Mental health and intervention studies in Norwegian medical students and doctors: a review and update of NORDOC

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Outline

THE ROLES OF:

- STRESS AND DISTRESS
- PERSONALITY
- INTERVENTIONS

INTER-PLAY
STRESS AND DISTRESS
The Longitudinal Study of Norwegian Medical Students and Doctors (NORDOC) - *Steps of career at follow-up*

UGY = Undergraduate year
PGY = Postgraduate year

UGY-1 UGY-3 UGY-6 PGY-1 PGY-4 PGY-9/10 PGY-15 PGY-20

(1993) T1 T2 T3 T4 T5 T6 (2014)

Medical Student Cohort (N=421)

(1993/94) T1 T2 T3 T4 T5 T6 (2014)

Young Doctor Cohort (N=631)
New NORDOC project: Alcohol, depression, and gene-environment interaction in the 20-year follow-up
Course of Life Satisfaction in Medical Student Cohort

(Kjeldstadli et al 2006)
Course of Life Satisfaction in Norwegian Young Doctor Cohort

* Sign. increase UGY-6 to PGY-1: Repeated measures: time X conscientiousness (beta = -0.09, p = 0.009) 

(Tyssen et al 2009)
Mental health treatment needs

- Life-time prevalence at entrance: 15%
- Prevalence during first three years: 31%
  \[ \text{OR} = 2.5 \ (p<0.001) \]
- *Perceived medical school stress* predicts mental health treatment needs
  - In medical school (Midtgaard et al 2008)
  - Four years after graduation (Tyssen et al 2001)
PERSONALITY
Giant three / Big five personality traits

- Neuroticism
- Extraversion
- Conscientiousness
- Openness
- Agreeableness

The "Giant three" (Eysenck)

The Big five (Costa, McCrae)
Personality trait dimensions as predictors of Perceived medical school stress (PMSS)

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<th>Unadjusted analyses</th>
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<td>Extraversion</td>
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<td>Conscientiousness</td>
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(Tyssen et al. 2007)
INTERVENTIONS
Intervention methods and samples

1. Counselling intervention among doctors seeking help for burnout (Villa Sana) N=227 (Isaksson Rø et al. 2008)

2. Controlled group intervention in medical students (Bergen) N=129 (Holm et al 2010)

3. RCT of mindfulness training in medical and psychology students (Oslo and Tromsø) N=288 (144 interv + 144 controls) (de Vibe et al 2013)
Three basic concepts: related but also different

- Burnout
- Depression
- Job stress
Baseline and one-year follow-up of Villa Sana doctors in comparison with Norwegian doctors (NORDOC)

(Low-threshold counselling intervention)

(Isaksson Rø et al. BMJ 2008)
Self-development groups reduce medical school stress: a controlled intervention study

(Holm et al 2010)
RCT of mindfulness-based stress reduction in medical and psychology students (GHQ-12)

Figure 2 a)

- Intervention Women
- Control Women
- Control Men
- Intervention Men

\[ g = 0.72 \text{ (95\% CI .45, .99), } p < .001 \]
\[ g = 0.33 \text{ (95\% CI -.16, .82), } p = .136 \]

(De Vibe et al BMC Med Educ 2013)
Effect Moderation by Neuroticism

(de Vibe et al. Mindfulness 2013)
Effect Moderation by Conscientiousness (Obsessiveness)

(de Vibe et al. Mindfulness 2013)
Psychological mechanisms: Altered ways of coping?

- Compared to the control group, the intervention group increased levels of problem-focused coping.

- Those with higher levels of neuroticism:
  - Reduced avoidance coping
  - Increased social-support coping

(Halland et al College Student Journal 2015: In press)
Conclusions

- Stress/distress is most prominent early in the career (medical school)
- Neuroticism and conscientiousness traits are important predictors of stress/distress
- Interventions should always be tailored for the expected outcome
- Both individual and group interventions may be effective
- Effects are moderated by personality traits, and they improve ways of coping: important psychological mechanisms?
Thank you for your attention!