The Intensive Connection

Wellbeing at work for professionals in the intensive care unit

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Wellbeing at work for professionals in the intensive care unit

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First Edition

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Update Info

Learning Objectives

After studying this module on **Wellbeing at work for professionals in the intensive care unit,** you should be able to:

1. Describe the relevance of (Personal, professional & organizational) wellbe-ing for your health and performance at work
2. Assess stressors in your environment in the ICU
3. List your own specific stressors of working in the ICU
4. Explain associated factors influencing work-related stress and wellbeing at work

5. Recognise ways to cope with personal stressors and learn how to react with resilience
6. Describe how positivity can stimulate creative thinking and vitality at work (evidence-based good practice)

eModule Information

Expiry date:

COBATrICe competencies covered in this module:

Competencies

- Identifies environmental hazards and promotes safety for patients & staff

Faculty Disclosures:
Dr. MMC van Mol has no disclosures to report.
Dr. MD Nijkamp has no disclosures to report.
Dr. IA Meynaar has no disclosures to report.
Prof. dr J. Bakker has no disclosures to report.

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0. 1. Executive Summary

Working in the intensive care unit (ICU) confronts every healthcare professional with patients suffering from disease and their relatives suffering from uncertainty, being torn between hope and loss. The professionals' own role in the patients' journey might also have challenges as professionals are human. Additionally, working within a team of different personalities, different competencies, and different specialties with constraints and demands, all contribute to a working environment that is prone to conflicts and disagreements. Evidently, this underscores the ICU as a stressful place threatening the wellbeing of the ICU professionals, e.g., nurse, doctor, supervisors and allied health professionals alike.

If one wants to improve working conditions in ICU, it is not sufficient to only help those professionals perceived to be under too much stress. The majority of 'healthy' employees also need examples and advice to keep their energy balance healthy and to nourish their wellbeing. Stress reactions are the first indicators of an imbalance in physical or emotional (work) load and the individual's ability to adapt to challenging situations. In the past, an abundance of research focused on the negative emo-tions related to work-related stress and burnout in ICU. However, an emphasis on positive emotions, takes an innovative approach to wellbeing that focuses on promoting people's positive health as-sets. In relation to the proposed definition of health, represented as the ability to adapt and self-manage, focus has shifted towards employees adapting to their work environment. Positive occupa-tional health psychology aims to understand and foster the factors that allow individuals and com-munities to flourish. It seems of utmost importance to focus research on the motivational process affecting personal health and successful working. In the end, to protect against occupational risks getting out of hand.

Flourishing (or engaged) employees to believe in themselves, generate positive feedback, set higher goals, have values that match that of the organisation, and can maintain long-lasting personal health are all of vital importance. Individual positive and flourishing conditions are not only related to per-sonal wellbeing but are also helpful to improve performance at work and team spirit. In addition, a healthy working environment helps individual employees to flourish; it's a reciprocal relationship. Changing the wellbeing of ICU professionals also requires addressing organisational wellbeing. Tak-ing time to refresh is a vital part of building personal resilience to cope with a challenging role and strive towards wellbeing at work. This means, being aware for small adaptations in daily practice and encompass self-care in personal life. Organisational strategies such as addressing leadership, intra-team conflicts and ethical issues in the ICU might have a positive influence on wellbeing at work as well.

This e-course helps you identify and explain stressors in the ICU environment, covers the theoretical background on work-related stress and wellbeing at work, provides insights into strategies to cope with personal stressors, and describes how to react with resilience. This e-course also supports you in understanding and addressing the challenges of your working environment in a

proactive way by focusing on strengths, not on complaints. Just start your personal movement.

1. Introduction

Global interest in how to boost wellbeing is growing. Happy, healthy and engaged employees are more productive and less likely to leave or be off sick. A paradigm shift from problem-based to solution-based methods redirects the focus of personal functioning, company policy, research, and interventions from handling problems to fostering wellbeing, Figure 1.

Figure 1: You don`t need to be ill to get better.
Source Den Ouden Management©

But what does 'wellbeing' mean? And how is this linked to work work-related stress in an intensive care unit (ICU)?

An ICU can be full of stressful situations for patients, relatives, and healthcare professionals. A growing body of evidence suggests that work-related stress among ICU nurses and ICU physicians is a remarkable result of the demanding and continuously high-stress work environment.

Case 1
Anna (age 29, lives with partner, no kids), is working her fourth night shift as a trainee intensivist in an academic hospital down town. Today she slept shortly, and used her extra time to work on the grant application with a deadline in 7 days. Her boss has emphasised the urge for funding if she wants to continue her PhD research. Moreover, her latest article needed a major revision and she is waiting for a response from her supervisor on her work. It is frustrating being ignored and Anna feels lonely in carrying out these tasks.
Two unstable patients have been drawing her attention, but it seems she has some time now to finish the medical reports. Just when Anna is preparing the day start with all team members, her bleep goes off and she has to attend a resuscitation in room 3. Although the nurses have done a great job, the intubated patient already returned to a regular hearth rhythm with BP of 105/55 mmHg, in a grumpy tone, Anna asks for a recent arterial blood gas. She does not understand what hap-pened, is studying the medical record and data from the medical devices around the patient and distances herself from the patient and his relative to keep emotional balance. Responding to their anxiety and sorrow is the last thing she needs now. Finally, Anna yells for fluid and drug administra-tion, arguing with the responsible nurse on the procedures done, and forcing a CT-scan for the un-stable patient. Anna is feeling out of control and questions her competence as a medical doctor.

Think

If this was your colleague, what would you advice her?

Case 2
Tom (age 34, married and has three kids), is arriving in the medical ICU for his evening shift as an ICU nurse. He has been ill for two weeks; with symptoms of flu, feeling muscle pain in the neck and shoulders, and severe headaches. This was on top of his lower back complaints, which had been bothering him for the last six months. His colleagues show genuine interest in how he is doing and he is starting the ward rounds for the patients under his responsibility.
It is the same as always, providing care to those critically ill patients. In room 1, he checked the parameters, examined the woman with leukemia, provided the care needed, and talked to the patient's husband. However, it seems useless. The patient will probably die within 48 hours. In room 2, he is displaying reluctance to spend his time with this man suffering from alcoholic liver disease. In both cases he feels guilty for not acting with more empathy. He used to be open and take a lot of time to support patients and their relatives in the tumultuous ICU admissions. Now, he is distressed and cannot cope anymore. He feels exhausted, cynical and disengaged.

Think

If this happened to a member of staff in your ICU, what could you do?

Challenge

What about yourself? Do you feel distressed, or having opportunities to grow and thrive in your daily work? Please explain why and in what situations.

Recently published in Intensive Care Medicine, From the Inside:
“If it is so stressful to work on an ICU, why then will most of the ICU-nurses and ICU-physicians never develop burnout, bore out or compassion fatigue? The roots of these con-cepts lie in people’s need to believe that their lives are meaningful, that the things they do are important, make sense and give existential significance. When people feel to have failed, being insignificant and making no difference, they start to feel helpless, hopeless and they crash. I do not believe that work stress is the most important factor in these conditions, but that it is corre-lated with the sense of accomplishment and having influence and meaningful recognition.”(Kompanje 2018)

Making a positive change in the lives of frail ICU patients and their relatives might provide signifi-cance and purpose for the employees’ own effort while working, which may stimulates and contrib-utes to the employees´ dedication to work. For ICU professionals in particular, this might generate some ideas in improving the working climate. The severity of illnesses, the emotional workload, and the often complex situations cannot be changed. However, the perspectives and goalsetting regard-ing medical therapies should be a topic of regular multidisciplinary discussion to help professionals maintain their values in accordance with the implemented policies and working climate. What might support these ICU professionals is providing them with an existential perspective on working as an expert in modern medicine and in the ICU. Employees with higher sense of meaningfulness report higher job satisfaction, more engagement at work and they tend to stick around longer.

In text References

(Santos, Chambel and Castanheira 2016; M.M.C. van Mol) 2017)

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1. 1. Personal, professional and organisational wellbeing

Can you have a thriving ICU with a workforce that is susceptible to burnout? Can you be at your best professionally when your personal wellbeing is rather poor, e.g. you suffer from a great loss in your life? Personal, professional and organisational wellbeing are connected and each impacts the other.

Wellbeing can be understood in many different ways and it relates to a wide range of concepts. Wellbeing is the keyword in the World Health Organisation’s (WHO) definition of health: “a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity”. Specifically, the WHO identifies mental health as “a state of wellbeing in which the individual realizses his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community”.

Wellbeing has been defined as a context-free (i.e., in relation to life in general) as well as a domain-specific concept (e.g., at work or regarding your health). The context-free approach of Ryff and col-leagues on wellbeing is the best-known. They introduced a six-dimensional framework for general wellbeing:

- Self-acceptance: a persisting positive and acceptant attitude toward oneself and purpose in life: goals and beliefs directing one’s meaning in life.
- Autonomy: self-determination as guided by one’s internal standards.
- Positive relationships with others: having satisfying personal relationships.
- Environmental mastery: ability to manage or create a suitable environment to accommodate personal needs and values.
- Personal growth: the insight into one’s own potential for self-actualisation.

Challenge

Would you classify yourself as a person high in wellbeing? Maybe today, but not last week? Explain your answer from Ryff's six-dimensional framework of general wellbeing.

In text References

(WHO 2014; Ryff 1989; Ryff and Keyes. 1995; Ryff, and Singer. 2008)

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1. 2. Trends in healthcare

Healthcare is changing, partly influenced by demographic, societal, economic and technological trends.

- An increasing aging population is a critical worldwide trend, due to longer life expectancy and lower birth rates. This development is associated with rising rates of chronic diseases and comorbidities.
- A free market system and questions regarding the costs of treatment with respect to efficacy have intrusive effects on the delivery of care. Value, defined as outcomes relative to costs, should meet the overarching goals of the patient. These goals (taken together in a 'value-based healthcare') direct the choices and combined efforts of healthcare providers in the full range of care.
- Medical treatment is expanding with ongoing technical improvements. Among other areas, these changes are very evident in the ICU environment.

The current WHO definition of health has been proposed for reformulation in a more positive direc-tion. Two main aspects considered for integration in this definition are 'adaptation' and 'human bal-ance in nature'. This new idea is positively expressed as "Health as the ability to adapt and to self-manage in the face of social, physical and emotional challenges". Although the concept is still under discussion, an approach of person-centredness and shared decision making can no longer be ig-nored from daily healthcare practice. It also means that the healthcare professionals themselves should be able to adapt and self-manage in their work environments.

Staying and working in the ICU can be two sides of the same coin; patients and their relatives on the one side and healthcare professionals on the other side, are strongly connected to each other. Act-ing as separate and distinct entities, with their own interests and values, might mutually influence personal life experiences. Staying in ICU is never desirable; but working in ICU is challenging and versatile and requires technical competencies, the provision of emotional support, expanding medi-cal knowledge and a comprehensive understanding of responsibilities. The ICU is a beautiful world in which to work, but it may be too much of a good thing; having to be present and empathic at all times with distancing or dehumanisation as a result. The continuous weighing and balancing of pro-fessional proximity is an individual equilibrium, a personal world of engagement and detachment, which varies by days, months, and years.

In text References

(Grimes. 2005; Huber et al. 2011; Porter 2010; United 2015)

References

- Grimes SL., The challenge of integrating the healthcare enterprise, 2005, https://ieeexplore.ieee.org/document/1411360/

Motivational factors might have an effect on sustainable employability as well, e.g., to allocate meaning in work and work engagement. Whereas previous research focused on the general popula-tion, in healthcare professionals, the subject is still relatively understudied. More specifically, in the ICU, which is well known for increasingly complex physical, cognitive and emotional work load, the need to explore factors related to maintaining professionals´ work ability is vital.

In text References

(Burdorf and Jansen. 2006; Fleuren et al. 2016; Leijten et al. 2015; Leiter M, Bakker and Maslach. 2014; van der Klink et al. 2016; van der Meer et al. 2016)

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1. 5. Stress related factors in the ICU affecting wellbeing of professionals

Working in the ICU confronts every healthcare professional with patients and relatives suffering from their disease, suffering from uncertainty, and from being torn between hope and loss. The professionals' own role in the patients' journey might also be uncover the limitations of a professional. Additionally, working in a team with members having different personalities, different competencies, and in different specialties, lead to a working environment that is prone for conflicts and disagree-ments. This underscores the ICU as a stressful place that threatens the wellbeing of ICU professionals, nurses, doctors, supervisors and allied health professionals alike.

Stresses include working 12-hour shifts three to six times a week, seeing patients undergo experiences beyond what you think the human body can endure, needing to simultaneously focus on any many tasks to keep the patients alive while helping their loved ones to emotionally process the po-tentially life-or-death medical decisions they suddenly face. It is for these reasons that working in ICU is classified as a profession high in emotional labour.

The daily demands of appearing calm and even minded in the face of desperate or angry interactions with patients, their relatives and/or colleagues, induces stress and may wear you down. The amount of emotional work load depends, among other things, on the frequency, the intensity and the endur-ance of and involvement in the emotional manifestations of the patients. Besides working at the ICU, fire fighters, soldiers, journalists on the front lines of war and disaster, humanitarian aid workers, therapists, prison guards and ambulance staff, are considered to be professions high in emotional labour.

Emotional labour is defined as the "effort, planning, and control needed to express organisationally desired emotion during interpersonal transactions." This definition includes the organisational expectations of employees concerning their interactions with the clients, as well as the internal state of tension or conflict that occurs when employees display emotions that are not congruous with the way they really feel (i.e., emotional dissonance). This agrees with surface acting; accepting external ex-pectations and acting against one's own emotions. Surface acting is likely to deplete energy, as it involves long-lasting internal tension between one's displayed (suppressed) and true feelings. This may ultimately lead to self-alienation and burn-out.

Suppressing your own emotions as an ICU professional is functional but you need to unwind and let go of the workday stress. Etymologically caring originates from cearian "being anxious or solicitous; grieve; feel concern or interest," it implies suffering with someone, but keep in mind your own capaci-ties, needs and limits. You need to care for yourself to take care for others.

Challenge

What kind of stress-related factors do you recognise in your own working environment?
How do you cope with the emotional work that is emerge in your daily practice?

In text References

(Cole 2017; Heuven. 2013; Morris and Feldman 1996)

References

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- Morris JA, Feldman DC , The Dimensions, Antecedents, and Consequences of Emotional Labor, 1996, https://www.researchgate.net/publication/271776213_The_Dimensions_Antecedents_and_Consequences_of_Emotional_Labor

1. 6. Importance of wellbeing for professionals

"Clients do not come first, employees come first. If you take care of your employees, they will take care of the clients" (Branson)

As stated before, wellbeing is a complex concept, which varies in different contexts and from one individual to another. Because our personal (psychological) wellbeing depends on the social context and our social connectedness, wellbeing should include a social dimension. Social wellbeing is the extent to which you feel a sense of belonging and social inclusion, it provides a social identity and helps us as individuals to function in society. Living and working together, traditions and beliefs are all important to our social wellbeing.

Both psychological wellbeing and social wellbeing are essential conditions to be able to function optimally and together they determine the way we feel about ourselves and life in general, i.e., our emotional wellbeing. Emotional wellbeing involves utilising strengths rather than focusing on fixing problems or weaknesses. According to the 'Broaden-and-build' theory, positive emotions are essen-tial for our wellbeing and help us flourish. By broadening our thoughts and action responses (by stimulating creative thinking and opening our minds), positive emotions are relevant to build new skills and resources. The more you flourish, the greater your capacity to experience happiness, be satisfied with your life and have the ability to cope with stress.

Challenge

Can you explain how a great team of intensive care specialists, nurses and other staff is essential for your own performance (doing your job well) as well as your job fulfilment (feeling positive about your job)?

The Two-Continua Model distinguishes two poles on a wellbeing continuum; a positive pole called flourishing and a negative pole called languishing. On one hand, flourishing stands for a state when someone displays an optimal level of functioning (psychological and social), experiencing positive emotions like happiness, fulfilment and calmness. On the other hand, languishing, a state where low levels of emotional wellbeing are combined with low levels of psychological and social wellbeing. Figure 2 depicts this multidimensional and continuous construct of wellbeing, in which social wellbe-ing connects a number of different, but linked, social factors.

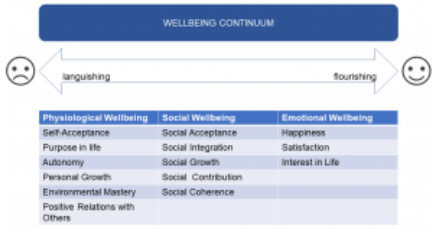

Figure 2: The multidimensional wellbeing continuum (based upon Keyes Two Continua Model)

In text References

(Seligman and Csikszentmihalyi. 2000; Figley 2014; Fredrickson 2001; Westerhof and Keyes. 2010)

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- observing the continuous suffering of patients,
- disproportionate care or medical futility,
- miscommunication, conflicts with colleagues,
- communication with relatives for the purpose of decision making,
- ICU work environment which has become increasingly technical,
- extended skills in advanced life sustaining medical therapies,
- continuous alarms and noise,
- disturbed work-life balance,
- heavy work load and strenuous schedules,
- claims and lawsuits.

In text References

(Curtis, Sprung and Azoulay. 2014; Epp 2012; Teixeira et al. 2014; van Mol et al. 2015)

2. 2. 3. Risk factors

There is a broad range of variables measured as risk factors to emotional distress, see Table 1. Work environment, professional role and conflicts were significantly and positively related to the measured phenomenon (i.e., burnout, compassion fatigue and traumatic stress symptoms). Howev-er, some studies stated opposite results. Most confusing variable was the female sex having an increasing effect on emotional distress and no significantly measured influence on emotional distress.

Table 1: Risk factors on emotional distress, pro and con

Variable	Significantly related to emotional distress	Not Significantly related to emotional distress
High workload	Embriaco 2007 Poncet 2007	Barbosa 2012
Short work experience	Bellieni 2012 Liu 2012 Zhang 2014	Karakinola 2012
Work environment	Elkonin 2011 Embriaco 2007 Verdon 2008 Rochefort 2010	
Nurse/patient ratio	Cho 2009	
Professional role (nurse-doctor)	Raggio 2007 (nurse) Merlani 2001 (nurse assistant)	
End-of-life care	Poncet 2007	Czaja 2012
Mortality rate	Merlanie 2011	Embriaco 2007
Demographic variables	Poncet 2007 (age) Raftopoulos 2012 (age) Bellieni 2012 (age) Merlanie 2011 (age) Liu 2012 (age)	Czaja 2012 Karakinola 2012 Lederer 2008 Guntupalli 1996 (age) Guntupalli 2014 (age)
Having children	Bellieni 2012	

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2. 3. How to handle stress

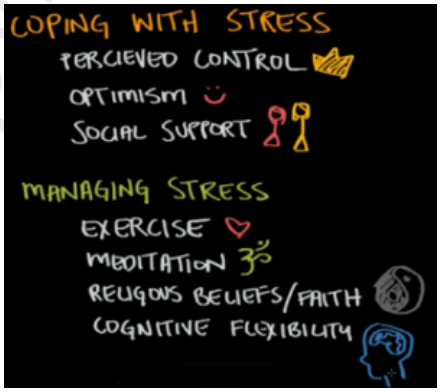

Figure 3:Coping and managing stress. Source Khan Academy

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1. 3. Setting the stage,the reality of getting older for Human Resource practice

The aging of the population increases rapidly due to longer life expectancy and lower birth rates. This also influences the work force. In Europe and Northern America, the participation in labour above the age of 65 has increased gradually since 1990, and it is expected to further increase in the future. Because of this foreseeable demographic shift, employers should adopt a proactive approach to align their policies to an ageing population. It is importat to stimulate employees to keep a healthy life, stay engaged and work productively until retirement. Exploring sustainable employability is of utmost importance.

In text References

(Leijten et al. 2015; United 2015; van der Meer et al. 2016)

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1. 4. Sustainable employability

Although still under discussion, sustainable employability may refer to “the degree to which employ-ees are able to work throughout their entire working lives, and their work context enables them to do so”. It is a multidimensional construct, in which both employer and employee are equally responsible for maintaining the ability to work. Various work-related factors, both physical and psychosocial, influence sustainable employability. A high physical work load can increase musculoskeletal disor-ders, e.g., low back pain, and a high psychosocial burden could lead to poor mental health, e.g., burnout.

Criterion A: stressor

The person was exposed to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, as follows: (one required)

1. Direct exposure.
2. Witnessing, in person.
3. Indirectly, by learning that a close relative or close friend was exposed to trauma. If the event involved actual or threatened death, it must have been violent or accidental.
4. Repeated or extreme indirect exposure to aversive details of the event(s), usually in the course of professional duties (e.g., first responders, collecting body parts; professionals repeatedly exposed to details of child abuse). This does not include indirect non-professional exposure through electronic media, television, movies, or pictures.

Criterion B: Intrusion symptoms

The traumatic event is persistently re-experienced in the following way(s): (one required)

1. Recurrent, involuntary, and intrusive memories. Note: Children older than six may express this symptom in repetitive play.
2. Traumatic nightmares. Note: Children may have frightening dreams without content related to the trauma(s).
3. Dissociative reactions (e.g., flashbacks) which may occur on a continuum from brief episodes to complete loss of consciousness. Note: Children may reenact the event in play.
4. Intense or prolonged distress after exposure to traumatic reminders.
5. Marked physiologic reactivity after exposure to trauma-related stimuli.

Criterion C: Avoidance

Persistent effortful avoidance of distressing trauma-related stimuli after the event:(one required)

1. Trauma-related thoughts or feelings
2. Trauma-related external reminders (e.g., people, places, conversations, activities, objects, or situations).

Criterion D: Negative alterations in cognitions and mood

Negative alterations in cognitions and mood that began or worsened after the traumatic event: (two required)

1. Inability to recall key features of the traumatic event (usually dissociative amnesia; not due to head injury, alcohol, or drugs).
2. Persistent (and often distorted) negative beliefs and expectations about oneself or the world (e.g., "I am bad," "The world is completely dangerous").
3. Persistent distorted blame of self or others for causing the traumatic event or for resulting consequences.
4. Persistent negative trauma-related emotions (e.g., fear, horror, anger, guilt, or shame).
5. Markedly diminished interest in (pre-traumatic) significant activities.
6. Feeling alienated from others (e.g., detachment or estrangement).
7. Constricted affect: persistent inability to experience positive emotions.

Criterion E: Alterations in arousal and reactivity

Trauma-related alterations in arousal and reactivity that began or worsened after the traumatic event: (two required)

1. Irritable or aggressive behavior
2. Self-destructive or reckless behavior
3. Hypervigilance
4. Exaggerated startle response
5. Problems in concentration
6. Sleep disturbance

Criterion F: Duration

Persistence of symptoms (in Criteria B, C, D, and E) for more than one month.

Criterion G: Functional significance

Significant symptom-related distress or functional impairment (e.g., social, occupational).

Criterion H: Exclusion

Disturbance is not due to medication, substance use, or other illness.

- Specify if: With dissociative symptoms.
- In addition to meeting criteria for diagnosis, an individual experiences high levels of either of the following in reaction to trauma-related stimuli:

  1. Depersonalization: experience of being an outside observer of or detached from oneself (e.g., feeling as if "this is not happening to me" or one were in a dream).
  2. Derealization: experience of unreality, distance, or distortion (e.g., "things are not real").

- Specify if: With delayed expression.
- Full diagnosis is not met until at least six months after the trauma(s), although onset of symptoms may occur immediately.

Healthcare professionals being involved in an adverse event could suffer emotionally with long-term consequences similar to PTSD. These ´second victim experiences´ were estimated to be as high as 50% and need formal organizational support to prevent suboptimal patient care and the possibility of future errors. Medical errors were similarly significantly related to diminished mental quality of life and emotional distress in a large study on 7,905 American surgeons. Nevertheless, most individuals re-cover spontaneously in the long time after a traumatic situation.

Watch PTSD Awareness in Healthcare Settings video

In text References

(American Psychiatric 2013; Kessler et al. 2005; National Center for 2013; Shanafelt et al. 2010; Gerven et al. 2014)

2. 4. 4. Vicarious Trauma

Vicarious trauma is the cumulative transformation in the inner experience of the therapist that comes about as a result of empathic engagement with the patient's traumatic material. It is a sign that a pa-tient´s history is having an extreme effect on the helper, with symptoms resembling the primary stress reactions of the patient. Thus, vicarious trauma might lead to intrusion symptoms, avoidance behavior, negative beliefs and expectations about oneself or the world and alterations in arousal and reactivity in the therapists themselves. Besides these, it is stated that a permanent change in individ-ual´s cognitive schema occurs, which might lead to anxiety, sadness, a lack of trust and safety, or diminished capacity of intimacy.
Vicarious trauma is most appropriate in a therapist-client relation, this special setting is not often applicable in healthcare professionals in the ICU.

In text References

(Figley 2013; Jenkins and Baird. 2002; Rothschild. 2006; Sabo 2011)

2. 4. 5. Depressive symptoms

Many forms of depressive disorders have been described in the DSM V, including a major depres-sive disorder. Although depressive symptoms sometimes seem to relate to burnout or high stress levels, the causes are definitely from another origin. Risk factors may be genetic aspects, personali-ty traits, substance abuse, and physiological issues such as chronic or disabling medical conditions. It is defined in the DSM V as: "The essential feature of a major depressive episode is a period of at least 2 weeks during which there is either depressed mood or the loss of interest or pleasure in nearly all activities. The mood is often described by the person as depressed, sad, hopeless, discouraged, or down in the dumps." Insomnia, loss of energy, immense tiredness, and appetite change are frequently reported in the range of depressive symptoms. In addition, psychomotor changes include agitation (e.g., handwringing, the inability to sit still) or retardation (e.g., slowed speech, muteness, reduced body movements). The twelve-month prevalence of major depressive disorder in the United States is approximately 7%.

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- Sabo B, Reflecting on the concept of compassion fatigue., 2011, PMID:21800932

2. 5. An historical overview

Historically, various healthcare professionals have been acknowledged as particularly vulnerable to work-related stress, with a number of prevalent stress responses such as burnout, compassion fa-tigue, and traumatic stress. See Table 3 for an overview.

Table 3: Types of stress responses experienced by various healthcare professionals

Anxiety	Moral distress
Burnout	Posttraumatic stress
Compassion fatigue	Secondary traumatic stress
Countertransference	Secondary victimisation
Depression	Substance abuse
Empathic distress/strain/fatigue/overload	Suicide
Emotional distress	Vicarious trauma/stress
Exhaustion	Wounded healer

2. 5. 1. Exhaustion and burnout

Burnout was first described by Herbert J. Freudenberger (1926–1999). He borrowed the term from the drug scene where it originally referred to the catastrophic influence of chronic drug abuse, and applied this concept to volunteers of the St Mark´s Free Clinic in New York´s East Village who felt a gradual emotional depletion, loss of motivation and reduced commitment. At the same time, burnout was used by Maslach in a description of social workers who felt emotionally exhausted and developed negative perceptions about their clients. From 1970 a considerable body of knowledge about the nature of burnout, its causes and consequences, and its prevalences in specific domains has emerged.

Note

Measuring exhaustion only, as an equivalent to burnout, is not sufficient and induc-es erroneously high prevalence rates. The high burnout rates as currently reported in public discussions is also confounded by the limited methodologic quality of the majority of the studies.

2. 5. 2. The foundation of compassion fatigue

In the early 1980s, the term ‘compassion fatigue’ was used in American policy documents in reference to immigration, and in the early 1990s to describe the lack of interest in homeless people by the general public. In 1992, Carol Joinson, a nurse educator in Texas, USA, described compassion fatigue as the loss of compassion due to repeated exposure to suffering during work. Slightly later, the psychologist Charles Figley, defined this phenomenon as secondary traumatic stress resulting from a deep involvement with a primarily traumatised person because of the “more friendly framing”. (Figley 2013) proposed in 1995 that compassion fatigue is an excessive empathic reaction after witnessing another´s suffering, resulting in symptoms such as anxiety, irritability, intrusive thoughts, hypervigilance or startle reactions, and avoidance of patient care. Although conceptually different, since then compas-sion fatigue and secondary traumatic stress have been used interchangeably, with suggested similarities between vicarious traumatisation and burnout.

Note

In the last two decades, compassion fatigue has become a fashionable hype that should be critically re-examined or erased in favour of a new debate on work-related stress among intensive care professionals.

2. 5. 3. Post traumatic stress originally

(Crocq and Crocq 2000) provided an allencompassing historical overview on the diseases that are currently labeled as Post-Traumatic Stress Disorder (PTSD). The authors stated that the first phenomena of psychological consequences after witnessing terrifying situations emerged during early battles as: “The first case of chronic mental symptoms caused by sudden fright in the battlefield is reported in the account of the battle of Marathon by Herodotus, written in 440 BC”. Hippocrates (460-377 BC) also mentioned frightening battle dreams, and centuries later, Shakespeare wrote a line of poetry in his ´Romeo and Julia´ on the awakening of soldiers by re-experiencing past battles in their dreams.

In 1952, the first edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-1) was developed by the American Psychiatric Association (APA). This manual included ´Gross stress reac-tion´ to mention a stress syndrome that is a response to an exceptional physical or mental stress, such as a natural catastrophe or battle. In DSM-II (1968), this category disappeared, perhaps because of the peaceful era in which the manual was revised, only to be re-entered in DSM-III (1980), after the Vietnam War, as ´Posttraumatic Stress Disorder´. The PTSD diagnostic criteria were again revised in DSM-5, including the persistent effortful avoidance of distressing trauma-related stimuli among others(American Psychological Association). 2013).

Note

Apart from some exceptional cases, such as being involved in a medical error, a natural disaster, or a war situation, it is very unlikely that intensive care professionals are traumatised by their emotionally demanding work. PTSD, and its related symptoms stemming from war veterans, is completely different from work-related stress in ICU professionals.

Read the critical reflections on the concepts of burnout, posttraumatic stress and compassion fatigue among ICU professionals

Think

State your opinion on the concepts of burnout, posttraumatic stress and compassion fatigue. Ex-plain why these should be erased or further investigated.

In text References

(Joinson. 1992; Schaufeli, Leiter and Maslach. 2009; Seidler et al. 2014)

References

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2. 6. Measurement instruments

There are a variety of measurements available to assess working environments, wellbeing, work en-gagement and job performance. These measurements can be carried out at the individual as well as the organisational level.

2. 6. 1. General assessments on individual and organisational level

The European Foundation for the Improvement of Living and Working Conditions (Eurofound) pro-vides information, advice and expertise – on working conditions and sustainable work, quality and life and public services – based upon comparative information, research and analysis. Eurofound conducts international (European) surveys on working conditions (EWCS) every five years in order to assess and quantify working conditions and employment wellbeing across Europe.

The types of methods available to monitor the wellbeing of ICU professionals and the organisational wellbeing can be categorised as:

- Self-reports: a type of survey, questionnaire, or poll in which individuals read the question and select a response by themselves without researcher interference. A self-report is any method which involves asking a participant about their feelings, attitudes, beliefs and so on (e.g., interviews or online questionnaires).
- Observations and registrations (e.g., registration of number of sick days)
- Clinical Audits: A quality improvement process through systematic review of care against explicit criteria and the implementation of change. Aspects of the structure, process and outcomes of care are selected and systematically evaluated against standards (e.g., the good-quality practice standards as formulated by the European Society of Intensive Care Medicine and the Adult Critical Care Clinical Reference Group)

More specifically, on an individual level, there is a large quantity of questionnaires measuring (deter-minants) of work related stress that are based on the stress-model described before. Three types of survey categories can be distinguished, those measuring:

- Stressors: job characteristics that may lead to stress reactions, like physical burden, job demands and social aspects.(e.g. Questionnaire on the Experience and Evaluation of Work (QEEW) and the Job Demands-Resources Monitor (JD-R Monitor))
- Stress reactions/strains: Job satisfaction questionnaires, Health and wellbeing measure-ments and sick leave.
- Moderator variables: protective and threatening aspects that influence the relationship be-tween stressors and strain, like demographics, social support and personality traits.

In text References

(van Veldhoven and Meiiman 1994; Eurofound 2017; Wong and Masterson 2015)

2. 6. 2. Individual assessments on specific stress-related domains

Burnout is not a clearly and universally defined psychiatric diagnosis, as it is not mentioned in the DSM manual. The Maslach Burnout Inventory (MBI) is used widely to diagnose burnout, mostly for research purposes, but it can be applied to individuals as well. The MBI consists of about 20 ques-tions on the three domains (emotional exhaustion, depersonalisation and reduced personal effective-ness) with an increasing score indicating a higher level of burnout. However, there is no consensus on a cut-off point beyond which burnout is diagnosed and different authors use different cut-off points. In addition, some authors think that emotional exhaustion is a prerequisite for diagnosing burnout, while others disagree. Other instruments to diagnose burnout are used less often.

An overview of the most used self-report measurement instruments on the various concepts in emo-tional distress is demonstrated in Table 4.

Table 4: An overview of the most used self-report measuring instruments on emotional distress

Concept*	Label of the measuring instrument

2. Work related stress

Stress represents a person's response to a threat or some other change in their environment which goes beyond one´s resources for coping with those obstacles (events, people, and situations). Simi-larly, in a psychological definition, stress is: “the condition in which person – environment transac-tions lead to a perceived discrepancy between the physical or psychological demands of a situation and the resources of the individual´s biological, psychological or social systems”. These reactions are described as a set of conscious and unconscious behaviors, cognitions and emotions, devel-oped to cope with the stressor.

Answer the ten items in this test

2. 1. Introduction

Basics of the stress response and how to get proactive

2. 1. 1. The origin of stress

Stress increases immediately if a defiant change or threat occurs. A certain amount of stress is nec-essary and important to perform activities and work tasks, also called eustress. The pathogenic role of stress was identified by physiologist Walter B. Cannon (1871-1945) in the ´fight-or-flight´ re-sponse, as this mobilises an individual to combat the threat or to flee in the face of the stressful event. This process could have negative consequences if the burden exceeds the individual’s capaci-ty or when it becomes a chronic stress.

PTSD	• Chart - Adult PTSD Self-Report Measures • Davidson Trauma Scale (DTS) • Distressing Events Questionnaire (DEQ) • Impact of Event Scale - Revised (IES-R) • Los Angeles Symptom Checklist (LASC) • Mississippi Scale for Combat-Related PTSD (M-PTSD) • Modified Posttraumatic Symptom Scale-Self Report (MPSS-SR) • Penn Inventory for Posttraumatic Stress Disorder (Penn Inventory) • Posttraumatic Diagnostic Scale (PDS) • PTSD 10-question Survey • PTSD Checklist for DSM-5 (PCL-5) • PTSD Diagnostic scale • PTSD Symptom scale (modified) • Screen for Posttraumatic Stress Symptoms (SPTSS) • Trauma Symptom Checklist - 40 (TSC-40) • Trauma Symptom Inventory (TSI)
STS	• Secondary Traumatic Stress Scale (STSS) • Secondary Trauma Scale • Post Traumatic Stress Syndrome 10 Questions Inventory • Professional Quality of Life Scale (Pro-QOL) version IV and V • Subscales compassion fatigue (CF), and compassion satisfaction (CS) • Davidson Trauma Scale
VT	• Traumatic Stress Institute Belief Scale, Revision L (TSI-BSL) • Traumatic Stress Institute Life Events Checklist (TSI-LEC)
CF	• Compassion Fatigue Self-Test for Psychotherapists (CFST) • Professional Quality of Life Scale (Pro-QOL) version IV and V ◦ Subscales compassion fatigue (CF), and compassion satisfaction (CS)

BO	• Maslach Burnout Inventory (MBI)
	  ◦ Subscales emotional exhaustion (EE), depersonalization (DP) and personal accomplishment (PA)
	• Professional Quality of Life Scale (Pro-QOL)
	  ◦ Subscale burnout (BO)
	• Link Burnout Questionnaire
	• The Arbeisbezogene Verhaltens- und Erlebensmuster (Burnout pattern)
	• The Oldenburg Burnout Inventory (OLBI)
	• The Shirom-Melamed Burnout measure (SMBM)

Depression	• Beck´s Depression Inventory (BDI) • Patient Health Questionnaire 8 (PHQ-8) • Hospital Anxiety and Depression Scale (HADS)
Anxiety	• Beck´s Anxiety Inventory (BAI) • State Trait Anxiety Inventory (STAI) • Generalized Anxiety Disorder (GAD-7) • Hospital Anxiety and Depression Scale (HADS)

General	• General Health Questionnaire/Depression and anxiety scale • Symptom Checklist-90/Depression and Anxiety scale (SCL-90) • Hospital Anxiety and Depression Scale (HADS) • Depression Anxiety Stress Scales-21 • Short-Form 36 Health survey (SF-36) • Multidimensional Scale of Perceived Social Support (MSPSS)

(*)PTST Posttraumatic stress disorder, STS Secondary traumatic stress, VT vicarious trauma, CF compassion fatigue, BO burnout

In text References

(Maslach, Jackson and Leiter 1996)

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2. 7. Prevalence of work related stress among ICU professionals

A 2014 study on the prevalence of burnout among physicians in the USA found that more than 54% reported at least one symptom of burnout, measured with the Maslach Burnout Inventory (MBI). Among all domains, the field of critical care scored highest in the prevalence of burnout (55%). How-ever, during the same period, a nationwide study on burnout among Dutch intensivists found a very low burnout rate with a prevalence of only 4.4%. Van Mol et al., (2015) suggested in a systematic literature review on emotional distress among ICU professionals that the true magnitude of work-related stress remains unclear due to a lack of unity in concepts, related measuring instruments, and cut-off points. A summary of the found measurement instruments, cut-off scores and reported prevalence of compassion fatigue, secondary stress, and burnout, is shown in Table 5.

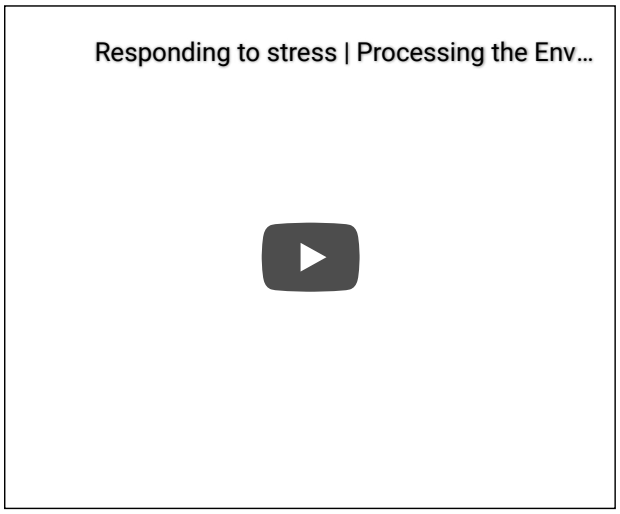
Table 5: A summary of the diverse measuring instruments, cut-off scores and found prevalences

Concept*	Measuring instrument	Applied in	Prevalence of high risk (%)
CF	• Professional Quality of Care – Revision IV, CF ◦ subscale CF > 17 high, 8-17 average and <8 low risk	• Elkonin 2011 • Meadors 2010	• 40.0 • 7.3

S/PTS	• Professional Quality of Care – Revision V, CF ◦ subscale BO >56 high, 55-43 moderate and < 42 low risk • Posttraumatic Diagnostic Scale • Post Traumatic Stress Syndrome 10 Questions Inventory • Davidson Trauma Scale	• Young 2011 • Mason 2014 • Czaja 2012 • Mealer 2007 • Su 2007	• 0.0 • 0.0 • 17.0 • 24.0 • 38.5

BO	• Professional Quality of Care – Revision IV,
	  ◦ BO subscale BO >27 high, 18-27 moderate and < 18 low risk
	• Professional Quality of Care – Revision V,
	  ◦ BO subscale BO >56 high, 55-44 moderate and < 43 low risk
	• Maslach Burnout Inventory with three subscales; EE**(9 items), DP** (5 items) and PA**(8 items)
	  ◦ A high score on EE subscale EE ≥ 27 high, 19-26 moderate and ≤ 19 low score
	  ◦ A high score on EE, cut-off score not defined
	  ◦ A high score in one subscale
	  ▪ EE ≥ 27 high, 19-26 moderate and ≤ 19 low score,
	  ▪ DP ≥ 12 high, 6-11 moderate and < 6 low score,
	  ▪ PA 0-33 high, 34-39 moderate, and ≥ 40 low score
	  ◦ A high score in one subscale EE > 24, DP > 9 or PA < 29
	  ◦ A high score in one subscale EE ≥ 27, DP ≥ 10 or PA ≤ 33
	  ◦ A high score in one subscale or a total score > -9 EE > 30, DP >12 or PA < 33
	  ◦ A high score on EE and DP
	  ▪ EE ≥ 30 high, 18-29 moderate and ≤ 17 low score,
	  ▪ DP ≥ 10 high, 6-9 moderate and ≤ 6 low score,
	  ▪ PA 0-33 high, 34-39 moderate, and ≥ 40 low score
	  ◦ A high score in two of the three subscales
	  ▪ EE ≥ 25 high, 15-24 moderate and ≤ 14 low score,
	  ▪ DP ≥ 190 high, 4-9 moderate and ≤ 3 low score,
	  ▪ PA 0-32 high, 33-39 moderate, and ≥ 40 low score
	  ◦ A high score on EE and DP with a low score on PA subscales
	  ▪ EE ≥ 27 high, 17-26 moderate and ≤ 16 low score,
	  ▪ DP ≥ 14 high, 9-13 moderate and ≤ 8 low score,
	  ▪ PA 0-30 high, 31-36 moderate, and ≥ 37 low score
	  ◦ A high score on EE and DP with a low score on PA subscales
	  ▪ EE ≥ 30 high, 18-29 moderate and ≤ 17 low score,
	  ▪ DP ≥ 10 high, 6-9 moderate and < 6 low score,
	  ▪ PA 0-33 high, 34-39 moderate, and ≥ 40 low score
	  ◦ A high score on EE and DP with a low score on PA subscales
	  ▪ EE > 31 high, 21-30 moderate and <20 low score,
	  ▪ DP > 11 high, 6-10 moderate and < 5 low score,
	  ▪ PA 0-35 high, 36-41 moderate, and > 42 low score
	  ◦ A moderate to high score one subscale EE ≥ 17, DP ≥ 7 and PA ≤ 39
	  ◦ A total MBI score > -9
	  ◦ High level not defined
	• Maslach Burnout Inventory, with four subscales; EE (9 items), DP (5 items), PA (7 items) and consternation (4 items)
	• Link Burnout Questionnaire
	• The Arbeisbezogene Verhaltens- und Erlebensmuster (Burnout pattern)
		• Elkonin 2011
		• Meadors 2010
		• Young 2011
		• Mason 2014
		• Cho 2009
		• Liu 2012
		• Rochefort 2010
		• Barbosa 2012
		• Galvan 2012
		• Raggio2007
		• Liu 2013
		• Quenot 2012
		• Raftopoulos 2012
		• Teixeira 2013
		• Guntupalli 2014
		• Karanikola 2012
		• Guntupalli 1996
		• Zhang 2014
		• Czaja
		• Embriaco 2007
		• Merlani 2011
		• Poncet 2007
		• Verdon 2008
		• Shehabi 2008
		• Lederer 2008
		• Bellieni 2012
		• Goetz 2012
			• 23.0
			• 1.2
			• 0.0
			• 0.0
			• 53.0
			• 37.3
			• 35.7
			• 70.1
			• 41.0
			• EE 32.0
			• EE 51.9
			• 28.0 before
			• 14.0 after
			• 14.5
			• 31.0
			• EE 25.0
			• 25.0
			• EE 29.0
			• 16.0
			• 68.0
			• 46.5
			• 28.0
			• 32.8
			• 28.0
			• EE 42.0
			• 34.4
			• 30.0
			• 17.7

A little later, this theory was expanded to the General Adaption Syndrome by Hans Selye (1907-1982), a medical doctor at Johns Hopkins University. He showed that environmental stressors acti-vate the HPA axis (hypothalamus, pituitary gland, and adrenal cortex) and consequently increase cortisol levels associated with an immediate increase in blood pressure and heart rate. In a chronic phase, these cortisol levels can lead to cell damage and depletion of the body´s energy reserves.



Finally, the psychologist Richard Lazarus (1922-2002) found that cognitive appraisal processes can influence both the stress and the emotional experience. The appraisal of a situation causes an emo-tional, or affective, response that is going to be based on that appraisal. An important aspect of this appraisal theory is that it accounts for individual variances of emotional reactions to the same event. Therefore, work-related stress might have different effects in individual healthcare professionals even in situations of equal stress. The individual experienced level of threat on the one side, and the valua-tion of own capabilities to adapt to the situation on the other side, connect to the idea of wellbeing.

If you want, find a self-test here

Stress management can be complicated and confusing because there are different types of stress; acute stress, episodic acute stress, and chronic stress.

- Acute stress is the most common form of stress. It comes from demands and pressures of the recent past and anticipated demands and pressures of the near future. Acute stress is thrilling and exciting in small doses, but too much is exhausting.
- Episodic acute stress is common for people with acute stress reactions who are over aroused, short-tempered, irritable, anxious and tense.
- Chronic stress is the grinding stress that wears people away day after day, year after year. It wreaks havoc through long-term attrition.

There are six categories of resources that affect an individual's perspective on stress:

- Personality (Empathy/Sympathy, Commitment, Optimism)
- Ego-related traits (Self-esteem, Self-confidence, Self-control)
- Social Connectivity (Social network, Available support)
- Cultural Views (Religious beliefs, Moral beliefs)
- Behavioural Skills (Social Skills, Management of Response to emotions)
- Other (Socioeconomic status, General Health)

In text References

(American Psychological 2018; Cannon. 1929; Lazarus 1993; Piquette, Reeves and LeBlanc. 2009; Sarafino 2002; Selye 1983)

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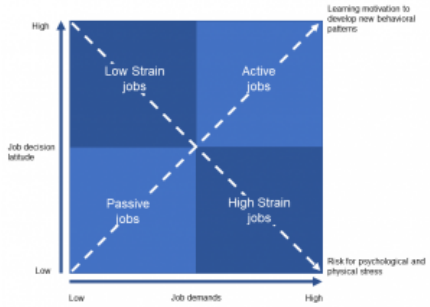

Figure 4: The Demand-Control (Support) Model.
Source www.toolshero.com

The Demand-Control Model is an environment-oriented model, which is presented in figure 4. It describes two important determinants of employee wellbeing: psychological job demands and job de-cision latitude (or job control).

This web link explains the Job Demand Control Model by Robert Karasek (1979) in a practical way. After reading it, you will understand the basics of this powerful effectiveness and stress management tool.

There are three major points of criticism:

- The operationalisation of both job demands and autonomy is under discussion because of the used measurement scales.
- The interaction effects between the constructs and work characteristics remains unclear.
- The model suggests that work characteristics are determining the wellbeing of employees, without individual differences such as personality.

Challenge

Is the Demand-Control by Robert Karasek applicable in your daily work? Do you recognise the practical explanation or do you have more suggestions? What are your success factors for finding the balance between desires and autonomy?

In text References

(Karasek Jr 1979; Mulder. 2017; De Rijk et al. 1998)

2. 8. 2. Job Characteristics Model

The Job Characteristics Model by Hackman and Oldham (1975) is a theory of work design. It pro-vides “a set of implementing principles for enriching jobs in organizsational settings”. The original version of job characteristics theory proposed a model of five “core” job characteristics (i.e. skill variety, task identity, task significance, autonomy and feedback) that affect five work-related out-comes (i.e. motivation, satisfaction, performance, absenteeism and turnover) through three psycho-logical states (i.e. experienced meaningfulness, experienced responsibility, and knowledge of results).

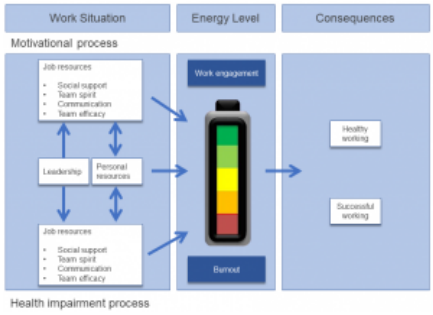

Figure 7:JD-R model, adapted from Triple i Human Capital, Schaufeli and Schaufeli. Source Den Ouden Management©

The JD-R model applied to the ICU

The stressful environment in which both ICU nurses and intensivists work is increasingly challenging in physical, cognitive and emotional terms. These job demands, together with the workload, might negatively affect an individual´s level of energy while working.

The level of work engagement is primarily related to job resources in the ICU:

- social aspects (i.e., team spirit, team efficacy and social support from colleagues);
- the aspects of personal growth (i.e., autonomy and performance feedback);
- the organisational aspects (i.e., peer communication).

The JD-R model includes personal resources as well, which refer to the perception of employees regarding their ability to successfully control and have an impact on their work environment. Personal resources interact with job resources, as employees who score high on optimism, hope, self-efficacy, resilience and self-esteem succeed more often in mobilising their job resources. This boosting effect may change the relationship between job resources and work engagement. Personal re-sources, such as personality traits, may partly explain different reactions to work-related stress and the level of work engagement.

In text References

(Moss et al. 2016; Schaufeli and Taris. 2014; Swider and Zimmerman. 2010)

2. 8. 4. Effort-Reward Imbalance Model

The Effort-Reward Imbalance Model by Siegrist (2001) has been developed as a link between per-sonal needs and societal structure. The model, as presented in figure 9, defines threatening job con-ditions as a mismatch between high workload (high effort) and low control over long-term rewards. An imbalance (high effort versus low rewards) might lead to work-related stress reactions such as health impairment, heart diseases, dissatisfaction and sickness leave.

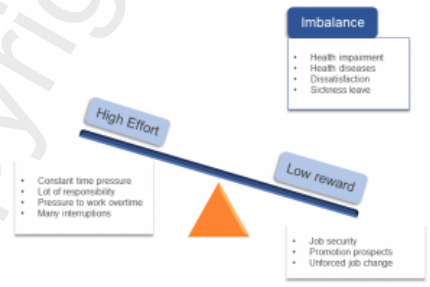

Figure 8:Effort-Reward Imbalance Model. Source Den Ouden Management©

The model suggests that personal characteristic have a moderating effect on the relationship be-tween work and health. Furthermore, the Effort-Reward Model recognises over-commitment in work (e.g., stubborn behaviour, strong need for approval and difficulty to detach from work).

In text References

(Siegrist. 2001)

References

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Resilience is a learned ability, which encourages investment in a resilience training (based upon in-sights from positive psychology). Resilience training helps to bounce, and not break (Fig. 10).

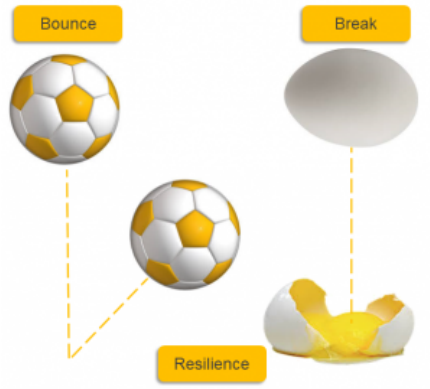

Figure 10:Resilience training helps to bounce, and not to break. Source Den Ouden Management©

Read the article and listen to the interview Margin Seligman, Building resilience

According to the Mayo Clinic the most effective training for resilience is to train attention and aware-ness. Becoming more intentional and purposeful will decrease negative thoughts and draw attention to what is most meaningful.

Resilience training has been proven to be an effective intervention in soldiers to better enable them to adapt to stressors of military life. It was a joint effort between the Positive Psychology Center at the University of Pennsylvania and the United States Army. Enhancing mental toughness, highlighting and focusing on strengths, and fostering strong relationships are core competencies. The resilience training was not perceived as “touchy-feely” or “psychobabble”, as you might think. In fact a large number of them evaluated the resilience training as the best course they had ever had in the army. A similar resilience training might be helpful for ICU staff to cope adaptively with their work-related ad-verse conditions and stress, although research backing this idea is still lacking.

To learn more about the Master Resilience Program, an overview is given in the power point presentation.

In text References

(Griffith and West. 2013; Reivich, Seligman and McBride. 2011; Sood and Mayo 2015)

References

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- Reivich KJ, Seligman ME, McBride S., Master resilience training in the U.S. Army., 2011, PMID:21219045
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3. 3. Intervention strategies from a health perspective

It is of great importance to foster a proactive approach to wellbeing at work for ICU professionals, rather than simply waiting for intensivists and ICU nurses to drop out and then beginning to treat the (i.e. tertiary prevention). Besides early detection of symptoms of (dis)stress (i.e. secondary preven-tion), it is also worthwhile investigating possibilities for primary prevention strategies at the ICU. Pri-mary prevention aims to prevent health impairment and sickness leave before it occurs. This is done by preventing exposure to (chronic) stressors, and increasing resistance to work related stress. Ex-amples include: mandate safe and healthy practices (e.g. reasonable work schedules) and education about healthy and safe habits (e.g. exercising regularly, relaxation techniques).

A wide range of intervention strategies to reduce emotional distress among ICU professionals is emerging from the literature, see Table 6.

Table 6: Summary of the interventions on emotional distress

- Sarafino EP, Health Psychology: Biopsychosocial Interactions, 4th Edition, 2002, ISBN:0471359408
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2. 2. Background

2. 2. 1. Symptoms

Work-related stress with the accompanying emotions provoked specifically in ICU is well document-ed over the years. The high-stakes, high stress environment that ICU professionals practice in, are incredibly demanding intellectually, physically, and emotionally. Both physical warning signs (such as headaches, sleeping disturbances, low back pain and stomach problems) and mental responses (such as irritability or hostility, loss of concentration, low self-confidence and emotional instability) could indicate individual stress reactions. However, these are non-specific symptoms which cannot identify the origin of stress and subsequently constrain effective coping mechanisms or the develop-ing of preventive strategies for this ongoing process.

Probably, you already will know the physical reactions of stress on the body. If not, then watch this video:

In text References

(Donchin and Seagull. 2002; Hays et al. 2006; Moss et al. 2016)

2. 2. 2. Causes

It has been suggested that ICU professionals could be emotionally affected by (in random order):

- end-of-life issues,
- ethical decision making,

on physician well-being of 19 biweekly discussion groups, which included elements of mindfulness, reflection and shared experience. Furthermore, interventions to positively influence individual resilience might provide starting points for future preventive strategies.

Human Resource Management Company Cezanne introduced ‘Five Ways to Boost Your Resilience at Work’:

1. Know your stress triggers

Individual reactions to cope and adapt to difficult situation range from a quiet and withdrawn behaviour strategy to angry and aggressive expressions. Learn how to monitor your own stress levels so that you know when things are getting too much and you need to take action.

2. Learn how to manage your emotions

(Lucas 2013) describes as following: “Negative emotions affect not just how we feel about ourselves but also how we perform at work. It’s hard to do a good job if inside you’re simmering with rage and resentment, are finding it hard to ‘move on’ from a difficult interaction with a colleague or are feeling upset because you’ve had to make someone redundant.”

Recognise your emotions and take control of how to cope with these emotions. This will help build resilience and the ability to bounce back from difficult situations. Try to identify, in advance, situa-tions which you know are going to have an emotional impact on you. You can prepare to manage them. It is important to be realistic in what you are able to achieve, take small steps, and avoid com-paring yourself negatively with others. Difference is okay, but don`t compete. Maybe it will help to take deep breaths and stay calm in response.

3. Nurture a growth mindset

Some healthcare professionals believe that their personality, intelligence and coping abilities are fixed, which may result in a situation of learned helplessness. Others see challenges as an opportuni-ty to learn and grow, likely to persist in difficult times at work in the ICU. The meaning of “effort and difficulty” can be transformed. If we concentrate more on improvement and progress rather than pass/fail, we can further equip ourselves for new challenges.

Watch: The power of believing that you can improve

4. Accept input from others

You might feel embarrassment or failure when asking for help, or need a few moments to recover from a difficult situation in ICU. However, research shows that the most resilient people are those who are prepared to reach out to others. Don’t be afraid to use your professional or social network when you need help, advice or just a listening ear. Willingness to seek help is a strength not a weak-ness.

5. Take time to refresh

A normal day can be packed with many patients, extremely ill and depended on your ability to treat, an inbox with overflowing mail and documents waiting to be reviewed or finished before deadlines. It is all too easy to get overwhelmed and exhausted. Therefore, strive for sustained ability to connect with the value of healthcare, to take care of human beings, knowing that is does make a difference. Find your own strategies that best fit your life to refresh and keep yourself engaged to work.

In text References

(Eagle, Creel and Alexandrov. 2012; Liu et al. 2012; Mehrabi et al. 2012; Nooryan et al. 2011; Nooryan et al. 2012; Raggio and Malacarne. 2007; West et al. 2014)

References

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3. 4. Barriers and facilitators of interventions to promote sustainable employability and health

To develop adequate preventive strategies for emotional distress, it is essential to know the individ-ual´s incentive in choosing a caring profession in addition to one's unconsciously chosen coping strategies to deal with the stressful work settings. Combined person- and organisation-directed multi-faceted interventions with refresher courses reported the best results. These intervention could serve as facilitators to promote sustainable employability and health. At this point, it might be interesting to investigate the effect of a combination of relevant and changeable determinants, such as communi-cation skills, educational sessions in stress management, and mindfulness training for ICU profes-sionals.

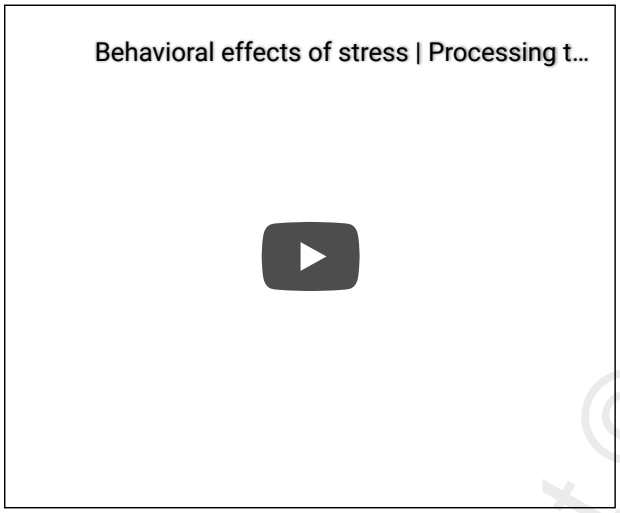
- The improvement of communications skills might support the interaction with patients and relatives, and reduce conflicts with clinical colleagues and colleagues in management.
- Educational sessions in stress management might expand the awareness of emotional dis-tress and methods to apply in response to this distress. The awareness of stressful situa-tions and knowing the vital signs are the first steps in maintaining a healthy work life. Lack of awareness of the ongoing devastating process may continue until a total mental or physical breakdown.
- Mindful meditation might be a source of strength for preventing the hidden effects of stress, and gives the individual healthcare professional the ability to pay attention in the present moment and respond wisely instead of reacting later with negative feelings. Balancing human intimacy and professional distance and remaining appropriately present and compassionate, are valuable personal abilities. This ability could be taught, and effectively enhanced, through self-awareness and mindful meditation which is potentially useful in promoting well-being and stress management in healthcare professionals.

Female sex	Embriaco 2007 (increased) Raggio 2007 (increased EE) Merlani 2011 (decreased) Raftopoulos 2012 (increased)	Poncet 2007 Bellieni 2012 Guntupalli 1996 Karakinola 2012 Guntupalli 2014
Conflicts	Embriaco 2007 Poncet 2007	
Number of ICU beds		Guntupalli 1996

In text References

(Bellieni et al. 2012; Elkonin and van der Vyverll 2011; Embriaco et al. 2007; Guntupalli and Fromm RE. 1996; Karanikola et al. 2012; Merlani et al. 2011; Poncet et al. 2007; Raftopoulos, Charalambous and Talias. 2012; Raggio and Malacarne. 2007; Rochefort and Clarke. 2010; Verdon et al. 2008)

2. 2. 4. Consequences



The causes of work-related stress may lead to moral distress or avoidance behavior and consequent-ly increase emotional distress. This work-related stress can have a negative effect on an individual´s enjoyment of work. It might even result in long-term absenteeism or a threatening brain and skill drain if the professionals leave their jobs prematurely to preserve their own health, ultimately leading to economic burdens. In addition, these processes may even reduce the quality of care for patients and relatives.

Stress reactions also might be the first indication of the presence of an emotional trauma. In the re-search field of traumatisation, which focuses on the process and origin of developing stress symp-toms, there is a distinct difference in primary and secondary traumatisation.

- **Primary traumatisation** is the process that can occur from having persistent, intense and di-rect contact with a traumatic event, such as a situation of war, violence or sexual abuse. This process can lead to posttraumatic stress disorder.
- **Secondary traumatisation** is the results of indirect exposure, which may develop from hear-ing about a traumatic event or caring for someone who has experienced a traumatic event. This process may lead to burnout, compassion fatigue, vicarious trauma and secondary traumatic stress.

In text References

(Böckerman and Ilmakunnas. 2008; De Villers and DeVon. 2013; Elkonin and van der Vyverll 2011)

References

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Individuals may experience hindrance to establishing wellbeing at work. For example, to continue mindful meditation in daily life is not easy. Most people with an interest succeed at first, maybe con-tinue for a while, and then struggle to find the time to practice due to ‘business as usual’.

Challenge

The goal of this exercise is to identify factors that may influence your well-being negatively. These factors may prevent you from both living in line with your values and achieving your goals. The exercise has been derived from the Positive Psychology Practitioner’s Toolkit (Figure 12).

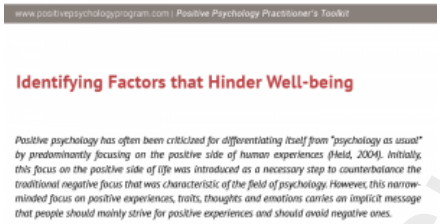

Figure 12:Exercises derived from the Positive Psychology Practitioner’s Toolkit learning hindring factors on wellbeing. Source www.positivepsychologyprogram.com

Think about the next questions for your own purpose:

1. What are the specific challenges that are getting in the way of your happiness or your ideal life?
2. How long have these challenges been present?
3. What factors caused or contributed to these challenges in the past?
4. What factors maintain these challenges or keep them going now?
5. In what way are these factors related to each other? Make a rough drawing.
6. Conclude by identifying your own hindrances in wellbeing at work.

In text References

(Curtis, Sprung and Azoulay. 2014; Kearney et al. 2009; Lan et al. 2014; Nooryan et al. 2011)

References

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4. A life long journey

"Resilience Is About How You Recharge, Not How You Endure" (Achor and Gielan 2016)

Taking time to refresh is a vital part of building a personal resilience to cope with a challenging role and the strive for wellbeing at work. This means, being aware for small adaptations in daily practice and life style. Those might make the biggest differences. For example:

- Take a break for lunch rather than grabbing food on the go or eating in front of your laptop.
- Get out for a lunch walk or take a breath of fresh air later during your work day.
- Avoid being 'always on' by turning that phone off to get adequate time to wind down and re-lax.
- Be active for 30 minutes each day.
- Take care to get enough slepp.
- Take holidays.

Train your resilience

Besides the individualised preventive efforts and encompassing self-care, organisations should ad-dress issues such as:

- Leadership
- Bullying
- Gender and cultural diversity
- Intra-team conflicts and teambuilding
- Peer support and social support
- Ethical discussions
- Career development

References

- Achor S, Gielan M, Resilience Is About How You Recharge, Not How You Endure, 2016, https://hbr.org/2016/06/resilience-is-about-how-you-recharge-not-how-you-endure

5. Wrap up

“Even as critical care practitioners provide care for the most vulnerable patients in the hospi-tal, at the same time these care providers are themselves vulnerable to erosion of their own work engagement because of persistent, high levels of work related stress.” (Zimmerman. 2018)

One of the leading threats for both patient safety and decreased quality of care today is the caring professionals themselves. Healthcare systems across Europe and the USA have systematically highlighted the importance of treating patients holistically, not just as diseases, and to respect their val-ues and needs. ICU professionals should not be exempt from this holistic view of person-centredness. Providing compassionate, humane and excellent quality of care requires healthy pro-fessionals, with profound coping skills to meet the inherently emotional demanding ICU environment.

References

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5. 1. Research agenda

Think

What research questions would you like to investigate and in which context?
Compose an international research agenda with a top three from your own interests.

Identification

The true prevalence of emotional distress in ICU professionals remains open for discussion, which might emphasise the need for a ´gold standard´ which will be used in all future research.

- The concept is specifically related to the ICU healthcare environment, (i.g., burnout, compas-sion fatigue and secondary traumatic stress) have to be defined by a wide-ranging consen-sus committee, e.g by conducting a Delphi study.
- Agreement is needed to address the discrepancies in measurement issues and to better in-vestigate emotional distress with a large international quantitative observational multicenter study.
- The prevalence of emotional distress among ICU professionals might change over time and a broader view would be preferable.

Influential factors

It is highly recommended to further investigate and compare the consequences of emotional distress in the ICU in a valid comparative manner to indicate the relevance of the problem.

- Cross-sectional study designs cannot reveal causal relationships between contributing varia-bles, individual coping mechanisms or organisational preventive strategies to emotional dis-tress. A prospective longitudinal study design would be recommended to bridge this gap.
- A pitfall of the focus on questionnaires and scoring systems is the reliance on a cut-off point intended to ´establish´ a phenomenon. In addition, socially desirable or exaggerated answers of the respondents might be an issue. Therefore, in-depth semi-structured interviews are re-quired to stress the deeper driving forces in an individual to provide more insights into the thoughts and behaviors in reaction to a stressful work environment.

Valuable interventions:

To develop adequate strategies focusing on wellbeing at work, it is essential to know the individual´s incentive in choosing a caring profession in addition to one’s unconsciously chosen coping strate-gies to deal with the stressful work settings.

- Combined person and organisation-directed multifaceted interventions with refresher courses reported the best results. At this point, it might be interesting to investigate the effects of a combination of relevant and changeable determinants, such as communication skills, educa-tional sessions in stress management, and mindfulness training for ICU professionals.
- Although promising, the effects of resilience training are still inconclusive. There should be a joint collaboration taking cultural differences into account.
- Team effort, social support, and leadership seem crucial factors influencing work engage-ment. Building strategies to underscore these factors and to emphasise the importance of a multi-professional team effort, should be incorporated in every ICU research agenda.

5. 2. Higher sense of meaningfulness in the ICU

Healthcare organisations should think of improvements and provide support in daily practice, in addi-tion to the individual activities promoting their well-being, such as self-care in nutrition, sleep, exer-cise, and spending time with family and friends. The urge of a call for action has been heard and endorsed by most healthcare providers now. Evidence-based interventions are needed to address the most effective contributing factors; however, persuasive randomised controlled trials in this do-main have not been performed until now. There probably isnt one simple solution that will fit all to enhance wellbeing at work.

Stimulating a healthy work environment is a multidimensional challenge, a traffic map with multiple roads leading to the same point of interest. Some promising suggestions are regulating the environ-ment and workload, having adequate administrative support systems, and finding meaning in work. Finding a high sense of meaningfulness is a key factor to wellbeing at work; on the one hand to pro-vide humane care and treatment for the patients and their relatives, and to stay emotional healthy and balanced in one's own life on the other hand. The personal development of resilience might provide the basic adaptability to flourish in the hectic and ever demanding ICU setting. Most professionals working here have learned to respond in the emotionally difficult situations. Indeed, we must take care of ourselves, however, the ICU is an inspiring world in which to work. We should keep it that way and strive for a healthy and successful working environment.

"If we keep doing what we have been doing, we are going to keep on getting what we have been getting".
(Steven Covey)

Challenge

In what way do you sense meaningfulness in your work as ICU professional? Has it changed over time? What is needed in your own situation to experience (more) meaningfulness in work-life? What can you do differently from now on while working in the ICU?

In text References

(Shanafelt et al. 2015; Moss et al. 2016; Pastores 2016; van Mol et al. 2015)

References

- van Mol MM, Kompanje EJ, Benoit DD, Bakker J, Nijkamp MD, The Prevalence of Compassion Fatigue and Burnout among Healthcare Professionals in Intensive Care Units: A Systematic Review., 2015, PMID:26322644
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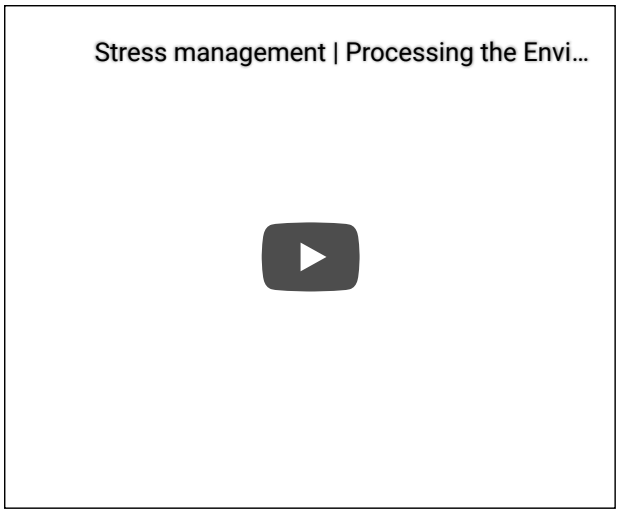


2. 4. Defining concepts that threaten wellbeing by work related stress

A growing body of evidence suggests that burnout among ICU healthcare professionals is a result of the demanding and continuously high-stress work environment.

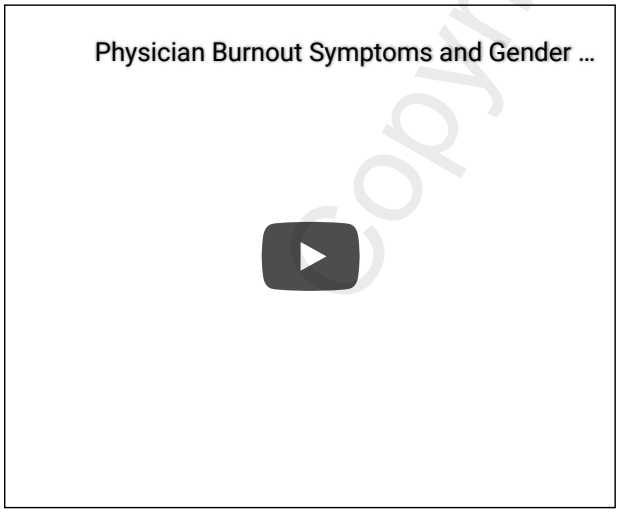
- Burnout has been defined as a combination of three factors: emotional exhaustion, deper-sonalisation and reduced personal accomplishment.
- Compassion fatigue, a closely related concept, has been described as a loss of compas-sion due to repeated exposure to suffering during work.
- Both post- and secondary traumatic stress include the persistent, deliberate avoidance of distressing trauma-related stimuli.

All of these concepts in the health impairment process are considered together in this e-course as ‘emotional distress’ because they underscore the same causes and consequences of work-related stress. However, in the next section we will further elaborate on the individual concepts.

In text References

(American Psychological Association). 2013; Leiter, Bakker and Maslach. 2014; Sinclair et al. 2016)

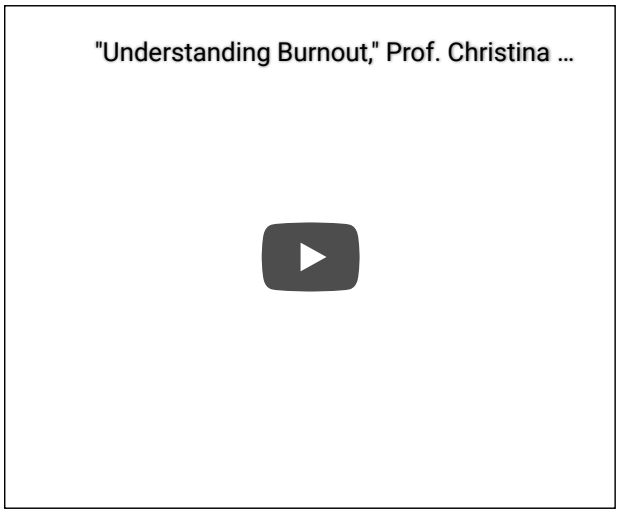
2. 4. 1. Burnout



Burnout is described as a syndrome of emotional exhaustion, depersonalisation or cynicism, and reduced personal effectiveness that can occur among individuals in response to occupational stress. As such, work-related stress is a prerequisite for diagnosing burnout. It is currently seen as the most prevalent career crisis of the twenty-first century. Individuals who are at risk of burnout

usually have some level of perfectionism and feel guilty if they do not perform as well as they would like to. This goal-oriented mindset could cause an extreme imbalance in work-related situations and might lead to long-term absenteeism.

Although burnout can be severe, it has also been viewed as a contagious syndrome. The social con-text, and especially the interaction with complaining colleagues, might play an important role in the development of burnout. Furthermore, burnout has been mentioned as a fashionable label because a clear and standardised definition is lacking. A substantial number of studies on burnout in a broad range of professions were published and a peak in media coverage occurred since the first description. However, burnout is not defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). As (Laurent et al. 2018) suggest, “Experiencing fatigue or distancing oneself from one’ work – what burnout is about – is not a sign of ill-being in itself”. Since its origination, the operation-alisation and measurement of burnout have differed enormously.



Think

Christina Maslach highlights seven outcomes of burnout (poor quality of work, low morale, absentee-ism, high turnover, health problems, depression and family problems).

- Explain the relationship between burnout and depression according to her opinion.
- Explain the mismatch between job and person in her perspective.

Occupational physicians and psychiatrists frequently diagnose burnout; however, it is not a diagno-sis in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). This means, there are no strict psychiatric criteria to establish the diagnosis of burnout. The Maslach Burnout Inventory (MBI) is seen as the standard tool for measuring the severity of burnout. The MBI is a highly reliable and validated 22-item self-report questionnaire that evaluates the three domains of burnout in independ-ent subscales. However, there is no consensus on a cut-off point beyond which burnout is diag-nosed and different authors use different cut-off points, resulting in different burnout prevalences.

Some authors think that emotional exhaustion is a prerequisite for diagnosing burnout, while others disagree. Nevertheless, burnout is a recognisable state in both ICU physicians and nurses with serious deleterious consequences for both patients and personnel.

For your interest, watch the presentation The Awakening: Tackling Burnout Syndrome in Critical Care Professionals Meredith Mealer, PhD RN, CCRN

If you want, find a self-test here:

- MBI
- On the path to burnout

In text References

(Bakker, Le Blanc and Schaufeli. 2005; Bakker and Demerouti 2007; Bienvenu 2016; Garrouste-Orgeas et al. 2015; Kaschka, Korczak and Broich. 2011; Leiter, Bakker and Maslach 2014; Maslach, Jackson and Leiter 1996; Merlani et al. 2011; Moss et al. 2016)

2. 4. 2. Compassion fatigue

Compassion fatigue has been defined as a state of physical or psychological distress in caregivers, which occurs as a consequence of an ongoing and snowballing process in a demanding relationship with needy individuals. It has been associated with a 'helper syndrome' that results from continuous disappointing situations and leads to moral distress. Compassion fatigue was described for the first time in the early nineties as the loss of compassion as a result of repeated exposure to suffering during work.

(Figley 2013) proposed thereafter the theoretical framework of the Professional Quality of Life, which is how an individual might feel in their caring work environment. This model includes two do-mains, the positive effects of healthcare work as indicated by compassion satisfaction, and the neg-ative effects resulting in compassion fatigue. Professionals could experience satisfaction through their ability to interact with colleagues, the pleasure in helping others and to make meaningful contri-butions to society. On the opposite side, compassion fatigue consists of two parts. The first part contains issues such as exhaustion, frustration and depression, typically associated with burnout. The second part is the negative feeling driven by concerns such as hyper-vigilance, avoidance, fear and intrusion, which are also characteristics of traumatic stress symptoms. The latter has been defined as the destructive emotional distress resulting from an encounter with a suffering patient who has experienced primary or direct trauma.

Besides the work environment, the client- and the personal-environment could affect compassion fatigue, thus making a person vulnerable to emotional distress. One of the key elements in this Professional Quality of Life model is the empathic ability of the caregivers and the subsequently therapeutic relationship with patients. This model has been applied in several healthcare settings such as palliative care, general wards and critical care.

In text References

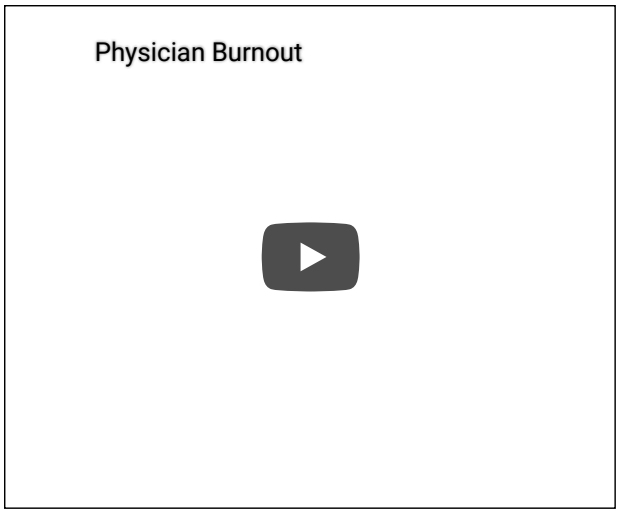
(Coetzee and Klopper. 2010; Jenkins and Warren. 2012; Joinson. 1992; Nimmo and Huggard 2013; Stamm 2010)

2. 4. 3. Post-traumatic stress

The Posttraumatic stress disorder (PTSD) diagnostic criteria, which are specified in Table 2, were revised in the fifth edition of the DSM-5. Diagnostic criteria for PTSD include a history of exposure to a traumatic event that meets specific stipulations and symptoms from each of four symptom clus-ters: intrusion, avoidance, negative alterations in cognitions and mood, and alterations in arousal and reactivity such as the persistent effortful avoidance of distressing trauma-related stimuli among oth-ers.

A structured interview, for example the Clinician-Administered PTSD Scale for DSM-5 or the PTSD Symptom Scale-Interview, establishes the PTSD diagnose. Disadvantages of these interviews are the prolonged administration time and the special training to guarantee the validity of the diagnosis. Alt-hough a number of self-report measurement instruments, such as the Davidson Trauma Scale or the Impact of Event Scale-Revised, assess the symptoms of PTSD, these measures do not accomplish a diagnose of PTSD because of too much biased responses. The estimated lifetime prevalence of PTSD in the National Comorbidity Survey Replication among adult Americans was 6.8% and a twelve-month prevalence of 3.5%.

Table 2: Criteria of Posttraumatic Stress Disorder, adopted from DSM-5 manual



If you want, find a self-test here

In text References

(American Psychological Association). 2013)

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(*)CF = Compassion fatigue, S/PTS = Secondary- and post-traumatic stress, BO = Burnout
(**)EE = Emotional exhaustion, DP = Depersonalization, PA = Personal accomplishment

In text References

(Medscape 2016; Meynaar et al. 2015; Shanafelt et al. 2015; van Mol et al. 2015)

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2. 8. Theoretical models in work-related stress

“He who loves practice without theory is like the sailor who boards ship without a rudder and compass and never knows where he may be cast.”
Leonardo da Vinci (1452-1519)

In the last few years employees have been dealing with changes in and around their work. A more intensive work environment and a shift from a physical to an emotional workload emerged through-out most labour settings. In addition, the psychological contract (the expectation of employees about a fair balance between efforts for the organisation, and material and immaterial rewards) has been increasingly affected negatively. Insights into the psychosocial characteristics and factors influencing qualitative and quantitative work load have encouraged the development of diverse theo-retical frameworks to explain work-related stress and wellbeing.

2. 8. 1. Demand-control (Support) Model

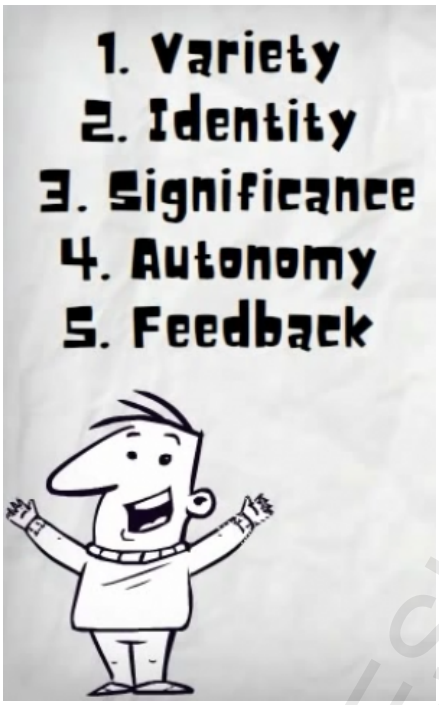


Figure 5:Five core job characteristics proposed by Hackman and Oldham (1975)

What is Job Characteristics Theory?

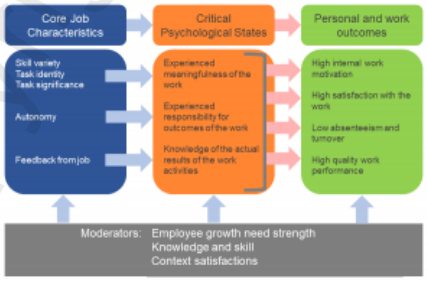
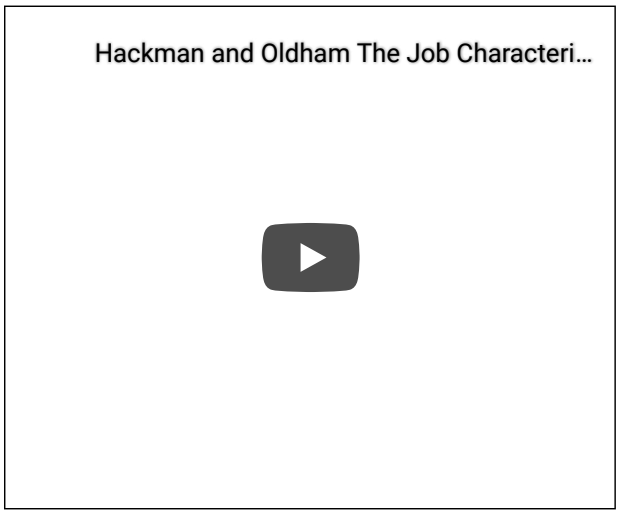


Figure 6:Complete Job Characteristics Model. Source www.flixabout.com



Job characteristic theory

Think

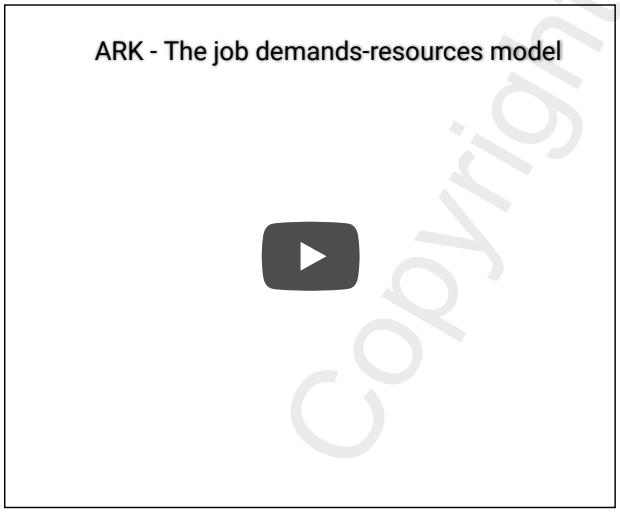
Apply the Job Characteristics Model in your own work situation. Use the core job characteristics to reflect on relevant psychological states and subsequent outcomes.

In text References

(Hackman and Oldham 1975; Oldham and Hackman. 2005)

2. 8. 3. Job-Demands Resources (JD-R) Model

The JD-R theory describes both the health impairment process and the motivational process in its relationship to the influencing factors in adapting and self-managing to stress. Many previous mod-els and theories have inclined towards the JD-R theory, including early burnout models (Leiter, 1993), stress models (Seyle, 1976), the demands-control model (Karasek, 1979), job characteristics theory (Hackman & Oldham, 1980), and conservation of resources theory (Hobfoll, 2001). The therefrom derived JD-R model encompasses the negative aspects of work-related stress (ultimately resulting in burnout) as well as the positive aspects (resulting in work engagement).

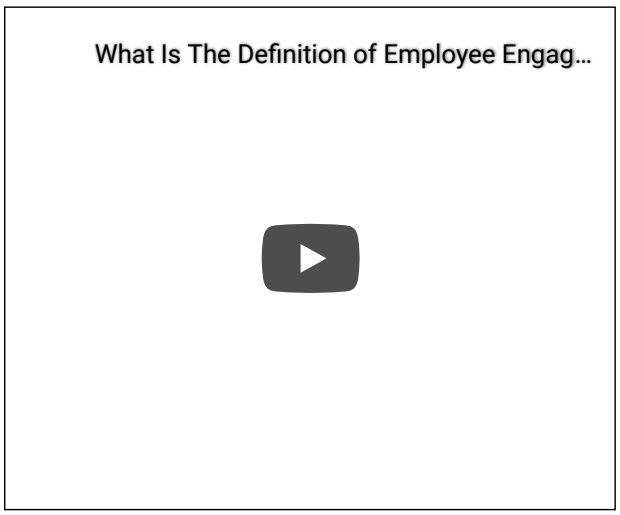


In text References

(Bakker and Demerouti 2017; Demerouti et al. 2001; Schaufeli and Bakker. 2004)

This JD-R model has been used in many studies of healthcare workers, and it is assumed that every occupation has its own demands, resources and associated factors. Thus, ICU professionals may have different aspects of their jobs related to work engagement compared to general employees (Fig. 7).

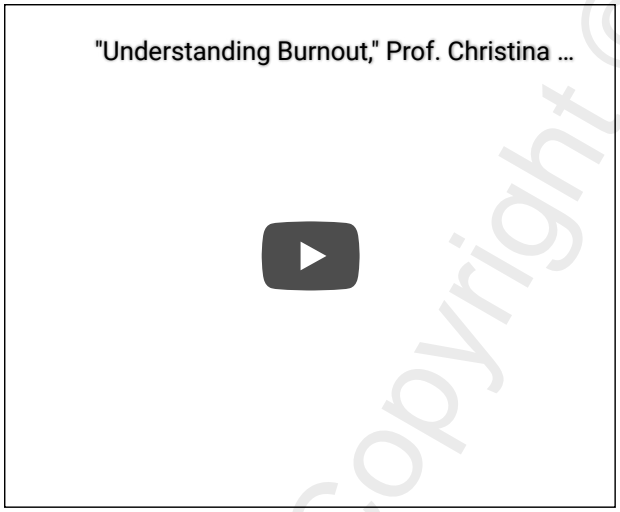
3. Wellbeing at work



Kevin Kruse: What is the definition of employee engagement

3. 1. Work satisfaction and work engagement

Thriving in Science Lecture: "Understanding Burnout," Prof. dr. Christina Maslach (Dept. of Psychol-ogy, U.C. Berkeley) - Wednesday, December 10, 2014



Work engagement, with its positive labeled elements, is a counterbalance to work-related stress, Figure 9. It is operationalised as a positive work-related state of mind and characterised by vigour, dedication, and absorption. Vigour represents the level of energy and mental resilience while work-ing; dedication refers to experiencing a sense of significance, enthusiasm and challenge; and ab-sorption is characterised by being focused and absorbed by work. In general, work engagement is influenced by job autonomy, social support, performance feedback and personal resources such as self-efficacy, flexibility and adaptability. Work engagement is firmly grounded in the Job-Demands-Resources (JD-R) theory.

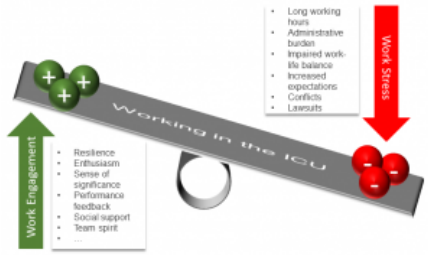


Figure 9: Work engagement in a counterbalance to work-related stress. Source Den Ouden Management©

Prof. Dr. Wilmar Schaufeli: Work engagement

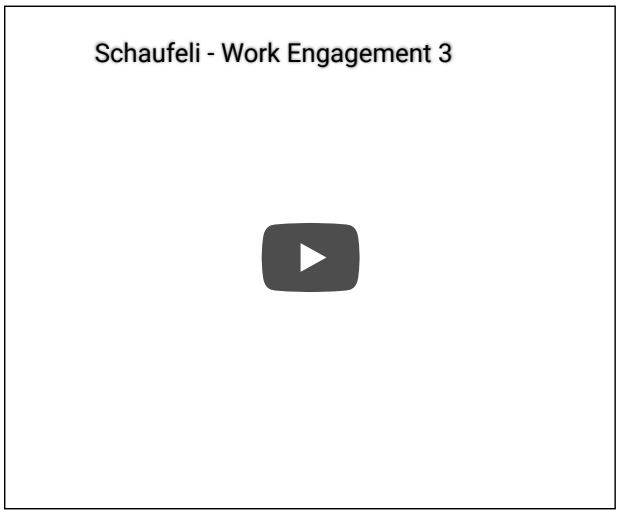
Part 1

Schaufeli - Work Engagement 1

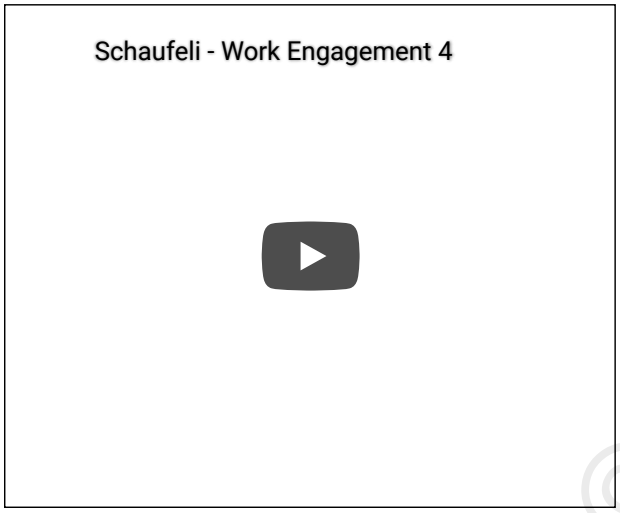
Part 2

Schaufeli - Work Engagement 2

Part 3



Part 4



In text References

(Bakker et al. 2008; Schaufeli 2015; Schaufeli and Taris. 2014)

References

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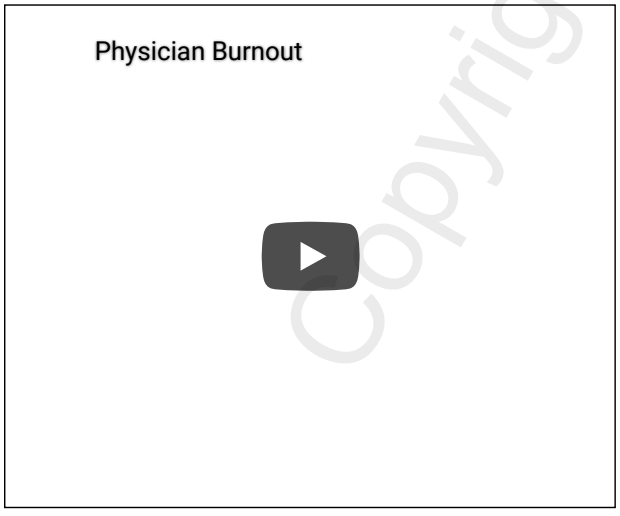
3. 2. The role of resilience in wellbeing

Resilience, in the work context, is the ability of humans to adapt when faced with difficulty or work-related stress. It is a necessary quality to foster wellbeing in the face of life's challenges. Resilient people do not only bounce back after a setback, they grow from the adverse event and become stronger and wiser. Even when the adverse events were perceived as traumatic (i.e. posttraumatic growth). People who are highly resilient find something good in any situation, are willing to learn from each negative experience and apply their acquired lessons in their future endeavors. People who are less resilient, are more likely to let problems linger for a longer period of time, to feel overwhelmed and victimised and to use maladaptive coping strategies (like substance abuse). Ultimately, limited resilience may lead to mental health problems like anxiety and depression and a lower quality of life.

Type of intervention	Description of intervention	Study
Organization-directed interventions		
	Work schedules of intensivist	Ali et al. 2011 Garland et al. 2012
	Improving work environment	Goets et al. 2012 Liu et al. 2013 Rochefort et al. 2010
	Change team composition	Merlani et al. 2011
	Team building and job rotation	Bellieni et al. 2012
Person-directed interventions		
Practical	Educational programs, seminars	Eagle et al. 2012 Meadors, et al 2008 West et al. 2014
	Improve communication skills	Loiselle et al. 2012 Quenot et al. 2012 Sluiter et al. 2005
	Relaxation exercises	West et al. 2014 Mehrabi et al. 2012
	Mindfulness	West et al. 2014
Personal	Personality and coping	Nooryan et al. 2011 Nooryan et al. 2012
	Social support and individual coping	Liu et al. 2012
	Counselling	Lederer et al. 2008

Elizabeth Bromley, MD, PhD



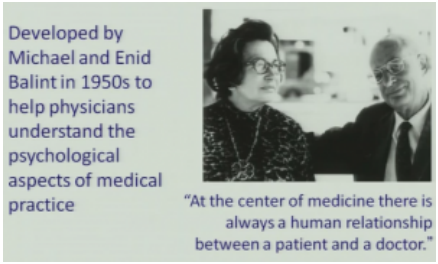


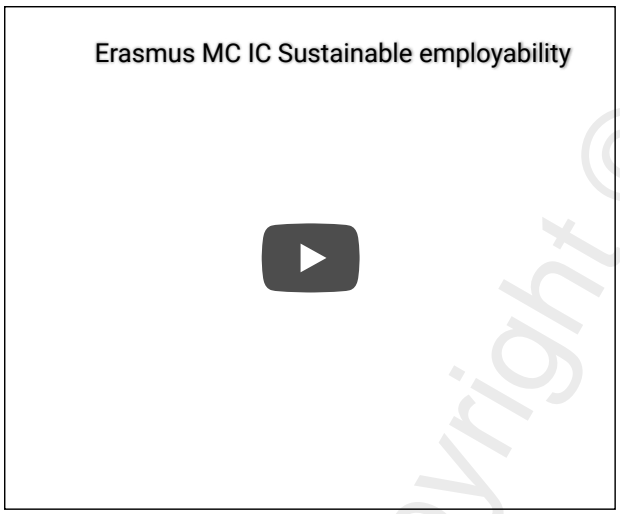
Figure 11:

3. 3. 1. Organisation-directed interventions

Some studies measured the effect of an intervention, such as different intensivists' work schedules, educational programs on emotional distress, improving elements of family-centred care and commu-nication skills. Other studies suggested preventive strategies, varying from improving the work envi-ronment, changing team composition to include a greater number of women, developing teambuild-ing and periodic job rotation. According to Quenot et al., the implementation of a set of active, in-tensive communication strategies regarding end-of-life care in the ICU has been associated with sig-nificantly lower rates of burnout after the intervention. These strategies comprised:

- elements in the organisation, (i.e., social support, team discussions and the availability of a staff psychologist for consultation on demand),
- communication, (i.e., daily meetings of the caregiving team with the patient and/or their fami-ly and discussion of palliative care options),
- ethics, (i.e., a special section in every patient´s medical record or ethical rounds),
- and stress debriefings and conflict prevention.

Reductions of almost 50% to 60% were reported in the relative risk of burnout and depression, re-spectively, after some of these interventions.



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(Ali et al. 2011; Bellieni et al. 2012; Eagle, Creel and Alexandrov. 2012; Garland, Roberts and Graff. 2012; Goetz et al. 2012; Loiselle et al. 2012; Liu et al. 2015; Meadors and Lamson. 2008; Merlani et al. 2011; Quenot et al. 2012; Sluiter et al. 2005; Rochefort and Clarke. 2010)

3. 3. 2. Person-directed interventions

Person-directed interventions include strategies regarding personality and coping, relaxation exercis-es such as yoga and mindfulness, focussing more on social support and a mix of all these ele-ments.

(Lederer et al. 2008) mentioned a positive influence on the prevalence of a fully developed burnout due to the support of a facilitator. An external psychologist provided support whenever needed in two of the five ICUs included in this study. More specifically, individuals with a high risk of burnout were less likely to consult the psychologist. In contrast, peer support had no significant effect on burnout. Derived from the JD-R model, in healthcare professional social support might be a key determinant in increasing wellbeing at work. Another promising preventive strategy is mindfulness training. West et al. measured a positive effect