

# Limited evidence for effectiveness of interventions aimed at mental health of student/novice nurses to prevent dropout

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## BACKGROUND

Globally, dropout among student/novice nurses occurs: e.g. 9% in Finland<sup>1</sup>, 18% in the Netherlands<sup>2</sup>; 42% in Australia<sup>3</sup>, and 13% in the USA<sup>4</sup>. High prevalences of psychological distress are reported in student nurses<sup>5,6</sup>. Distress is an early sign of anxiety, depression and burnout. In nurses, burnout is associated with nurses' intention to leave their profession<sup>7</sup>.

## AIM

- 1) Overview of interventions aimed at improving mental health/capacity of student/novice nurses to prevent dropout
- 2) Overview of effectiveness on dropout.

## METHODS

Database search in EMBASE, MEDLINE, PsycINFO, CINAHL, ERIC, the Cochrane Library, Web of Science, and Google Scholar up to 19 February 2019. Inclusion criteria: (i) English; (ii) quantitative/mixed methods; (iii) student/novice nurses ( $\leq 2$  years after graduation); (iv) interventions focus on improving mental health/capacity; (v) evaluating effects on dropout-related outcomes. Cochrane Risk of Bias tool was used. Statistical pooling was not feasible due to the heterogeneity of the studies, and a qualitative data synthesis of comparable studies was performed.

## RESULTS

From the 15,566 records, 21 studies met the inclusion criteria. Only two randomised controlled trials were found. Most studies focused on novice nurses (n=16); Three types of interventions were identified, namely interventions aimed at:

- 1) Managing stress/stressors (n=4);
- 2) Facilitating the transition to nursing practice (n=14);
- 3) Facilitating the transition to nursing practice + stress management (n=3).

Five of 21 studies showed a statistically significant effect on (early indicators) of dropout (see table 1). Of these five interventions:

- 1) Two aimed at managing stress or stressors, targeting student nurses
- 2) Two facilitating the transition to nursing practice, targeting novice nurses
- 3) One had a combined approach, targeting novice nurses.

The overall risk of bias was high.

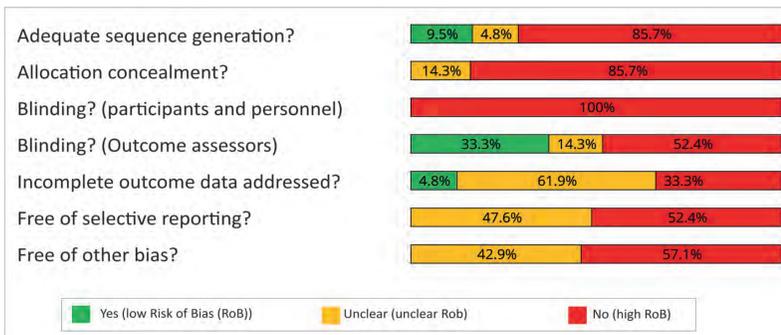


Table 1: Overview of the effectiveness of the Interventions

Study (first author, year)	Dropout	Sickness absence	Intention to leave	Effectiveness as described in studies
<b>Stress management focus, student nurses</b>				
Bailey, 1984		+		+
Delaney, 2016	NS			NS
Jones, 2000		NS		NS
Wernick, 1984	+			+
<b>Transition focus, student nurses</b>				
Jones, 2006		-		-
<b>Transition focus, novice nurses</b>				
Cubit, 2011	?			+
Hu, 2015			+	+
Kowalski, 2010	?			+
Krugman, 2006	?			+
Newhouse, 2007	?		+	+
Olson - Sitki, 2012	?			+
Roxburgh, 2010			?	+
Scott, 2008			?	+
Williams, 2008	?			+
Owings, 2016	?			+
Pelletier, 2019	?			+
Spector et al., 2015	NS			NS
Williams, 2018			NS	NS
<b>Transition focus with stress management component, novice nurses</b>				
Beecroft, 2001	?		+	+
Messmer, 2011	?		?	+
Owens, 2001	?			+

+	Positive significant effect
-	Negative significant effect
NS	No statistically significant effect
?	Unclear effect; statistical significance not measured/no comparison/no numbers reported

## CONCLUSION & RECOMMENDATIONS

A wide range of interventions are available that are aimed at improving mental health or mental capacity to prevent dropout from nursing education/work, but the evidence for the effectiveness of these interventions is limited. There is a need for high-quality studies in this field, preferably with a randomised controlled design.

## REFERENCES

<sup>1</sup> Kukkonen et al., 2016, NEP; <sup>2</sup>Vereniging van Hogescholen, Facts & Figures, 2014; <sup>3</sup>Gaynor et al., 2007, AJAN; <sup>4</sup>Kovner et al., 2014, PPN; <sup>5</sup>Jones & Johnston, 1997, JAN; <sup>6</sup>Deary et al., 2003 JAN; <sup>7</sup>Heinen et al., 2013, IJNS.

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