Relationship Based Care Factors Associated with Improved Client Outcomes

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She gives us Big Love and good treatment. She save my life by give me good advise. I hope everyone have a chance like me to get help by her.”

Background
Relationship based care is a hallmark of public health nurse (PHN) home visiting programs. This evidence-based intervention is known to improve lifecourse trajectories for high risk mothers, but modeling the factors that contribute to this success is challenging. It is likely that differential outcomes could be predicted by the quality of the nurse-client relationship. A first step toward using large data sets is to identify factors in the data that are associated with improved outcomes.

Purpose
To investigate variability in health literacy outcomes due to Nurse, Client, and Intervention.

Our hypothesis: Nurse × Client × Intervention = Outcome

Method
We used a logistical mixed-effects model, in which the variance is composed of the effect due to client variability, nurse variability, and intervention effects. We asked, what proportion is due to each of its constituents? Our independent factors were Nurse (fake staff ID), Intervention (Problem-Category-Target), and Client (fake client ID, age, race, marital status, race/ethnicity). Our dependent factor was health literacy benchmark attainment (Reaching a 4 or 5 on a scale of 1-5 for problem-specific health literacy ratings). There were 484 mothers served by 15 PHNs from a local public health department over a period of six years.

Results

Original Model

Adjusted Model

When TGC interventions were excluded, variation due to intervention was greatest.

Adjusted Model for Top Performing Nurses

When the highest performing nurses were analyzed separately, variation due to nurse was minimal.

Conclusions
Our revised hypothesis is that Nurse × Client × Intervention × Problem = Outcome.

Problem is common platform when all features come together: a bridge Part of a client’s situation Determines interventions Has a role to play in whether the benchmark is reached or not

This work establishes a platform for modeling nurse-client interaction effects and improve understanding of the effects of the nurse-client relationship on client outcomes.

Implications

Relationship based care outcomes are associated with complex combinations of factors, including nurse, client, client problems, and nursing interventions.

Acknowledgements

This research is partially supported by the National Science Foundation under grant # SES-0851705, and by the Omaha System Partnership.

The authors thank the public health nurses and families who shared their stories within the data.