Personality and burnout

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PERSONALITY AND BURNOUT
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Many studies highlight the correlation between personality and burnout but a limitation in previous studies is the lack of longitudinal data, which is preferable to show strong causal relationships. The purpose of this study is to explore if personality traits can predict changes in levels of burnout across time. Longitudinal data from nurse students in Sweden participating in the LANE study are used. The personality constructs chosen are personality traits from The Five Factor theory, adjusted into traits specifically applicable in personality and health research. Two dimensions of burnout were used to identify levels of burnout, exhaustion and disengagement. The method used to explore changes in burnout levels, and associations to personality traits, is multiple regression analysis. The results show that the personality traits Impulsivity, Negative affectivity and Antagonism can predict burnout. The longitudinal data allow us to make stronger predictions than earlier studies made.

The concept of burnout has evolved over the years and the meaning of the word has changed. The concept has stimulated research on job stress, particularly in helping professions. In the 1970s Maslach and her colleagues studied how a variety of human services workers coped with their emotional arousal using cognitive strategies such as detached concern. As a result of these interviews she learned that these workers often felt emotionally exhausted, developed negative perceptions and feelings about their clients or patients and experienced crises in professional competence as a result of the emotional turmoil (Schaufeli, Leiter & Maslach, 2009). The term they used to describe this was “burnout” and Maslach invented the MBI - Maslach Burout Inventory. Maslach defined the concept of burnout as “a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity”. In the 1980s researchers discovered that burnout was found in other professions than those in the human service area and the MBI-GS (Maslach Burout Inventory General Survey) (was invented Schaufeli, Leiter & Maslach, 2009). This led to a widening of the concept to “A state of exhaustion in which one is cynical about the value of one’s occupation and doubtful of one’s capacity to perform”. Moreover it was found that burnout was absent in some ideological communities like monasteries and religious care centers. The reason for this seem to be that social commitment, a collective whole and shared strong values, that comes with a collective identity, prevents burnout.

In the 1960s burnout like symptoms were described among doctors, nurses, teachers, social workers and police officers. The symptoms could be connected to a weakening of the professional authority in combination with increased expectations from the recipients. These two trends increased the technical and emotional demands of professional work considerably, and the discrepancy grew between professionals’ efforts and the rewards they received (Schaufeli, Leiter & Maslach, 2009). This observation can be connected to Hobfoll´s theory about conservation of recourses when he describes that loss of recourses is greater than the recourses gained (Hobfoll, 1989). Most prominent is the imbalance between demands and resources at work and the conflict between values. The latter aims to conflicts between personal values and those
of the organization, as well as between the officially stated organizational values and the values in action. Kaplan has described that when people must behave or experience themselves in a way dissonant with their basic view of the world, they are likely to experience psychological distress (Hobfoll, 1989). Shirom (2003) describes similar observations in the case of employees in people oriented professionals in the 80s and 90s. The public sector had to adjust to consumers’ growing demands for quality service, downsizing, and budgetary retrenchments while norms expected them to continuously invest emotional, cognitive, and physical energy in service recipients (Shirom, 2003). These changes are likely to create a process of emotional exhaustion, mental weariness, and physical fatigue.

It is possible that the development of burnout is effected by the socio-cultural evolution. Since the 1970s community support has decreased for the benefit of individualism with a personal definition of social and occupational roles. In addition we see the evolution of a narcissistic culture that produce self-absorbed, manipulative individuals, who demand immediate gratification desires (Schaufeli, Leiter & Maslach, 2009). The trends toward individualization and narcissism produce “a perfect recipe for burnout” where the former produces stress and frustration while the latter undermines people’s coping resources.

In the Job demand-Resources model of burnout by Demerouti, Bakker, Nachreiner and Schaufeli (2001) they use an alternative measure of burnout called The Oldenburg Burnout inventory (OLBI). The model assumes that burnout develops irrespective of the type of occupation, when job demands are high and job resources are limited. Such negative working conditions, they say, lead to energy depletion and undermine employees motivation. The third classical burnout component, reduced Personal accomplishment, is not considered to be a separate dimension in the Job demand-Resources model of burnout. This is because 1. Emotional exhaustion and Depersonalization are generally considered to be the core dimensions of burnout. 2. a meta-analysis has shown that Emotional exhaustion and Depersonalization are much stronger correlated with each other than with Personal accomplishment. 3. Personal accomplishment is the weakest burnout dimensions in terms of significant relationships with other variables (Demerouti, Bakker, Nachreiner & Schaufeli 2001). According to Demerouti, Bakker, Nachreiner and Schaufeli, these empirical results support the notion that Emotional exhaustion and Depersonalization constitute a syndrome, which is loosely related to Personal accomplishment. Reduced Personal accomplishment could be seen as a consequence of the negative emotional experience of burnout.

Recent debates revolve around whether burnout should be considered only as aspects of exhaustion. Most scientific research still uses the three-dimensional description of burnout including exhaustion, cynicism, and inefficacy, consistent with Maslach Burnout Inventory, which dominates the field. However some critics maintain that rather than being a multi-dimensional phenomenon, burnout is essentially equivalent to exhaustion (Schaufeli, Leiter & Maslach, 2009). Other scholars consider burnout as a generic, context-free phenomenon that may occur outside work. For instance, recently Kristensen et al. proposed to discriminate between work-related burnout, client-related burnout, and personal burnout. The latter is described as “the degree of physical and psychological fatigue and exhaustion experienced by the person” (Kristensen et al referred by Schaufeli, Leiter & Maslach, 2009).
The OLBI includes two dimensions of burnout, exhaustion and disengagement from work. Exhaustion is defined as a consequence of intensive physical, affective and cognitive strain. This could be a long term consequence of prolonged exposure to certain demands. This conceptualization is quite similar to other definitions of exhaustion that have been proposed (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). The OLBI covers affective, physical and cognitive aspects of exhaustion. Depersonalization in the OLBI refers to distancing oneself from work, experiencing negative attitudes towards work objects, work content or one’s work in general, whereas depersonalization in the MBI refers to distancing oneself emotionally from service recipients.

A problem with MBI and MBI-GS is that the items of each subscale are all phrased in the same direction, all exhaustion and cynicism items are phrased negatively and all professional-efficacy items are phrased positively. This will increase acquiescence tendencies and can lead to artificial factor solutions in which positively and negatively worded items are likely to cluster (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). The MBI has been criticized for this weakness, and it has also been noted in a study which examined the factorial and convergent validity of the MBI and the OLBI (Demerouti, Bakker, Vardakou & Kantas, 2002). The OLBI scales, on the other hand, each includes both negatively and positively worded items. Both exhaustion and disengagement are measured via sets of items that require both affirmative and negating responses.

In the Job demand-Resources model of burnout by Demerouti, Bakker, Nachreiner and Schaufeli (2001) the results showed that the two-factor structure of the OLBI, with exhaustion and disengagement as separate but correlated factors, is essential invariant across samples including workers employed in the human services, transport operations and the manufacturing industry.

As we can see theories about burnout revolve around the work situation, but there are also theories about personality playing a roll in the process of burnout. In their cognitive-affective personality system (CAPS), Mischel and Shoda theorize that individuals’ personalities affect how they encode or evaluate information from their environments. It is argued that individuals’ mental encodings of their expectancies and beliefs, their affective and physiological reactions to events, and their self-regulatory plans control impulsive behavioral tendencies, frustrations, and fears. These encodings, referred to as cognitive-affective units, serve as mediators explaining personality-behavior relationships (Mischel & Shoda 1995 referred by Swider & Zimmerman 2009). Job burnout may serve as a set of mental encodings that individuals have, concerning their reactions and responses to ongoing stress at work.

**Personality traits**

Then what is personality? According to Roberts and Mroczek (2008) personality traits are defined as the relatively enduring patterns of thoughts, feelings, and behaviors that distinguish individuals from one another. There are many different theories and thoughts about what personality is but one of the most well-established ones are the Five Factor Model which is a trait theory of personality (Digman, 1990; Ozer, 2006). The Five Factor Model inventories consist of five scales measuring broad personality factors. Each scale may be broken down into a number of subscales. The five scales are:
1. Agreeableness - Agreeable individuals are warm, supportive, and good-natured with high adaptability and compliance.

2. Conscientiousness - Conscientious individuals tend to have strong work ethic and achievement orientation and are of efficient and a hardworking nature.

3. Extraversion - Extraverts are likely to experience positive emotions, such as cheerfulness, enthusiasm, and optimism.

4. Neuroticism - Neurotic individuals are described as being anxious, insecure, depressed, fearful, and nervous.

5. Openness - Individuals who are high in levels of openness tend to be intellectually curious and open-minded about their environments.

The association between personality and burnout
A relatively large amount of studies have explored the associations between personality and burnout. In a recent meta-analysis made by Swider and Zimmerman (2010) correlations between Five Factor Model personality traits and job burnout were synthesized from 112 different research reports. In the results was found that all five of the Five Factor Model personality traits contributed to explain substantial variance in the burnout levels between individuals. Neuroticism and Extraversion correlated strongest with Exhaustion, and Neuroticism and Agreeableness correlated strongest with Depersonalization. Extraversion and Neuroticism correlated strongest with Personal accomplishment. The Five-Factor Model traits explain 33% of the variance in emotional exhaustion, 21% of the variance in depersonalization, and 27% of the variance in personal accomplishment.

In another meta-analysis made by Alarcon, Eschleman and Bowling (2009) the relationship between personality and three dimensions of the Maslach Burnout Inventory (MBI) were synthesized from 115 different research reports. In the results they found that four out of five personality traits were correlated to the three dimensions of burnout. Negative affectivity, Extraversion, Conscientiousness and Agreeableness showed significant relationships to all three dimensions. Negative affectivity and Extraversion were strongest correlated to Exhaustion and Negative affectivity and Agreeableness were strongest correlated to Personal accomplishment. Extraversion and Agreeableness were strongest correlated to Personal accomplishment.

The results indicate that personality traits like Extraversion, Conscientiousness and Agreeableness reduces the risk of burnout, while people with high levels of Negative affectivity and Neuroticism are more prone to experience job burnout.

Then why are there connections between personality and burnout? In Hobfoll’s theory about Conservation of resources, he defines psychological stress as a reaction to the environment in which there is threat of loss of resources, loss of resources or lack of resource gain following the investment of resources. Resources are assumed to be essential in the understanding of psychological stress (Hobfoll, 1989). In this theory resources are defined as those objects, personal characteristics, conditions or energies that are valued by the individual, or serve as a means for attainment of these objects, personal characteristics, conditions or energies. These resources could for example be mastery, self-esteem, learned resourcefulness, socioeconomic status or employment.
Hobfoll states that individuals strive to minimize loss of resources when confronted with stress. Individuals that are ill equipped to gain resources are likely to be particularly vulnerable and they lean toward prevention of resource loss. Hobfoll defines one of the resources personal characteristics, he claims that many personal traits and skills aid stress resistance.

In the cognitive–affective personality system (CAPS) by Mischel and Shoda, mentioned earlier, is described how individuals’ personalities affect how they encode or evaluate information from their environments (Mischel & Shoda 1995 referred by Swider & Zimmerman, 2010). According to this theory Job burnout may serve as a set of mental encodings that individuals have, concerning their reactions and responses to ongoing stress at work. Taking Hobfolls’ theory about recourses in account, the connection between personality and burnout could also be that individuals, in accordance with their mental encodings, react and response in ways that demands different amount of recourses, and are therefore various vulnerable to resource loss.

Previous studies have clearly shown a correlation between personality and burnout. Among studies made on the subject, trying to find predictions for burnout, there are some limitations. One of them is the use of cross-sectional data as correlations found does not imply causion. Even when there seem to be a clear caus and effect relationship, correlation alone is not sufficient evidence for a causal relationship (Brace, Kemp & Snelgar, 2009).

Four conditions should be met in order to be able to assert that X has a causal effect on Y. 1. X should precede Y in time, 2. there should be a statistically significant association between X and Y, 3. the association between X and Y should not be due to a third variable, 4. there should be a reasonable theoretical explanation of the relation between X and Y (Hochwälder, 2008). The longitudinal data used in this study are advantageous to show a stronger causal relationship and to be able to predict change or deterioration in burnout dimentions based on personality traits.

The purpose of this study is to explore if personality-traits can predict changes in levels of burnout across time. On the basis of the cross-sectional associations between personality and burnout from the two previous meta-analyses, it is hypothesized that 1. Personality traits associated with Neuroticism and Extraversion show the strongest correlations with Exhaustion. 2. Personality traits associated with Neuroticism and Agreeableness show the strongest correlations with Disengagement.

Method

Study design
This study used longitudinal data from nurse students in Sweden participating in the LANE study – a part of an ongoing longitudinal research program concerning how people perceive their work situation and their work related health. The LANE-study is focusing on nurses working conditions and work related health. Longitudinal data makes it possible to compare results from two occasions, look for changes in levels of burnout and connect them to personality-traits.

Settings
Data was collected as postal surveys in the autumn and winter of 2002, the second term of the education, and were followed-up in the autumn and winter of 2003, the fourth term. The participants received written information about the survey which contained a part with personality related questions and a part with burnout related questions. The participants could also follow the project on a website.

Participants
All nurse students in Sweden, starting the nurse program in the spring of 2002, were invited to participate in the study. They all received a letter with request for participation. In the letter the students were informed about the project, why the study was made and about the code of ethics. At baseline the average age was 28 years (standard deviation 7 years and range 20 to 52 years). 50% were 20-25 years old and less than 50% had children. 11% were men and 89% were women. The participant will be followed after their education is finished, for several years into their working life.

Instruments
Two dimensions of burnout were used to identify levels of burnout, Exhaustion and Disengagement. Both dimensions were measured via sets of items that required both affirmative and negating responses in accordance with the OLBI scale (Demerouti, Bakker, Nachreiner & Schaufeli 2001). Eight items were used for each dimension, half of them were positively phrased and half negatively. The answers of each individual were compiled into a mean value.

The personality constructs chosen are personality traits from The Five Factor theory adjusted into personality traits associated with health. These are based on a personality inventory, specifically applicable in personality and health research (HP5i). The development of this inventory began with a demarcation of some specific constructs thought to be relevant in explaining individual differences influencing the vulnerability to illness, illness progression and psychosocial adaptation to illness (Gustavsson et al., 2003). The adjusted personality traits are Antagonism, Impulsivity, Hedonic capacity, Negative affectivity and Alexithymia. The participants answered four questions on each scale, totally 20 questions, and the answers were compiled into a mean value.

1. Antagonism: a facet of Agreeableness (to which it is inversely related). Based on previous research on risk factors for coronary heart disease this facet specifically addresses an overtly hostile interpersonal style or expressive hostility.

2. Impulsivity: a facet of Conscientiousness (to which it is inversely related). Defined on the basis of Schalling’s research on disinhibitory behavior this facet focuses on the construct’s cognitive content, i.e., choosing rapidly with little thought, acting on the spur of the moment and a non-planning orientation.

3. Hedonic capacity: a facet of extraversion. Based on Meehl’s writings as well as research on engagement and goal directed behaviors in face of disease and disease progression this facet specifically addresses the emotional core of extraversion that defines positive emotionality as a motivational drive in everyday life.
4. Negative affectivity: a facet of neuroticism. Based on Schalling and co-workers research on the dual nature of neuroticism this facet focus on “nervous tension and distress”, aspects that previously have been found to be more strongly related to health outcomes than “cognitive-social neuroticism”.

5. Alexithymia: a facet of openness (to which it is inversely related). Defined on the basis of conceptual research on what constitutes the most characteristic feature of the alexithymia construct, this facet focus on a disinterest in identifying and understanding feelings.

Using multi-group confirmatory factor analysis on a population based cohort (n= 5700) all important parameters of the measurement model were found to be invariant (Gustavsson et al., 2008). Measurement invariance across age and gender was examined for a five-factor model of personality traits in which scales have been included to function as lower-order traits related to health-behavior or health outcomes. Mean differences across age and gender in personality traits were tested and the results showed that the instrument appears to measure traits equally well across different age groups and gender.

Data analysis
Data were collected on two different occasions, the first time when the nurse students started their education and the second time one year in to their education.

Study size
2 331 nurse students started their education in the spring of 2002 and they all received information about the study and were invited to participate. 1 702 (73%) choose to participate.

Statistical methods
The method used to explore changes in burnout levels, and associations to personality-traits, is multiple regression analysis. The method multiple regression is used for studying a dependent variable and several independent variables (Allison, 1999) and it makes it possible to predict a score on one variable on the basis of the score on several other variables (Brace, Kemp & Snelgar, 2009). In this study the method was used to predict change in burnout dimensions, associated with personality trait, and explore stability in burnout levels over time. The standardized valu of the Significant- and Beta-coefficients, showing the significance of the prediction and the strength of the relationship, were extracted from data. The effect size was calculated by Cohen d/SD T1. All data analyses were performed under supervision in SPSS version (Brace, Kemp & Snelgar, 2009).

Results
Out of the 1 702 nurse students participating in the study 28 were excluded because of internal drop out. Data from 1 674 participants are used.
Table 1. 
Change over time in levels of Burnout

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th></th>
<th>Follow up</th>
<th></th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard</td>
<td>Mean</td>
<td>Standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>value</td>
<td>Deviation</td>
<td>value</td>
<td>Deviation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaustion</td>
<td>2.272</td>
<td>.544</td>
<td>2.362</td>
<td>.582</td>
<td>-7.276</td>
<td>.001</td>
</tr>
<tr>
<td>Disengagement</td>
<td>2.05</td>
<td>.491</td>
<td>2.176</td>
<td>.519</td>
<td>-10.9</td>
<td>.001</td>
</tr>
</tbody>
</table>

The effect size (Cohen d/SD T1) of the change is .165 for Exhaustion and .257 for disengagement. The results show a small but significantly ensured change in levels of burnout over time. The effect size for Disengagement is stronger than for Exhaustion. The fact that the change is small indicates that the stability in levels of Exhaustion and Disengagement over time is high.

The figures show the spread and the frequency of Exhaustion levels at baseline and follow-up (2002 and 2003). The two figures together show change in levels between baseline and follow-up. The X-axis show the spread in levels of Exhaustion and the Y-axis show the frequency of Exhaustion levels.

![Fig. 1 Frequency Exhaustion levels, baseline](image1)

![Fig. 2 Frequency Exhaustion levels, follow-up](image2)

The figures show the spread and the frequency of Disengagement levels at baseline and follow-up (2002 and 2003). The two figures together show change in levels between baseline and follow-up. The X-axis show the spread in levels of Disengagement and the Y-axis show the frequency of Disengagement levels.
The results show that the personality trait Impulsivity significantly predicts change in the burnout dimension Exhaustion across two time points (in this study 2002 and 2003). The level of significance is .030. The Beta value shows the strength of the prediction of Exhaustion for the personality trait Impulsivity. If Impulsivity increase with one standard deviation the Exhaustion level increase with .047 standard deviations.

The results also show that the personality trait Negative affectivity significantly predicted change in the burnout dimension Exhaustion. The level of significance is .007. The strength in the relationship between Negative affectivity and Exhaustion is shown in the Beta value, if Negative affectivity increase with one standard deviation, the Exhaustion level increase with .061 standard deviation. This is the strongest relationship in the results of personality traits predicting Exhaustion.
Table 3.
Results of Multiple Regression - Personality traits predicting Disengagement. Dependent variable is follow-up Disengagement levels.

<table>
<thead>
<tr>
<th>Personality traits</th>
<th>Beta</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disengagement</td>
<td>.574</td>
<td>.000</td>
</tr>
<tr>
<td>Antagonism</td>
<td>.067</td>
<td>.004</td>
</tr>
<tr>
<td>Impulsivity</td>
<td>.018</td>
<td>.425</td>
</tr>
<tr>
<td>Hedonic capacity</td>
<td>.042</td>
<td>.060</td>
</tr>
<tr>
<td>Negative affectivity</td>
<td>.002</td>
<td>.943</td>
</tr>
<tr>
<td>Alexithymia</td>
<td>.016</td>
<td>.467</td>
</tr>
</tbody>
</table>

The results show that only the personality trait Antagonism significantly can predict changes in the burnout dimension of Disengagement. The level of significance for Antagonism predicting Disengagement is .004. The strength in the relationship between Antagonism and Disengagement is shown in the Beta value, if Antagonism increase with one standard deviation, the Disengagement level increase with .067 standard deviation.

Diskussion

The aim of this study was to explore if personality-traits can predict changes in burnout across time. The results imply that three out of five personality traits can predict changes in one of the burnout dimensions. The relationships are not strong but significantly ensured. The effect size shows that the change in burnout levels over time are small but significant and might still be important. Antagonism is the personality trait that correlates the strongest with Disengagement. This result is different from the results of the meta-analysis’ where this relationship is not the strongest. The result lines with our hypothesis 2. – Antagonism (a facet of Agreeableness) being one of the strongest predictors of Disengagement. The correlation between Negative affectivity (a facet of Neuroticism) and Exhaustion lines with the results of the meta-analysis’ but is not as strong. This result was hypothesized (in hypothesis one), but Negative affectivity is not significantly correlated to Disengagement as expected in hypothesis 2. The correlation between Impulsivity (a facet of Conscientiousness) and Exhaustion is not strong but significant. This result does not line with the results from the meta-analysis’, where Conscientiousness correlate stronger with Depersonalization, and therefore not with our hypothesis. The hypothesis 1., Hedonic capacity (a facet of Extraversion) can predict Exhaustion, was not significantly established. The correlations in the meta-analysis’ are generally much stronger than the correlations in this study. However, the results indicate that somewhat different personality traits stand out as the strongest predictors when looking at personality traits predicting burnout over time, using longitudinal data. This should be further explored in longitudinal studies that extends over a longer period of time.
Data in this study meet better with the causal effect criteria than data of the meta-analysis’ because longitudinal data are used. Personality measurements also precede the follow-up burnout levels in time and therefore we should be more able to assert that personality has a causal effect on burnout (Hochwälder, 2008). There is also statistical significance between personality and burnout, and the association between the variables is not expected to be due to a third variable, even though it is nearly impossible to rule out the possibility of a third variable effect. There are also reasonable theoretical explanation of the relation between personality and burnout.

Antagonism predicting Disengagement
The results from this study imply that Antagonism, a facet of Agreeableness, can predict changes in the burnout dimension Disengagement. Components related to Antagonism are uncooperativeness, antagonism, rudeness, and cynicism (Gustavsson et al., 2003). The correlation is stronger than between any of the personality traits and Disengagement.

An Antagonistic person has a hostile outlook on interpersonal relationships or shows an expressive hostility. One is recalcitrant and often identifies enemies in the surroundings. It is likely that supervisors are automatically categorized as enemies as they have the power to effect ones situation. A person with this personality trait easily perceives situations, and people around them, as threatening and changes or increased demands would naturally aggravate the situation. It is likely that increased pressure in a situation, where the environment is already perceived as threatening, will be weathering. The person will fight the threatening environment for as long as he can but it will be a stressful situation that could lead to burnout. A natural way to cope with this situation would be to distance oneself from the threatening environment.

Psychosocial theories have focused on how a hostile outlook may cause interpersonal conflict, elevated interpersonal distress, and lessen the likelihood of social support. The literature on anger proneness, hostile attitudes and aggressiveness, and the instruments used for their measurement, are characterized by conceptual ambiguity (Gustavsson et al., 2003). Social support, which is an important recourse needed, will not be accessible as the persons hostile behavior will prevent this to happen. The lack of social support is therefore another explanation of Antagonism leading to burnout.

Negative affectivity predicting Exhaustion
According to the results we should also be able to say that the personality trait Negative affectivity can predict changes in the burnout dimension Exhaustion. This relationship is stronger than the ones between the other personality traits and Exhaustion. Negative affectivity is a facet of the Five Factor personality trait Neuroticism that focuses on “nervous tension and distress”, which involves tenseness, distractibility, fatigability, emotional arousal, uneasiness and diffuse stress (Gustavsson et al., 2003).

The fact that a personality trait that contains tenseness, distractibility, fatigability, emotional arousal, a feeling of uneasiness and diffuse stress can predict burnout is not surprising. When these are the core emotions it is easy to see how an employee with this personality trait perceive the world around him negatively, focusing on the negative aspects of a situation. A consequence of this could be that every change in a work related situations, or increased demands at work, should be more exhausting when one is not capable of looking at situations and changes as potentially positive and
challenging. One might perceive work as a burden, and changes and increased demands might lead to Exhaustion. Maslach and her colleges have also noted that individuals who are more depression-prone, as indicated by higher scores on neuroticism, are more vulnerable to burnout (Maslach, Schaufeli & Leiter, 2001). Neurotic individuals are emotionally unstable and prone to psychological distress, and this should also be applicable on individuals with high score on Negative affectivity. Furthermore Neurotic individuals are more likely to interpret ordinary situations as threatening, and minor frustrations as hopelessly difficult (Maslach, Schaufeli & Leiter, 2001). Their negative emotional reactions tend to persist for unusually long periods of time. The problems concerning emotional regulation can diminish the ability of a person scoring high on neuroticism to think clearly, make decisions, and cope effectively with stress.

These theories can be connected to Hobfoll’s theory about Conservation of resources where he describes Loss spirals as a phenomenon that occurs when people lack the resources to offset loss. Because resources are used to prevent loss, a loss of these resources will lead to further decreases in the likelihood of possessing necessary resources reserves (Hobfoll, 1989). In the case of people with high score on Negative affectivity this theory is applicable when too much recourse must be used to cope with the everyday life. When a situation that is already negatively perceived involve further demands, in terms of a changed work situation or increased requirements, recourses that are normally used to prevent further loss is used to handle the increased demands in the present situation. This drains the recourse reserve and might lead them into a so called Loss spiral.

**Impulsivity predicting Exhaustion**

The results indicate that the personality trait Impulsivity is a predictor of the burnout dimension Exhaustion. Impulsivity is a facet of the Five Factor Model personality trait Conscientiousness, which is a non risk taking, planing and not spontaneous kind of personality. The opposite can be said about the impulsive person who is characterised by a tendency to make decisions before thinking (cognitive impulsivity).

In this study, in accordance with the OLBI, Exhaustion is defined as a consequence of intensive physical, affective and cognitive strain which could be a long term consequence of prolonged exposure to certain demands. Not surprisingly the results shows that a personality trait that increases the tendency to make decisions without thinking, and not being able to plan and structure work tasks, increases the risk of perceived strains in the work environment. This personality trait could also make people put themselves in difficult situations and into a feeling of chaos. The disability to structure ones work could also lead to a lack of possibility of getting an overview and control over ones work, and much energy must go to “putting out fires”. Swider and Zimmerman also note that an ability to plan, organize and structure ones work tasks should prevent the feeling of anxiety and nervousness that are characteristic of Exhaustion (Swider & Zimmerman, 2010). According to Alarcon, Eschelman and Bowling (2009) high-conscientiousness employees are more likely to elicit positive responses from their supervisors and co-workers. The conclusion will be that people high in Impulsivity might not get as much positive response. According to Hobfoll’s theory of Conservation of recourses one of the key recourses are social support. Individuals who get social support have better mental health, are more stress resistant and have better physical health outcomes (Hobfoll, 2002). Maslach, Schaufeli and Leiter also discuss the importance of studying absence of job resources, as well as
presence of job demands, and they mention social support as an important recourse. There is a consistent and strong body of evidence that a lack of social support is linked to burnout and lack of support from supervisors is especially important, even more so than support from co-workers (Maslach, Schaufeli & Leiter, 2001).

**Personality trait development**

The results from this study indicate that personality significantly can predict changes in levels of Exhaustion and Disengagement over time. The relationships, however, are relatively weak, considerably weaker than the relationships in the cross connections of the two meta-analyses. Another finding is that the burnout dimensions are unexpectedly stable over time, as shown by the two high magnitude Beta coefficients in the regression analysis.

Research on personality predicting burnout is a sensitive area. Identifying personality traits that can predict burnout involves a risk of stigmatizing effects on individuals. When studying personality trait and burnout it is important to take an interest in how personality trait development occurs. Is personality static or changeable in adulthood? When does personality change and why? There is a growing body of evidence showing that personality traits continue to develop after childhood, with remarkable levels of change occurring in young adulthood. (Roberts, Wood & Smith, 2005). Personality trait development can and does occur in all age periods of adulthood, including old age. Even though changes predominantly take place in young adulthood (age 20–40) research has shown that middle-aged individuals tend to score higher than young adults on Agreeableness and Conscientiousness and lower on Extraversion, Neuroticism, and Openness. In terms of individual differences in personality change, people demonstrate unique patterns of development at all stages of life, and these patterns appear to be the result of specific life experiences connected to a person’s stage of life (Roberts & Mroczek, 2008). Young adulthood, when people transition from their family of origin to their family of destination, from compulsory education to a career, and to being an active member of their community, is the time when we see the most personality trait change (Roberts & Walton, 2006).

Then why does people’s personality change? According to the Five-Factor Theory mean-level changes arise because of genetic predispositions to change in particular ways. There are very few data to support this position. Environmental factors seem to play a larger role in personality trait change in adulthood than do genetic factors. Findings from Roberts and Walton’s study (2006) show that patterns of change are associated with specific cohorts. This would also contradict the notion that personality trait development is independent of environmental influences. The theory about the environmental influences on personality development is called the Social Investment Theory (Roberts, Wood & Smith, 2004). It states that investing in social institutions, such as age-graded social roles, is one of the driving mechanisms of personality development (Roberts & Walton, 2006). People build identities in the form of social roles by making psychological commitments to social institutions such as work, marriage, family and community. People who occupy normative roles at appropriate ages, such as being married and working in young adulthood, are expected to be more conscientious, agreeable, emotionally stable and less neurotic (Roberts, Walton, Bogg & Caspi 2006).
According to the Social Investment Theory different experiences in life lead to differences in personality trait development. The personality traits that seem to develop with age and normative roles are Conscientiousness, Agreeableness and Emotional stability, at the same time as levels of Neuroticism decreases. This raises the question whether people who are in the beginning of their personality developmental process are at greater risk of burnout. Important factors in personality development are, among others, age, civil status and family situation. The fact that the participants in this study are young (20-45 years old, 50% 20-25 years old) and therefore are less likely to have a stable family situation (less than 50% had children) should according to the Social Investment Theory (Swider & Zimmerman, 2009) mean that the participants are less likely of being conscientious, agreeable and emotionally stable and more likely to be neurotic which increases the risk of burnout. With adjusted personality traits this means more likely of being impulsive and antagonistic and less likely to be negatively affective. The results in this study show that Impulsivity, Negative affectivity and Antagonism, are personality traits that can predict burnout. Does this mean that personality traits connected to youth are also connected to a higher risk of burnout? If so this should be taken into account in stress proactive actions.

Connecting the Social Investment Theory and the arguments above to Hobfoll´s theory about Conservation of recourses, maturation becomes a recourse generating activity. Hobfoll describes gaining recourses as one of the things that motivates people’s behavior. This motivation drives people to invest resources in order to enrich their resource pool. These resources shelter them from further losses and contribute to enhanced status, love, possessions or self-esteem, depending on the individuals’ goals and direction of their investment (Hobfoll, 1989). When people, according to the Social Investment Theory, build identities by making psychological commitments in the form of social roles to social institutions, such as work, marriage, family and community, this could be seen as recourse generating activities that will prevent future recourse loss.

Strengths and Limitations
Previously studies made on the subject used cross-sectional data which limits the possibility of making strong predictions about personality traits and burnout dimensions. This study used longitudinal data which allow us to make stronger predictions about the relationship between personality and burnout. A strength with this study, compared to earlier studies, is also that the Five Factor Model has been adjusted into an inventory that that is more applicable in personality and health research. This should make the results more reliable than studies using the ordinary Five Factor Model traits as variables. On the other hand the survey is limited in its scale and might not measure the most important aspects of burnout. All together, however, the assumption is that the validity is reasonably high. The study should also be possible to replicate and therefore the reliability is high as well. A difference between this study and earlier studies made is that the participants are students where other studies use data collected from participants in working lives. This is a new area explored but it might also be a limitation in personality trait and burnout research. The results show that the levels of burnout are not significantly higher one year into the studies than when the participants started their education. According to some theories burnout is the end result of long exposure to chronic job stressors (Maslach, Schaufeli & Leiter, 2001). Consequently, burnout ought to occur later in people’s careers, rather than earlier. Theories about burnout appearing after a longer time in a stressful environment might explain the small differences in burnout levels between assessment point one and two.
There is a possibility that the personality trait impact on burnout risks, depend on the intensity of the stressor. In extremely stressful work environments, for example, burnout may be inevitable for nearly all employees. A lack of variability in burnout scores may therefore result in personality being found to be weakly related to burnout in high-stressor environments (Alarcon, Eschleman & Bowling 2009). Similar effects may be observed in low stressor jobs. That is few employees may experience burnout in stressor-free environments which result in personality and burnout being weakly related. These possibilities suggest that personality and burnout may be most strongly related in medium stressor situations. According to these theories the small differences in burnout levels in this study could also lead to the weak correlations between personality trait and burnout.

Another limitation of the study could be that data are based on self-evaluations a method that has its strengths and weaknesses. On one hand self-reports might be the most valid measurement method as the participant is the best person to report their own personality and levels of burnout. On the other hand correlations between variables measured with the same method, for example self-report surveys, could be inflated due to the action of common method variance. However some theories suggest the fact that common method variance automatically affects variables measured with the same method is a distortion and an oversimplification of the true state of affairs (Spector, 2006). It is also possible that the personality traits of those that choose to participate in the study are different from those who did not participate. Even so the high number of participants should minimize this risk of this affecting the results.

Conclusions and Future research
The results from this study show that the personality traits Impulsivity, Negative affectivity and Antagonism can predict different dimensions of burnout. They differs from earlier, cross-sectional studies made, and indicate that somewhat different personality traits stand out as the strongest predictors when looking at personality traits predicting burnout over time, using longitudinal data. This should be further explored in longitudinal studies that extend over a longer period of time.

The consequences of burnout are costly for both the individual and the employer. Burnout, and the long absence from work it leads to, means long term costs that are higher than the short term profits of reorganizations and cut downs (Ekman & Arnetz, 2002). What can be done to prevent this? Stress and self-help literature have demonstrated that people can indeed learn new ways of coping with stress, but applying new knowledge at work can be a challenge because people are operating under various constraints (Maslach, Schaufeli & Leiter, 2001). Research findings concerning the effects of new ways of coping with stress are also mixed.

Another perspective on stress preventive actions involves theories about rewarding. People may be able to tolerate greater workload if they value their work and feel that what they are doing is important, or if they feel well-rewarded for their efforts. According to Ekman and Arnetz (2002) the factors that play a part in the process of developing stress reactions does not only concern workload but also an opportunity to self-monitoring, rewards (not only money), interaction with co-workers and supervisors, perceived justice and a feeling of at least a reasonable correspondence between ones own values and those of the employer. The ability to do this could indeed
be linked to some of the personality traits in the Five Factor Model. Agreeable people, for example, are more likely to have a positive view of their jobs because of their adaptability and compliance and their tendency to have an understanding of the negative aspects of the work environment. Conscientious individuals have strong work ethic and achievement orientation. They are efficient and hardworking by nature and they have an ability to feel motivated and see possibilities. These traits are linked to the ability to achieve the conditions mentioned above. Neurotic people on the other hand, or people with high score on Negative affectivity, perceive the world as threatening and see barriers instead of challenges. They see negative aspects of a situation which should make it harder for them to achieve these conditions.

The consequences of this correspond with the findings in this study which implies that Impulsivity, Negative affectivity and Antagonism can predict burnout. Hobfoll describes shifting focus of attention as a way of conserving resource. This can be reinterpreting threat as challenge and focus on what one might gain instead on of what one might lose. He suggests that many stressors are not clearly positive or negative but are open to personal appraisal. Many stress theories have suggested that appraisal is the key to stress resistance (Hobfoll, 1989). He also sais that the ability to shift focus, and the appraisal “chosen”, could be assumed to be connected to personality traits. This would strengthen the theory that some personality traits are more vulnerable to resource loss, and therefore to stress and by extension burnout. It could be discussed how pliable appraisals and perceptions are when things that people value and ways that people perceive the world are basic to their sense of self. Even so, further research should look into the possibilities of finding stress preventive actions aiming to help people perceiving situations differently. The challenge is to find tools that are applicable in everyday life, but if this was to be found it would be of great help for people within as well as outside work.

When looking into questions about personality traits and how they affect risk of burnout it is important to identify what the results might lead to in the future. An apprehension is that this kind of research would lead to increased incentive for sorting out people with certain personality traits, for example when requiring. This research should instead lead to actions of creating better conditions for employees to minimize the risk of burnout. Individuals’ mental encodings, in accordance with the cognitive–affective personality system (CAPS) (Mischel & Shoda 1995 referred by Swider & Zimmerman, 2009), affect how they encode and evaluate information from their environment, and must be taken into consideration in the choice of stress preventive actions. If we identify personality traits that increase the risk of burnout there is a chance to find individuals who are predisposed to burnout and implement preventive interventions more effectively.
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