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Problem

Charge nurses lack training and expertise in effective communication and conflict management

Introduction/Background

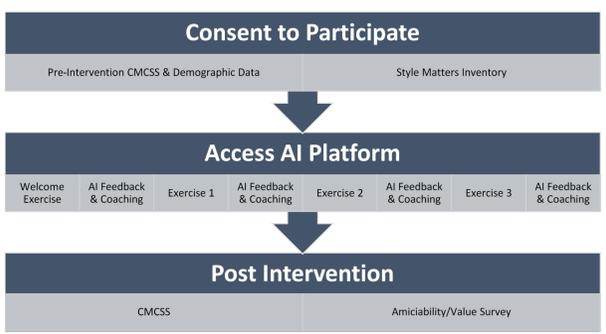
The need for high-performing charge nurses with excellent interpersonal, conflict management, communication, and leadership competencies is vital to achieving optimal patient and organizational outcomes (Basogul, 2020; Truninger, Ruderman, Clerkin, Fernandez, & Cancro, 2020). This innovative project used artificial intelligence feedback in simulated peer conflict to improve charge nurse communication competencies in conflict management situations.

Design

Pre/Post Test utilizing simulation training and the Managing Challenging Situations Confidence Scale.

Methodology

A learner needs assessment revealed a desire for development targeting communication in conflict resolution, specifically peer-to-peer conflict resolution. Two scenarios representing common peer-to-peer conflict within the work team described by charge nurses were presented via the mobile application platform Oraí. Artificial intelligence (AI) analyzed the recordings and provided consistent feedback with measurable scoring related to pace, energy, facial expression, and use of fillers.



Artificial Intelligence (AI) promotes Charge Nurse Competency in Conflict Management



Scan to download a digital copy of the poster along with a detailed manuscript of the project.



Results

Demographic Characteristics		Frequency	
Race/Ethnicity			
Asian	n= 4	25%	
Black	n= 1	6.3%	
Caucasian	n= 10	62.5%	
Hispanic	n= 1	6.3%	
Employment Status			
Part-time	n=1	6.3%	
Full-time	n=15	93.8%	
Gender			
Male	n=2	12%	
Female	n=14	88%	
Age			
25-34	n=3	18.8%	
35-44	n=7	43.8%	
45-54	n=5	31.3%	
65+	n=1	6%	
Education			
BSN	n= 16	100%	
Specialty Certification	n=12	76%	
Years Experience as RN			
<4 yrs	n=3	18.8%	
5-10 yrs	n=4	25%	
>10 yrs	n=9	86.3%	
Years Experience as Charge RN			
<2 yrs	n=6	37.6%	
5-6 yrs	n=2	12.5%	
>11 yrs	n=8	49%	

Participant Feedback			
Metric	Frequency (n=16)	Percent	
Overall Experience			
Not valuable	0	0%	
Somewhat valuable	1	6.3%	
Very valuable	10	62.5%	
Extremely valuable	5	31.3%	
Amiability - Would you recommend use of AI?			
Would not	0	0%	
Probably would	7	43.8%	
Definitely would	9	56.3%	

Reliability Statistics for CMCSS Tool in Project			
		Cronbach's Alpha	N of Items
Pair 1	Post Part 1 - Pre	0.912	9
Pair 2	Post Part 2 - Pre	0.877	12
Pair 3	Post Total- Pre	0.924	21

* Valid Cases N=16 (100%) Zero excluded

Confidence Managing Challenging Situations Scale Analysis								
Change Comparison	Mean	Std. Deviation	Std. Error Mean	95% Conf. Lower	95% Conf. Upper	t	df	Two-sided p
Pair 1								
Post Part 1 - Pre	3.625	4.334	1.083	1.316	5.934	3.346	15	0.004*
Pair 2								
Post Part 2 - Pre	4.125	5.018	1.255	1.451	6.799	3.288	15	0.005*
Pair 3								
Post Total 3 - Pre	7.75	7.733	1.933	3.629	11.871	4.009	15	0.001*

* Indicates statistical significance p=0.005

Change Comparison	Mean	Std. Deviation	Std. Error Mean	95% Conf. Lower	95% Conf. Upper	t	df	Two-sided p
Post AI Score – Welcome AI score	6.450	9.463	2.366	1.407	11.493	2.726	15	0.016*

* Statistical significance p=0.05

The average pre-intervention CMCSS total scores improved by 7.75 points from the pretest (M = 61; SD = 10.37) to the posttest (M = 68.8; SD = 10.78) and was statistically significant, t(15)=4.009, 95% CI [3.63 – 11.87], p = .001, d = 1.002. The AI welcome score was (M = 66.6; SD = 8.4), and the final exercise score was (M = 73.04; SD = 5.97). This difference of 6.45 points revealed a statistically significant improvement in performance, t (15) = 2.73, 95% CI [1.41 – 11.5], p = .016, d = .682.

Conclusions

Using innovative strategies such as AI to promote communication competency in conflict management can be effective meriting further investigation for application in nursing. DNP leaders have an obligation to embrace innovation and technology in not only healthcare, but also professional development to equip nurses for the challenges of our profession.

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