

Is Endorsement of Preference of Death Over Disability Associated With Suicidality in Chronic Pain Patients?

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Introduction

Psychiatric research has demonstrated an association between disability and suicidality (attempts and completions).¹ 69% of stroke victims and 82% of controls rank death as being preferable to severe disability.²

Although disability is a huge problem in chronic pain, there has only been one study which addressed this association. Here 13 chronic pain patients (CPP) with suicide ideation (SI)(Group 1) were compared to 13 CPPs with depression but without SI (Group 2) and 13 CPPs with depression and SI (Group 3). Groups 1 and 3 had significantly greater levels of pain-related disability.³ This study would then indicate that there should be an association between the perception of disability and suicidality in CPPs.

Study Objectives

(1) Compare the frequency of disability perception between four groups (community non-patients without pain [CNPWP], community patients with pain [CPWP], acute pain patients [APPs] and CPPs); (2) Determine if there is a significant correlation between the perception of disability and different forms of suicidality in CPPs and APPs; (3) Compare the frequency of “preference for death over disability” between the four groups; (4) Determine if the “preference for death over disability” is associated with different forms of suicidality in APPs and CPPs; and (5) Develop predictor models for “preference for death over disability” in APPs and CPPs.

Methods

A data bank of questions/items utilized to develop the BHI 2 (Brief Battery for Health Improvement 2)⁴ contained the disability perception item, the preference for death over disability item, and 6 suicidality items, e.g., has a suicide plan.

All 600 items had acceptable test-retest reliability scores with 8 items under study having scores greater than .67.

The 600 items and 15 demographic variables had been administered to 12 CNPWP, 108 CPWP, 326 APPs and 341 CPPs (pain greater than 3 months duration).

CPPs and APPs were then compared for risk of affirmation for the “prefers death to disability” and “disability perception” items to CNPWP and to CPWP.

Correlation coefficients were then calculated for the “prefers death to disability” and “perception of

disability” items in APPs and CPPs and between the 6 suicidality items.

Multivariate analyses of variance (MANOVA) were conducted to look for group differences between patients who agreed with the death versus disability item versus those who disagreed using the BHI 2 scales, and BHI 2 items pertaining to pain. Similarly, MANOVA were also conducted to look for group differences between patients who agreed with the disability item versus those who disagreed on the BHI 2 scales, and BHI 2 items pertaining to pain. For both the phi correlations and the MANOVA, we employed a strict level ($p \leq .001$) to choose variables that were significant. Our rationale for selecting such a restrictive p value was that it would reduce the risk of false positives caused by performing multiple statistical tests. Use of this restrictive p value minimized the risk of committing a Type I error and helped ensure that these variables would be significant regardless of the correction method chosen. The items selected in this manner (phi correlations and MANOVA) were used as independent variables in a stepwise logistic regression model to assess the predictability of agreement with the death/disability item. A final logistic regression analysis was conducted to assess the predictability of agreement with the death/disability item using significant scale items and their associated individual items as predictors. The logistic regression analyses were performed separately for APPs and CPPs.

Discussion and Conclusions

- There were not significantly more CPPs than any other group that endorsed the death/disability item.

- However, as expected, there were significantly more CPPs endorsing the belief in disability than any other group and death/disability correlated strongly with all suicide items, indicating that it could be a suicide item.

- As expected, some suicide items and perception of disability predicted death/disability perception in APPs and CPPs.

- Both the APPs and CPPs model predicted death/disability at greater than the base rates (especially for CPPs), indicating that both models are viable.

- Thus, for APPs and CPPs who perceive themselves to be disabled, the clinician should inquire about the death/disability perception and into other suicidality issues such as suicide ideation.

Variable	Category	Community Non-Patients without Pain (n = 129)	Community Patients with Pain (n = 108)	Rehabilitation Acute Pain Patients (n = 326)	Rehabilitation Chronic Pain Patients (n = 341)
Age (years)		M = 37.6 SD = 11.6	M = 45.1 SD = 11.9	M = 36.4 SD = 11.5	M = 39.8 SD = 10.1
		R = 20, 64	R = 18, 65	R = 18, 65	R = 19, 65
Age (years)	18-24	16 (12.8%)	5 (4.9%)	62 (19.6%)	24 (7.3%)
	25-44	72 (57.6%)	37 (35.9%)	177 (55.8%)	202 (61.8%)
	45-65	37 (29.6%)	61 (59.2%)	78 (24.6%)	101 (30.9%)
Race	White	89 (69%)	82 (75.9%)	278 (86.1%)	275 (81.8%)
	Black	22 (17.1%)	19 (17.6%)	19 (5.9%)	25 (7.4%)
	Asian	1 (.8%)	1 (.9%)	3 (0.9%)	1 (0.3%)
	Native American	0	3 (2.8%)	6 (1.9%)	13 (3.9%)
	Hispanic	16 (12.4%)	3 (2.8%)	14 (4.3%)	21 (6.3%)
Gender	Other	1 (.8%)	0	3 (0.9%)	1 (0.3%)
	Male	74 (57.4%)	46 (42.6%)	146 (44.8%)	149 (43.7%)
Education	Female	55 (42.6%)	62 (57.4%)	180 (55.2%)	192 (56.3%)
	Less than High School	31 (24%)	28 (25.9%)	32 (9.9%)	55 (16.4%)
Education	High School Graduate	27 (20.9%)	33 (30.6%)	88 (27.3%)	94 (28.0%)
	Some College	42 (32.6%)	23 (21.3%)	117 (36.3%)	142 (42.3%)
	College Graduate or more	29 (22.5%)	24 (22.2%)	85 (26.4%)	45 (13.4%)

Table 4 shows that the death/disability variable correlated significantly with all suicidality items in APPs and CPPs. Significant correlation values ranged from 0.17 to 0.28 for APPs and from 0.15 to 0.37 for CPPs.

		Having a Suicide Plan	History of Wanting to Die	History of Suicide Attempt	Wanting to Die Because of Pain	Recent Frequent Suicide Ideation	Wanting to Die Because Life is Hard
APPs	Death/Disability	.165*	.282**	.201**	.167*	.147*	.204**
CPPs	Death/Disability	.280**	.349**	.151*	.285**	.365**	.302**

Note: **p < 0.001 and *p < 0.01

Table 5 shows that the belief in disability variable correlated significantly with most of the suicidality items in APPs and CPPs. Significant correlation values ranged from 0.17 to 0.23 for APPs and from 0.21 to 0.24 for CPPs.

		Having a Suicide Plan	History of Wanting to Die	History of Suicide Attempt	Wanting to Die Because of Pain	Recent Frequent Suicide Ideation	Wanting to Die Because Life is Hard
APPs	Death/Disability	.079	.231**	.033	.167*	.115	.111
CPPs	Death/Disability	.109	.120	.078	.235**	.133	.205**

Note: **p < 0.001 and *p < 0.01

Category	Total n	Yes to Death/Disability (n, %)	Relative Risk	Lower 95% CI	Upper 95% CI
Community Non-Patients without Pain	129	25 (19.4%)	1.00	-	-
Community Patients with Pain	108	17 (15.7%)	.81	0.46	1.42
Acute Patients with Pain	326	74 (22.7%)	1.17	0.78	1.75
Chronic Patients with Pain	341	63 (18.5%)	.95	0.63	1.45
Z score and p value between Community Non-Patients without Pain and Acute Pain Patients		z = 0.79,			
		p = 0.43			
Z score and p value between Community Non-Patients without Pain and Chronic Pain Patients		z = 0.22,			
		p = 0.82			
Community Patients with Pain (Reference Group)	108	17 (15.7%)	1.00	-	-
Acute Patients with Pain	326	74 (22.7%)	1.45	0.89	2.34
Chronic Patients with Pain	341	63 (18.5%)	1.18	0.72	1.92
Z score and p value between Community Patients with Pain and Acute Pain Patients		z = 1.67,			
		p = 0.10			
Z score and p value between Community Patients with Pain and Chronic Pain Patients		z = 0.69,			
		p = 0.49			

Category	Total n	Yes to Belief in Disability (n, %)	Relative Risk	Lower 95% CI	Upper 95% CI
Community Non-Patients without Pain	129	11 (8.5%)	1.00	-	-
Community Patients with Pain	108	38 (35.2%)	4.14	2.23	7.71
Acute Patients with Pain	326	74 (22.7%)	2.67	1.47	4.87
Chronic Patients with Pain	341	164 (48.1%)	5.66	3.18	10.08
Z score and p value between Community Non-Patients without Pain and Acute Pain Patients		z = 4.21			
		p = 0.0001			
Z score and p value between Community Non-Patients without Pain and Chronic Pain Patients		z = 10.84			
		p = 0.0001			
Community Patients with Pain (Reference Group)	108	38 (35.2%)	1.00	-	-
Acute Patients with Pain	326	74 (22.7%)	.64	0.65	0.47
Chronic Patients with Pain	341	164 (48.1%)	1.37	1.37	1.03
Z score and p value between Community Patients with Pain and Acute Pain Patients		z = 2.43			
		p = 0.02			
Z score and p value between Community Patients with Pain and Chronic Pain Patients		z = 2.42			
		p = 0.02			

Step χ^2 (df), p value	% of Cases Predicted Correctly by the Model	Step Nagelkerke R ²	Variable	Associated BHI-2 Scale	B	Wald, p value	Odds Ratio	Lower 95% CI for Odds Ratio	Upper 95% CI for Odds Ratio
ACUTE PAIN PATIENTS									
26.82 (1), <.001	77.6	.12	Family Dysfunction	Family Dysfunction	.07	24.26, <.001	1.07	1.04	1.10
10.59 (1), <.001	78.5	.16	Intend to get busy but just lie around	Perseverance	.62	10.08, <.001	1.86	1.27	2.72
6.13 (1), <.05	79.1	.19	Often forget doctor's orders	Perseverance	.47	6.13, <.05	1.61	1.10	2.34
4.12 (1), <.05	79.4	.21	History of wanting to die	Not Applicable	.70	4.20, <.05	2.01	1.03	3.93
4.26 (1), <.05	79.1	.22	Belief in disabled status	Not Applicable	-.73	3.96, <.05	.479	.23	.99
CHRONIC PAIN PATIENTS									
65.64 (1), <.001	85	.28	Borderline	Borderline	.12	46.64, <.001	1.13	1.09	1.17
10.12 (1), <.001	84.5	.32	History of wanting to die	Not Applicable	1.09	10.03, <.005	2.97	1.51	5.80
6.41 (1), <.05	86.5	.34	Treated fairly by family	Family Dysfunction	-.47	6.26, <.05	.62	.43	.90
6.42 (1), <.05	87.1	.37	Frequent suicide ideation	Not Applicable	1.28	6.35, <.05	3.59	1.33	9.7
6.14 (1), <.05	87.1	.39	People I trust turn on me	Borderline	.63	6.16, <.05	1.87	1.14	3.08
4.27 (1), <.05	87.7	.41	Belief in disabled status	Not Applicable	-.74	4.08, <.05	.48	.23	.98