>Gender</b>	
Female	7
Male	3
<b>Age mean (range)</b>	43.7 (27-54)
<b>Nursing specialty area</b>	
Technical unit – Outpatient clinics	2
Emergency Room – Operating Room – Intensive Care Unit	1
Medical-surgical unit	2
Pediatric unit	2
Psychiatric unit	1
Geriatric unit	2
<b>Hospital group</b>	
A	3
B	5
C	2
<b>Burnout status</b>	
Burned out	5
Risk for burnout	3
Burnout in the past	2

FIGURES

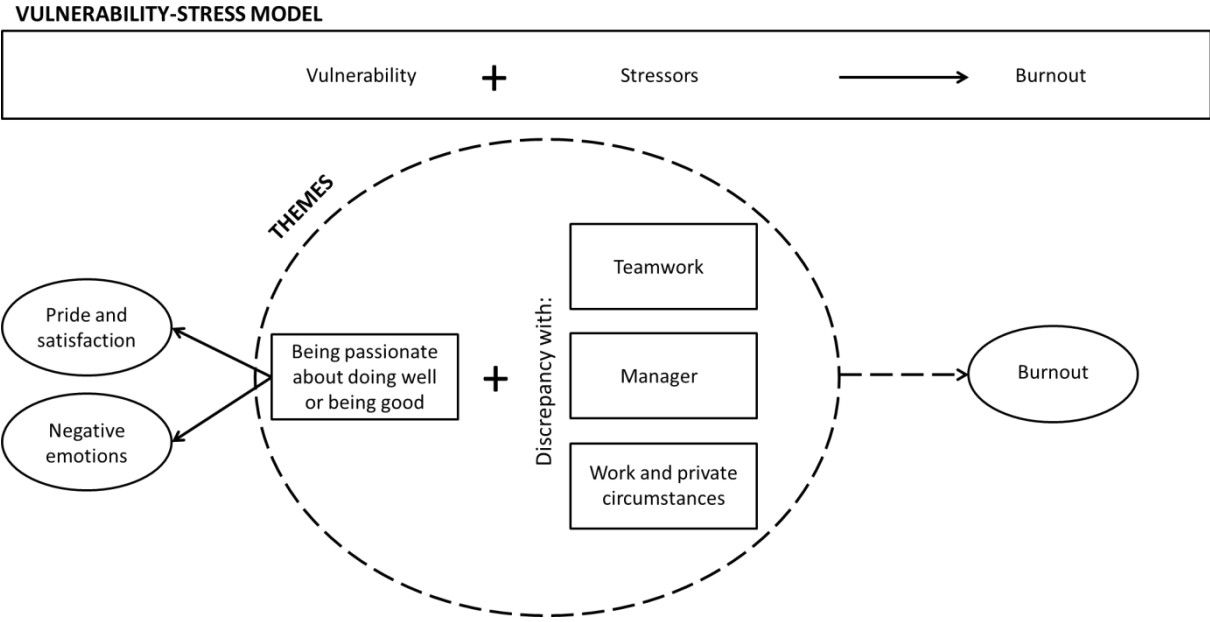


Figure 1: Schematic representation of the results in relation to the vulnerability-stress model