

Abstracts from the Poster Session of the 2018 American Massage Therapy Association National Convention

EIGHT-WEEK SWEDISH MASSAGE PROGRAM AND ITS EFFECT ON CANCER TREATMENT- RELATED SYMPTOMS IN BREAST CANCER SURVIVORS: PRELIMINARY RESULTS

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Background: Although Massage Therapy (MT) has been providing positive results in the management of cancer treatment-related symptoms (TRS), the quantity and quality of preliminary evidence is not sufficient to build trustworthy clinical guidelines for cancer survivors.

Objective: The objective of this study is to investigate the effects of a Swedish massage protocol on quality of life (QoL), sleep, stress, fatigue, immune, and endocrine biomarkers in a population of breast cancer survivors.

Method: Females over 18 years who were breast cancer survivors were invited to participate (IRB approval protocol #16-112). Fifteen participants underwent 1 hour/week of a novel Swedish massage protocol for 8 weeks. Data for the study was collected in three main phases: (i) baseline, (ii) during an 8-week intervention period, and (iii) endpoint. Fatigue, sleep, and QoL were assessed through validated questionnaires (FACT-F, FACT-B and Perceived Scale Stress). Sleep was measured with a wrist-worn device (Basic Motionlogger Actigraph Monitor). Saliva was collected to quantify cortisol, α -amylase and cytokines levels. Some physiological parameters such as blood pressure, SpO2 level, and pulse were measured.

Results: Mean age of participants was 55 years old. A paired-samples *t* test was conducted to compare if there was a difference between pre- and post-intervention period. There was a significant difference between baseline QoL ($M=87.5$, $SD=14.8$) and endpoint QoL ($M=99.1$, $SD=19.3$). Fatigue also significantly improved ($t(5)=-4.85$, $p=.005$) from baseline ($M=23.5$, $SD=9.6$) to endpoint ($M=34.5$, $SD=9.1$). Significant improvement ($t(5)=3.369$, $p=.020$) was also observed in stress from baseline ($M=24.1$, $SD=5.7$) to endpoint ($M=20.3$, $SD=8.1$). There was a statistically significant improvement in blood pressure following the Swedish massage program from 107.4 ± 8.5 mmHg to 99.8 ± 3.5 mmHg ($p=.047$); an improvement of 3.50 ± 1.16 mmHg. Sleep efficiency pre- and post-intervention also showed improvement.

Conclusions: Our 8-week Swedish massage program showed potential benefits for improvement of cancer TRS. In this feasibility pilot, a within-subjects, single group design was used for determining if participants improved their levels of fatigue, quality of sleep, quality of life, and stress. Hence, one limitation of our study is that we did not design a control group.

DOCUMENTATION IN MASSAGE SCHOOL CLINICS

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Introduction: Massage therapy school clinics offer a realistic experience for students to practice assessment and treatment of clients. Forms used in these clinics serve as health records, but also as a guide to teach students the process of documentation. Information typically included in health records includes personal health history, medical diagnoses, signs/symptoms of disease or illness, and information from medical assessments. Within different areas of health care, assessments are used and documented to monitor changes in signs/symptoms of disease or illness. A variety of assessments have been used in the larger body of massage research to document effects of massage. It is unclear how these are used in massage therapy education to teach students about documentation and evidence-based practice. The purpose of this exploratory research was to examine characteristics of forms used in massage therapy school clinics for the potential to aggregate data for analysis.

Methods: A descriptive analysis of school clinic forms was conducted for massage therapy schools in the United States and Canada. A convenience sample of blank health history/intake forms was obtained via email recruitment announcement and a general internet search. Content analysis was used to extract information into a database for analysis. This project was approved by the Rutgers Biomedical and Health Sciences—Newark Institutional Review Board (Pro20150002374.)

Results: Forms were obtained from 52 massage school clinics. Schools from the Northeast, Southeast, Midwest, Northwest, and West Coast of the United States were included in the analysis, along with schools from two Canadian provinces. All of

the forms requested personal health information and 21 asked for the client's health care provider contact information; but only 7 included a HIPAA notice. The majority contained questions about massage experience (31) and expectations (29.) Checklists were the most common way to gather information (46) about medical conditions and symptoms. The number of conditions and symptoms ranged from 9 to 196 (mean 41). Categories of medical conditions most frequently listed were: circulatory, neurological, and metabolic. SOAP questions were used on 10 forms; body outlines on 24. Identification of health-related risk factors was minimal, and a few forms requested information (marital status, employer) that is not relevant to massage outcomes.

Discussion: The forms serve as a framework to help students develop assessment skills, but also as a health record for clients. A lack of consistency was evident in the type of information requested about medical diagnoses, signs, or symptoms. This indicates wide variation in how massage schools are teaching students to gather information needed to perform effective massage and to track outcomes of massage. There is limited potential for aggregated analysis of the effects of massage in this setting.

MASSAGE THERAPY PRACTICE GUIDELINES AT NCI-DESIGNATED CANCER CENTERS

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Introduction: National Cancer Institute (NCI)-designated cancer centers are a group of cancer research institutions at the forefront of cancer care. Outpatient cancer treatment at these centers is comprehensive in nature, aiming to promote well-being. Massage is associated with an array of benefits for cancer patients undergoing treatment. The purpose of this research was to analyze clinical practice guidelines for massage at NCI-designated cancer centers.

Methods: A mixed-methods approach was used to gather information from the 62 NCI-designated cancer centers that clinical services to patients. Content analysis of each center's website and a telephone survey were used to gather information about outpatient massage. The combined information was entered into a dataset and coded for analysis. This research was approved by the Rutgers Biomedical and Health Sciences—Newark Institutional Review Board (Pro20150001821.)

Results: Data were available from 59 (91.1%) of the centers. Massage was offered to cancer patients undergoing treatment at 34 (54.8%) centers. Pressure guidelines were used at 23 (35.4%) centers. Written clinical practice guidelines were in place at 16 (25.8%)

centers. The guidelines were based upon a range of resources from literature reviews to nurse recommendation. A single resource was used to develop guidelines by 5 centers, two resources were used by 5 centers, and three or more resources were used by 6 centers. A variety was noted in the types of massage, treatment duration, and frequency of massage treatments.

Discussion: Despite a relatively robust body of research that reveals favorable effects of massage for cancer patients undergoing treatment, less than half of the centers offered massage. Among those offering massage, half had clinical practice guidelines. Of these, only 10 used research as resource material to develop guidelines. These findings suggest that massage research is not being adequately leveraged to benefit cancer patients undergoing cancer treatment.

THERAPY USE COMBINATIONS OF MASSAGE CLIENTS

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Introduction: Massage therapy clients are likely to have used one or more other forms of complementary and alternative medicine (CAM). The use of CAM therapies alongside massage has been well documented in the published literature. This study adds to the literature by describing the frequency and composition of multi-therapy combinations used concurrent with massage.

Objectives: This study reports the proportions of massage clients who have used (or not used) any one, two, and three of the following in the past 12 months: vitamins or herbal supplements (supplement therapy); chiropractic or osteopathic manipulations (chiropractic therapy); and yoga, tai chi or qi gong practice (movement therapy). The study also reports proportions for lifetime use of the therapy combinations. The study does not address issues of satisfaction or effectiveness.

Methods: Data from the 2012 National Health Interview Survey were used to create the eight mutually exclusive groups of therapy use combinations. Data were analyzed using SAS software procedures designed for the analysis of complex sample surveys.

Results: Over 50 percent of massage therapy clients have used two or more other CAM therapies ever and more than 25 percent of massage therapy clients have used two or more other CAM therapies in the past 12 months. Among respondents who had seen a massage therapist in the past year (n=2127), 13 percent reported using no other CAM therapies in the past year. Use of supplement therapy alone was reported by 38 percent, chiropractic therapy alone by 8 percent, movement therapy alone by 9 percent, supplement and chiropractic therapy by 9 percent, supplement and movement therapy by 8 percent,

chiropractic and movement therapy by 8 percent, and 5 percent reported using all three types of therapies in the past 12 months.

Conclusion: Most massage therapy clients have experienced other CAM therapies and many continue to engage in multi-therapy combinations at the same time as massage. This research can help massage therapists to initiate and guide conversations about other forms of care clients may be using.

WHAT SHOULD MASSAGE EDUCATION DO MORE OF, DIFFERENT, START, AND STOP? MASSAGE EDUCATION STAKEHOLDER VIEWS FROM THE 2017 ALLIANCE FOR MASSAGE THERAPY EDUCATIONAL CONGRESS

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Introduction: An Education Futures Forum held during the 2017 Alliance for Massage Therapy Education's Educational Congress systematically gathered massage education stakeholders' opinions through a World Café-modeled exercise.

Methods: Forum attendees participated in three concurrent 30-minute breakout group sessions in adjacent rooms focused on Continuing Education, Schools, or Employment. During each session, participants rotated between four tables asking what should be done more, differently, stopped, and started in massage education related to that room's focus. Participants wrote their per-table prompt responses as comments on large post-it sheets. Comments were reviewed by respective breakout sessions' participants who awarded importance points, with 6 blue and 3 orange dots each worth 1 and 3 points, respectively. Post-it sheet comments and point allocations were transcribed into an Excel spreadsheet and analyzed for descriptive statistics and top scoring comments from each room.

Results: 85–91 attendees participated in the three breakout sessions resulting in 674 unique comments with 3,744 assigned value points. The top 5 scoring comments from each room per session (N=45) determined stakeholder's most critical views. Stop comments made up the smallest total comments proportion (19%) yet largest top scoring comment proportion (36%), potentially highlighting unified frustration for various massage education practices. Comparatively, Start comments made up 26% of total comments but the smallest highest scoring proportion (18%), perhaps suggesting stakeholders feel it more important to improve what is already being done rather than beginning new endeavors in these areas. Top scoring education comments were focused on improving assessment and standards for students and instructors.

Conclusion: Stakeholder views were systematically gathered in a large conference setting for organization, analysis, and dissemination to inform field decision-making.

UTILIZING ORTHOPEDIC MASSAGE TO IMPROVE IN-CHAIR COMFORT DURING MANUAL WHEELCHAIR USE FOR A VETERAN LIVING WITH A SPINAL CORD INJURY (SCI)

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Introduction: Negligible guidance exists for massage therapy intervention to improve life quality of the wheelchair-bound, leaving therapists fearful of advanced cases or unaware of the positive impact they could have. Post-rehab, many SCI clients experience nociceptive pain and overall discomfort from manual wheelchair use.

Objective: Identify the impact of orthopedic massage on nociceptive pain and overall discomfort in a veteran client living with a SCI, in a 12 therapy session series.

Methods: The client, a 39-year old male Veteran, fractured his C-5 and C-6 vertebrae in combat. Considered a complete quadriplegic, he has regained some mobility throughout his cervical spine, glenohumeral, scapular, and core areas, through rehabilitation. At the initial session, the client presented with nociceptive pain and overall discomfort of his upper body using the verbal numeric rating scale (VNRS) at a 6 but could range as high as an 8. He reported his lower body at an 8 with "tightness" throughout his lower back and gluteal muscles. The client was permitted to dictate the focus between upper or lower body therapy sessions, depending on the level of discomfort experienced that day. Session duration ranged from 20–45 minutes, depending on the severity of pain or discomfort. Upper body focused treatments included range of motion (ROM) visual assessment of scapular travel during glenohumeral abduction/adduction and flexion/extension pre- and post-treatment. The client provided his VNRS rating pre- and post-treatments on both upper and lower body days. Upper body treatments focused on improving ROM and overall discomfort pushing his chair. Orthopedic massage techniques utilized included cross-fiber friction, longitudinal stripping, neuromuscular resistance techniques, and trigger point. These techniques were applied to cervical, glenohumeral, scapular, and spinal musculature. Lower body treatments focused on improving his in chair comfort. The same techniques were used as the upper body treatments, but for spinal musculature only.

Results: Seven upper body therapy sessions yielded an average of 4.28 VNRS point reduction. Visual ROM assessment indicated reduced scapular travel

during glenohumeral abduction/adduction and flexion/extension. The client reported a more comfortable experience pushing his chair. Five lower body therapy sessions yielded an average of 4 VNRS point reduction. The client reported feeling “looser” and more comfortable throughout his lower back and gluteal muscles. He also reported improved core movement and increased comfort in his chair.

Conclusion: The results demonstrate the potential benefits of orthopedic massage to reduce nociceptive pain, increase range of motion, and improve in-chair comfort for this underserved population. Limitations exist with visual observation only. Future reports should include quantifiable measurements of ROM pre/post session and pre/post series. This would enable more accurate identification of short-term and longer term musculoskeletal effects. Future reports should also include more qualitative data from the client to assess effects orthopedic massage can have on quality of life.

MASSAGE THERAPY FOR DYSTONIA: A CASE REPORT

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Introduction: Dystonia is a neurological disorder, characterized by involuntary muscle spasms and tremors, resulting in abnormal movements and posture. Symptoms include pain, spasms, tremors, and dyskinesia. Conventional treatments include medication, botulism injections, and surgical intervention. Many dystonia patients seek complementary and alternative medicine (CAM) therapies such as massage, but the effects of treatments are not well documented. This study documents massage treatment for dystonia in a specific case.

Objective: To examine the effects of massage therapy on pain, dyskinesia, and functional mobility in activities of daily living (ADL) in a patient with dystonia.

Methods: A student massage therapist administered five massage treatments over a six-week period on a 51-year-old female patient diagnosed with dystonia. Written consent was obtained from the patient. The patient presented with symptoms of pain, spasms, and tremors affecting functional mobility in ADL. Treatments aimed to decrease pain and increase functional mobility by reducing sympathetic nervous system (SNS) firing and increasing relaxation. Techniques applied included Swedish massage, hydrotherapy, myofascial release, stretching, and remedial exercise. Pre- and post-numeric rating scales (NRS) for pain were evaluated each session. Frequency of night pain, the Modified Bradykinesia Rating Scale (MBRS), the Timed Up and Go (TUG) test, the Functional Rating Index (FRI), and the Modified Gait Efficacy

Scale (MGES) were measured at the start and end of the study.

Results: Post-treatment pain intensity generally remained the same or decreased. Positive outcomes were exhibited in the frequency of night pain, TUG, MBRS, and FRI test scores. The MGES score was negatively affected.

Conclusion: The results suggest massage therapy may temporarily decrease pain intensity, pain frequency, and dyskinesia, and improve functional mobility in ADL associated with dystonia.

ENTRY LEVEL MASSAGE EDUCATION'S PREPARATION FOR U.S. HEALTH CARE SETTINGS: PERSPECTIVES FROM EXPERIENCED MASSAGE THERAPISTS

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Introduction: Massage therapists work in a variety of settings including health care centers (organization, business, or institute providing preventative and/or medical care services). Little research focuses on massage therapists' experience working in U.S. health care centers, and reliable data is needed to understand existing educational preparation and to better inform educators and practitioners for increasing health care integration opportunities.

Methods: Massage therapists with U.S. health care center setting work experience were invited to complete an electronically delivered, multi-part survey during an 8-week recruitment period. Indiana University Office of Research Integrity approved the study (Protocol #1706176243).

Results: N=386 surveys were completed and analyzed for all and by medical setting experience (defined as in/out patient medical clinic, hospital, doctor's office or nursing home). A majority of respondents were White (85%), female (88%), and state licensed/equivalent (94%). Forty-seven percent reported medical setting massage experience. Smaller proportions of therapists under 40 worked in medical care settings (34%; $p < .01$) compared to those aged 40-59 years (51%) and 60+ (57%). A majority of respondents (80%) indicated education beyond entry level training was needed for massage therapists working in health care centers, but proportions were smaller among those not working in a medical care environment (74% vs. 87%; $p = .0014$). Those whose health care center work as a massage therapist were in medical care environments reported reliance on experience from other related fields in greater proportions (73% vs. 59%; $p = .003$) and did not feel as strongly that their entry level massage training prepared them for work in health care centers.

Conclusion: Different experiences and medical team involvement based on health care center setting type may influence massage therapists' education needs and perceptions.

DEFICITS IN MESSAGE-RELATED ADVERSE EVENTS CASE REPORTING AND IMPLICATIONS FOR THE THERAPEUTIC MASSAGE AND BODYWORK FIELD: A SYSTEMATIC AUDIT THROUGH MID-2016

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Introduction: Using the CAse REport (CARE) guidelines and adverse event reporting recommendations, the current study sought to provide a rich description regarding the reporting thoroughness and implications of case reports in the literature documenting treatment for, and/or outcomes of, massage-attributed adverse events.

Methods: 1) Systematic identification of published, peer-reviewed case reports for treatment of massage related adverse events following PRISMA recommendations; 2) audit development based on CARE and adverse event reporting guidelines; 3) audit implementation; and 4) descriptive analysis of audit scores.

Results: Search identified 1,041 articles; 71 met study inclusion criteria. Fifty-one audit items were identified as reporting necessities of which articles included approximately 49% on average. Discussion sections of case reports had the best average item reporting (65%), while Case Presentation (41%) and Results (50%) sections scored moderately and, of concern, only 14% of adverse event causing details (massage and provider) were reported on average. Audit scores revealed inconsistent abstract reporting and few audited case reports included client race (11%), perspective (7%), and occupation/activities (21%) or patient consent to publish the report (7%). On average, articles reported 1.7 (SD1.2) of the 12 possible event-causing descriptors with only 1 or fewer of the 71 reports including massage provider descriptor items: setting, training, scope-of-practice, experience level, or credentialing. Most articles included massage identification (83%), but few included massage descriptors items: depth (6%), number (32%), length (11%), frequency (6%), or duration (4%). Seventy percent of cases failed to identify who provided the adverse event-causing massage, and none reported soliciting massage application details from non-self-massage providers. Treatment descriptor item reporting varied from high to low. Various implications of concern are discussed.

Conclusion: The current audit and descriptive analysis highlight several reporting inconsistencies in massage-related adverse event case reports. Most case reports implicated massage therapy for the adverse event, yet few details are provided to inform practice or clarify the massage therapy field's role in these medically treated situations.

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TRIGGER POINT SELF-CARE FOR CHRONIC NECK PAIN: A PILOT STUDY

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Introduction: Massage is promising for chronic neck pain (CNP), but accessibility is limited due to out-of-pocket costs. Trigger points contribute to CNP and trigger point self-care (TrPtSc) may be an effective way for massage benefit to reach broad populations. This proof-of-concept/feasibility study sought to examine trigger point self-treatment effect for CNP. Indiana University Office of Research Integrity approved all study activity and participants provided informed consent.

Methods: Non-obese adults with self-reported, nonspecific and uncomplicated CNP were recruited for a three-armed, randomized pre/post trial with 1-, 4-, and 8- weeks follow-up: 1) training workshop and TrPtSc, 2) four weekly 1-hour individualized practitioner provided massages, or 3) no treatment/control. Three visual analogue scales (VAS) for current, average, and worst neck pain over the past week and three 11-point pain scales for current, best, and worst CNP assessed pain intensity.

Results: Forty-six (n=36 females) adults, aged 19-67 (mean=47.6±12.9) enrolled. Five enrollees (n=1 female) were excluded from analysis due to missing data and early withdrawal resulting in N=41. Within group analysis indicated improved current and worst pain VAS scores for TrPtSc ($p=.003$; 0.007 , respectively) and massage ($p=.02$; $.05$, respectively) groups and improved average VAS ($p=.009$), current 11-point pain ($p=.02$), and best 11-point pain ($p=.018$) for the TrPtSc group. TrPtSc improved current 11-point ($p=.029$) and VAS pain ($p=.044$), worse VAS pain ($p=.049$), and best 11-point pain ($p=.004$) compared to control at Week 8.

Discussion: TrPtSc and massage were both effective for CNP after four weeks, but only TrPtSc retained benefit and continued to improve at Week 8. Fully powered, larger research is needed to confirm trends and determine the extent to which TrPtSc alone, or combined with massage, contribute to CNP's long-term management.