Effects of an Online Educational Initiative on Pediatric Nurses' Knowledge, Attitudes, and Spiritual Care Competence

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Problem

Nurses have not been sufficiently educated about how to provide spiritual care to children with cancer at the end of life and require increased awareness, knowledge, and skills.

Background

Spiritual care of a child at end of life and family includes several attributes:

◇ Assessing the child's spiritual needs;
◇ Assisting the child to express feelings;
◇ Guiding the child to strengthen relationships;
◇ Helping the child to be remembered;
◇ Assisting the child to find meaning;
◇ Aiding the child to find hope.

While spiritual care is implicit in holistic models of nursing care, gaps in knowledge and practice prevent children at the end of life and their families from receiving spiritual care.

Conceptual Framework

Actioning Spirituality and Spiritual Care Education and Training in Nursing Model

• Structure: self-reflection, integration of new knowledge into practice
• Process: self-study and application of the nursing process
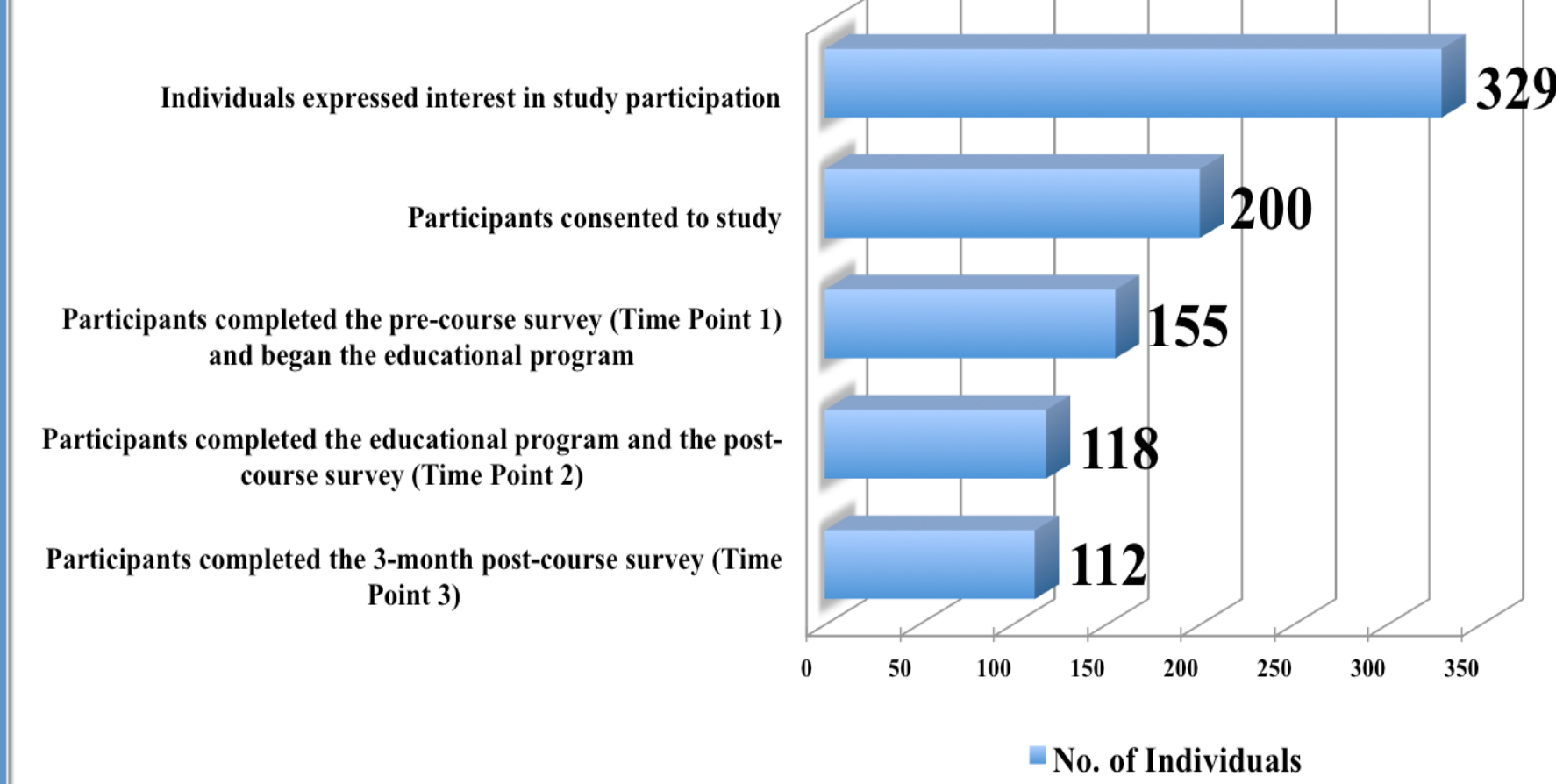• Outcomes: knowledge, competence,

Spiritual Care Educational Program

• A three-hour online, theory-driven educational program: voiceover lectures, interviews, blog written by a dying woman, discussion board, case studies, videos, documentary.

Methodology

• Prospective, longitudinal design
• Pediatric oncology nurses at a Midwestern academic hospital
• Sample size of 112 was based on review of sample calculation tables and a function of power (.80) with a moderate effect size (.25), assumption of a .5 correlation between repetitive measures, and an alpha level of .05.

Recruitment

- Individuals expressed interest in study participation: **329**
- Participants consented to study: **200**
- Participants completed the pre-course survey (Time Point 1) and began the educational program: **155**
- Participants completed the educational program and the post-course survey (Time Point 2): **118**
- Participants completed the 3-month post-course survey (Time Point 3): **112**

■ No. of Individuals

Instruments

Spiritual Care Competence Scale (SCCS)

• 27-item Likert-based self-report scale
• Reliability coefficients .56-.82
• Inter-item correlations indicated a homogeneous scale

Spirituality and Spiritual Care Rating Scale (SSCRS)

• 17-item Likert-based self-report scale
• Reported reliability coefficient for instrument: .64-.71.

Thank you!

Demographics

Demographics N=112

Age	Frequency	Percentage	Race	Frequency	Percentage
21-30 years	28	25.0%	White	107	95.5%
31-50 years	59	52.7%	Asian	1	0.8%
51-60 years	21	18.8%	Hispanic	3	2.7%
> 60 years	4	3.6%	Other	1	0.8%

Years RN	Frequency	Percentage	Previous Training	Frequency	Percentage
1 year	2	1.8%	Yes	86	76.8%
2-5 years	20	17.9%	No	26	23.2%
6-10 years	23	20.5%			
11-20 years	33	29.5%	Education	Frequency	Percentage
> 20 years	34	30.4%	ADN	5	4.5%
			RN / BSN	71	63.4%
Years Onc RN	Frequency	Percentage	Grad.	35	31.3%
1 year	6	5.4%	Prefer not to answer	1	0.9%
2-5 years	23	20.5%			
6-10 years	27	24.1%	Gender	Frequency	Percentage
11-20 years	33	29.5%	Male	2	1.8%
> 20 years	23	20.5%	Female	110	98.2%

Analysis

Specific Aim 1: RM-ANOVA evaluated the effect of the educational program on nurses' perceived spiritual care competence (SCCS) at the 3 time points. Post hoc analysis: Bonferroni correction.

One-way RM-ANOVA SCCS Total Score

N	Time	Mean	(SD)	F	df	Sig.[a]	ES[b]	Wilks' Lambda
99	T_1	98.30	(14.05)	127.78	1.64	p < .0005*	0.57	0.36
99	T_2	113.18	(11.55)					
99	T_3	115.70	(10.55)					

[a] Significance (Sig.): Bonferroni adjustment p<.017

[b] Effect Size (ES): Partial eta squared .01=small; .06=moderate; .14=large

One-way RM-ANOVA SCCS Total Score Pairwise Comparisons

Time	Mean Difference	95% Confidence Interval of the difference		Sig.[a]
$T_2 - T_1$	14.88	11.90 - 17.85		p < .0005*
$T_3 - T_1$	17.39	14.05 - 20.73		p < .0005*
$T_3 - T_2$	2.52	0.36 - 4.67		p = .016*

[a] Significance (Sig.): Bonferroni adjustment p<.017

One-way RM-ANOVA SCCS subscales: comparison of baseline scores (T1), scores after completion of intervention (T2), and scores three months after completion of intervention (T3)

Subscale	N	Time	Mean	(SD)	F	df	Sig.[a]	ES[b]	Wilks' Lambda
Assessment and Implementation of Spiritual Care	110	T_1	27.14	(2.39)	38.86	2.00	p < .0005*	0.13	0.79
		T_2	27.55	(2.17)					
		T_3	28.31	(1.70)					
Professionalization and Improving the Quality of Spiritual Care	110	T_1	20.86	(4.54)	134.18	1.73	p < .0005*	0.64	0.36
		T_2	27.45	(2.69)					
		T_3	24.97	(3.05)					
Personal Counselling and Support of Patient	108	T_1	21.42	(3.86)	122.76	1.57	p < .0005*	0.53	0.40
		T_2	25.53	(3.01)					
		T_3	25.91	(2.61)					
Referral to Professionals	110	T_1	11.57	(1.97)	63.04	1.85	p < .005*	0.37	0.52
		T_2	13.27	(1.48)					
		T_3	13.23	(1.54)					
Attitude Toward Patient's Spirituality	110	T_1	12.36	(3.08)	91.95	1.78	p < .005*	0.46	0.44
		T_2	15.61	(2.49)					
		T_3	15.85	(2.59)					
Communication	109	T_1	5.33	(1.83)	91.58	1.88	p < .005*	0.46	0.43
		T_2	7.32	(1.53)					
		T_3	7.47	(1.49)					

[a] Significance (Sig.): Bonferroni adjustment p<.017

[b] Effect Size (ES): Partial eta squared .01=small; .06=moderate; .14=large

Analysis

Specific Aim 2: Repeated measures ANOVA evaluated the effect of the program on nurses' knowledge and attitudes about spiritual care (SSCRS) at the 3 time points with Bonferroni correction.

One-way RM-ANOVA SSCRS Total Score

N	Time	Mean	(SD)	F	df	Sig.[a]	ES[b]	Wilks' Lambda
102	T_1	69.58	(6.58)	66.19	2.00	p < .005*	0.40	0.46
102	T_2	75.45	(5.89)					
102	T_3	75.27	(6.14)					

[a] Significance (Sig.): Bonferroni adjustment p<.017   [b] Effect Size (ES): Partial eta squared .01=small; .06=moderate; .14=large

One-way RM-ANOVA SSCRS Total Score Pairwise Comparisons

Time	Mean Difference	95% Confidence Interval of the difference		Sig.[a]
$T_2 - T_1$	5.87	4.49 - 7.26		p < .005*
$T_3 - T_1$	5.70	4.15 - 7.24		p < .005*
$T_3 - T_2$	-0.18	-1.48 - 1.13		p = 1.00

[a] Significance (Sig.): Bonferroni adjustment p<.017

One-way RM-ANOVA: SSCRS Comparison of baseline scores (T1), scores after completion of intervention (T2), and scores three months after completion of intervention (T3)

SSCRS Subscale	N	Time		Mean	(SD)	F	df	Sig.[a]	ES[b]	Wilks' Lambda
Spirituality	107	$T_2 - T_1$		22.78	(3.52)	66.83	2.00	p < .0005*	0.39	0.46
		$T_3 - T_2$		26.28	(3.30)					
		$T_3 - T_1$		25.91	(3.30)					
Paired Comparisons SSCRS Factor 1										
Spiritual Care	111	$T_2 - T_1$		17.85	(2.01)	37.7	1.71	p < .0005*	0.26	0.67
		$T_3 - T_2$		19.01	(1.42)					
		$T_3 - T_1$		19.08	(1.40)					
Paired Comparisons SSCRS Factor 2										
Religiosity	110	$T_2 - T_1$		13.05	(1.71)	4.15	2.00	p = .017	0.39	0.93
		$T_3 - T_2$		13.55	(2.25)					
		$T_3 - T_1$		13.54	(1.86)					
Paired Comparisons SSCRS Factor 3										
Personalized Care	110	$T_2 - T_1$		12.29	(1.67)	26.8	2.00	p < .0005*	0.20	0.68
		$T_3 - T_2$		13.55	(1.45)					
		$T_3 - T_1$		13.1	(1.39)					
Paired Comparisons SSCRS Factor 4										

[a] Significance (Sig.): Bonferroni adjustment p<.017   [b] Effect Size (ES): Partial eta squared .01=small; .06=moderate; .14=large

Specific Aim 3: Regression analysis determined if change in nurses' attitudes towards and knowledge of spiritual care predicted change in perceived level of spiritual care competence

• Relationship was statistically significant, r=.32, p=.001
• $Y' = 11.93 + 0.62X$
• 95% Confidence Interval (.25-.99)

Caring for a dying child is one of the most difficult responsibilities a health care professional will ever encounter because of its intensive management of the physical, psychosocial, and spiritual issues facing both the child & the family.