

Effects of Implementing a “No Distraction Zone” on Anesthesia Providers

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PROBLEM STATEMENT

- Distractions in the operating room can negatively impact patient safety and surgical suite environments during the critical periods of anesthesia care (patient induction and emergence) by increasing task stress on providers.
- Distractions: Loud music, conversations, equipment handling.

PROJECT PURPOSE

- Determine if the implementation of a "No Distraction Zone", during critical periods of anesthetic induction and emergence, impacted the perceived task load of anesthesia providers.
- **Clinical question:** For anesthesia providers at a tertiary community hospital, providing general anesthesia, does the implementation of a no interruption zone during induction and emergence effect their perceived task load, as measured by the NASA TLX over three months?

MODEL/NURSING THEORIES

- EBP
 - ACE Star Model of Knowledge Transformation
- Philosophy and Theory of Transpersonal Caring
 - Centrality of human caring and the caring-to-caring transpersonal relationship.

METHODS

Sample

- Clinically active anesthesia providers, in a large regional health center, who agreed to participate in the project and provided baseline/interval measurements as required by the methodology.

Instruments/Tools

- NASA –TLX (1981): Provides the most robust measurement of perceptions of task load.
- **Specific Measurement:** Perceived provider task load during general anesthetic induction and emergence
- **Indirect measurement:** Effectiveness of decreasing distractions

Intervention and Data Collection

- Initial in-service for frontline operating room staff
- Education regarding distractions and interruptions
- Baseline measurement of perceived provider task load utilizing NASA-TLX Index
- No Distraction Zone implemented for three months
- 4 Interval measurements of perceived provider task load

RESULTS

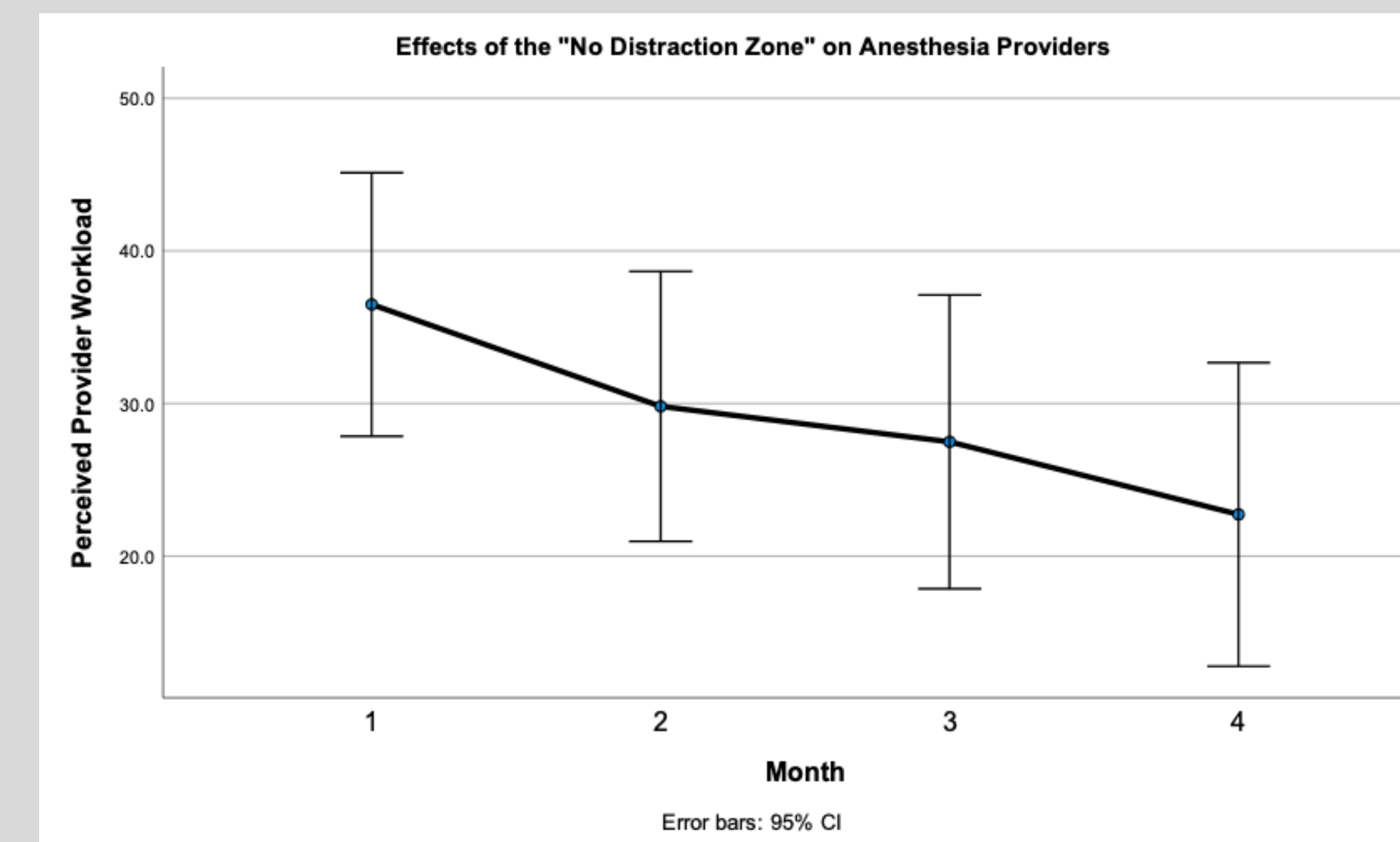
Descriptive Statistics

	Mean	Std. Deviation	N
Workload Baseline	36.496	22.27	28
Workload Month 1	29.818	22.82	28
Workload Month 2	27.493	24.82	28
Workload Month 3	22.736	25.66	28

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^a	
Month	Greenhouse-Geisser	2752.524	1.832	1502.411	7.159	0.002	0.210	13.116	0.901
Error	Greenhouse-Geisser	10380.741	49.466	209.856					

a. Computed using alpha = 0.05



Pairwise Comparisons

(I) Month	(J) Month	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	6.679	3.040	0.221	-1.977	15.334
	3	9.004	3.795	0.150	-1.801	19.808
	4	13.761*	4.061	0.013	2.200	25.321
2	1	-6.679	3.040	0.221	-15.334	1.977
	3	2.325	2.387	1.000	-4.471	9.121
	4	7.082*	2.321	0.030	0.474	13.691
3	1	-9.004	3.795	0.150	-19.808	1.801
	2	-2.325	2.387	1.000	-9.121	4.471
	4	4.757	1.924	0.120	-0.719	10.233
4	1	-13.761*	4.061	0.013	-25.321	-2.200
	2	-7.082*	2.321	0.030	-13.691	-0.474
	3	-4.757	1.924	0.120	-10.233	0.719

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Bonferroni.

DISCUSSION

- The implementation of the “No Distraction Zone” elicited a statistically significant decrease in perceived provider workload over time as measured by the NASA-TLX (p=0.002).
- Staff members perceived the “No Distraction Zone” as a welcome approach to increase patient safety and decrease their perceived task load during critical procedures.

IMPLICATIONS FOR ADVANCED PRACTICE NURSING

- Increase anesthesia and OR staff awareness regarding about pervasiveness of distractions in surgical suites
- Improving patient safety and decreasing stress on anesthesia providers and OR staff by controlling noise levels/distractions

SUSTAINABILITY

- Reinforcement of critical concepts by incorporating project materials during semi-annual education
- Performing random appraisals of perceived provider task load to evaluate continued adherence.

REFERENCES

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The implementation of a “no distraction zone” reduced perceived anesthesia provider workload, which has been demonstrated to minimize lapses in patient safety, reduce medical errors, and improve quality of care.