

Jagdish (2001) and 'Roqan emotional intelligence test' developed by prof. Roquiya zainuaddin and Anjum Ahmed). The sample of the present study comprised of 120 teachers of Government Schools (60 female and 60 male) and 120 teachers of private schools (60 female and 60 male) selected from four district of Haryana State (INDIA) by using stratified random sampling technique. The study was limited to three independent (age, sex, and type of schools) and two dependent variables (Mental health and emotional intelligence).

Result and discussion The findings of the research reveals that there is significant difference between teachers in their mental health with regards to their age, gender and type of schools. Emotional intelligence is an important factor that is positively co-related to the mental of teachers.

Conclusion We must restructure the school environment, which not only help in development of intellects of individuals but also improve the capability of teachers, especially in case of female teachers.

1496 EPIGENETIC PERSPECTIVE OF BURNOUT

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Introduction Despite burnout received an increasing attention in occupational health, there are no binding diagnostic criteria to identify burnout 'cases'. The main aggravating factor is the overlap between burnout and depression. The lack of diagnostic consensus resulted in several attempts to identify biomarkers of burnout, but the results were inconsistent. However, epigenetic biomarkers of burnout have not been investigated so far even though DNA methylation is implicated as a mediator between environmental stress and psychopathology. Therefore, our aim is to investigate epigenetic (DNA methylation) correlates of burnout, compare them to those present in depression and explore their biomarker potential.

Methods We conducted a systematic literature review to gain an insight into DNA methylation mechanisms related to chronic stress, burnout and depression. The biomarker potential of genes derived from the literature review will be tested in a cross-sectional and a cohort study.

Results We identified four genes as potential burnout biomarkers: glucocorticoid receptor gene (NR3C1), brain derived neurotrophic factor gene (BDNF), serotonin transporter gene (SLC6A4) and tyrosine hydroxylase (TH) gene. Methylation of NR3C1 displayed differed patterns in chronic stress and depression. SLC6A4 was hypermethylated in chronic stress, depression and burnout. Methylation levels of BDNF displayed different patterns associated with work-related stress compared to those correlated with depressive symptoms in the same human sample. Work-related stress affected methylation of TH gene in a single study.

Conclusion Additional research exploring DNA methylation patterns in burnout and comparing them to those in depression could offer a better understanding of epigenetic dimensions beyond these constructs and their overlap. Moreover, carefully designed longitudinal studies are necessary for revealing the cause-effect relationship of epigenetic changes and their clinical correlates.

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REDUCED LIFE SATISFACTION IN NORWEGIAN MEDICAL DOCTORS COMPARED TO OTHERS: A 15-YEAR LONGITUDINAL STUDY ON INCREASED IMPORTANCE OF WORK-RELATED FACTORS

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Introduction There have been alarming reports about burnout and dissatisfaction in US doctors, but what about doctors in Scandinavian public health? We lack representative and longitudinal studies on adjusted work-related predictors of well-being in medical doctors. This study aims to compare Norwegian doctors' life satisfaction with a socio-economical matched population sample, and to analyse long-term work-related predictors of life satisfaction.

Methods Two nationwide cohorts of doctors (n=1052) were surveyed in their final year of medical school (1993/94 and 1999) (T1), and 4 (T2), 10 (T3), and 15 (T4) years later. The population sample was from the Nord-Trøndelag Health Survey. A one-item life satisfaction measure was used for the comparison. Work-related predictors of life satisfaction (3-items) from T2 to T4 were analysed and controlled for confounders by mixed models repeated measures.

Results Ninety per cent (947/1052) responded at least once, whereas 42% (450/1052) responded at all 4 periods. The population sample was n=595. Life satisfaction level was lower in doctors at T4 than in the comparison group (5.3 vs 5.7, p<0.001), and more doctors were dissatisfied with their life (5.6 vs 2.2%, p=0.006). Adjusted work-related predictors of higher life satisfaction were: work-home stress ($\beta=-0.20$, 95% CI=-0.25- -0.16, p<0.001), perceived job demands ($\beta=-0.10$, 95% CI=-0.15- -0.05, p<0.001), and colleague support ($\beta=0.05$, 95% CI: 0.04 to 0.07, p<0.001). Work-related predictors were more important in the youngest cohort (1999).

Discussion Dissatisfaction with life was almost three times more common among doctors, and work pressures seem to have increased over the last decade. The identified work-related factors seem to be especially important for doctors, and may partly explain the difference between doctors and others. We have controlled for relevant individual factors, such as personality, social support and negative life events, and also life style factors (such as problematic drinking and physical training).

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PSYCHOLOGICAL DISTRESS, EFFORT-REWARD IMBALANCE AND WORK-FAMILY INTERACTIONS IN ECUADORIAN PETROLEUM WORKERS

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Introduction Work in oil industry often has workers living transiently in camps for 1-2 weeks periods. This is a

challenge for workers' personal-family life. The objective was to evaluate relationship of psychosocial factors and work-family interactions with psychological distress in Ecuadorian petroleum workers living transiently in camps, comparing to those who stay in cities.

Methods 350 workers invited to answer a self-administered questionnaire (response 88%; October 2015 to January 2016). Psychological distress assessed through General Health Questionnaire – 12 items (GHQ-12; dichotomized GHQ-score, $\text{GHQ}_{\text{case}} = \text{cut off } 4/5$). Psychosocial factors: Effort-Reward Imbalance (ERI) Questionnaire, short version (ERI and Overcommitment (OC) sub-scales, cut-off upper tertile). Work and family-personal life interaction evaluated with Work-Home Interaction – Nijmegen questionnaire (SWING; 4 dimensions, scores rescaled to 0–3, cut-off upper tertile). Other variables were socio-demographics and commuting time from house or camp to workplace.

Result Higher prevalences of $\text{GHQ}_{\text{cases}}$ were found in workers who perceived higher ERI (38.1% vs 18.2%, $p < 0.001$) and OC levels (33.6% vs 20.0%, $p < 0.05$), compared to lower tertiles). $\text{GHQ}_{\text{cases}}$ were also more prevalent in urban workers (31.5%, $p = 0.001$) and when commuting time was > 15 min (31.5%, $p < 0.05$). Negative interactions from work to family and viceversa were associated with higher prevalences of $\text{GHQ}_{\text{cases}}$ ($p < 0.05$), while positive interactions were associated with lower ones ($p < 0.001$). Adjusted Odds Ratios (95% CI) for GHQ_{case} showed significant associations with ERI [2.34; (1.13–4.84)] and residing in cities while working [3.36; (1.38–8.16)]. Positive influences from domestic-personal life to work were associated with lower risk of psychological distress [0.25 (0.10–0.61)].

Discussion Perception of imbalance between effort and reward is associated with lower mental health. If skills and learnings acquired in domestic life are allowed to be displayed in work, workers seem to experience better mental health. Workers living transiently in camps exhibited better mental health in this group.

1517 PREVALENCE OF DEPRESSIVE SYMPTOMS ASSOCIATED TO NON-CONVENTIONAL WORK SCHEDULES AMONG ECUADORIAN INDUSTRIAL AND ARTISANAL FISHERMEN

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Introduction Workers' depression is an increasing concern for occupational health. Latin American researches have evaluated workplace psychosocial. Less is known about associations with working-hours schedules. This research was aimed to determine the prevalence of depressive symptoms associated with unconventional job schedules in industrial and artisanal fishermen in Ecuador.

Materials and methods 111 industrial (response 100%) and 122 artisanal fishermen (response 80%) were invited to answer a questionnaire, applied by a trained interviewer, in Manabí, Ecuador. Depressive symptoms in previous two weeks were evaluated with a validated version of Patients Health Questionnaire-9 items (PHQ9) each item scoring 0–3, total

scale score from 0 to 27; cut-off=5. Job schedules were evaluated through a tailored set of questions including shifts, night work, hours per week, time of stay in the sea and rest period while in the sea. Other variables considered were socio-demographics (marital status, number of children, educational level). Adjusted logistic regression models were calculated to estimate Odds Ratios.

Results Both groups were similar in educational level and number of children. Industrial fishermen were older and lived more in couples, compared to artisanal ones. Industrial also had less employment security, they worked longer shifts and they had less rest periods in the sea. Artisanal had less formal job contracts. Depression was more prevalent in industrial fishermen (36.0% vs 19.7%, $p < 0.001$). Longer time of stay in the sea showed a non-significant association with depression in both groups (OR 1.56 [0.61–4.04] for stays from 1 to 60 days, and 1.58 [0.52–4.72] for stays longer than 60 days). Adjusted model showed a significant association of depression with lack of rest periods in the sea (OR 11.5 [2.3–57.4]).

Discussion Depressive symptoms may increase in workers who have unconventional work schedules and without rest periods during the shift. Fishermen are exposed to such working conditions, mainly in the industrial sub-sector.

1560 INTRODUCTION OF A FATIGUE RISK MANAGEMENT SYSTEM IN A PAEDIATRIC HOSPITAL IN IRELAND

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Introduction Fatigue is a common by-product of the 24 hour delivery of patient care. Defined as a decreased capacity to perform mental or physical work or the subjective state in which one can no longer perform a task, fatigue manifests in physiological performance decreases and cognitive impairment.¹ Fatigue thus poses elevated risk to the staff and patients of TSCUH and hospitals in Ireland and across the globe.

Methods The authors set out to introduce a Fatigue Risk Management System² (FRMS) in a paediatric Hospital which would integrate management practices, beliefs and procedures to manage the risks associated with fatigue at the hospital. A review of the literature was conducted and a number of tools were utilised in undertaking the project including stakeholder analysis, risk assessment and a communication plan. The project was managed with reference to The HSE Change model. A local working group was formed to proactively manage this risk of fatigue with defined governance structures. The FRMS provides tailored defences against fatigue-related risks through the use of objective thresholds specifically for local environments. A policy was developed to support fatigue risk management system. Once the FRMS had been introduced locally a plan was devised to disseminate best practice at a national level.

Results A local working group has been established to address fatigue mitigation. Fatigue is now on the quality and risk agenda. Control strategies have been identified including: