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## BACKGROUND

Staffing, environment and leadership has previously been associated with nurses' levels of job dissatisfaction and intention to leave an organisation<sup>1,2</sup>. This association has yet to be examined within the Irish context.

The Framework for Safe Nurse Staffing and Skill-mix<sup>3</sup> seeks to address staffing provision on wards through three recommendations: staffing determined by nursing hours per patient day; 80:20 skill-mix (RN:HCA); and a 100% supervisory leadership role.

## OBJECTIVE

Determine the impact of the pilot introduction of the safe nurse staffing Framework on nursing environment and nurse outcomes.

## METHODS

This prospective pilot study was conducted in six medical and/or surgical wards across three acute hospitals.

Cross-sectional data was collected pre (Phase 1) & post (Phase 2) implementation of the Framework.

The Nursing Work Index - Revised (NWI-R)<sup>4</sup> is a validated 41 item tool measuring the nursing work environment on a 4-point scale, with 5 subscales:

- Nurse Participation in Hospital Affairs
- Nursing Foundations for Quality of Care
- Nurse Manager Ability, Leadership and Support
- Staffing and Resource Adequacy
- Collegial Nurse Physician Relations

Job satisfaction and intention to leave were also measured on a 4-point scale.

## RESULTS (2): Nursing Environment and Outcomes

- For all respondents, staffing and resource adequacy was significantly higher in Phase 2 than Phase 1 (U = 2237.50, p < 0.001, figure 1). For those in both phases (n = 55), this remained significant (Z = -3.38, p < 0.01, figure 2).
- Collegial nurse/physician relationships had a significantly higher ratings in Phase 2 than Phase 1 (U = 2906.00, p < 0.05, figure 1). Again, this remained significant for those responding in both phases (Z = -2.01, P < 0.05, figure 2).

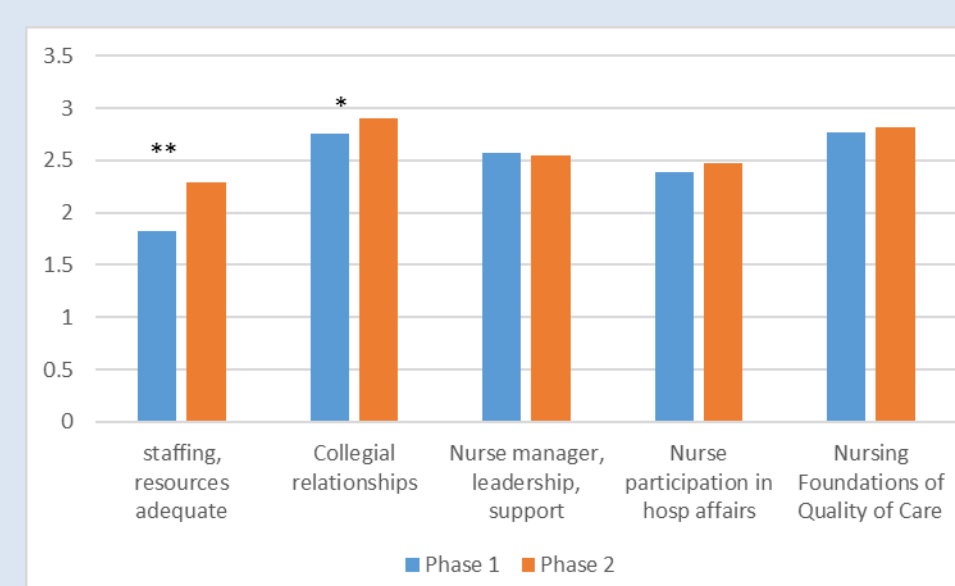


Figure 1: NWI for all respondents in Phases 1 and 2 separately

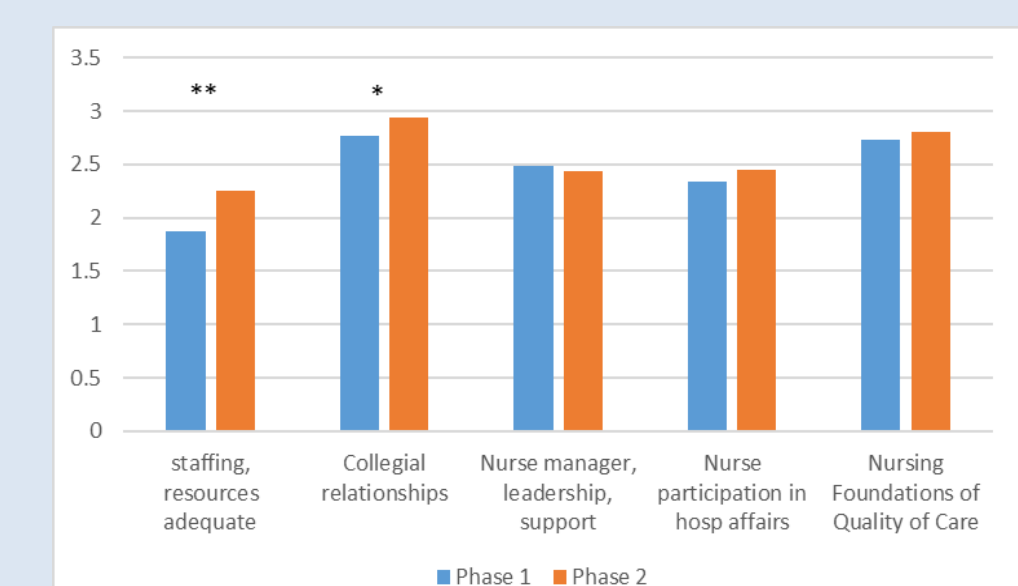


Figure 2: NWI for respondents to both phases

- Job satisfaction significantly increased in Phase 2 (U = 3064.00, p < 0.05, figure 3) however for those in both phases this was not significant (p > 0.05, figure 4). There was no significant difference for intention to stay (p > 0.05, figures 3 & 4).

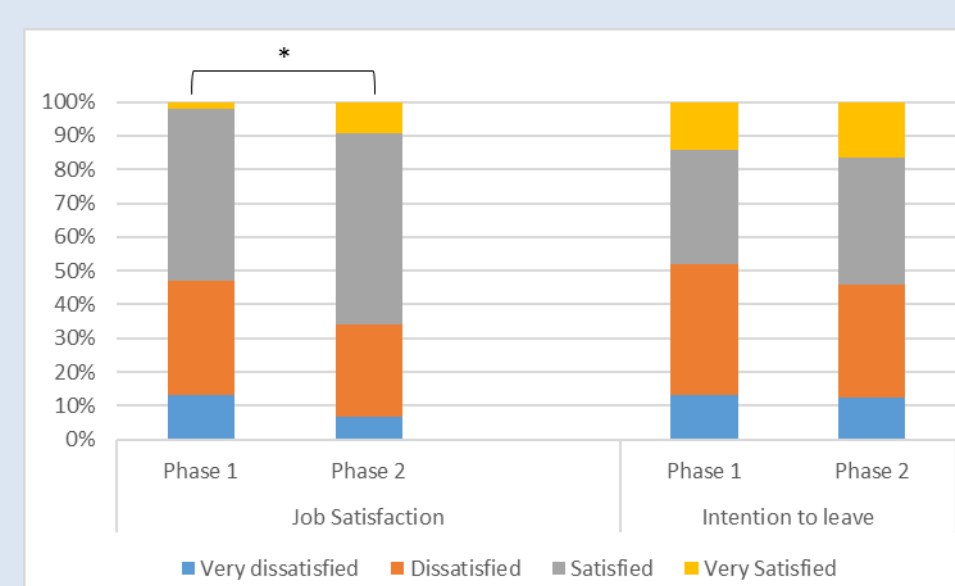


Figure 3: Job satisfaction and intention to leave for all respondents in Phases 1 and 2

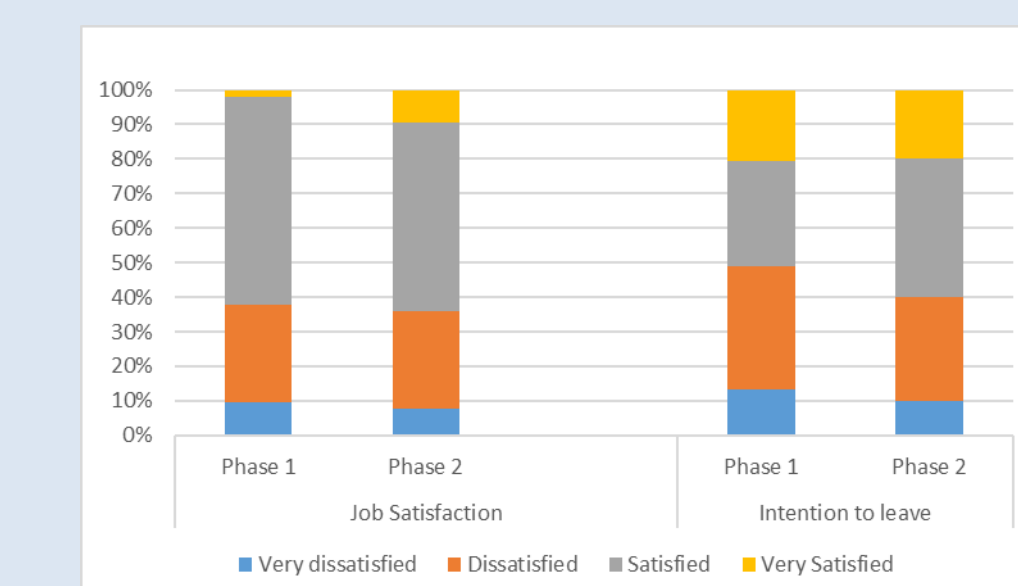


Figure 4: Job satisfaction and intention to leave for respondents to both phases

## RESULTS (3): Correlations between environment and outcomes

- There was a significant correlation between staffing and resource adequacy and job satisfaction (r = .541, n = 169, p < 0.001, see figure 5) and separately between adequate staffing resources and intention to stay/leave respectively (r = .235, n = 165, p < 0.001, see figure 6).

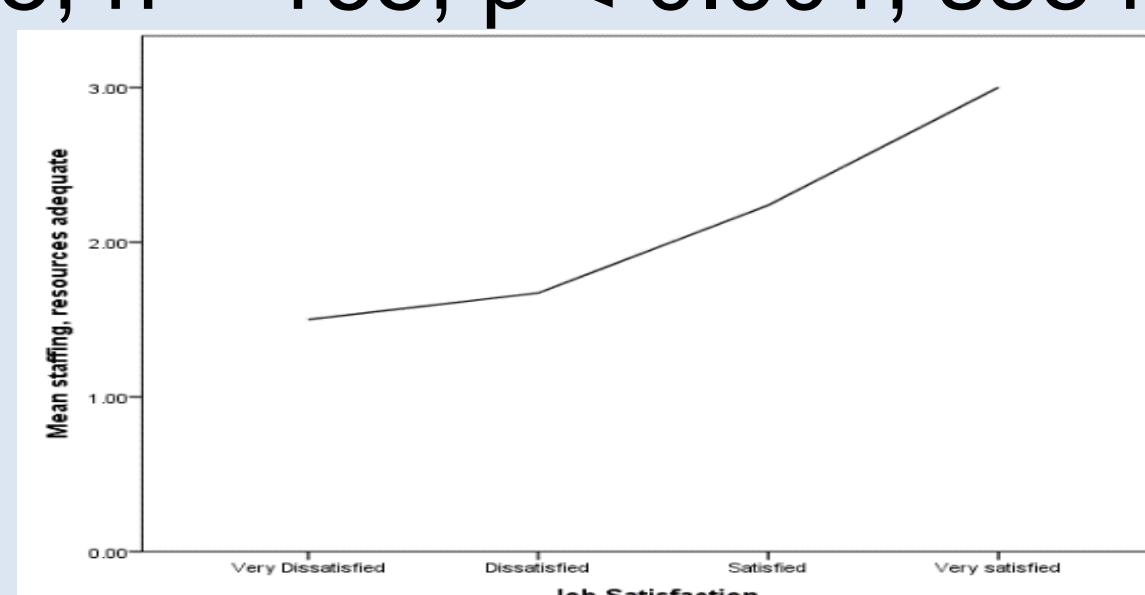


Figure 5: Association between Staffing and Resource adequacy and job satisfaction

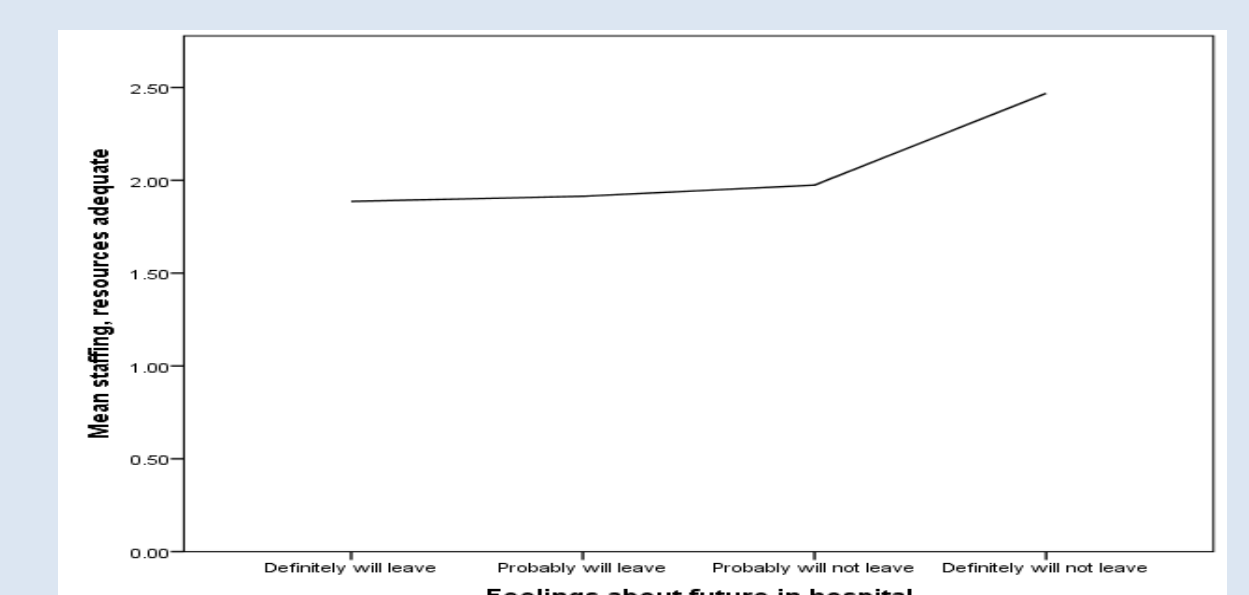


Figure 6: Association between Staffing and Resource adequacy and intention to leave/stay

## RESULTS (1): Demographics

	Phase 1 (n = 101)	Phase 2 (n = 79)	Both (n = 55)
Gender			
Male	7 (6.9%)	69 (88.5%)	5 (9.1%)
Female	94 (93.1%)	9 (11.5%)	50 (90.9%)
Grade			
CNM	13 (12.9%)	11 (13.9%)	10 (18.2%)
RN	77 (76.2%)	53 (67.1%)	36 (65.5%)
HCA	11 (10.9%)	15 (19%)	9 (16.4%)
Qualifications			
Cert	4 (4.4%)	2 (3.1%)	2 (4.3%)
Diploma	15 (16.7%)	6 (9.4%)	5 (10.9%)
Degree	57 (63.3%)	42 (65.6%)	31 (67.4%)
PG cert	4 (4.4%)	4 (6.3%)	4 (8.7%)
PG diploma	9 (10%)	5 (7.8%)	4 (8.7%)
Masters	1 (1.1%)	5 (7.8%)	-
Mean years as Nurse/HCA (SD)	13.77 (9.3)	14.79 (10.3)	15.91 (9.8)

## DISCUSSION

The trends indicate a promising upward trajectory for both the environment, job satisfaction and intention to leave. This suggests that the intervention during the pilot study may have led to positive nurse outcomes. The positive association between staffing and resource adequacy, and increased job satisfaction warrants further investigation.

There were some confounding factors which may have affected the results. These include a low response rate during both phases, and in particular, a small number of staff members responded during both phases. In addition there was a relatively short period of time for the changes implemented to take effect and thus the wards may still be undergoing transition which may lead to a distortion of the results.

These findings align with previous research thus strengthening the evidence for the link between environment and nurse outcomes. These results, along with other positive findings of the research, have led to the recommendation that the Framework is implemented nationally in medical/surgical settings and the development of similar Frameworks for other clinical settings.

## References

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3. Department of Health Interim Report and Recommendations by the Taskforce on Staffing and Skill Mix for Nursing on a Framework for Safe Nurse Staffing and Skill Mix in General and Specialist Medical and Surgical Care Settings in Adult Hospitals in Ireland. 2016; Department of Health, Dublin.
4. Lake ET. Development of the Practice Environment Scale of the Nursing Work Index. *Research in Nursing & Health*. 2002; 25:176-88.