# Resilience in Critical Care Nurses: An Exploratory Analysis of Data from the 'WellNesS' Feasibility Study

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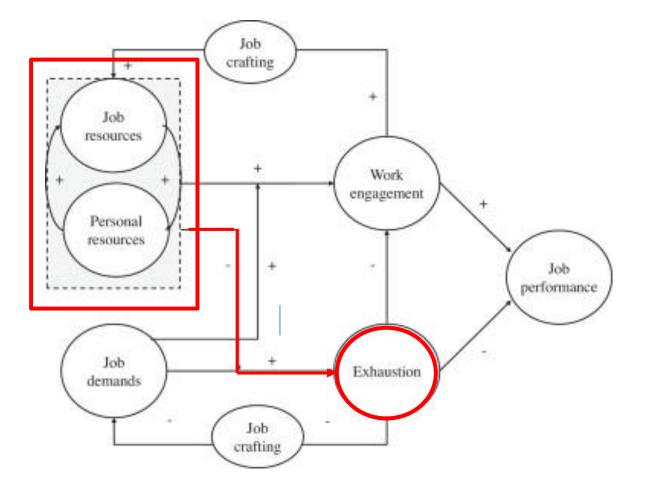
### Resilience, Burnout Syndrome & Critical Care Nurses (CCNs)



## The 'WellNesS' Study



#### The Job Demands Resource Model

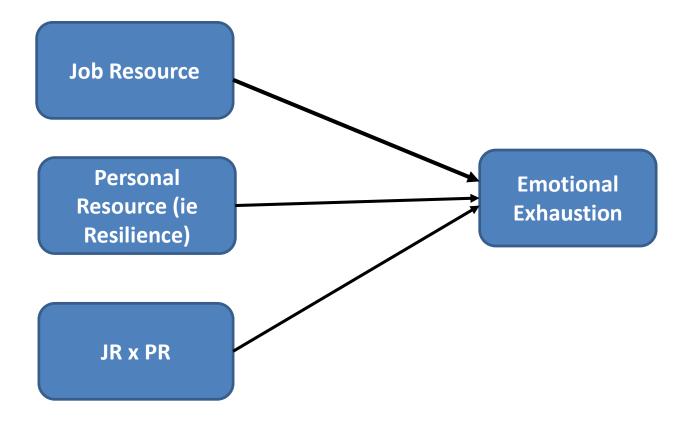


(Bakker & Demerouti, 2014)

#### Aim of this Presentation

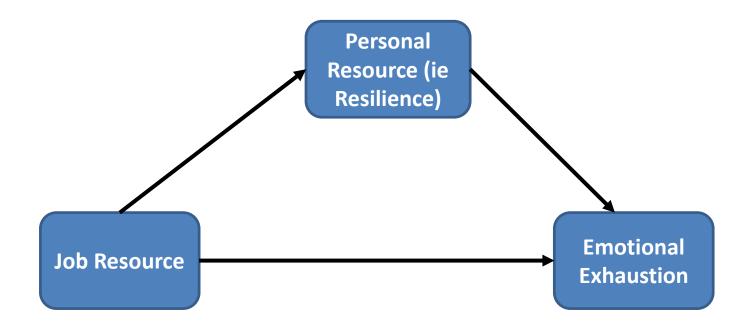
To observe the relationship between job resources & emotional exhaustion (EE) in CCNs, whilst examining the influence of resilience on this relationship.

#### Resilience as a Moderator



(Hayes, 2018; Field, 2017; Tabachnick & Fidell, 2014)

#### **Resilience as a Mediator**



(Field, 2017; Baron & Kenny, 1986)

## Method – Feasibility Study

- Cross-sectional Questionnaire Single-Centre in UK, two intensive care units (n=227)
- Sponsorship NHS Tayside, Ethical Approval University Dundee.
- Measures included:

Job Resources included 11 subscales (4-point response scale, including autonomy' (4-items), 'feedback from supervisor' (4-items), 'task clarity' (4-items) assessed using the Questionnaire on the Experience & Evaluation of Work 2.0 (Van Veldhoven et al 2015).

**Resilience** assessed using the Connor Davidson-Resilience Scale(CD-RISC) (25items, or 10-items; 5-point response scale) (Connor & Davidson, 2003).

**Emotional Exhaustion (EE)** captured using the Maslach Burnout Inventory-Human Services Scale (MBI-HSS) (**22-items; 7-point response scale)** (Maslach & Jackson, 1981).

Characteristics of Feasibility Study Population (n=54; RR 24%)	Result	Range
Age (years)	M=37 (SD 11.1)	21-62
Female	n=48 (88%)	
English/Welsh/Scottish/Northern Irish Other	n=41 (76%) n=13 (24%)	
Married Steady Relationship Single/Divorced/Separated/Widowed	n=20 (37%) n=19 (35%) n=15 (28%)	
Fulltime	n=43 (80%)	
No. Years Nursing Experience	M=12.5 (SD 10.05)	(.67 - 40)
No. Years CCN Experience	M=8.6 (SD 7.8)	(.67 - 30)
No. Days Absent (n=36) No. Occasions Absence (n=37) (Last 12months)	M=13.2 (SD 30.9) M=2.08 (SD 2.22)	(1-150) (1-13)
Highest Level of Qualification BSc Highest Level of Qualification MSc	n=38 (70%) n=2 (4%)	
Specialist Intensive Care Qualification (ENB100)	n=22 (50%)	
Nursing Band 5 Nursing Band 6 Nursing Band 7	n=34 (63%) n=14 (26%) n=6 (11%)	

## Reliability – Job Resource Measures

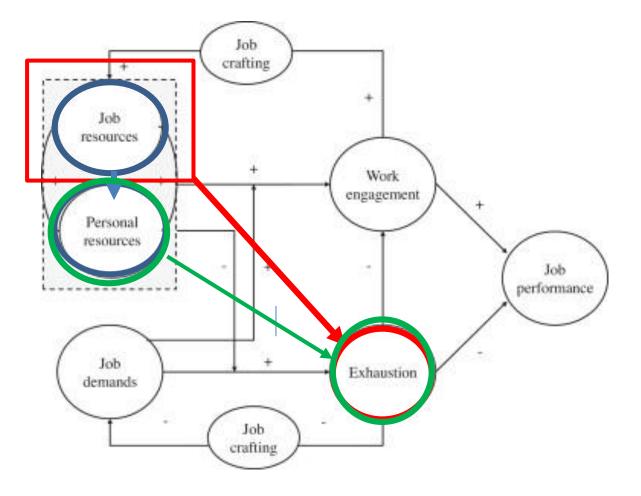
Job Resources (QEEW 2.0)	Cronbach's Alpha	N of Items	Cronbach's Alpha from Van Veldhoven et al (2015)
Communication	.901	3	.86
Participation	.845	4	.81
Relationship with Supervisor	.839	6	.87
Learning Opportunities	.808	3	.90
Inspiration by Supervisor	.808	4	.86
Feedback	.807	4	.86
Task Clarity	.772	4	.83
Variety in Work	.745	4	.83
Relationships with Colleagues	.693	6	.81
Job Autonomy	.630	4	.86
Contact Possibilities	.591	3	.85

## Reliability – Resilience Measure

**Personal Resource Measure** 

	Cronbach's Alpha	N of Items	Positive or Negative Items	Response Scale
CD-RISC-25 (25-items)	.905	25	n/a	5-point
CD-RISC-10 (10-items)	.848	10	n/a	5-point
CD-RISC-2 (2-items)	.274	2	n/a	5-point

### Reminder of the Pathways Tested



(Bakker & Demerouti, 2014)

# Results: Job Resources & Emotional Exhaustion

- Job resources, including 'Feedback' (r=.326<sup>\*</sup> p=.016, n=54); 'Task Clarity' (r=.304<sup>\*</sup> p=.025, n=54); & 'Relationship with Colleagues' (r=.431<sup>\*</sup> p=.001, n=54); all correlated significantly with EE.
- CCNs who perceived higher levels of these job resources reported lower levels of EE, but equally CCNs who perceived lower levels of EE reported having more feedback, clarity with tasks and favourable relationships with colleagues.

#### Results: Job Resources & Resilience

	Variety Work	Autonomy	Task Clarity	Feedback	Relationship with Supervisor	Inspiration by Supervisor	Communication	Participation	Relationships with Colleagues	Contact Possibilities	Opportunities to Learn
CD-RISC 25) CD-RISC 25) ion		291*	419**	461**	331*	343*	389**	500**	222	033	345*
CD- Res	53	53	54	54	54	54	54	54	54	54	54

P<.001\*\*; p<.05\*

# Results: Resilience & Emotional Exhaustion

• Resilience was related to EE, but not significantly (r=-.249; p=.070, n=54).

## Conclusion

- Exploration of the data indicates that job resources are related to EE, in the expected direction ie  $\uparrow$ JRs are associated with  $\downarrow$ EE, or vice versa.
- Based on these findings, 'Resilience' may exert some influence on the relationship between JRs & EE, however the small sample size prevented mediation & moderation from being tested.
- These results indicate that the influence of 'Resilience' on the relationship between JRs and EE is worthy of further exploration in a larger sample of CCNs in the main 'WellNesS' Study.

### **Reference List**

BAKKER, A. & DEMEROUTI, E. 2014. Resources, coping & control. In In: P. CHEN AND C. COOPER (eds) <u>Work and Wellbeing: Wellbeing: A Complete Reference Guide, Volume III.</u> London: John Wiley & Sons, pp. 1-28.

BARON, R. and KENNY, A. 1986. The moderator-mediator variable distinction in social psychological research: conceptual, strategic and statistical considerations. <u>Journal of Personality and Social Psychologically</u>, 51(6), pp.1173-82.

CONNOR, K. & DAVIDSON, J. 2003. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). <u>Depression & Anxiety</u>, 18(2), pp. 76-82.

FIELDS, A. 2017. Discovering Statistics Using IBM SPSS Statistics. 5<sup>th</sup> ed. Sage: London.

HAYES, A. 2018. Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression Based Approach. 2<sup>nd</sup> Ed. London: The Guildford Press.

MASLACH, C. & JACKSON, S. 1981. The measurement of experienced burnout. <u>Journal of Organizational</u> <u>Behaviour</u>. 2, pp. 99–113.

MEALER, M., JONES, J., NEWMAN, J., McFANN, K., ROTHBAUM, B. and MOSS, M. 2012. The presence of resilience is associated with a healthier psychological profile in intensive care unit (ICU) nurses: results of a national survey. International Journal of Nursing Studies, 49, pp. 292-299.

TABACHNICK, B. & FIDELL, L. 2014. Using Multivariate Statistics. 6<sup>th</sup> Edition Harlow: Pearsons.

VAN VELDHOVEN, M., PRINS, J., VAN DER LAKEN, P. & DIJKSTRA, L. 2015. <u>QEEW 2.0 42 short scales for</u> <u>survey research on work, wellbeing and performance</u>. SKB: Amsterdam. Available at:

file:///C:/Users/McCallum/Downloads/QEEW2.0\_42\_short\_scales\_for\_survey\_research.pdf