

Randomized Controlled Trial of Family Caregiver Use of Massage as Supportive Cancer Care following Multimedia Instruction

Community-based study in Boston, MA, Portland, ME and Portland, OR

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Abstract

Purpose. Massage is one of the most effective forms of supportive care in cancer, but access to professional practitioners is limited for most patients. This abstract presents findings from an NCI-sponsored randomized controlled trial (RCT) of family caregivers using simple techniques of touch and massage as supportive care guided by a home-based multimedia instructional program. The project assessed effects on (1) patient symptoms and side effects, (2) patient quality of life, and (3) caregiver attitudes toward use of touch as a form of caregiving.

Method. A community-based, multi-ethnic sample of 97 adult caregiver-patient dyads were randomized to experimental or attention control conditions for four weeks. The sample consisted of sixty-three white, thirteen Black, ten Chinese, eight Hispanic, and three mixed-ethnicity dyads. Twenty-three types of cancer and all stages were represented. All data collection and instructional materials were produced in English, Spanish, and Chinese language versions.

Instruction was provided in a 78 minute DVD featuring instruction by two oncology massage therapy researchers (JK, TW), filmed in a workshop context with eleven patient-caregiver dyads (white, black, Hispanic and Asian) learning and practicing the techniques. Content addressed communication, safety precautions related to cancer (lymphedema, etc.), manual techniques for comfort and relaxation, acupressure, simple light touch/holding for comfort, and positioning on home furniture. A 70-page illustrated manual accompanied the DVD.

Experimental dyads were instructed to view the materials as often as they wished and practice techniques of their choice at least three times per week. Control caregivers were instructed to read to the patient from literature of the patient's choice at least three times per week. Both groups recorded "session effects" on one 20-minute "reporting session" per week, using 5x8 inch cards. Patients completed a two-sided card that reported pre- and 15 minutes post-session ratings of severity levels (10 point scale) for pain, fatigue, stress/anxiety, nausea, depression, and an optional "other." Safety monitoring for massage dyads was conducted by home visit observation by an oncology massage therapist. At baseline and 4 week follow-up, subjects also completed survey instruments assessing quality of life, stress, and caregiver attitudes. After the RCT both groups were merged into the massage condition for a longitudinal study of utilization and effects over 20 weeks (longitudinal data to be reported separately).

Results. Session data showed significant reductions for all symptoms after both activities. Reductions after reading ranged from 12-28%, and after massage, 29-44%, as follows: pain, 18% vs 34%; fatigue, 20% vs. 32%; stress/anxiety, 28% vs. 44%; nausea, 12% vs. 29%; depression, 22% vs. 31%; other, 17% vs. 42%. Massage was significantly superior to reading for stress/anxiety ($p<.01$), pain ($p=.04$), fatigue ($p=.01$), and other ($p<.01$). Caregivers in the massage condition showed significant gains in their confidence and comfort with using touch and massage as forms of caregiving.

Conclusion. A multimedia instructional program in massage as supportive care at home offers family members a viable means of enhancing self-efficacy and satisfaction in caregiving. Family members can learn and apply safe and simple methods that increase patient comfort, reduce distress, and improve quality of relationship.



Sample

	Caregivers (N=97)	Patients (N=97)
Sex		
Male	43	23
Female	54	74
Age (yrs)		
Mean	51.5	54.7
Median	53.0	56.0
SD	13.6	11.6
Range	18 to 82	24 to 78
Ethnicity		
White	64	63
African Am.	13	13
Asian Am.	10	12
Hispanic	8	8
Native Am.	2	1
Education		
No HS	2	1
Some HS	2	0
HS grad	17	14
Some college	17	5
College grad	39	58
Adv degree	18	18
Unknown	2	1

Duration (yrs)
Mean: 25.5
Median: 25.0
SD: 14.8
Range: 1 to 62
Caregiver role
Spouse or partner: 62
Adult child: 16
Parent: 4
Other Relative: 4
Friend: 11
Same household?
Yes: 75
No: 22

Breast - 44
Lung - 10
Colorectal - 6
Multiple myeloma - 5
Ovarian - 5
Brain - 4
Lymphoma - 3
Prostate - 3
Thyroid - 3
Endometrial - 2
Kidney - 2
Esophageal - 1
Liver - 1
Melanoma - 1
Myelofibrosis - 1
Pancreatic - 1
Peritoneal - 1
Stomach - 1
Testicular - 1
Tongue - 1
Uterine - 1



Diagnostic status		Chemotherapy		Radiation		Surgery		
Months**	Stage	Metastasis	Past	Current or planned	Past	Current or planned	Past	Current or planned
Mean: 29.7	I: 9	No: 55	No: 33	No: 45	No: 50	No: 78	No: 20	No: 79
Median: 12	II: 24	Yes: 40	Yes: 64	Yes: 51	Yes: 47	Yes: 18	Yes: 77	Yes: 17
SD: 40.2	III: 16	Unknown: 2	Unknown: 1	Unknown: 1	Unknown: 1	Unknown: 1	Unknown: 1	Unknown: 1
Range: 1 to 258	IV: 35	Unknown: 7						

*Data provided by patient's health care provider (physician or nurse) at enrollment.
 **Months since diagnosis.



Results

Symptom	Group	N	Pre	Post	% Change
Stress/anxiety	Reading	43-49	4.75 (2.63)	3.43 (2.21)	28
	Massage	40-41	4.86 (2.52)	2.72 (1.59)	44
Pain	Reading	44-50	4.23 (2.66)	3.46 (2.46)	18
	Massage	40-42	3.97 (2.66)	2.62 (1.92)	34
Fatigue	Reading	44-49	5.46 (2.39)	4.37 (2.26)	20
	Massage	40-42	5.44 (2.00)	3.70 (2.15)	32
Depression	Reading	42-49	3.24 (2.18)	2.52 (1.85)	22
	Massage	39-41	3.13 (2.38)	2.17 (1.62)	31
Nausea	Reading	43-49	2.08 (1.12)	1.83 (1.83)	12
	Massage	40-41	2.01 (2.08)	1.42 (1.42)	29
Other	Reading	19-26	4.37 (3.01)	3.62 (2.74)	17
	Massage	32-36	2.53 (2.96)	1.47 (2.48)	42

*Weighted group means and standard deviations across four weekly "reporting sessions" per group.

Symptom	Time	p	Time by group	p	Group differences	p*
Stress/anxiety	F _(3,234) =0.47	0.71	F _(3,233) =0.83	0.48	F _(1,78) =8.82	<0.01
Pain	F _(3,237) =0.26	0.85	F _(3,237) =1.02	0.39	F _(1,79) =4.41	0.04
Fatigue	F _(3,234) =1.21	0.31	F _(3,234) =1.21	0.31	F _(1,78) =6.26	0.01
Depression	F _(3,228) =0.07	0.98	F _(3,228) =0.96	0.41	F _(1,76) =2.21	0.14
Nausea	F _(3,234) =1.05	0.37	F _(3,234) =0.44	0.72	F _(1,78) =2.92	0.09
Other	F _(3,120) =2.03	0.11	F _(3,120) =0.91	0.44	F _(1,40) =18.49	<0.01

*Significant group differences favor the experimental condition.

Question	Time	p	Time by group	p*	Group differences	p*
Satisfied with ability to help	F _(1,85) =5.525	0.02	F _(1,85) =0.135	0.71	F _(1,85) =0.051	0.82
Comfortable using touch	F _(1,85) =0.047	0.83	F _(1,85) =4.288	0.04	F _(1,85) =0.008	0.93
Concern about causing pain	F _(1,85) =7.596	0.01	F _(1,85) =3.474	0.07	F _(1,85) =4.713	0.03
Concern about making worse	F _(1,85) =3.430	0.07	F _(1,85) =3.151	0.08	F _(1,85) =4.723	0.03
Comfortable talking touch	F _(1,85) =0.321	0.57	F _(1,85) =3.494	0.07	F _(1,85) =0.138	0.71
Comfortable giving massage	F _(1,85) =0.220	0.64	F _(1,85) =6.437	0.01	F _(1,85) =0.271	0.60
Efficacy in giving massage	F _(1,85) =1.318	0.25	F _(1,85) =4.646	0.03	F _(1,85) =0.080	0.78

*Significant group differences favor the experimental condition.

Caregiver withdrew - 3
"We're too busy" - 7
Patient died - 7
No response - 3

Please circle one number indicating how bothersome each problem is in THIS MOMENT. If you have a problem that is not on the list, call it "Other symptom." 1 means "not at all bothersome", and 10 means "extremely bothersome."											
Not at all bothersome	1	2	3	4	5	6	7	8	9	10	Extremely bothersome
Pain	1	2	3	4	5	6	7	8	9	10	
Fatigue	1	2	3	4	5	6	7	8	9	10	
Stress/anxiety	1	2	3	4	5	6	7	8	9	10	
Nausea	1	2	3	4	5	6	7	8	9	10	
Depression	1	2	3	4	5	6	7	8	9	10	
Other symptom	1	2	3	4	5	6	7	8	9	10	
Describe "other" _____											

Subject Comments

"Last Wednesday he had level 5 aches and pains – by using the "cat paws" technique I dropped it to a level 1 in about 10 minutes – in another 10 minutes he was snoring!! It's been a while since I was this proud of myself!! In a couple of weeks he'll be having radiation for the first time. I want to go over the manual and DVD with him again to encourage him to try some other techniques but only the ones he wants – not me!!"

"I am grateful for this therapy that brings us together in a close and loving way and which helps W. to relax and eases her pain."

"Just want to let you know how wonderful it was the first time we did the caring touch after having pain and/or just 'hanging on' physically... to actually feel good – to feel pleasant sensations – what a gift. Thank you."

"I am glad that I can, at least temporarily, help relieve W.'s pain. Foot massage works the best for her to calm her back pain. These sessions continue to be very beneficial to both of us and we are thankful for them. Reviewing the entire DVD at one time this week was a big help. I enjoy and appreciate the opportunity to provide this helpful therapy for W. and myself. Thank you."

"N. was sore from surgery and her neck was stiff. She said the massage helped and I felt great being able to help."

"My partner really enjoyed the massage provided by me so that really reflects on me and makes me feel very good about myself. Thank you."

"J. seems to enjoy the massage sessions and is responding well. J.'s hands seem to be his biggest concern (neuropathy in fingertips) so we tend to focus on the hands the most. It appears the massage increases feeling in the hands."

"Our sessions have helped maintain a level of intimacy, despite my husband's chemo side effects."

"I've seen the DVD so many times, I think I know it by heart now. B. really still prefers the 'loving touch' on her extremities (head, face, feet and hands). I think it really helps her circulation. She usually takes a nap of 30 – 45 minutes after a session. They really relax her. We do sessions flat on her back and she always falls asleep afterwards with the dog curled up next to her. This is really helping! We both look forward to these sessions very much. Thank you for teaching us these techniques."

"It just keeps getting better! She is enjoying these sessions very much and looks forward to them as do I. Thank you so much for teaching us these techniques. What a fantastic experience!! It's been a privilege to be part of this study. Thank you so much for accepting us."

"My wife really seemed to enjoy the massage – she dozed a bit. I look forward to the next session. It brings us closer together."

"T. and I participated in the project. I was the caregiver. I greatly appreciate your efforts and the good that the project produces. The massage became a regular thing. We would do it in the morning after we woke up, not every day but often. It was a very nice way to connect in the morning, to feel caring and in touch not just physically. T. gave feedback on what felt good or not. This was good for me to hear and respond to. The whole project works as a relationship builder. I learned to appreciate her strength, and her desire to fully live her life. I continue to see evidence of her love for me. I know I'm a person who deals well with structure. I really appreciated knowing how enjoyable the touching is for her."

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